Appendix 5A, Section A

CalSim II and DSM2 Modeling Methodology

This section summarizes the modeling methodology used to analyze the No Action Alternative, Second Basis of Comparison, and other alternatives in this Environmental Impact Statement (EIS). It describes the overall analytical framework and contains descriptions of the key analytical tools and approaches used in the environmental consequences evaluation for the alternatives.

Appendix 5A, Section A is organized as follows:

- Introduction
- Overview of the Modeling Approach
  - Analytical Tools
  - Key Components of the Analytical Framework
  - Climate Change and Sea-Level Rise
- Hydrology and System Operations
  - CalSim II
  - Artificial Neural Network for Flow-Salinity Relationship
  - Application of CalSim II to Evaluate EIS Alternatives
  - Output Parameters
  - Appropriate Use of CalSim II Results
  - Linkages to Other Models
- Delta Hydrodynamics and Water Quality
  - Overview of Hydrodynamics and Water Quality Modeling Approach
  - Delta Simulation Model (DSM2)
  - Application of DSM2 to Evaluate EIS Alternatives
  - Output Parameters
  - Modeling Limitations
  - Linkages to Other Models
- Climate Change and Sea-Level Rise
  - Climate Change
  - Sea-Level Rise
  - Incorporating Climate Change and Sea-Level Rise in EIS Simulations
  - Climate Change and Sea-Level Rise Modeling Limitations
- References

5A.A.1 Introduction

This EIS includes identifying effects of operations considered until Year 2030 and the hydrologic response of the system to those operations. For modeling purposes, the alternatives are simulated at Year 2030; and in the evaluation of all alternatives at Year 2030, climate change and sea-level rise of 15 centimeters (cm) were assumed to be inherent.

The analytical framework and the tools used for the environmental consequences analysis are described in this section. Modeling assumptions for all the alternatives are provided in Section B of this appendix.

5A.A.2 Overview of the Modeling Approach

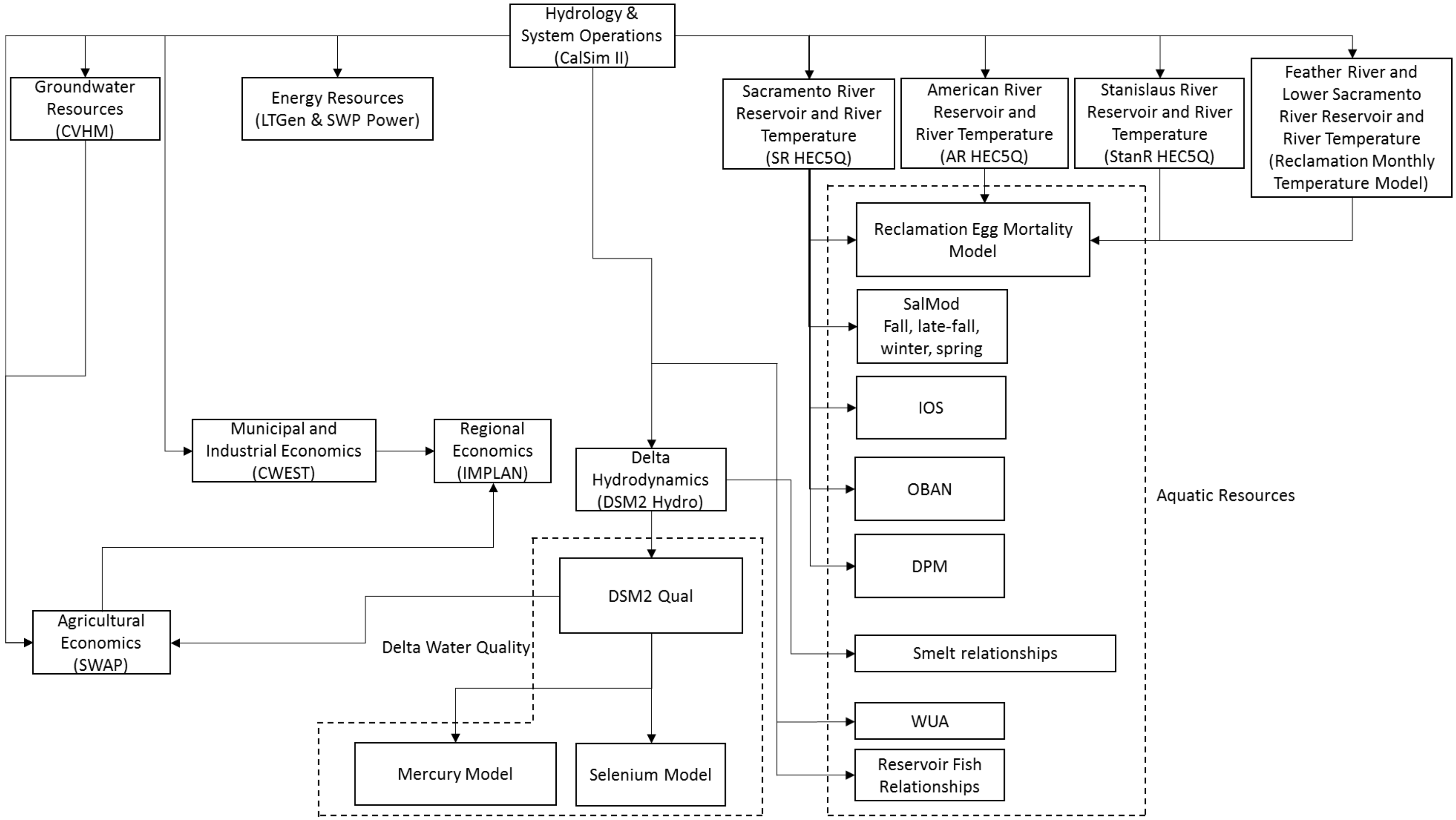
To support the impact analysis of the alternatives, numerical modeling of physical variables (or "physically based modeling"), such as river flows and water temperature, is required to evaluate changes to conditions affecting resources in the Central Valley including the Sacramento-San Joaquin Delta (Delta). A framework of integrated analyses including hydrologic, operations, hydrodynamics, water quality, and fisheries analyses is required to provide information for the comparative National Environmental Policy Act (NEPA) assessment of several resources, such as water supply, surface water, groundwater, and aquatic resources.

The alternatives include operational changes in the coordinated operation of the Central Valley Project (CVP) and State Water Project (SWP). Both these operational changes and other external factors such as climate and sea-level changes influence the future conditions of reservoir storage, river flow, Delta flows, exports, water temperature, and water quality. Evaluation of these conditions is the primary focus of the physically based modeling analyses.

Figure 5A.A.1 shows the analytical tools applied in these assessments and the relationship between these tools. Each model included in Figure 5A.A.1 provides information to the subsequent model in order to provide various results to support the impact analyses.

Changes to the historical hydrology related to the future climate are applied in the CalSim II model and combined with the assumed operations for each alternative. The CalSim II model simulates the operation of the major CVP and SWP facilities in the Central Valley and generates estimates of river flows, exports, reservoir storage, deliveries, and other parameters.

Agricultural and municipal and industrial deliveries resulting from CalSim II are used for assessment of changes in groundwater resources and in agricultural, municipal, and regional economics. Changes in land use reported by the agricultural economics model are subsequently used to assess changes in air quality.

1 

2 **Figure 5A.A.1 Analytical Framework Used to Evaluate Impacts of the Alternatives**

The Delta boundary flows and exports from CalSim II are used to drive the DSM2 Delta hydrodynamic and water quality models for estimating tidally based flows, stage, velocity, and salt transport within the estuary. DSM2 water quality and volumetric fingerprinting results are used to assess changes in concentrations of selenium and methylmercury in Delta waters.

Power generation models use CalSim II reservoir levels and releases to estimate power use and generation capability of the projects.

Temperature models for the primary river systems use the CalSim II reservoir storage, reservoir releases, river flows, and meteorological conditions to estimate reservoir and river temperatures under each scenario.

Results from these temperature models are further used as an input to fisheries models (e.g., SalMod, Reclamation Egg Mortality Model, and IOS) to assess changes in fisheries habitat due to flow and temperature. CalSim II and DSM2 results are also used for fisheries models (IOS, DPM) or aquatic species survival/habitat relationships developed based on peer-reviewed scientific publications.

The results from this suite of physically based models are used to describe the effects of each individual scenario considered in the EIS.

5A.A.2.1 Analytical Tools

A brief description of the hydrologic and hydrodynamic models discussed in Chapter 5, Surface Water Resources and Water Supplies, is provided below. All other subsequent models to CalSim II presented in the analytical framework are described in detail in appendices of the respective chapters where their results are used.

5A.A.2.1.1 CalSim II

The CalSim II planning model was used to simulate the coordinated operation of the CVP and SWP over a range of hydrologic conditions. CalSim II is a generalized reservoir-river basin simulation model that allows for specification and achievement of user-specified operating rules or goals (Draper et al. 2004). CalSim II represents the best available planning model for the CVP and SWP system operations and has been used in previous system-wide evaluations of CVP and SWP operations (Reclamation 2008a).

Hydrologic inputs to CalSim II include water diversion requirements (demands), stream accretions and depletions, rim basin inflows, irrigation efficiencies, return flows, non-recoverable losses, and groundwater operations. Sacramento Valley and tributary rim basin hydrologies are developed using a process designed to adjust the historical sequence of monthly stream flows over an 82-year period (1922 to 2003) to represent a sequence of flows at a particular level of development.

Adjustments to historical water supplies are determined by imposing a defined level of land use on historical meteorological and hydrologic conditions. The resulting hydrology represents the water supply available from Central Valley streams to the CVP and SWP at that defined level of development.

CalSim II produces outputs for river flows and diversions, reservoir storage, Delta-channel flows and exports, Delta inflow and outflow, deliveries to project and non-project users, and controls on project operations. Reclamation's 2008 Biological Assessment on the Continued Long-term Operations of the Central Valley Project and the State Water Project (2008 LTO BA) Appendix D provides more information about CalSim II (Reclamation 2008a). CalSim II output provides the basis for multiple other hydrologic, hydrodynamic, and biological models and analyses. CalSim II results feed into other models as described above.

5A.A.2.1.2 Artificial Neural Network for Flow-Salinity Relationships

An artificial neural network (ANN) that mimics the flow-salinity relationships as modeled in DSM2 and transforms this information into a form usable by the CalSim II model has been developed (Sandhu et al. 1999; Seneviratne and Wu, 2007). The ANN is implemented in CalSim II to constrain the operations of the upstream reservoirs and the Delta export pumps in order to satisfy particular salinity requirements in the Delta. The current ANN predicts salinity at various locations in the Delta using the following parameters as input: Sacramento River inflow, San Joaquin River inflow, Delta Cross Channel gate position, and total exports and diversions. Sacramento River inflow input accounts for Sacramento River flow, Yolo Bypass flow, and combined flow from the Mokelumne, Cosumnes, and Calaveras rivers (east side streams) andNorth Bay Aqueduct and Vallejo diversions. Total exports and diversions include SWP Banks Pumping Plant, CVP Tracy Pumping Plant, and Contra Costa Water District (CCWD) diversions including diversion to Los Vaqueros Reservoir. The ANN model approximates DSM2 model-generated salinity at the following key locations for the purpose of modeling Delta water quality standards: X2, Sacramento River at Emmaton, San Joaquin River at Jersey Point, Sacramento River at Collinsville, and Old River at Rock Slough. In addition, the ANN is capable of providing salinity estimates for Clifton Court Forebay, CCWD Alternate Intake Project, and Los Vaqueros diversion locations. A more detailed description of the ANNs and their use in the CalSim II model is provided in Wilbur and Munévar (2001). In addition, the California Department of Water Resources (DWR) Modeling Support Branch website (http://baydeltaoffice.water.ca.gov/modeling/) provides ANN documentation.

5A.A.2.1.3 DSM2

DSM2 is a one-dimensional hydrodynamic and water quality simulation model used to simulate hydrodynamics, water quality, and particle tracking in the Sacramento-San Joaquin Delta. DSM2 represents the best available planning model for Delta tidal hydraulic and salinity modeling. It is appropriate for describing the existing conditions in the Delta, as well as performing simulations for the assessment of incremental environmental impacts caused by future facilities and operations.

The DSM2 model has three separate components: HYDRO, QUAL, and PTM. HYDRO simulates velocities and water surface elevations and provides the flow input for QUAL and PTM. DSM2-HYDRO outputs are used to predict changes in flow rates and depths, and their effects on covered species, as a result of the EIS and climate change.

The QUAL module simulates fate and transport of conservative and non-conservative water quality constituents, including salts, given a flow field simulated by HYDRO. Outputs are used to estimate changes in salinity, and their effects on covered species, as a result of the EIS and climate change. The QUAL module is also used to simulate source water fingerprinting, which allows determining the relative contributions of water sources to the volume at any specified location. Reclamation's 2008 LTO BA Appendix F provides more information about DSM2 (Reclamation 2008b).

DSM2-PTM simulates pseudo 3-D transport of neutrally buoyant particles based on the flow field simulated by HYDRO. It simulates the transport and fate of individual particles traveling throughout the Delta. The model uses velocity, flow, and stage output from the HYDRO module to monitor the location of each individual particle using assumed vertical and lateral velocity profiles and specified random movement to simulate mixing. Additional information on DSM2 can be found on the DWR Modeling Support Branch website at http://baydeltaoffice.water.ca.gov/modeling/.

5A.A.2.2 Key Components of the Analytical Framework

Components of the EIS modeling relevant to Chapter 5, Surface Water Resources and Water Supplies, are described in this appendix in separate sections, including hydrology and systems operations modeling and delta hydrodynamics and water quality. Each section describes in detail the key tools used for modeling, data interdependencies, and limitations. It also includes descriptions of how the tools are applied in a long-term planning analysis such as evaluating the alternatives and describes any improvements or modifications performed for application in EIS modeling.

Section 5A.A.3, Hydrology and Systems Operations Modeling, describes the application of the CalSim II model to evaluate the effects of hydrology and system operations on river flows, reservoir storage, Delta flows and exports, and water deliveries. Section 5A.A.4, Delta Hydrodynamics and Water Quality, describes the application of the DSM2 model to assess effects of the operations considered in the EIS and resulting effects to tidal stage, velocity, flows, and salinity.

5A.A.2.3 Climate Change and Sea-Level Rise

The modeling approach applied for the EIS integrates a suite of analytical tools in a unique manner to characterize changes to the system from "atmosphere to ocean." Figure 5A.A.2 illustrates the general flow of information for incorporating climate and sea-level change in the modeling analyses. Climate and sea level can be considered the most upstream and most downstream boundary forcings on the system analyzed in the modeling for the EIS. However, these forcings are outside the influence of the EIS and are considered external forcings. The effects of these forcings are incorporated into the key models used in the analytical framework.

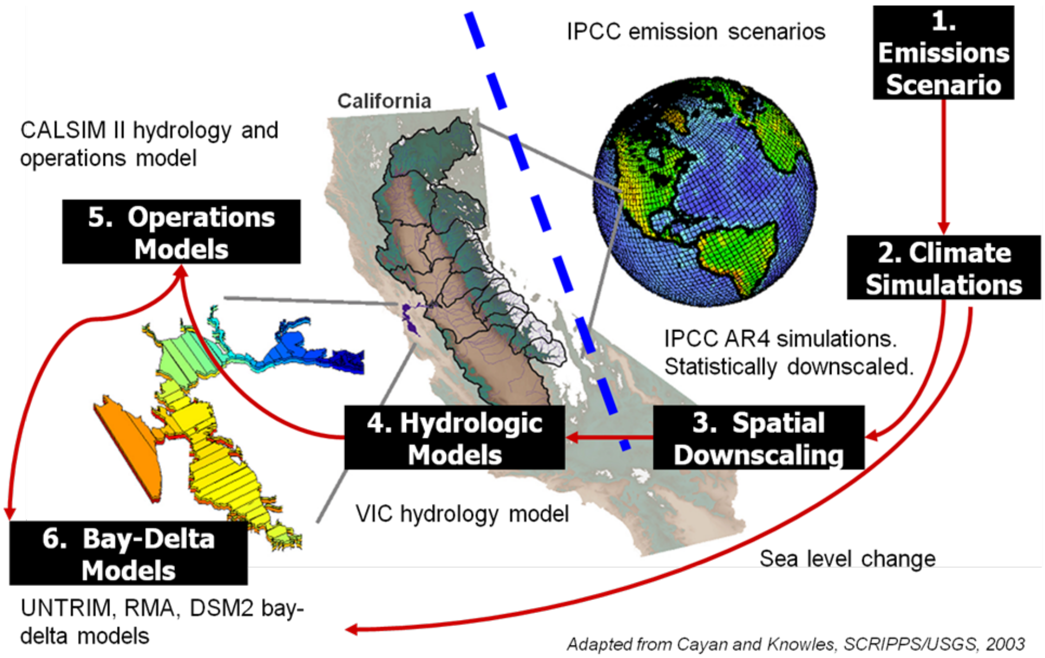


Figure 5A.A.2 Characterizing Climate Impacts from Atmosphere to Oceans

For the selected future climate scenario, regional hydrologic modeling was performed with the Variable Infiltration Capacity (VIC) hydrology model using temperature and precipitation projections of future climate. The VIC model (Liang et al. 1994; Liang et al. 1996; Nijssen et al. 1997) is a spatially distributed hydrologic model that solves the water balance at each model grid cell. The VIC model incorporates spatially distributed parameters describing topography, soils, land use, and vegetation classes. VIC is considered a macro-scale hydrologic model in that it is designed for larger basins with fairly coarse grids. In this manner, it accepts input meteorological data directly from global or national gridded databases or from general circulation model (GCM) projections. To compensate for the coarseness of the discretization, VIC is unique in its incorporation of subgrid variability to describe variations in the land parameters as well as precipitation distribution. Parameterization within VIC is performed primarily through adjustments to parameters describing the rates of infiltration and baseflow as a function of soil properties, as well as the soil layers depths. When simulating in water balance mode, as done for this California application, VIC is driven by daily inputs of precipitation, maximum and minimum temperature, and windspeed. The model internally calculates additional meteorological forcings such short-wave and long-wave radiation, relative humidity, vapor pressure and vapor pressure deficits. Rainfall, snow, infiltration, evapotranspiration, runoff, soil moisture, and baseflow are computed over each grid cell on a daily basis for the entire period of simulation. An offline routing tool then processes the individual cell runoff and baseflow terms and routes the flow to develop streamflow at various locations in the watershed.

In addition to a range of hydrologic process information, the VIC model generates natural stream flows under each assumed climate condition (DWR et al. 2013). Section 5A.A.5 provides more detailed information on climate change and sea-level rise modeling approach followed for the EIS.

5A.A.3 Hydrology and System Operations

The hydrology of the Central Valley and coordinated operation of the CVP and SWP systems is a critical element in any assessment of changed conditions in the Central Valley and the Delta. Changes to conveyance, flow patterns, demands, regulations, or Delta configuration will influence the operations of the CVP and SWP reservoirs and export facilities. The operations of these facilities, in turn, influence Delta flows, water quality, river flows, and reservoir storage. The interaction between hydrology, operations, and regulations is not always intuitive and detailed analysis of this interaction often results in new understanding of system responses. Modeling tools are required to approximate these complex interactions under future conditions.

This section describes in detail the use of CalSim II and the methodology used to simulate hydrology and system operations for evaluating the effects of the EIS.

5A.A.3.1 CalSim II

The CalSim II planning model was used to simulate the operation of the CVP and SWP over a range of regulatory conditions. CalSim II incorporates major CVP and SWP facilities as well as key local (or non-project) facilities. A list of major modeled facilities is located in Table 5A.B.20.

The CalSim II simulation model uses single time-step optimization techniques to route water through a network of storage nodes and flow arcs based on a series of user-specified relative priorities for water allocation and storage. Physical capacities and specific regulatory and contractual requirements are input as linear constraints to the system operation using the water resources simulation language (WRESL). The process of conveying water through the channels and storing water in reservoirs is performed by a mixed-integer linear-programming solver. For each time step, the solver maximizes the objective function to determine a solution that delivers or stores water according to the specified priorities and satisfies all system constraints. The sequence of solved linear-programming problems represents the simulation of the system over the period of analysis.

CalSim II includes an 82-year modified historical hydrology (water years 1922-2003) developed jointly by Reclamation and DWR. Water diversion requirements (demands), stream accretions and depletions, rim basin inflows, irrigation efficiencies, return flows, nonrecoverable losses, and groundwater operations are components that make up the hydrology used in CalSim II. Sacramento Valley and tributary rim basin hydrologies are developed using a process designed to adjust the historical observed sequence of monthly stream flows to represent a sequence of flows at a future level of development. Adjustments to historic water supplies are determined by imposing future level land use on historical meteorological and hydrologic conditions. The resulting hydrology represents the water supply available from Central Valley streams to the system at a future level of development. Figure 5A.A.3 shows the valley floor depletion regions, which represent the spatial resolution at which the hydrologic analysis is performed in the model.

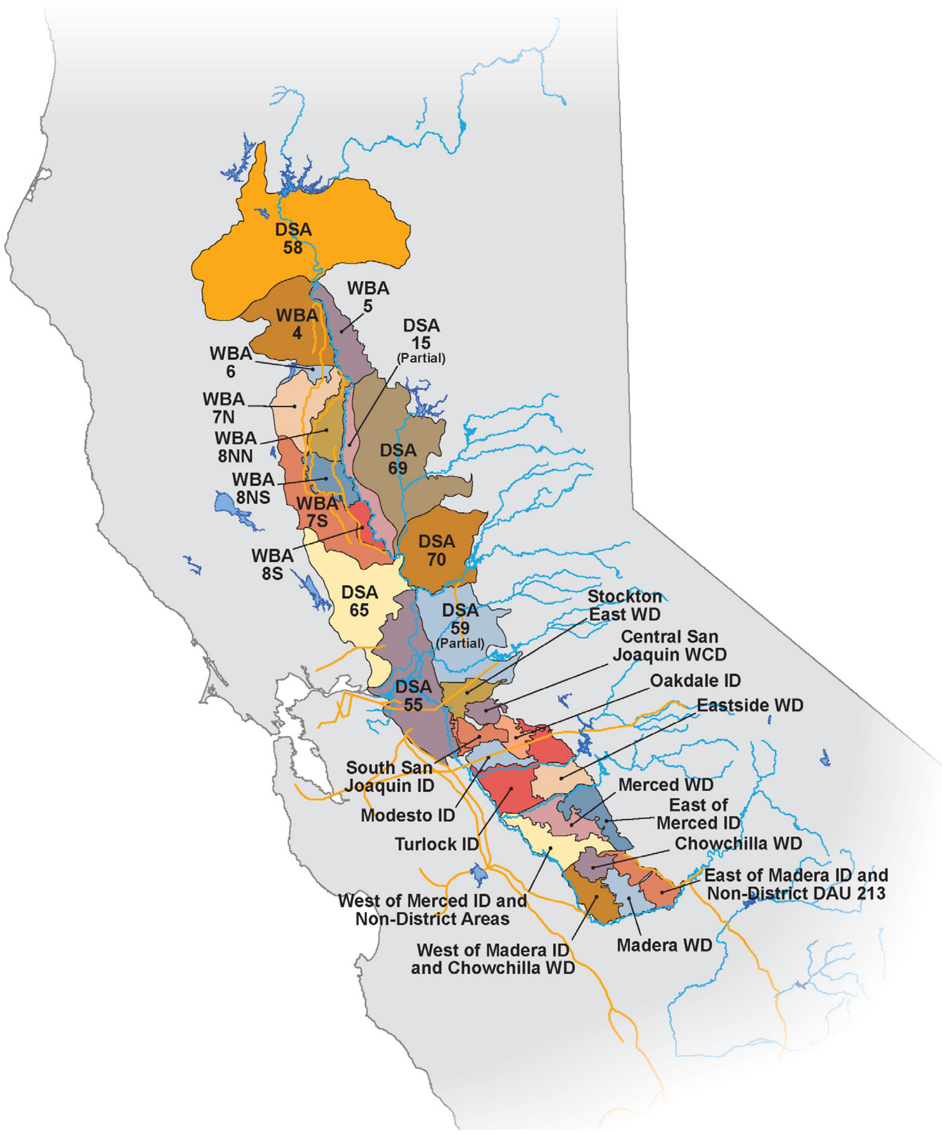


Figure 5A.A.3 CalSim II Depletion Analysis Regions

CalSim II uses rule-based algorithms for determining deliveries to north-of-Delta and south-of-Delta CVP and SWP contractors. This delivery logic uses runoff forecast information, which incorporates uncertainty and standardized rule curves. The rule curves relate storage levels and forecasted water supplies to project delivery capability for the upcoming year. The delivery capability is then translated into CVP and SWP contractor allocations that are satisfied through coordinated reservoir-export operations.

The CalSim II model utilizes a monthly time step to route flows throughout the river-reservoir system of the Central Valley. Although monthly time steps are reasonable for long-term planning analyses of water operations, a component of the EIS conveyance and conservation strategy includes operations that are sensitive to flow variability at scales less than monthly (i.e., the operation of the Fremont Weir). Initial comparisons of monthly versus daily operations at these facilities indicated that weir spills were likely underestimated and diversion potential was likely overstated using a monthly time step. For these reasons, a monthly to daily flow disaggregation technique was included in the CalSim II model for the Fremont Weir and the Sacramento Weir. The technique applies historical daily patterns, based on the hydrology of the year, to transform the monthly volumes into daily flows. Reclamation's 2008 LTO BA Appendix D provides more information about CalSim II (Reclamation 2008a).

5A.A.3.2 Artificial Neural Network for Flow-Salinity Relationship

Determination of flow-salinity relationships in the Sacramento-San Joaquin Delta is critical to both project and ecosystem management. Operation of the CVP and SWP facilities and management of Delta flows is often dependent on Delta flow needs for salinity standards. Salinity in the Delta cannot be simulated accurately by the simple mass-balance routing and coarse time step used in CalSim II. Likewise, the upstream reservoirs and operational constraints cannot be modeled in the DSM2 model. An ANN has been developed (Sandhu et al. 1999) that attempts to mimic the flow-salinity relationships as simulated in DSM2, but provide a rapid transformation of this information into a form usable by the CalSim II operations model. The ANN is implemented in CalSim II to constrain the operations of the upstream reservoirs and the Delta export pumps in order to satisfy particular salinity requirements. A more detailed description of the use of ANNs in the CalSim II model is provided in Wilbur and Munévar (2001).

The ANN developed by DWR (Sandhu et al. 1999, Seneviratne and Wu 2007) attempts to statistically correlate the salinity results from a particular DSM2 model run to the various peripheral flows (Delta inflows, exports, and diversions), gate operations, and an indicator of tidal energy. The ANN is calibrated or trained on DSM2 results that may represent historical or future conditions using a full-circle analysis (Seneviratne and Wu 2007). For example, a future reconfiguration of the Delta channels to improve conveyance may significantly affect the hydrodynamics of the system. The ANN would be able to represent this new configuration by being retrained on DSM2 model results that included the new configuration.

The current ANN predicts salinity at various locations in the Delta using the following parameters as input: Northern flows, San Joaquin River inflow, Delta Cross Channel gate position, total exports and diversions, Net Delta Consumptive Use (an indicator of the tidal energy), and San Joaquin River at Vernalis salinity.

Northern flows include Sacramento River flow, Yolo Bypass flow, and combined flow from the Mokelumne, Cosumnes, and Calaveras rivers (East Side Streams) minus North Bay Aqueduct and Vallejo exports. Total exports and diversions include SWP Banks Pumping Plant, CVP Jones Pumping Plant, and CCWD diversions, including diversions to Los Vaqueros Reservoir. A total of 148 days of values for each of these parameters is included in the correlation, representing an estimate of the length of memory of antecedent conditions in the Delta. The ANN model approximates DSM2 model-generated salinity at the following key locations for the purpose of modeling Delta water quality standards: X2, Sacramento River at Emmaton, San Joaquin River at Jersey Point, Sacramento River at Collinsville, and Old River at Rock Slough. In addition, the ANN is capable of providing salinity estimates for Clifton Court Forebay, and the CCWD Alternate Intake Project and Los Vaqueros diversion locations.

The ANN may not fully capture the dynamics of the Delta under conditions other than those for which it was trained. It is possible that the ANN will exhibit errors in flow regimes beyond those for which it was trained. Therefore, a new ANN is needed for any new Delta configuration or under sea-level rise conditions that may result in changed flow-salinity relationships in the Delta.

5A.A.3.3 Application of CalSim II to Evaluate EIS Alternatives

Typical long-term planning analyses of the Central Valley system and operations of the CVP and SWP have applied the CalSim II model to analyze system responses. CalSim II simulates future CVP and SWP project operations based on an 82-year monthly hydrology derived from the observed 1922-2003 period. Future land use and demands are projected for the appropriate future period. The system configuration of facilities, operations, and regulations forms the input to the model and defines the limits or preferences for operation. The configuration of the Delta, while not simulated directly in CalSim II, informs the flow-salinity relationships and several flow-related regressions for interior Delta conditions (e.g., X2 and OMR) included in the model. The CalSim II model is simulated for each set of hydrologic, facility, operations, regulations, and Delta configuration conditions. Some refinement of the CVP and SWP operations related to delivery allocations and San Luis target storage levels are generally necessary to have the model reflect suitable north-south reservoir balancing under future conditions. These refinements are generally made by experienced modelers in coordination with project operators.

The CalSim II model produces outputs of river flows, exports, water deliveries, reservoir storage, water quality, and several derived variables such as X2, Delta salinity, OMR (combined Old and Middle River flows), and QWEST (westerly flow on the San Joaquin River past Jersey Point). The CalSim II model is most appropriately applied for comparing one alternative to another and drawing comparisons among the results. This is the method applied for the EIS.

The No Action Alternative simulation assumes continuation of operations under the current regulatory environment with existing facilities for future climate and sea-level conditions (projected to the Year 2030).

The Second Basis of Comparison is developed due to the identified need during scoping comments for a basis of comparison to operations that would occur "without" the reasonable and prudent alternatives (RPAs). The Second Basis of Comparison assumptions do not include most of the RPAs. The Second Basis of Comparison does, however, include actions that are constructed (e.g., Red Bluff Pumping Plant), implemented (e.g., the Suisun Marsh Habitat Management, Preservation, and Restoration Plan), legislatively mandated (e.g., the San Joaquin River Restoration Plan), and have made substantial progress (e.g., Yolo Bypass Salmonid Habitat Restoration and Fish Passage).

Each alternative is compared to the No Action Alternative and the Second Basis of Comparison to evaluate areas in which the project changes conditions and the seasonality and magnitude of such changes. The change in hydrologic response or system conditions is important information that informs the impact analysis related to water-dependent resources in Sacramento-San Joaquin watersheds.

5A.A.3.3.1 ANN Retraining

ANNs are used for simulating flow-salinity relationships in CalSim II. They are trained on DSM2 outputs and therefore emulate DSM2 results. ANN requires retraining whenever the flow-salinity relationship in the Delta changes. As mentioned earlier, EIS analysis assumes a 15-cm sea-level rise. An ANN developed to simulate salinity conditions with 15-cm sea-level rise was developed by and obtained from DWR. The ANN retraining process is described in Section 5A.A.4.3.1.

5A.A.3.3.2 Incorporation of Climate Change

Climate and sea level change are incorporated into the CalSim II model in two ways: changes to the input hydrology and changes to the flow-salinity relationship in the Delta due to sea-level rise. In this approach, changes in runoff and stream flow are simulated through VIC modeling under representative climate scenarios. These simulated changes in runoff are applied to the CalSim II inflows as a fractional change from the observed inflow patterns (simulated future runoff divided by historical runoff). These fraction changes are first applied for every month of the 82-year period consistent with the VIC simulated patterns. A second order correction is then applied to ensure that the annual shifts in runoff at each location are consistent with that generated from the VIC modeling. A spreadsheet tool has been prepared to process this information and generate adjusted inflow time series records for CalSim II. Once the changes in flows have been resolved, water year types and other hydrologic indices that govern water operations or compliance are adjusted to be consistent with the new hydrologic regime. This spreadsheet tool has been updated for the EIS analysis to accommodate the needs of the CalSim II version used in this study.

The effect of sea-level rise on the flow-salinity response is incorporated in the respective ANN.

The following input parameters are adjusted in CalSim II to incorporate the effects of climate change:

- Inflow time series records for all major streams in the Central Valley
- Sacramento and San Joaquin valley water year types
- Runoff forecasts used for reservoir operations and allocation decisions
- Delta water temperature as used in triggering Biological Opinion Smelt criteria
- A modified ANN to reflect the flow-salinity response under 15-cm sea-level change

Section 5A.A.5 provides more detailed information on climate change and sea-level rise modeling approaches followed for the EIS.

The CalSim II simulations do not consider future climate change adaptations that may manage the CVP and SWP system in a different manner than today to reduce climate impacts. For example, future changes in reservoir flood control reservation to better accommodate a seasonally changing hydrograph may be considered under future programs, but are not considered under the EIS. Thus, the CalSim II EIS results represent the risks to operations, water users, and the environment in the absence of dynamic adaptation for climate change.

5A.A.3.4 Output Parameters

The hydrology and system operations models produce the following key parameters on a monthly time step:

- River flows and diversions
- Reservoir storage
- Delta flows and exports
- Delta inflow and outflow
- Deliveries to project and non-project users
- Controls on project operations

Some operations have been informed by the daily variability included in the CalSim II model for the EIS and, where appropriate, these results are presented. However, it should be noted that CalSim II remains a monthly model. The daily variability inputs to the CalSim II model help to better represent certain operational aspects, but the monthly results are utilized for water balance.

5A.A.3.5 Appropriate Use of CalSim II Results

CalSim II is a monthly model developed for planning level analyses. The model is run for an 82-year historical hydrologic period, at a projected level of hydrology and demands, and under an assumed framework of regulations. Therefore, the 82-year simulation does not provide information about historical conditions, but it does provide information about variability of conditions that would occur at the assumed level of hydrology and demand with the assumed operations, under the same historical hydrologic sequence. Because it is not a physically based model, CalSim II is not calibrated and cannot be used in a predictive manner. CalSim II is intended to be used in a comparative manner, which is appropriate for a NEPA analysis.

In CalSim II, operational decisions are made on a monthly basis, based on a set of predefined rules that represent the assumed regulations. The model has no capability to adjust these rules based on a sequence of hydrologic events such as a prolonged drought, or based on statistical performance criteria such as meeting a storage target in an assumed percentage of years.

Although there are certain components in the model that are downscaled to daily time step (simulated or approximated hydrology) such as an air-temperature-based trigger for a fisheries action, the results of those daily conditions are always averaged to a monthly time step (for example, a certain number of days with and without the action is calculated and the monthly result is calculated using a day-weighted average based on the total number of days in that month), and operational decisions based on those components are made on a monthly basis. Therefore, reporting sub-monthly results from CalSim II or from any other subsequent model that uses monthly CalSim results as an input is not considered an appropriate use of model results.

Appropriate use of model results is important. Despite detailed model inputs and assumptions, the CalSim II results may differ from real-time operations under stressed water supply conditions. Such model results occur due to the inability of the model to make real-time policy decisions under extreme circumstances, as the actual (human) operators must do. Therefore, these results should only be considered an indicator of stressed water supply conditions under that alternative, and should not be considered to reflect what would occur in the future. For example, reductions to senior water rights holders due to dead-pool conditions in the model can be observed in model results under certain circumstances. These reductions, in real-time operations, may be avoided by making policy decisions on other requirements in prior months. In actual future operations, as has always been the case in the past, the project operators would work in real time to satisfy legal and contractual obligations given the current conditions and hydrologic constraints. Chapter 5, Surface Water Resources and Water Supplies, provides appropriate interpretation and analysis of such model results. Section 5.3.3 of Chapter 5, describes historical responses by CVP and SWP to recent drought conditions.

Reclamation's 2008 LTO BA Appendix W (Reclamation 2008c) included a comprehensive sensitivity and uncertainty analysis of CalSim II results relative to the uncertainty in the inputs. This appendix provides a good summary of the key inputs that are critical to the largest changes in several operational outputs. Understanding the findings from this appendix may help in better understanding the alternatives.

5A.A.3.6 Linkages to Other Models

The hydrology and system operations models generally require input assumptions relating to hydrology, demands, regulations, and flow-salinity responses. Reclamation and DWR have prepared hydrologic inputs and demand assumptions for a future (2030) level of development (future land use and development assumptions) based on historical hydroclimatic conditions. Regulations and associated operations are translated into operational requirements. The flow-salinity ANN, representing appropriate sea-level rise, is embedded into the system operations model.

As mentioned previously in this appendix, changes to the historical hydrology related to future climate are applied in the CalSim II model and combined with the assumed operations for each alternative. The CalSim II model simulates the operation of the major CVP and SWP facilities in the Central Valley and generates estimates of river flows, exports, reservoir storage, deliveries, and other parameters.

Agricultural and municipal and industrial deliveries resulting from CalSim II are used in other models for assessing changes to groundwater resources and agricultural, municipal, and regional economics. Changes in land use reported by the agricultural economics model are subsequently used to assess changes in air quality.

The Delta boundary flows and exports from CalSim II are then used to drive the DSM2 Delta hydrodynamic and water quality models for estimating tidally based flows, stage, velocity, and salt transport within the estuary. DSM2 water quality and volumetric fingerprinting results are used to assess changes in concentration of selenium and methylmercury in Delta waters.

Power generation models use CalSim II reservoir levels and releases to estimate power use and generation capability of the projects.

River and temperature models for the primary river systems use the CalSim II reservoir storage, reservoir releases, river flows, and meteorological conditions to estimate reservoir and river temperatures under each scenario.

Results from these temperature models are further used as an input to fisheries models (e.g., SalMod, Reclamation Egg Mortality Model, and IOS) to assess changes in fisheries habitat due to flow and temperature. CalSim II and DSM2 results are also used for fisheries models (IOS, DPM) or aquatic species survival/habitat relationships developed based on peer-reviewed scientific publications.

The results from this suite of physically based models are used to describe the effects of each individual scenario considered in the EIS.

5A.A.4 Delta Hydrodynamics and Water Quality

Hydrodynamics and water quality modeling is essential to understanding the impacts of operation of the CVP and SWP on the Delta. The analysis of the hydrodynamics and water quality changes as a result of operational changes is critical in understanding the impacts on the habitats, species, and water users that depend on the Delta.

This section describes the methodology used for simulating Delta hydrodynamics and water quality for evaluating the alternatives. It discusses the primary tool (DSM2) used in this process.

5A.A.4.1 Overview of Hydrodynamics and Water Quality Modeling Approach

There are several tools available to simulate hydrodynamics and water quality in the Delta. Some tools simulate detailed processes, but are computationally intensive and have long runtimes. Other tools approximate certain processes and have short runtimes, while only compromising slightly on the accuracy of the results. For a planning analysis, it is ideal to understand the resulting changes over several years to cover a range of hydrologic conditions. So, a tool that can simulate the changed hydrodynamics and water quality in the Delta accurately with a short runtime is desired. DSM2 is a one-dimensional hydrodynamics and water quality model that serves this purpose.

DSM2 has a limited ability to simulate two-dimensional features such as tidal marshes and three-dimensional processes such as gravitational circulation, which is known to increase with sea-level rise in the estuaries. Therefore, it must be recalibrated or corroborated based on a data set that accurately represents the conditions in the Delta under sea-level rise. Because the proposed conditions are hypothetical, the best available approach to estimate the Delta hydrodynamics is to simulate higher dimensional models that can resolve the two- and three-dimensional processes well. These models would generate the data sets needed to corroborate or recalibrate DSM2 under those conditions so that it can simulate the hydrodynamics and salinity transport with reasonable accuracy. For the purposes of this EIS, a DSM2 model that was corroborated for 15-cm sea-level rise is used.

5A.A.4.2 Delta Simulation Model

DSM2 is a one-dimensional hydrodynamics, water quality, and particle-tracking simulation model used to simulate hydrodynamics, water quality, and particle tracking in the Sacramento-San Joaquin Delta (Anderson and Mierzwa 2002). DSM2 represents the best available planning model for Delta tidal hydraulics and salinity modeling. It is appropriate for describing the existing conditions in the Delta, as well as performing simulations for the assessment of incremental environmental impacts caused by future facilities and operations. The DSM2 model has three separate components: HYDRO, QUAL, and PTM. HYDRO simulates one-dimensional hydrodynamics including flows, velocities, depth, and water surface elevations. HYDRO provides the flow input for QUAL and PTM. QUAL simulates one-dimensional fate and transport of conservative and non-conservative water quality constituents given a flow field simulated by HYDRO. PTM simulates pseudo 3-D transport of neutrally buoyant particles based on the flow field simulated by HYDRO.

DSM2 v8.0.6 was used in modeling of the EIS No Action Alternative, Second Basis of Comparison, and the other alternatives using a period of simulation consistent with the CalSim II model (water years 1922 to 2003).

DSM2 hydrodynamics and salinity (electrical conductivity, or EC) were initially calibrated in 1997 (DWR 1997). In 2000, a group of agencies, water users, and stakeholders recalibrated and validated DSM2 in an open process resulting in a model that could replicate the observed data more closely than the 1997 version (DSM2PWT 2001). In 2009, DWR performed a calibration and validation of DSM2 by including the flooded Liberty Island in the DSM2 grid, which allowed for an improved simulation of tidal hydraulics and EC transport in DSM2 (DWR 2009). The model used for evaluating the EIS scenarios was based on this latest calibration.

Simulation of dissolved organic carbon (DOC) transport in DSM2 was successfully validated in 2001 by DWR (Pandey 2001). The temperature and dissolved oxygen (DO) calibration was initially performed in 2003 by DWR (Rajbhandari 2003). Recent development efforts by Resource Management Associates, Inc. (RMA) in 2009 allowed for improved calibration of temperature, DO, and the nutrient transport in DSM2.

5A.A.4.2.1 DSM2-HYDRO

The HYDRO module is a one-dimensional, implicit, unsteady, open-channel flow model that DWR developed from FOURPT, a four-point finite difference model originally developed by the U.S. Geological Survey (USGS) in Reston, Virginia. DWR adapted the model to the Delta by revising the input-output system, including open-water elements, and incorporating water project facilities, such as gates, barriers, and the Clifton Court Forebay. HYDRO simulates water surface elevations, velocities, and flows in the Delta channels (Nader-Tehrani 1998). HYDRO provides the flow input necessary for QUAL and PTM modules.

The HYDRO module solves the continuity and momentum equations using a fully implicit scheme. These partial differential equations are solved using a finite difference scheme requiring four points of computation. The equations are integrated in time and space, which leads to a solution of stage and flow at the computational points. HYDRO enforces an “equal stage” boundary condition for all the channels connected to a junction. The model can handle both irregular cross-sections derived from the bathymetric surveys and trapezoidal cross-sections. Even though, the model formulation includes a baroclinic term, the density is generally held constant in the HYDRO simulations.

HYDRO allows the simulation of hydraulic gates in the channels. A gate may have several associated hydraulic features (e.g., radial gates, flash boards, and boat ramps), each of which may be operated independently to control flow. Gates can be placed either at the upstream or downstream end of a channel. Once the location of a gate is defined, the boundary condition for the gated channel is modified from “equal stage” to “known flow,” with the calculated flow. The gates can be opened or closed in one or both directions by specifying a coefficient of zero or one.

Reservoirs are used to represent open bodies of water that store flow. Reservoirs are treated as vertical-walled tanks in DSM2, with a known surface area and bottom elevation and are considered instantly well-mixed. The flow interaction between the open water area and one or more of the connecting channels is determined using the general orifice formula. The flow in and out of the reservoir is controlled using the flow coefficient in the orifice equation, which can be different in each direction. DSM2 does not allow the cross-sectional area of the inlet to vary with the water level.

DSM2 v8 includes a new feature called "operating rules" under which the gate operations or the flow boundaries can be modified dynamically when the model is running based on the current value of a state variable (flow, stage, or velocity). The change can also be triggered based on a time series that is not currently simulated in the model (e.g., daily averaged EC) or based on the current time step of the simulation (for example, a change can occur at the end of the day or end of the season). The operating rules include many functions that allow derivation of the quantities to be used as trigger from the model data or outside time series data. Operating rules allow a change or an action to occur when the trigger value changes from false to true.

5A.A.4.2.2 DSM2-QUAL

The QUAL module is a one-dimensional water quality transport model that DWR adapted from the Branched Lagrangian Transport Model originally developed by the USGS. DWR added many enhancements to the QUAL module, such as open water areas and gates. A Lagrangian feature in the formulation eliminates the numerical dispersion that is inherently in other segmented formulations, although the tidal dispersion coefficients must still be specified. QUAL simulates fate and transport of conservative and nonconservative water quality constituents given a flow field simulated by HYDRO. It can calculate mass transport processes for conservative and nonconservative constituents including salts, water temperature, nutrients, DO, and trihalomethane formation potential.

The main processes contributing to the fate and transport of the constituents include flow-dependent advection and tidal dispersion in the longitudinal direction. Mass-balance equations are solved for all quality constituents in each parcel of water using the tidal flows and volumes calculated by the HYDRO module. Additional information and the equations used are specified in the 19th annual progress report by DWR (Rajbhandari 1998).

The QUAL module is also used to simulate source water fingerprinting, which allows determining the relative contributions of water sources to the volume at any specified location. It is also used to simulate constituent fingerprinting, which determines the relative contributions of conservative constituent sources to the concentration at any specified location. For fingerprinting studies, six main sources are typically tracked: Sacramento River, San Joaquin River, Martinez, Eastside Streams (Mokelumne, Cosumnes and Calaveras combined), agricultural drains (all combined), and Yolo Bypass. For source water fingerprinting, a tracer with constant concentration is assumed for each source tracked, while the concentrations at other inflows are kept as zero. For constituent (e.g., EC) fingerprinting analysis, the concentrations of the desired constituent are specified at each tracked source, while the concentrations at other inflows are kept as zero (Anderson 2003).

5A.A.4.2.3 DSM2 Input Requirements

DSM2 requires input assumptions relating to physical description of the system (e.g., Delta channel, marsh, and island configuration); description of flow control structures such as gates; initial estimates for stage, flow, and EC throughout the Delta; and time-varying input for all boundary river flows and exports, tidal boundary conditions, gate operations, and constituent concentrations at each inflow. Figure 5A.A.4 illustrates the hydrodynamic and water quality boundary conditions required in DSM2. For long-term planning simulations, output from the CalSim II model generally provides the necessary input for the river flows and exports.

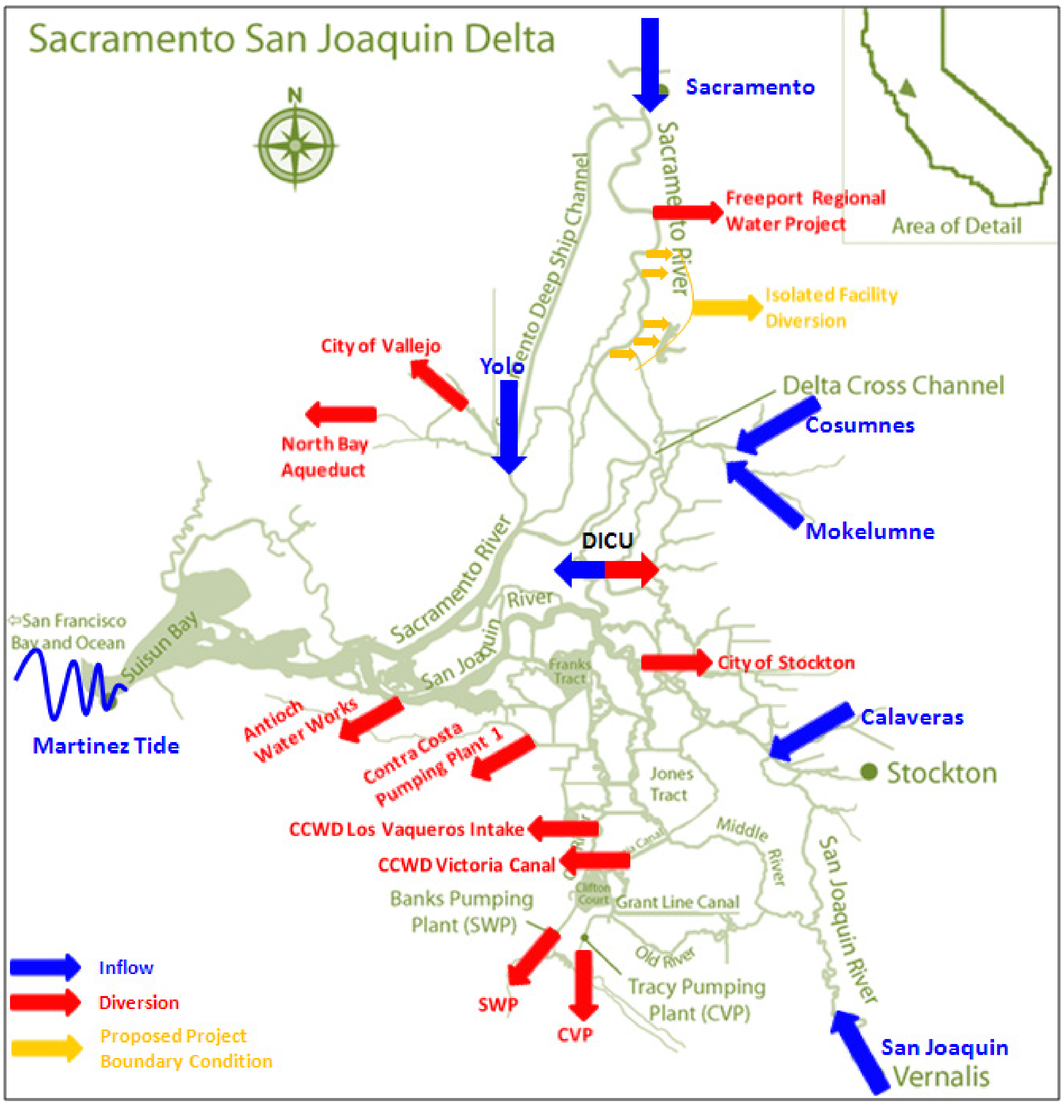


Figure 5A.A.4 Hydrodynamic and Water Quality Boundary Conditions in DSM2

Assumptions relating to Delta configuration and gate operations are directly input into the hydrodynamic models. Adjusted astronomical tide (Ateljevich 2001a) normalized for sea-level rise (Ateljevich and Yu 2007) is forced at the Martinez boundary. Constituent concentrations are specified at the inflow boundaries, which are estimated from either historical information or CalSim II results. The EC boundary condition at Vernalis is derived from the CalSim II results. The Martinez EC boundary condition is derived based on the simulated net Delta outflow from CalSim II and using a modified G-model (Ateljevich 2001b).

The major hydrodynamic boundary conditions are listed in Table 5A.A.1, and the locations at which constituent concentrations are specified for the water quality model are listed in Table 5A.A.2.

Table 5A.A.1 DSM2 HYDRO Boundary Conditions

Boundary Condition	Location/Control Structure	Typical Temporal Resolution
Tide	Martinez	15 minutes
Delta Inflows	Sacramento River at Freeport	1 day
	San Joaquin River at Vernalis	1 day
	Eastside Streams (Mokelumne and Cosumnes Rivers)	1 day
	Calaveras River	1 day
	Yolo Bypass	1 day
Delta Exports/Diversions	Banks Pumping Plant (SWP)	1 day
	Jones Pumping Plant (CVP)	1 day
	Contra Costa Water District Diversions at Rock Slough, Old River at Highway 4 and Victoria Canal	1 day
	North Bay Aqueduct	1 day
	City of Vallejo	1 day
	Antioch Water Works	1 day
	Freeport Regional Water Project	1 day
	City of Stockton	1 day
	Isolated Facility Diversion	1 day
Delta Island Consumptive Use	Diversion	1 month
	Seepage	1 month
	Drainage	1 month
Gate Operations	Delta Cross Channel	Irregular time series

Gate Operations (continued)	South Delta Temporary Barriers	Dynamically operated on 15-minute step
	Montezuma Salinity Control Gate	Dynamically operated on 15-minute step

Table 5A.A.2 DSM2 QUAL Boundary Conditions Typically Used in a Salinity Simulation

Boundary Condition	Location/Control Structure	Typical Temporal Resolution
Ocean Salinity	Martinez	15 minutes
Delta Inflows	Sacramento River at Freeport	Constant
	San Joaquin River at Vernalis	1 month
	Eastside Streams (Mokelumne and Cosumnes Rivers)	Constant
	Calaveras River	Constant
	Yolo Bypass	Constant
Delta Island Consumptive Use	Drainage	1 month (repeated each year)

Note: For other water quality constituents, concentrations are required at the same locations.

5A.A.4.3 Application of DSM2 to Evaluate EIS Alternatives

For EIS purposes, DSM2 was run for the 82-year period from water year 1922 to water year 2003 consistent with CalSim II, on a 15-minute time step. Inputs needed for DSM2—inflows, exports, and Delta Cross Channel (DCC) gate operations—were provided by the 82-year CalSim II simulations. The tidal boundary condition at Martinez was provided by an adjusted astronomical tide (Ateljevich and Yu 2007). Monthly Delta channel depletions (i.e., diversions, seepage, and drainage) were estimated using DWR's Delta Island Consumptive Use model (Mahadevan 1995).

CalSim II provides monthly inflows and exports in the Delta. Traditionally, the Sacramento and San Joaquin river inflows are disaggregated to a daily time step for use in DSM2, either by applying rational histosplines or by assuming that the monthly average flow is constant over the whole month. The splines allow a smooth transition between the months. The smoothing reduces sharp transitions at the start of the month, but still results in constant flows for most of the month. Other inflows, exports, and diversions were assumed to be constant over the month.

DCC gate operation input in DSM2 is based on CalSim II output. For each month, DSM2 assumes the DCC gates are open for the "number of the days open" simulated in CalSim II, from the start of the month.

The operation of the south Delta temporary barriers is determined dynamically in using the operating rules feature in DSM2. These operations generally depend on the season, San Joaquin River flow at Vernalis, and tidal condition in the south Delta. Similarly, the Montezuma Slough salinity control gate operations are determined using an operating rule that sets the operations based on the season, Martinez salinity, and tidal condition in the Montezuma Slough.

For salinity, EC at Martinez is estimated using the G-model on a 15-minute time step, based on the Delta outflow simulated in CalSim II and the pure astronomical tide at Martinez (Ateljevich 2001a). The monthly averaged EC for the San Joaquin River at Vernalis estimated in CalSim II for the 82-year period is used in DSM2. For other river flows, which have low salinity, constant values are assumed. Monthly average values of the EC associated with Delta agricultural drainage and return flows were estimated for three regions in the Delta based on observed data identifying the seasonal trend. These values are repeated for each year of the simulation.

5A.A.4.3.1 ANN Retraining

ANNs are used for flow-salinity relationships in CalSim II. They are trained on DSM2 outputs and therefore emulate DSM2 functionality. ANN requires retraining whenever the flow-salinity relationship in the Delta changes. EIS analysis assumes 15-cm sea-level rise at Year 2030 that results in a different flow-salinity relationship in the Delta and therefore required an ANN retrained for the 15-cm sea-level rise by DWR Bay-Delta Modeling Support Branch staff.

The ANN retraining process involves the following steps:

- The DSM2 model is corroborated for each scenario (changed sea level or Delta physical configuration).
- A range of example long-term CalSim II scenarios is used to provide a range of boundary conditions for DSM2 models.
- Using the grid configuration and the correlations from the corroboration process, several 16-year planning runs are simulated based on the boundary conditions from the identified CalSim II scenarios to create a training data set for each new ANN.
- ANNs are trained using the Delta flows and DCC operations from CalSim II, EC results from DSM2, and the Martinez tide.
- The training data set is divided into two parts; one is used for training the ANN, and the other to validate.
- Once the ANN is ready, a full-circle analysis is performed to assess the performance of the ANN.

Detailed description of the ANN training procedure and the full-circle analysis is provided in DWR's 2007 annual report (Seneviratne and Wu 2007).

5A.A.4.4 Output Parameters

DSM2 HYDRO provides the following outputs on a 15-minute time step:

- Tidal flow
- Tidal stage
- Tidal velocity

The following variables can be derived from the above outputs:

- Net flows
- Mean sea level, mean higher high water, mean lower low water, and tidal range
- Water depth
- Tidal reversals
- Flow splits, etc.

DSM2 QUAL provides the following outputs on a 15-minute time step:

- Salinity (EC)
- DOC
- Source water and constituent fingerprinting

The following variables can be derived from the above QUAL outputs:

- Bromide, chloride, and total dissolved solids
- Selenium and mercury

In a planning analysis, the flow boundary conditions that drive DSM2 are obtained from the monthly CalSim II model. The agricultural diversions, return flows, and corresponding salinities used in DSM2 are on a monthly time step. The implementation of DCC gate operations in DSM2 assumes that the gates are open from the beginning of a month, irrespective of the water quality needs in the south Delta.

The input assumptions stated earlier should be considered when DSM2 EC results are used to evaluate performance of a baseline or an alternative against the standards. Even though CalSim II releases sufficient flow to meet the standards on a monthly average basis, the resulting EC from DSM2 may be over the standard for part of a month and under the standard for part of the month, depending on the spring/neap tide and other factors (for example, simplification of operations). It is recommended that the results are presented on a monthly basis. Frequency of compliance with a criterion should be computed based on monthly average results. Averaging on a sub-monthly (14-day or more) scale may be appropriate as long as the limitations with respect to the compliance of the baseline model are described in detail and the alternative results are presented as an incremental change from a baseline model.

In general, it is appropriate to present DSM2 QUAL results including EC, DOC, volumetric fingerprinting, and constituent fingerprinting on a monthly time step. When comparing results between two scenarios, computing differences based on these mean monthly statistics is appropriate.

5A.A.4.5 Modeling Limitations

DSM2 is a one-dimensional model with inherent limitations in simulating hydrodynamic and transport processes in a complex estuarine environment such as the Delta. DSM2 assumes that velocity in a channel can be adequately represented by a single average velocity over the channel cross-section, meaning that variations both across the width of the channel and through the water column are negligible. DSM2 does not have the ability to model short-circuiting of flow through a reach, where a majority of the flow in a cross-section is confined to a small portion of the cross-section. DSM2 does not conserve momentum at the channel junctions and does not model the secondary currents in a channel. DSM2 also does not explicitly account for dispersion due to flow accelerating through channel bends. It cannot model the vertical salinity stratification in the channels.

It has inherent limitations in simulating the hydrodynamics related to the open water areas. Since a reservoir surface area is constant in DSM2, it impacts the stage in the reservoir and thereby impacts the flow exchange with the adjoining channel. Due to the inability to change the cross-sectional area of the reservoir inlets with changing water surface elevation, the final entrance and exit coefficients were fine-tuned to match a median flow range. This causes errors in the flow exchange at breaches during the extreme spring and neap tides. Using an arbitrary bottom elevation value for the reservoirs representing the proposed marsh areas to get around the wetting-drying limitation of DSM2 may increase the dilution of salinity in the reservoirs. Accurate representation of tidal marsh areas, bottom elevations, location of breaches, breach widths, cross-sections, and boundary conditions in DSM2 is critical to the agreement of corroboration results.

For open waterbodies DSM2 assumes uniform and instantaneous mixing over the entire open water area. Thus, it does not account for any salinity gradients that may exist within the open waterbodies. Significant uncertainty exists in flow and EC input data related to in-Delta agriculture, which leads to uncertainty in the simulated EC values. Caution needs to be exercised when using EC outputs on a sub-monthly scale. Water quality results inside the waterbodies representing the tidal marsh areas were not validated specifically, and because of the bottom elevation assumptions, preferably should not be used for analysis.

5A.A.4.6 Linkages to Other Models

The Delta boundary flows and exports from CalSim II are used to drive the DSM2 Delta hydrodynamic and water quality models for estimating tidally based flows, stage, velocity, and salt transport within the estuary. DSM2 water quality and volumetric fingerprinting results are used to assess changes in concentration of selenium and methylmercury in Delta waters.

DSM2 results are also used for fisheries models (IOS, DPM) or aquatics species survival/habitat relationships developed based on peer-reviewed scientific publications.

5A.A.5 Climate Change and Sea-Level Rise

The EIS uses a representation of potential climate change and sea-level rise change in numerical models that simulate hydrologic and hydrodynamic conditions in the study area in addition to changes in river flows due to changes in operations and diversions. This approach is based upon the methods used in development of BDCP EIR/EIS (DWR et al 2013).

This section provides brief information on methods used for this EIS.

5A.A.5.1 Climate Change

A growing body of evidence indicates that Earth's atmosphere is warming. Records show that surface temperatures have risen about 0.7°C since the early twentieth century and that 0.5°C of this increase has occurred since 1978 (NAS 2006). Observed changes in oceans, snow and ice cover, and ecosystems are consistent with this warming trend (NAS 2006, IPCC 2007). The temperature of Earth's atmosphere is directly related to the concentration of atmospheric greenhouse gases. Growing scientific consensus suggests that climate change will be inevitable as the result of increased concentrations of greenhouse gases and related temperature increases (IPCC 2007, Kiparsky and Gleick 2003, Cayan et al. 2009, USGRP 2013).

Observed climate and hydrologic records indicate that more substantial warming has occurred since the 1970s and that this is likely a response to the increases in greenhouse gas (GHG) increases during this time. The recent suite of global climate models (GCMs), a part of the Coupled Model Intercomparison Project Phase 3 (CMIP3)[1] and Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4), when simulated under future GHG emission scenarios and current atmospheric GHGs, exhibit warming globally and regionally over California. In the early part of the twenty-first century, the amount of warming produced by the higher-emission A2 scenario is not very different from the lower-emission B1 scenario, but becomes increasingly larger through the middle and especially the latter part of the century. Six GCMs selected for the 2009 scenarios project by the California Climate Action Team project a mid-century temperature increase of about 1°C to 3°C (1.8°F to 5.4°F), and an end-of-century increase from about 2°C to 5°C (3.6°F to 9°F) (Cayan et al. 2009). Precipitation in most of California is dominated by extreme variability, seasonally, annually, and over decade time scales. The GCM simulations of

[1] At the time of methods selection for the EIS, Coupled Model Intercomparison Project Phase 3 (CMIP3) projections were the most recently available ensembles. Even though Coupled Model Intercomparison Project Phase 5 (CMIP5) was released by the IPCC (after the methods selection for the EIS) in 2013, the use of CMIP3 ensembles are deemed appropriate because the differences in the projected changes in annual precipitation and temperature between the CMIP3 and CMIP5 projections are relatively small over the Central Valley by the end of 2030.

historical climate capture the historical range of variability reasonably well (Cayan et al. 2009), but historical trends are not well captured in these models. Projections of future precipitation are much more uncertain than those for temperature. As climate changes, California is expected to be subjected to alterations in natural hydrologic conditions, including changes in snow accumulation and stream flow availability.

5A.A.5.2 Sea-Level Rise

Global and regional sea levels have been increasing steadily over the past century and are expected to continue to increase throughout this century. Over the past several decades, sea level measured at tide gages along the California coast has risen at a rate of about 17 to 20 cm (6.7 to 7.9 inches) per century (Cayan et al. 2009). While there is considerable variability among the gages along the Pacific Coast, primarily reflecting local differences in vertical movement of the land and length of gage record, this observed rate in mean sea level is similar to the global mean trend (NOAA 2012). Global estimates of sea-level rise made in the most recent assessment by the IPCC (2007) indicate a range of 18 to 59 cm (7.1 to 23.2 inches) this century. However, since the release of the IPCC AR4, advances have occurred in the understanding of sea-level rise. These advances in the science have led to criticism of the approach used by the IPCC. Recent work by Rahmstorf (2007), Vermeer and Rahmstorf (2009), and others suggests that the sea-level rise may be substantially greater than the IPCC projections.

Empirical models based on the observed relationship between global temperatures and sea levels have been shown to perform better than the IPCC models in reconstructing recent observed trends. Rahmstorf (2007) and Vermeer and Rahmstorf (2009) demonstrated that such a relationship, when applied to the range of emission scenarios of IPCC (2007), results in a mid-range rise this century of 70 to 100 cm (28 to 39 inches), with a full range of variability of 50 to 140 cm (20 to 55 inches). The CALFED Science Program (CALFED 2007), State of California, and others have made assessments of the range of potential future sea-level rise throughout 21st century.

In 2011, the United States Army Corps of Engineers (USACE) issued guidance on incorporating sea-level change in civil works programs (USACE 2011). The guidance document reviews the existing literature and suggests use of a range of sea-level change projections, including the “high probability” of accelerating global sea-level rise. The ranges of future sea-level rise were based on the empirical procedure recommended by the National Research Council and updated for recent conditions (NRC 1987). The three scenarios included in the USACE guidance suggest end-of-century sea-level rise in the range of 50 to 150 cm (20 to 59 inches), consistent with the range of projections by Rahmstorf (2007) and Vermeer and Rahmstorf (2009). The USACE Bulletin expired in September 2013.[2]

[2] At the time of methods selection for the EIS, USACE 2011 was the most recent guidance. Current most recent guidance (USACE 2013) suggests evaluation of a low, medium, and high sea-level rise. The projected mean sea level rise ranges between 10 cm and 14 cm at 2030 relative to year 2000 based on the recent NRC

The recent NRC study (NRC 2012) on west coast sea-level rise relies on estimates of the individual components that contribute to sea-level rise and then sums those to produce the projections. The recent NRC sea-level rise projections for California have wider ranges, but the upper limits are not as high as those from Vermeer and Rahmstorf's (2009) global projections. The California State Sea-Level Rise Guidance Document (CO-CAT 2013) was updated in March 2013 with the scientific findings of the 2012 NRC report.

As sea-level rise progresses during the century, the hydrodynamics of the San Francisco Bay-Sacramento-San Joaquin Delta estuary will change, causing the salinity of water in the Delta estuary to increase. This increasing salinity will most likely have significant impacts on water management throughout the Central Valley and other regions of the state.

5A.A.5.3 Incorporating Climate Change and Sea-Level Rise in EIS Simulations

Incorporation of climate change in water resources planning continues to be an area of evolving science, methods, and applications. Several potential approaches exist for incorporating climate change in the resources impact analyses. Currently, there is no standardized methodology that has been adopted by either the State of California or the Federal agencies for use in impact assessments. The courts have ruled that climate change must be considered in the planning of long-term water management projects in California, but have not been prescriptive in terms of methodologies to be applied. Climate change could be addressed in a qualitative and/or quantitative manner, could focus on global climate model projections or recent observed trends, and could explore broader descriptions of observed variability by blending paleoclimate information into this understanding.

5A.A.5.3.1 Incorporating Climate Change

The climate change scenarios were developed from an ensemble of 112 bias-corrected, spatially downscaled GCM simulations from 16 climate models for SRES emission scenarios A2, A1B, and B1 from the CMIP3 that are part of the IPCC AR4. The future projected changes over the 30-year climatological period centered on 2025 (i.e., 2011-2040 to represent 2025 timeline) were combined with a set of historically observed temperatures and precipitation to generate climate sequences that maintain important multi-year variability not always reproduced in direct climate projections.

In an effort to summarize these 112 scenarios, five statistically representative climate change scenarios were developed to characterize the central tendency, and the range of the ensemble uncertainty.

(2012) study and using the USACE Sea Level Change Curve Calculator (2015.46) located at http://www.corpsclimate.us/ccaceslcurves.cfm. The mean projected sea-level rise is similar to the EIS assumption of 15 cm at Year 2030. Due to the considerable uncertainty in the future sea-level change projections and the state of sea-level rise science, the use of 15 cm sea-level rise for the EIS was deemed reasonable.

Since the ensemble is made up of many projections, it is useful to identify the median (50th percentile) change of both annual temperature and annual precipitation. In doing so, the state of climate change at this point in time can be broken into quadrants representing (1) drier, less warming, (2) drier, more warming, (3) wetter, more warming, and (4) wetter, less warming than the ensemble median (Q1 through Q4). In addition, a fifth region (Q5) can be described that samples from inner-quartiles (25th to 75th percentile) of the ensemble and represents a central region of climate change. In each of the five regions the sub-ensemble of climate change projections, made up of those contained within the region bounds, is identified. The Q5 scenario is derived from the central tending climate projections and thus favors the consensus of the ensemble.

Through extensive coordination with the State and Federal teams involved in the BDCP, the bounding scenarios Q1-Q4 were refined in April 2010 to reduce the attenuation of climate projection variability that comes about through the use of larger ensembles. A sensitivity analysis was prepared for the bounding scenarios (Q1-Q4) using sub-ensembles made up of different numbers of downscaled climate projections. The sensitivity analysis was prepared using a "nearest neighbor" (k-NN) approach. In this approach, a certain joint projection probability is selected based on the annual temperature change-precipitation change (i.e. 90th percentile of temperature and 90th percentile of precipitation change). From this statistical point, the "k" nearest neighbors (after normalizing temperature and precipitation changes) of projections are selected and climate change statistics are derived. Consistent with the approach applied in 2008 LTO BA, the 90th and 10th percentile of annual temperature and precipitation change were selected as the bounding points. The sensitivity analysis considered using the 1-NN (single projection), 5-NN (5 projections), and 10-NN (10 projections) sub-ensemble of projections. These were compared to the original quadrant scenarios which commonly are made up of 25-35 projections and are based on the direction of change from 50th percentile statistic. The very small ensemble sample sizes exhibited month by month changes that were sometimes dramatically different than that produced by adding a few more projections to the ensemble. The 1-NN approach was found to be inferior to all other methods for this reason. The original quadrant method produced a consensus direction of change of the projections, and thus produced seasonal trends that were more realistic, but exhibited a slightly smaller range due to the inclusion of several central tending projections. The 5-NN and 10-NN methods exhibited slightly wider range of variability than the quadrant method which was desirable from the "bounding" approach. In most cases the 5-NN and 10-NN projections were similar, although they differed at some locations in representation of season trend. The 10-NN approach was found to be preferable in that it best represented the seasonal trends of larger ensembles, retained much of the "range" of the smaller ensembles, and was guaranteed to include projections from at least two GCM-emission scenario combinations (in the CMIP3 projection archive, up to 5 projections – multiple simulations – could come from one GCM-emission scenario combination). The State and Federal representatives agreed to utilize the following climate scenario selection process for BDCP: (1) the use of the original quadrant approach for Q5 (projections within the 25th to 75th percentile bounding box) as it provides the best estimate of the consensus of climate projections and (2) the use of the 10-NN method to developing the Q1-Q4 bounding scenarios. An automated process was developed that generates the monthly and annual statistics for every grid cell within the Central Valley domain and identifies the members of the sub ensemble for consideration in each of the five scenarios.

For the purposes of this EIS, Q5 climate change scenario for the period centered on 2025 is used for all alternatives analyses and represents conditions at 2030. The Q5 scenario was derived from the central tending “consensus” of the climate projections and thus represents the median ensemble projection. Figures 5A.A.5 through 5A.A.8 present projected changes in temperature and precipitation for the 2025 timeline for select locations that represent Sacramento, San Joaquin, and Delta systems.

The modified temperature and precipitation inputs were used in the VIC hydrology model to simulate hydrologic processes on the 1/8th degree scale to produce watershed runoff (and other hydrologic variables) for the major rivers and streams in the Central Valley.

To compute watershed runoff, the VIC model was simulated in water balance mode. In this mode, a complete land surface water balance is computed for each grid cell on a daily basis for the entire model domain. Unique to the VIC model is its characterization of sub-grid variability. Sub-grid elevation bands enable more detailed characterization of snow-related processes. Five elevation bands are included for each grid cell. In addition, VIC also includes a sub-daily (1 hour) computation to resolve transients in the snow model. The soil column is represented by three soil zones extending from land surface in order to capture the vertical distribution of soil moisture. The VIC model represents multiple vegetation types as uses NASA’s Land Data Assimilation System (LDAS) databases as the primary input data set.

The VIC model computes the water balance over each grid cell on a daily basis for the entire period of simulation. For the simulations performed for the BDCP, water balance variables such as precipitation, evapotranspiration, runoff, baseflow, soil moisture, and snow water equivalent were included as output. In order to facilitate understanding of these watershed process results, nine locations throughout the in the watershed were selected for more detailed review. These locations are representative points within each of the following hydrologic basins: Upper Sacramento River, Feather River, Yuba River, American River, Stanislaus River, Tuolumne River, Merced River, and Upper San Joaquin River. The flow in these main rivers were included in the Eight River Index which is the broadest measure of total flow contributing to the Delta. A ninth location was selected to represent conditions within the Delta.

Streamflow was routed to 21 locations that generally align with long-term gauging stations throughout the watershed. The flow at these locations also allowed for assessment of changes in various hydrologic indices used in water management in the Sacramento-San Joaquin Delta. Flows were output in both daily and monthly time steps. Only the monthly flows were used in subsequent analyses. It is important to note that VIC routed flows were considered "naturalized" in that they do not include effects of diversions, imports, storage, or other human management of the water resource. Figures 5A.A.9 through 5A.A.18 present projected changes in watershed runoff for the major rivers and streams in the Central Valley for the 2025 timeline.

These simulated changes in runoff were applied to the CalSim II inflows as a fractional change from the observed inflow patterns (simulated future runoff divided by historical runoff). These fraction changes were first applied for every month of the 82-year period consistent with the VIC simulated patterns. A second correction was then applied to ensure that the annual shifts in runoff at each location are consistent with that generated from the VIC modeling.

Once the changes in flows had been resolved, water year types and other hydrologic indices that govern water operations or compliance were adjusted to be consistent with the new hydrologic regime. The changes in reservoir inflows, key valley floor accretions, and water year types and hydrologic indices were translated into modified input time series for the CalSim II model.

For the BDCP EIR/EIS, the CalSim II model was simulated with each of the five climate change hydrologic conditions (including effects of sea level rise) in addition to the historical hydrologic conditions for the No Project/No Action Alternative and one other alternative to understand the sensitivity of projected operations to the range of climate change scenarios. The results of that analysis indicated that the incremental differences between the No Action Alternative and the other alternative were consistent at Q1 through Q5 conditions, although absolute values were different (DWR et al, 2013).

5A.A.5.3.2 Incorporation of Sea-Level Rise

For sea-level rise simulation, using the work conducted by Rahmstorf, it was assumed the projected sea-level rise at the early long-term timeline (2025) would be approximately 12 to 18 cm (5 to 7 inches). At the late long-term timeline (2060), the projected sea-level rise was assumed to be approximately 30 to 60 cm (12 to 24 inches).

These sea-level rise estimates were consistent with those outlined in the recent USACE guidance circular for incorporating sea-level changes in civil works programs (USACE 2013). Due to the considerable uncertainty in these projections and the state of sea-level rise science, it was proposed to use the mid-range of the estimates of 15 cm (6 inches) by 2025 and 45 cm (18 inches) by 2060.For the purposes of the EIS, the sea-level rise scenario for the period centered on 2025 is used (DWR et al. 2013). This period is considered because the EIS extends only up to 2030. These changes were simulated in Bay-Delta hydrodynamics models, and their effect on the flow-salinity relationship in the Bay-Delta was incorporated into CalSim II modeling through the use of ANNs that were developed for the BDCP EIR/EIS (DWR et al 2013) for the same sea-level rise and physical Delta conditions.

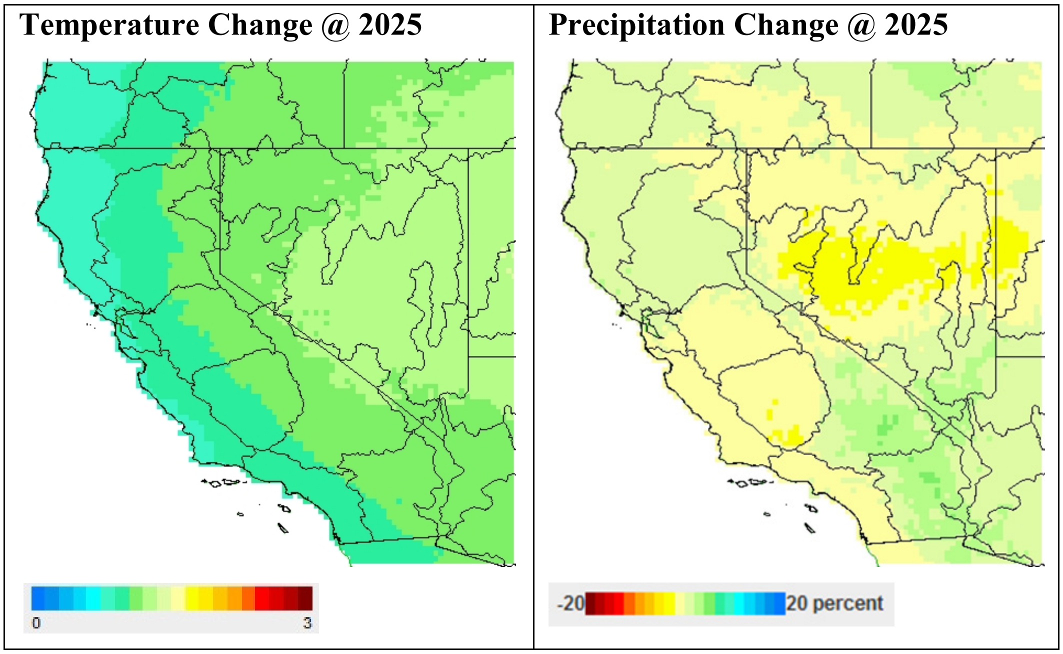
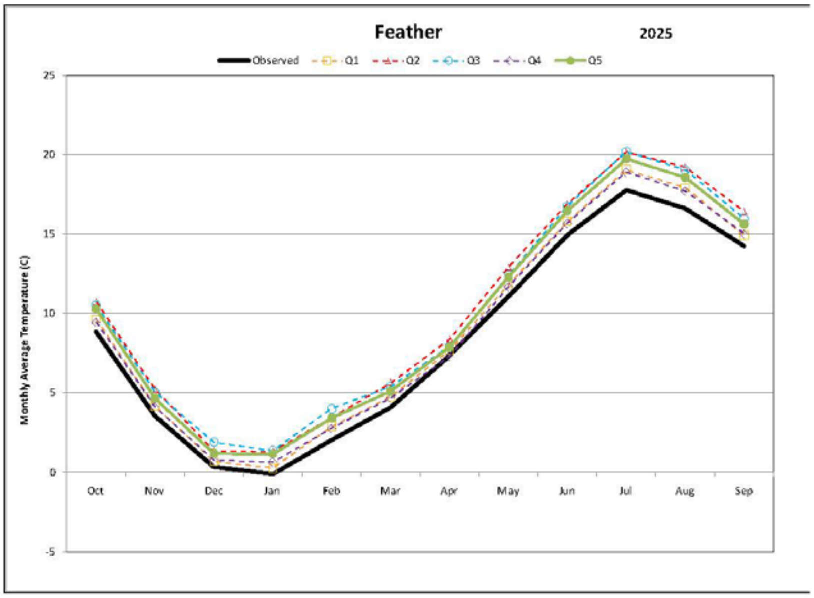


Figure 5A.A.5 Projected Changes in Annual Temperature (as degrees C) and Precipitation (as percent change) for the Period 2011-2040 (2025) as Compared to the 1971-2000 Historical Period

Derived from Daily Gridded Observed Meteorology (Maurer et al. 2002).



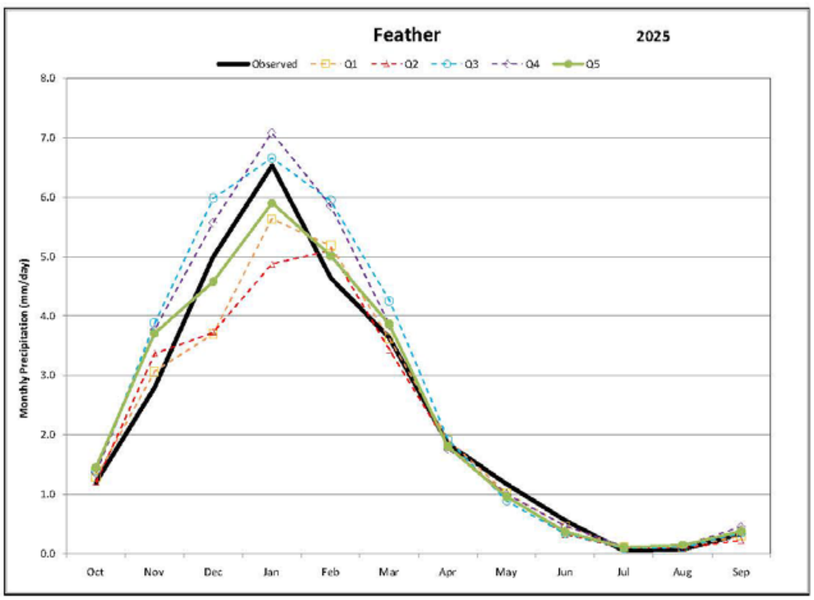


Figure 5A.A.6 Projected Changes in Seasonal Temperature (top) and Precipitation (bottom) for a Grid Cell in the Feather River Basin

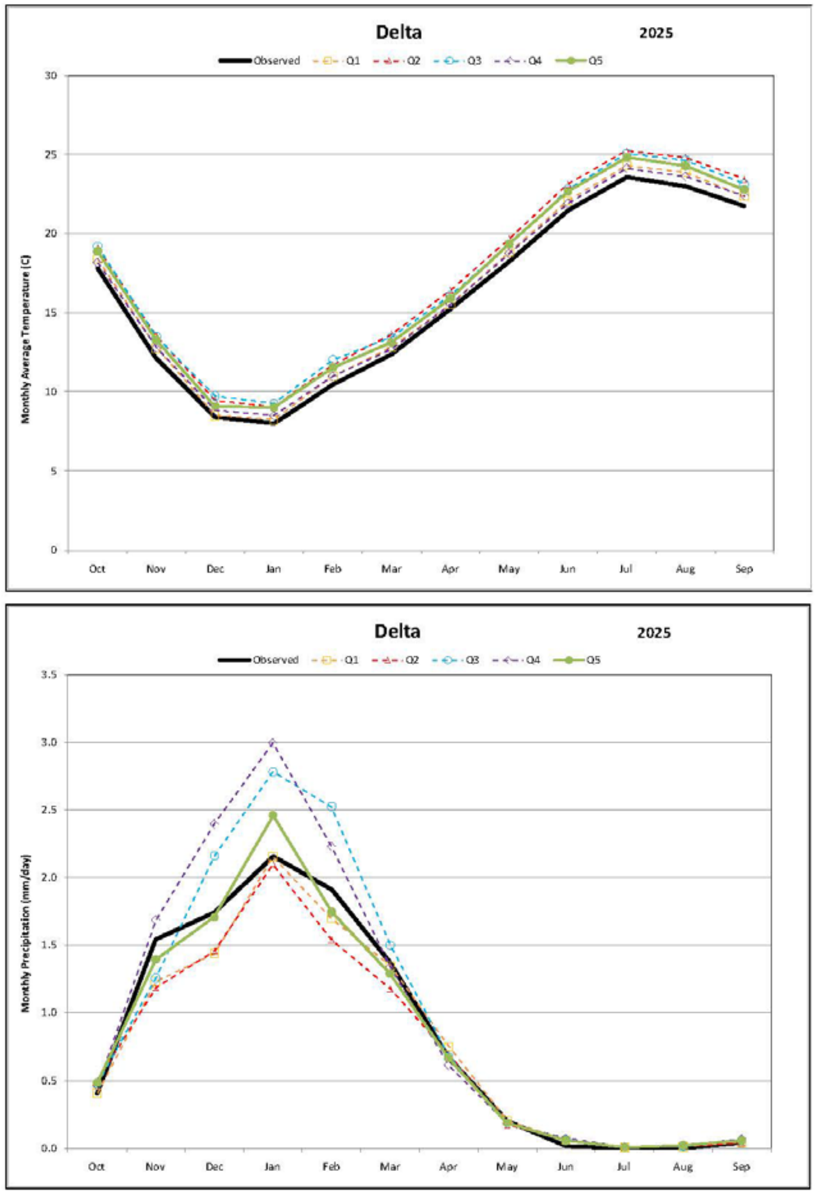


Figure 5A.A.7 Projected Changes in Seasonal Temperature (top) and Precipitation (bottom) for a Grid Cell in the Delta

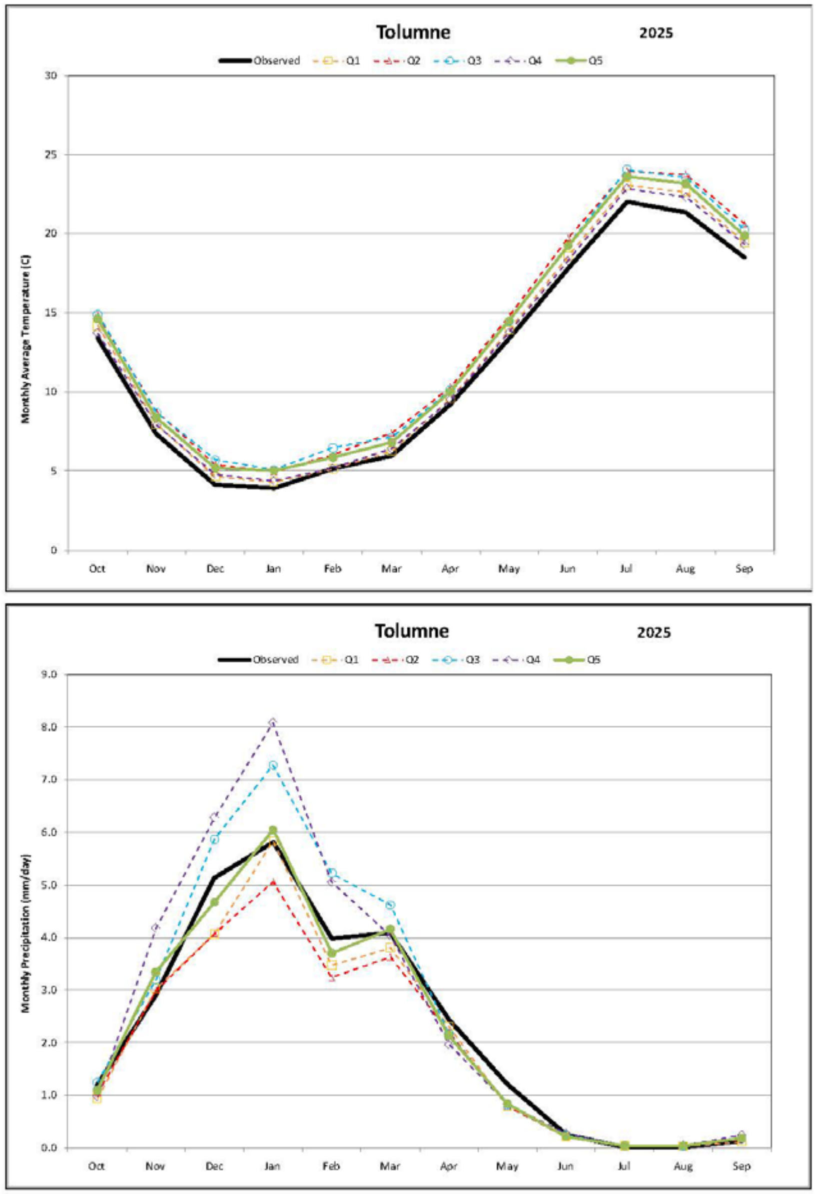


Figure 5A.A.8 Projected Changes in Seasonal Temperature (top) and Precipitation (bottom) for a Grid Cell in the Tuolumne River Basin

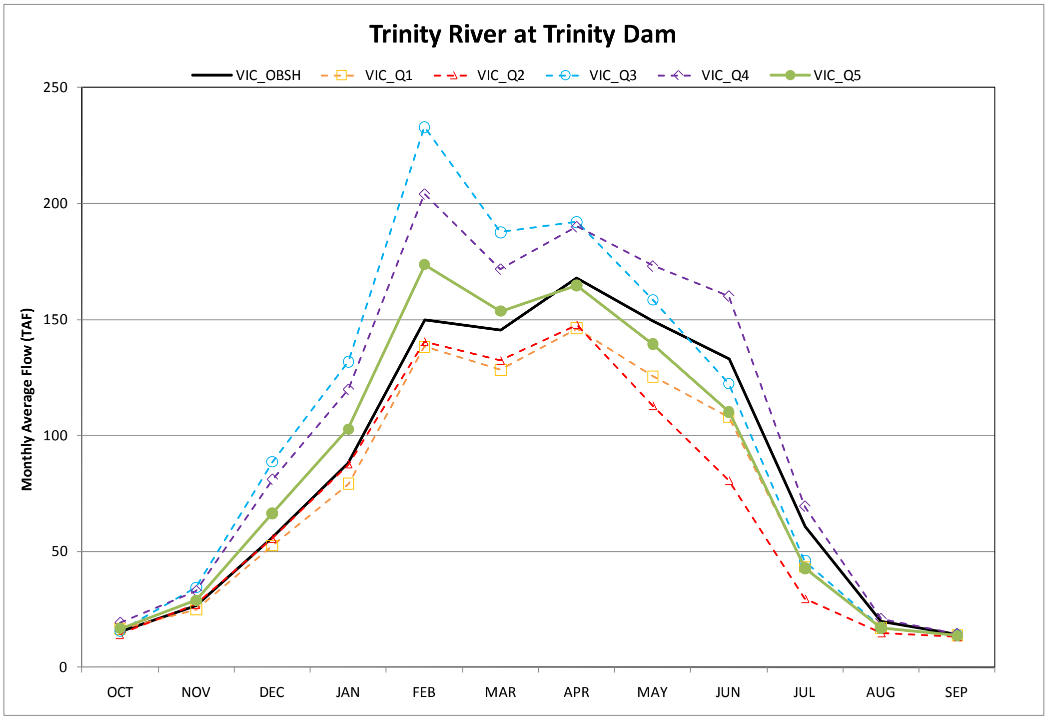


Figure 5A.A.9 Simulated Changes in Monthly Natural Streamflow for Trinity River at Trinity Dam (for the 2025 timeline)

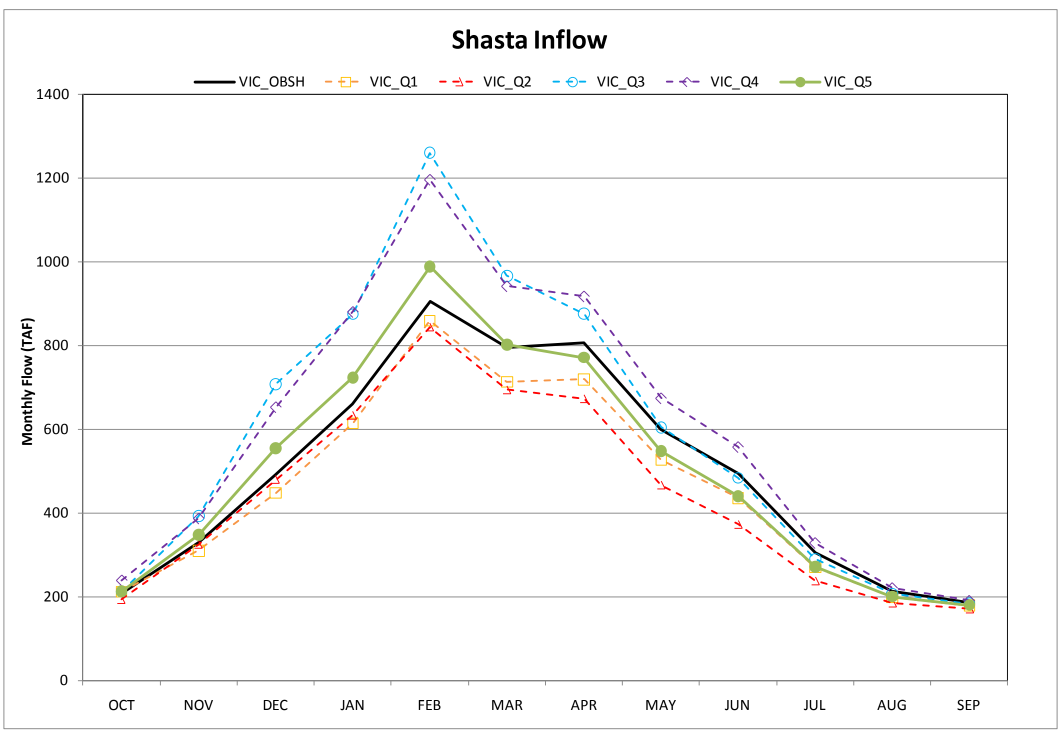


Figure 5A.A.10 Simulated Changes in Monthly Natural Streamflow for Shasta Inflow (for the 2025 timeline)

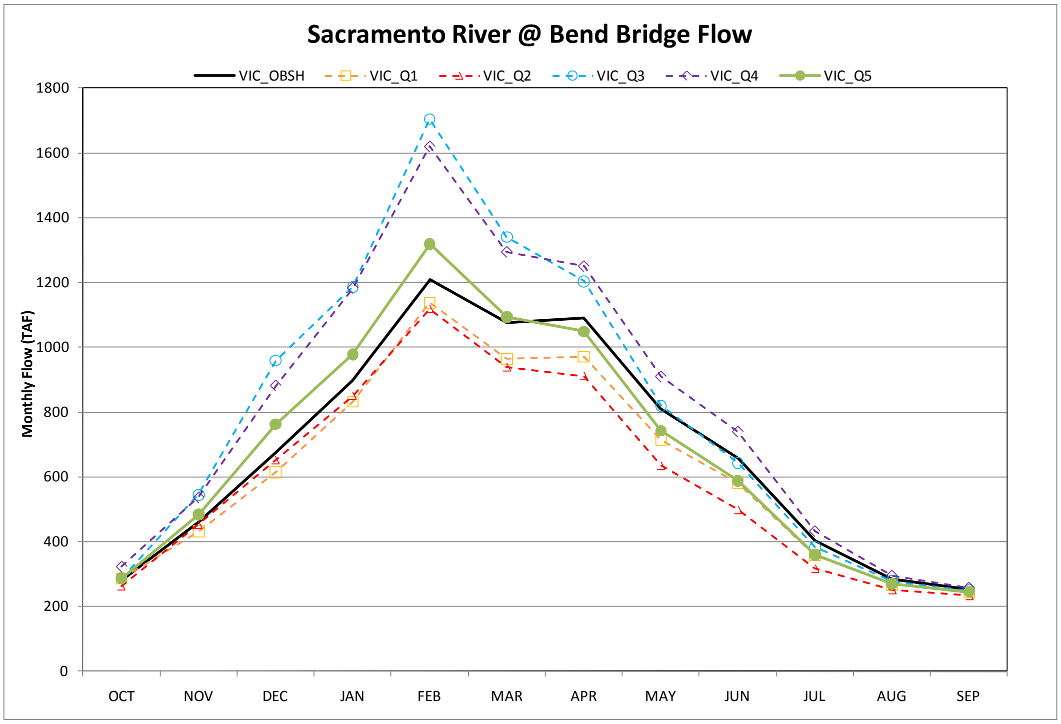


Figure 5A.A.11 Simulated Changes in Monthly Natural Streamflow for Sacramento River at Bend Bridge (for the 2025 timeline)

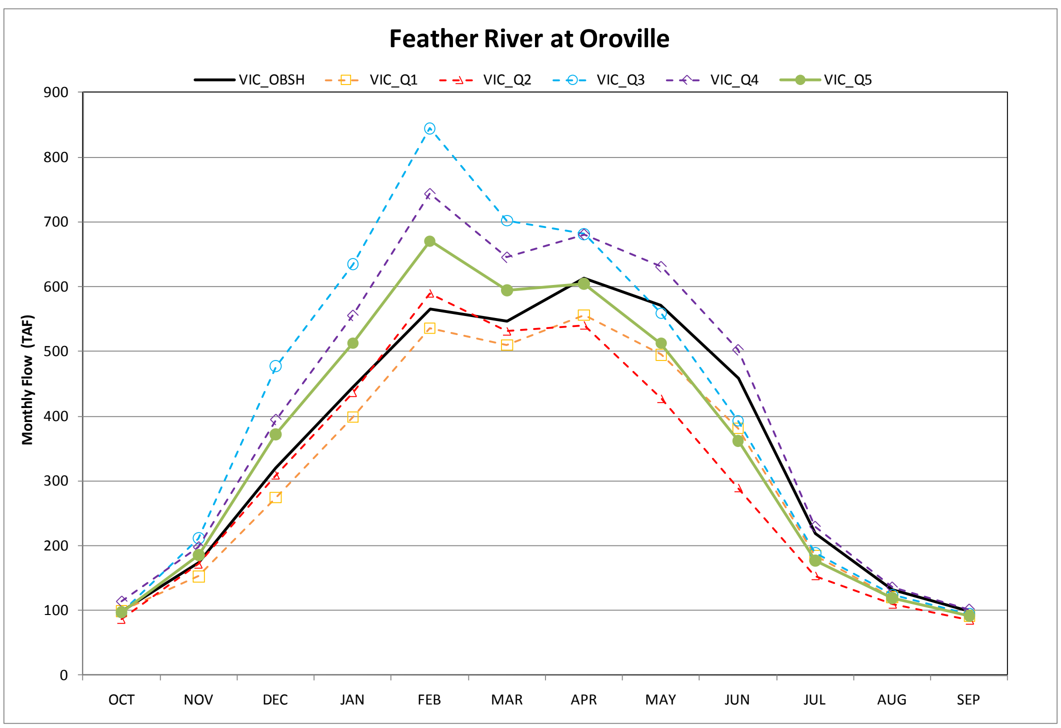


Figure 5A.A.12 Simulated Changes in Monthly Natural Streamflow for Feather River at Oroville (for the 2025 timeline)

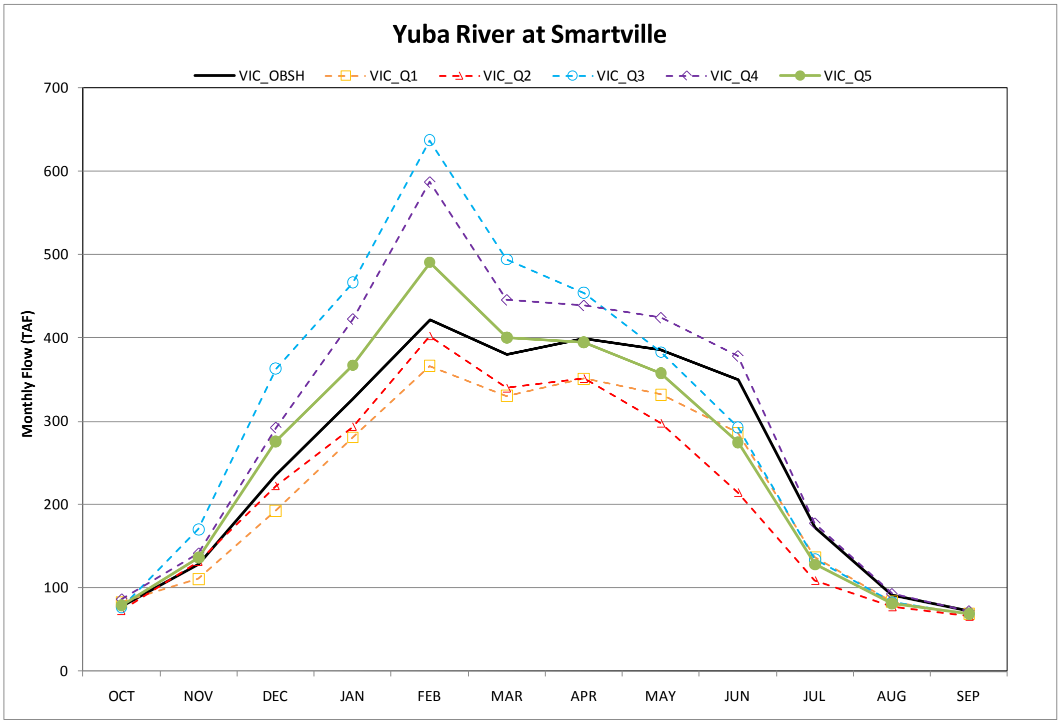


Figure 5A.A.13 Simulated Changes in Monthly Natural Streamflow for Yuba River at Smartville (for the 2025 timeline)

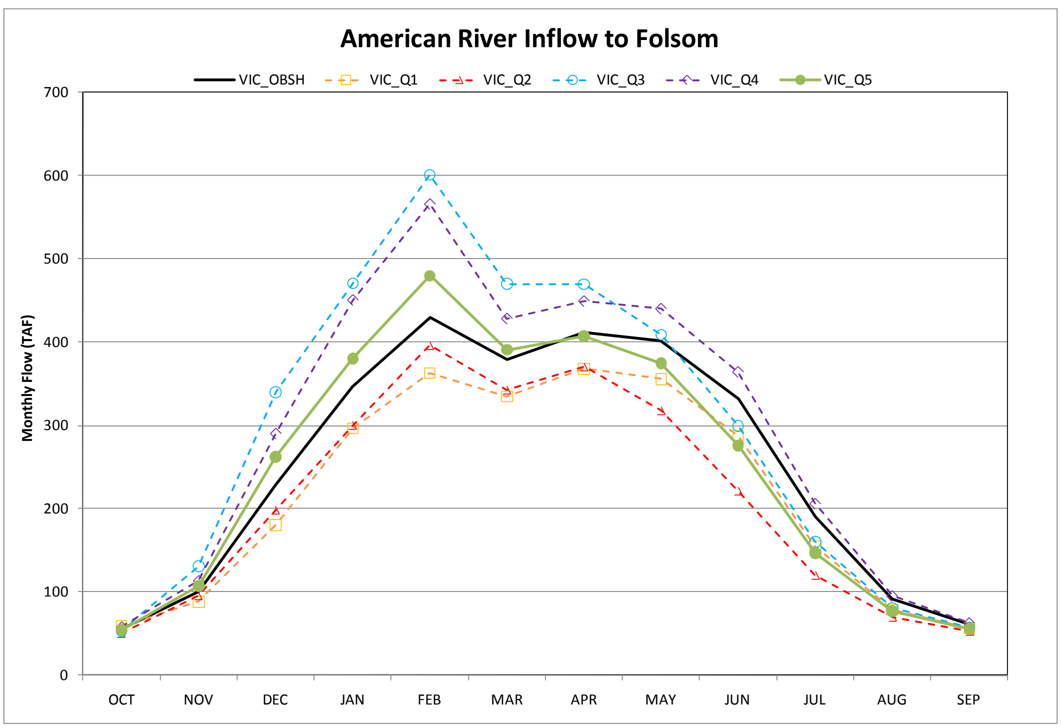


Figure 5A.A.14 Simulated Changes in Monthly Natural Streamflow for American River Inflow to Folsom (for the 2025 timeline)

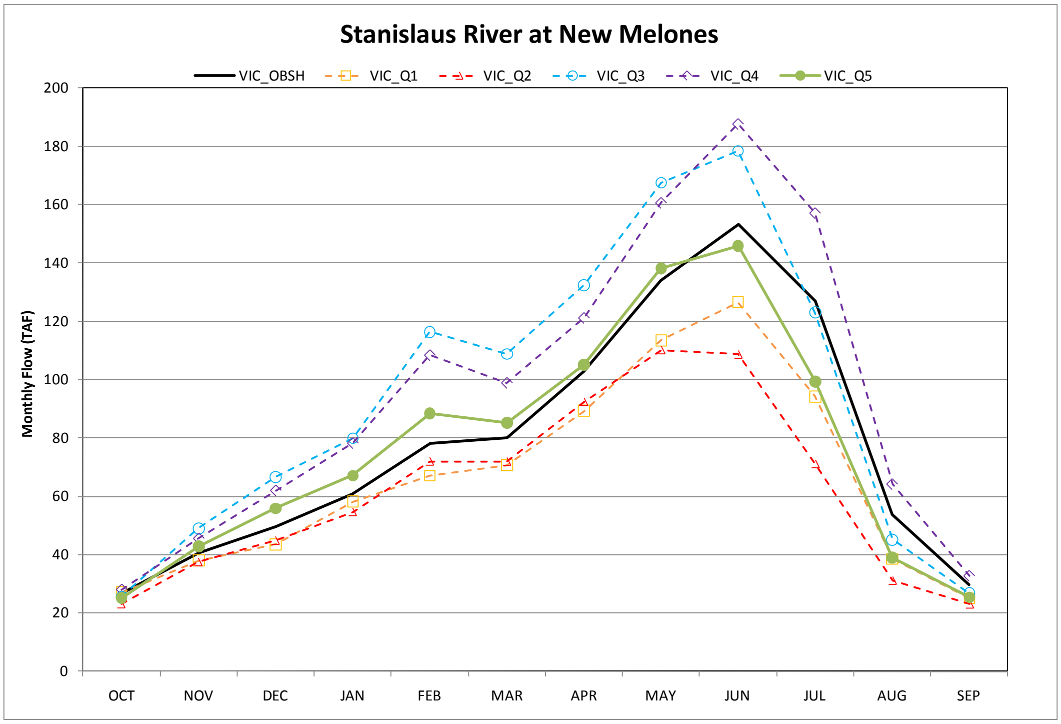


Figure 5A.A.15 Simulated Changes in Monthly Natural Streamflow for Stanislaus River at New Melones (for the 2025 timeline)

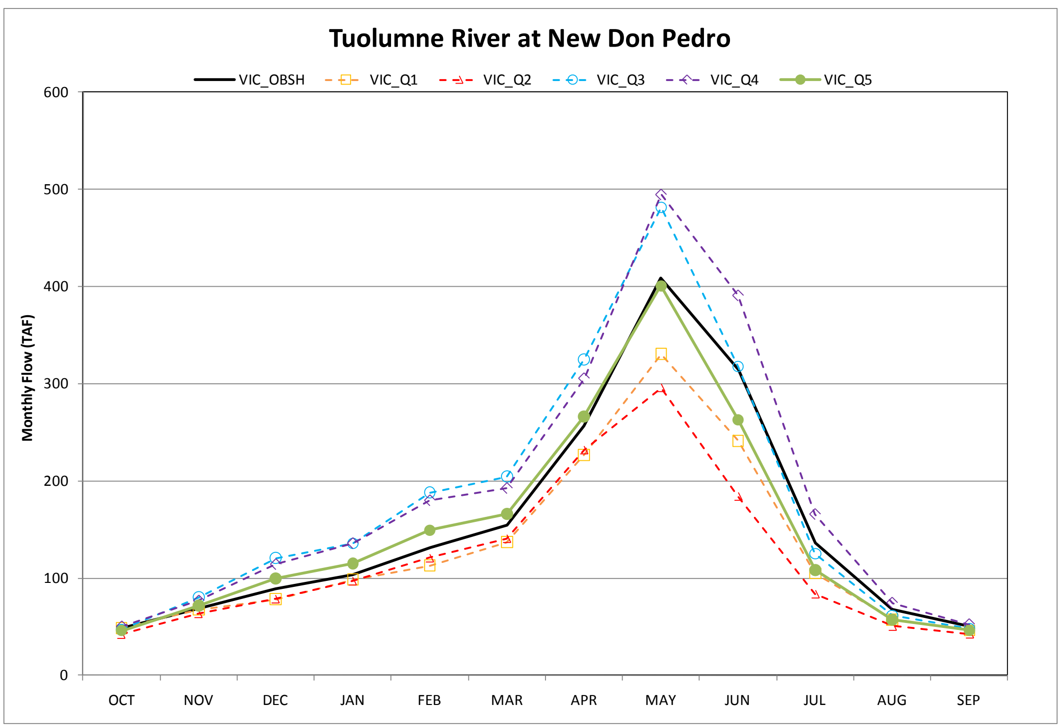


Figure 5A.A.16 Simulated Changes in Monthly Natural Streamflow for Tuolumne River at New Don Pedro (for the 2025 timeline)

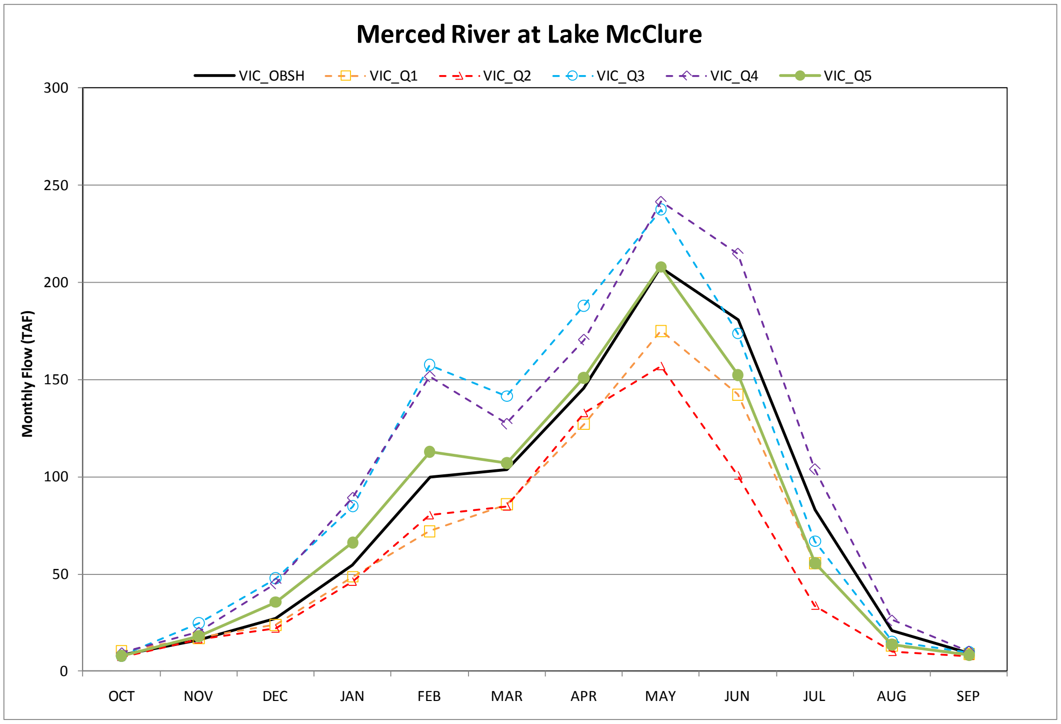


Figure 5A.A.17 Simulated Changes in Monthly Natural Streamflow for Merced River at Lake McClure (for the 2025 timeline)

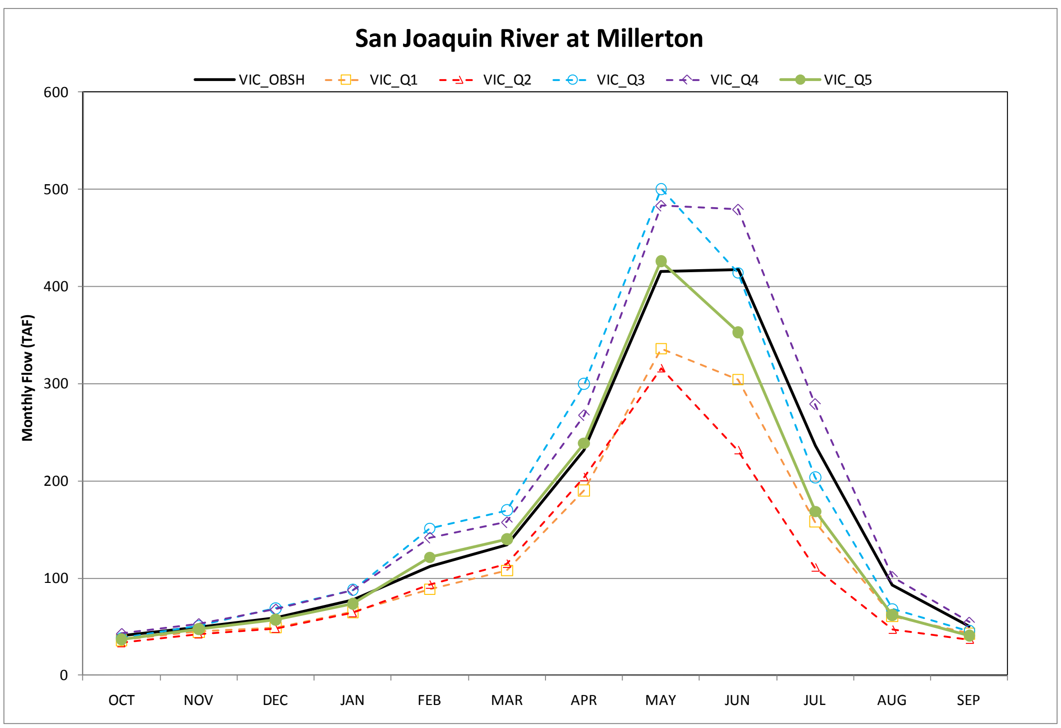


Figure 5A.A.18 Simulated Changes in Monthly Natural Streamflow for San Joaquin River at Millerton (for the 2025 timeline)

5A.A.5.4 Climate Change and Sea-Level Rise Modeling Limitations

GCMs represent different physical processes in the atmosphere, ocean, cryosphere, and land surface. GCMs are the most advanced tools currently available for simulating the response of the global climate system to increasing greenhouse gas concentrations. However, several of the important processes are either missing or inadequately represented in today's state-of-the-art GCMs. GCMs depict the climate using a three dimensional grid over the globe at a coarse horizontal resolution. A downscaling method is generally used to produce finer spatial scale that is more meaningful in the context of local and regional impacts than the coarse-scale GCM simulations.

In this study, downscaled climate projections using the Bias-correction and Spatial Disaggregation (BCSD) method is used (http://gdo-dcp.ucllnl.org/downscaled_cmip_projections/dcpInterface.html#About). The BCSD downscaling method is well tested and widely used, but it has some inherent limitations such as stationary assumptions used in the BCSD downscaling method (Maurer et al. 2007; Reclamation 2013) and also due to the fact that bias correction procedure employed in the BCSD downscaling method can modify climate model simulated precipitation changes (Maurer and Pierce, 2014). The downscaling method also carries some of the limitations applicable to native GCM simulations.

A median climate change scenario that was based on more than a hundred climate change projections was used for characterizing the future climate condition for the purposes of the EIS. Although projected changes in future climate contain significant uncertainty through time, several studies have shown that use of the median climate change condition is acceptable (for example, Pierce et al. 2009). The median climate change is considered appropriate for the EIS because of the comparative nature of the NEPA analysis. Therefore, a sensitivity analysis using the different climate change conditions was not conducted for this study.

Projected change in stream flow is calculated using the VIC macroscale hydrologic model. The use of the VIC model is primarily intended to generate changes in inflow magnitude and timing for use in subsequent CalSim II modeling. While the model contains several sub-grid mechanisms, the coarse grid scale should be noted when considering results and analysis of local-scale phenomena. The VIC model is currently best applied for the regional-scale hydrologic analyses. There are several limitations to long-term gridded meteorology related to spatial-temporal interpolation due to limited availability of meteorological stations that provide data for interpolation. In addition, the inputs to the model do not include any transient trends in the vegetation or water management that may affect stream flows; they should only be analyzed from a "naturalized" flow change standpoint. Finally, the VIC model includes three soil zones to capture the vertical movement of soil moisture, but does not explicitly include groundwater. The exclusion of deeper groundwater is not likely a limiting factor in the upper watersheds of the Sacramento and San Joaquin river watersheds that contribute approximately 80 to 90 percent of the runoff to the Delta. However, in the valley floor, interrelation of groundwater and surface water management is considerable. Water management models such as CalSim II should be used to characterize the heavily "managed" portions of the system.

5A.A.6 References

Anderson, J. 2003. Chapter 14: DSM2 Fingerprinting Methodology. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 24th Annual Progress Report to the State Water Resources Control Board.*

Anderson, J., and M. Mierzwa. 2002. DSM2 tutorial—an introduction to the Delta Simulation Model II (DSM2) for simulation of hydrodynamics and water quality of the Sacramento–San Joaquin Delta. Draft. February. Delta Modeling Section, Office of State Water Project Planning, California Department of Water Resources

Ateljevich, E. 2001a. Chapter 10: Planning tide at the Martinez boundary. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 22nd Annual Progress Report to the State Water Resources Control Board*.

_____. 2001b. Chapter 11: Improving salinity estimates at the Martinez boundary. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 22nd Annual Progress Report to the State Water Resources Control Board*.

_____., and M. Yu. 2007. Chapter 4: Extended 82-year Martinez planning tide. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 28th Annual Progress Report to the State Water Resources Control Board*.

CALFED (CALFED Independent Science Board). 2007. Projections of Sea Level Rise for the Delta. A memo from Mike Healey, CALFED lead scientist, to John Kirlin, Executive Director of the Delta Blue Ribbon Task Force, September 6, 2007.

Cayan D, T. M, Dettinger, H. Hidalgo, T. Das, E. Maurer, P. Bromirski, N. Graham, and R. Flick. 2009. *Climate Change Scenarios and Sea Level Rise Estimates for the California 2008 Climate Change Scenarios Assessment*.

CO-CAT. 2013. *State of California Sea-Level Rise Guidance Document*. Developed by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), with science support provided by the Ocean Protection Council's Science Advisory Team and the California Ocean Science Trust. March 2013 update. Available at: http://www.opc.ca.gov/webmaster/ftp/pdf/docs/2013_SLR_Guidance_Update_FINAL1.pdf.

Draper, A.J., A. Munévar, S. K. Arora, E. Reyes, N. L. Parker, F. I. Chung, and L. E. Peterson. 2004. CalSim: Generalized Model for Reservoir System Analysis. *American Society of Civil Engineers, Journal of Water Resources Planning and Management* Vol. 130, No. 6.

DSM2PWT. 2001. *Enhanced Calibration and Validation of DSM2 HYDRO and QUAL.* Draft Final Report, Interagency Ecological Program for the Sacramento-San Joaquin Estuary. November.

DWR (California Department of Water Resources). 1997. Chapter 2: DSM2 Model Development. In *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 18th Annual Progress Report to the State Water Resources Control Board.*

DWR (California Department of Water Resources). 2009. DSM2 Recalibration. October 2009.

DWR (California Department of Water Resources), Bureau of Reclamation, U.S. Fish and Wildlife Service, and National Marine Fisheries Service. 2013. *Environmental Impact Report/Environmental Impact Statement for the Bay Delta Conservation Plan. Draft*. December.

IPCC (Intergovernmental Panel on Climate Change). 2007. *Climate Change 2007: The Physical Science Basis.* Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Edited by S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor, and H. L. Miller. Cambridge University Press, Cambridge, United Kingdom, and New York, NY, USA. 996 pp.

Kiparsky, M., and P. H. Gleick. 2003. *Climate Change and California Water Resources: A Survey and Summary of the Literature.*

Lower Colorado River Authority. 2008. *Climate Change Study, Report on Evaluation Methods and Climate Scenarios. Lower Colorado River Authority – San Antonio Water System*.

Maurer, E.P., A.W. Wood, J. D. Adam, D. P. Lettenmaier, and B. Nijssen. 2002. A long-term hydrologically-based data set of land surface fluxes and states for the conterminous United States. *Journal Climate* 15(22):3237-3251.

Maurer, E. P., L. Brekke, T. Pruitt, and P. B. Duffy. 2007. Fine-resolution climate projections enhance regional climate change impact studies. *Eos Trans. AGU* 88(47), 504.

Maurer, E. P., and D. W Pierce. 2014. Bias correction can modify climate model simulated precipitation changes without adverse effect on the ensemble mean. *Hydrol. Earth Syst. Sci.* 18, 915-925, doi:10.5194/hess-18-915-2014.

Mahadevan, N. 1995. *Estimation of Delta Island Diversions and Return Flows*. California Department of Water Resources, Division of Planning. February.

Nader-Tehrani, P. 1998. Chapter 2: DSM2-HYDRO. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 19th Annual Progress Report to the State Water Resources Control Board.*

NAS (National Academy of Sciences). 2006. *Surface Temperature Reconstructions for the Last 2,000 Years*. National Academies Press.

NOAA (National Oceanic and Atmospheric Administration) Center for Operational Oceanographic Products and Services. 2012. NOAA Tides & Currents website. http://tidesandcurrents.noaa.gov/sltrends/.

NRC (National Research Council). 1987. *Responding to Changes in Sea Level: Engineering Implications*.

____. 2012. *Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future.* Committee on Sea Level Rise in California, Oregon, and Washington. Board on Earth Sciences and Resources; Ocean Studies Board; Division on Earth and Life Studies.

Pandey, G. 2001. Chapter 3: Simulation of Historical DOC and UVA Conditions in the Delta. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 22nd Annual Progress Report to the State Water Resources Control Board*.

Pierce, D. W., T. P. Barnett, B. D. Santer, and P. J. Gleckler. 2009. Selecting global climate models for regional climate change studies. *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.0900094106.

Rajbhandari, H. 1998. Chapter 3: DSM2-QUAL. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 19th Annual Progress Report to the State Water Resources Control Board.*

Rajbhandari, H. 2003. Chapter 3: Extending DSM2-QUAL Calibration of Dissolved Oxygen. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 24th Annual Progress Report to the State Water Resources Control Board.*

Rahmstorf, S. 2007. A semi-empirical approach to projecting future sea level. *Science* Vol. 315. January.

Reclamation (Bureau of Reclamation). 2008a. *2008 Central Valley Project and State Water Project Operations Criteria and Plan Biological Assessment,* Appendix D CalSim II Model. May.

_____. 2008b. *2008 Central Valley Project and State Water Project Operations Criteria and Plan Biological Assessment,* Appendix F DSM2 Model. May.

_____. 2008c. *2008 Central Valley Project and State Water Project Operations Criteria and Plan Biological Assessment,* Appendix W: Sensitivity and Uncertainty Analysis.

_____. 2010. *Climate Change and Hydrology Scenarios for Oklahoma Yield Studies*. Technical Memorandum 86-68210-2010-01. April.

_____. 2013. *Downscaled CMIP3 and CMIP5 Climate Projections*. http://gdo-dcp.ucllnl.org/downscaled_cmip_projections/techmemo/downscaled_climate.pdf.

RMA (Resource Management Associates, Inc.), 2010. *Numerical Modeling in Support of Bay Delta Conservation Plan Technical Study #4 – Evaluation of Tidal Marsh Restoration Effects Analysis*.

Sandhu, N., D. Wilson, R. Finch, and F. Chung. 1999. *Modeling Flow-Salinity Relationships in the Sacramento-San Joaquin Delta Using Artificial Neural Networks*. Technical Information Record OSP-99-1, Sacramento: California Department of Water Resources.

Seneviratne, S., and S. Wu. 2007. Chapter 3: Enhanced Development of Flow-Salinity Relationships in the Delta Using Artificial Neural Networks: Incorporating Tidal Influence. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 28th Annual Progress Report to the State Water Resources Control Board*.

USACE (U.S. Army Corps of Engineers). 2011. *Sea-level Change Considerations for Civil Works Programs*. Circular 1165-2-212. November.

_____. 2013. *Incorporating Sea-level Change in Civil Works Programs.* Circular 1100-2-8162. 31 December.

USGCRP (U.S. Global Change Research Program). 2013. U.S. National Climate Assessment (NCA) report. Available at: http://ncadac.globalchange.gov/

Vermeer, M., and S. Rahmstorf. 2009. Global sea level linked to global temperatures. *Proceedings of the National Academy of Sciences*.

Wilbur, R., and A. Munévar. 2001. Chapter 7: Integration of CalSim and Artificial Neural Networks Models for Sacramento-San Joaquin Delta Flow-Salinity Relationships. *Methodology for Flow and Salinity Estimates in the Sacramento-San Joaquin Delta and Suisun Marsh, 22nd Annual Progress Report to the State Water Resources Control Board*.

Appendix 5A, Section B

CalSim II and DSM2 Modeling Simulations and Assumptions

This section summarizes the modeling simulations and assumptions for the No Action Alternative, Second Basis of Comparison, and Alternatives 1 through 5 in this Environmental Impact Statement (EIS). Appendix 5A, Section B, is organized as follows:

- Introduction
- Assumptions for the No Action Alternative and Second Basis of Comparison Model Simulations
  - No Action Alternative
  - Second Basis of Comparison
- Assumptions for Alternatives Model Simulations
  - Alternative 3
  - Alternative 5
  - Summary of Alternatives Assumptions
- Timeframe of Evaluation
- No Action Alternative and Second Basis of Comparison Assumptions Tables
  - CalSim II Assumptions
  - (DSM2 Assumptions
- American River Demands
- Delivery Specifications
- U.S. Fish and Wildlife Service (USFWS) Reasonable and Prudent Alternative (RPA) Implementation
- National Marine Fisheries Service (NMFS) RPA Implementation
- References

5A.B1 Introduction

As described in Appendix 5A, Section A, modeling was prepared for evaluation of the alternatives considered in this EIS. This section describes the assumptions for the CalSim II and DSM2 modeling of the No Action Alternative, Second Basis of Comparison, and Alternatives 1 through 5.

The following model simulations were prepared as the basis for evaluating the impacts of the other alternatives at 2030 projected conditions:

- No Action Alternative

- Second Basis of Comparison
- Alternative 1 – Same as the Second Basis of Comparison
- Alternative 2 – Only operational components of the No Action Alternative (same modeling assumptions as the No Action Alternative)
- Alternative 3 –Discussed further in this section
- Alternative 4 – Similar to Second Basis of Comparison with actions to improve aquatic resource conditions (same modeling assumptions as the Second Basis of Comparison)
- Alternative 5 – Discussed further in this section

The No Action Alternative and Second Basis of Comparison assumptions were developed by the Bureau of Reclamation (Reclamation). Alternative 2 assumptions were defined in the Notice of Intent. Assumptions for Alternatives 3, 4, and 5 were developed in consideration of comments received during the scoping process.

The No Action Alternative and Second Basis of Comparison models were developed by Reclamation. Other alternatives were simulated using these two CalSim II simulations and implementing changes in assumptions from either the No Action Alternative or the Second Basis of Comparison.

Alternative 1 and Alternative 4 modeling assumptions are the same as the Second Basis of Comparison, and Alternative 2 modeling assumptions are the same as the No Action Alternative; therefore, the assumptions for those alternatives will not be discussed separately in this document.

CalSim II and DSM2 model representation of the RPAs in the 2008 USFWS and 2009 NMFS Biological Opinions (BOs) is consistent with the model representation developed in 2009 through a coordinated process with the Federal and state agencies.

5A.B2 Assumptions for the No Action Alternative and the Second Basis of Comparison Model Simulations

This section presents the assumptions used in developing the CalSim II and DSM2 model simulations of the No Action Alternative and the Second Basis of Comparison for use in the EIS evaluation.

The assumptions were selected to satisfy National Environmental Policy Act requirements. The basis for these assumptions is described in Chapter 3, Description of Alternatives. Assumptions that were applied to the CalSim II and DSM2 modeling are included in the following section.

The No Action Alternative assumptions represent the continuation of existing policy and management direction at Year 2030 and include implementation of water operations components of the RPA actions specified in the 2008 USFWS BO and 2009 NMFS BO.

The Second Basis of Comparison was developed due to the identified need during scoping comments for a basis of comparison that would occur without the RPAs. The Second Basis of Comparison assumptions do not include most of the RPAs. They do, however, include actions that are constructed (e.g., Red Bluff Pumping Plant), implemented (e.g., Suisun Marsh Habitat Management, Preservation, and Restoration Plan), or legislatively mandated (e.g., San Joaquin River Restoration Plan), and those that have undergone a substantial degree of progress (e.g., Yolo Bypass Salmonid Habitat Restoration and Fish Passage).

The detailed assumptions used in developing CalSim II and DSM2 simulations of the No Action Alternative and Second Basis of Comparison are included in Section 5A.B.5. Additional information is provided in the table footnotes of each table. Table entries and footnotes make reference to supporting appendix sections and other documents.

5A.B2.1 No Action Alternative

The No Action Alternative was developed assuming projected Year 2030 conditions. The No Action Alternative assumptions include existing facilities and ongoing programs that existed as of March 28, 2012, publication date of the Notice of Intent. The No Action Alternative assumptions also include facilities and programs that received approvals and permits by March 2012 because those programs were consistent with the existing management direction of the Notice of Intent. The No Action Alternative models do not include any potential future habitat restoration areas due to the uncertainty on system effects depending on potential locations of such areas within the Delta.

The No Action Alternative includes projected climate change and sea-level rise assumptions corresponding to the Year 2030. Climate change results in the changes in the reservoir and tributary inflows included in CalSim II. The sea-level rise changes result in modified flow salinity relationships in the Delta. The climate change and sea-level rise assumptions at Year 2030 are described in detail in Section 5A.B.4. The CalSim II simulation for the No Action Alternative does not consider any adaptation measures that would result in managing the Central Valley Project (CVP) and State Water Project (SWP) system in a different manner than it is managed today to reduce climate impacts. For example, future changes in reservoir flood control reservation to better accommodate a seasonally changing hydrograph may be considered under future programs, but are not considered under the EIS.

5A.B2.1.1 CalSim II Assumptions for the No Action Alternative Hydrology

5A.B2.1.1.1 Inflows/Supplies

The CalSim II model includes the historical hydrology projected to Year 2030 under the climate change and with projected 2020 modifications for operations upstream of the rim reservoirs.

Level of Development

CalSim II uses a hydrology that is the result of an analysis of agricultural and urban land use and population estimates. The assumptions used for Sacramento Valley land use result from aggregation of historical survey and projected data developed for the California Water Plan Update (Bulletin 160-98). Generally, land-use projections are based on Year 2020 estimates (hydrology serial number 2020D09E); however, the San Joaquin Valley hydrology reflects draft 2030 land-use assumptions developed by Reclamation. Where appropriate, Year 2020 projections of demands associated with water rights and CVP and SWP water service contracts have been included. Specifically, projections of full buildout are used to describe the American River region demands for water rights and CVP contract supplies, and California Aqueduct and the Delta Mendota Canal CVP and SWP contractor demands are set to full contract amounts.

Demands, Water Rights, and CVP and SWP Contracts

CalSim II demand inputs are preprocessed monthly time series for a specified level of development (e.g., 2020) and according to hydrologic conditions. Demands are classified as CVP project, SWP project, local project, or non-project. CVP and SWP demands are separated into different classes based on the contract type. A description of various demands and classifications included in CalSim II is provided in the 2008 Operations Criteria and Plan (OCAP) Biological Assessment (BA) Appendix D (Reclamation 2008a).

Table 5A.B.1 below includes the summary of the CVP and SWP project demands in thousand acre feet (TAF) included under the No Action Alternative. A detailed description of American River demands assumed under the No Action Alternative is provided in Section 5A.B.7. For SWP entitlement contractors, full Table A demands are assumed every year. The demand assumptions are not modified for changes in climate conditions.

The detailed listing of CVP and SWP contract amounts and other water rights assumptions for the No Action Alternative are included in the delivery specification tables in Section 5A.B.9.

Table 5A.B.1 Summary of CVP and SWP Demands (TAF/Year) under No Action Alternative

Project Contractor Type	North-of-the-Delta	South-of-the-Delta
CVP Contractors		
Settlement/Exchange	2,194	840
Water Service Contracts	935	2,101
Agriculture	378	1,937
M&I	557	164
Refuges	189	281
SWP Contractors		

Project Contractor Type	North-of-the-Delta	South-of-the-Delta
Feather River Service Area	983	–
Table A	114	4,055
Agriculture	0	1,017
M&I	114	3,038

Notes:
Urban demands noted above are for full buildout conditions.
M&I = municipal and industrial

5A.B2.1.1.2 Facilities

CalSim II includes representation of all the existing CVP and SWP storage and conveyance facilities. Assumptions regarding selected key facilities are included in the callout tables in Section 5A.B.5.

CalSim II also represents the flood control weirs such as the Fremont Weir located along the Sacramento River at the upstream end of the Yolo Bypass. Rating curves for the existing weir are used to model the spills over the Fremont Weir. In addition, the No Action Alternative CalSim II model assumes an operable weir notch for the Fremont Weir as modeled in Alternative 4 in the Bay Delta Conservation Plan (BDCP) Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (DWR, Reclamation, USFWS, and NMFS 2013).

The No Action Alternative also includes the Freeport Regional Water Project, located along the Sacramento River near Freeport and the City of Stockton Delta Water Supply Project (30 million gallon/day [mgd] capacity).

A brief description of the key export facilities that are located in the Delta and included under the No Action Alternative run is provided below.

The Delta serves as a natural system of channels to transport river flows and reservoir storage to the CVP and SWP facilities in the south Delta, which export water to the projects' contractors through two pumping plants: CVP's C.W. Jones Pumping Plant and SWP's Harvey O. Banks Pumping Plant. The Jones and Banks pumping plants supply water to agricultural and urban users throughout parts of the San Joaquin Valley, South Lahontan, Southern California, Central Coast, and South San Francisco Bay Area regions.

The Contra Costa Canal and the North Bay Aqueduct supply water to users in the northeastern San Francisco Bay and Napa Valley areas.

Fremont Weir

Fremont Weir is a flood control structure located along the Sacramento River at the head of the Yolo Bypass. To enhance the potential benefits of the Yolo Bypass for various fish species, the Fremont Weir is assumed to be notched to provide increased seasonal floodplain inundation in all of the alternatives simulated for the EIS. It is assumed that an opening in the existing weir and operable gates are constructed at elevation 17.5 feet along with a smaller opening and operable gates at elevation 11.5 feet. Derivation of the rating curve for the elevation 17.5-feet opening used in the CalSim II model is described in Section 5A.B.4 of this appendix. The modeling approach used in CalSim II model to estimate the Fremont Weir spills using the daily patterned Sacramento River flow at Verona is provided in Section 5A.3.3.

CVP C.W. Bill Jones Pumping Plant (Tracy Pumping Plant) Capacity

The Jones Pumping Plant consists of six pumps, including one rated at 800 cubic feet/second (cfs), two at 850 cfs, and three at 950 cfs. Maximum pumping capacity is assumed to be 4,600 cfs with the 400 cfs Delta Mendota Canal (DMC)–California Aqueduct Intertie that became operational in July 2012.

SWP Banks Pumping Plant Capacity

SWP Banks pumping plant has an installed capacity of about 10,668 cfs (two units of 375 cfs, five units of 1,130 cfs, and four units of 1,067 cfs). The SWP water rights for diversions specify a maximum of 10,350 cfs, but the U.S. Army Corps of Engineers (USACE) permit for SWP Banks Pumping Plant allows a maximum pumping of 6,680 cfs. With additional diversions depending on Vernalis flows, the total diversion can go up to 8,500 cfs from December 15 to March 15. Additional capacity of 500 cfs (pumping limit up to 7,180 cfs) is allowed to reduce impact of NMFS BO Action 4.2.1 on the SWP.

Contra Costa Water District (CCWD) Intakes

The Contra Costa Canal originates at Rock Slough (about 4 miles southeast of Oakley) and terminates after 47.7 miles, at Martinez Reservoir. Historically, diversions at the unscreened Rock Slough facility (Contra Costa Canal Pumping Plant No. 1) have ranged from about 50 to 250 cfs. The canal and associated facilities are part of the CVP, but are operated and maintained by the Contra Costa Water District (CCWD). CCWD also operates a diversion on Old River and the Alternative Intake Project (AIP), the new drinking water intake at Victoria Canal, about 2.5 miles east of CCWD's intake on the Old River. CCWD can divert water to the Los Vaqueros Reservoir to store good quality water when available and supply to its customers.

5A.B2.1.1.3 Regulatory Standards

The regulatory standards that govern the operations of the CVP and SWP facilities under the No Action Alternative are briefly described below. Specific assumptions related to key regulatory standards are also outlined below.

Decision 1641 (D-1641) Operations

The State Water Resources Control Board (SWRCB) Water Quality Control Plan (WQCP) and other applicable water rights decisions, as well as other agreements, are important factors in determining the operations of both the CVP and SWP.

The December 1994 Accord committed the CVP and SWP to a set of Delta habitat protective objectives that were incorporated into the 1995 WQCP and later were implemented by Decision 1641 (D-1641). Significant elements in D-1641 include X2 standards, export/inflow (E/I) ratios, Delta water quality standards, real-time Delta Cross Channel operation, and San Joaquin flow standards.

Coordinated Operation Agreement (COA)

The CVP and SWP use a common water supply in the Central Valley of California. Reclamation and California Department of Water Resources (DWR) have built water conservation and water delivery facilities in the Central Valley in order to deliver water supplies to project contractors. The water rights of the projects are conditioned by the SWRCB to protect the beneficial uses of water within each respective project and jointly for the protection of beneficial uses in the Sacramento Valley and the Sacramento-San Joaquin Delta Estuary. The agencies coordinate and operate the CVP and SWP to meet the joint water right requirements in the Delta.

The Coordinated Operation Agreement (COA), signed in 1986, defines the project facilities and their water supplies, sets forth procedures for coordination of operations, identifies formulas for sharing joint responsibilities for meeting Delta standards as they existed in SWRCB Decision 1485 (D-1485), identifies how unstored flow will be shared, sets up a framework for exchange of water and services between the Projects, and provides for periodic review of the agreement.

Central Valley Project Improvement Act (CVPIA) (b)(2) Assumptions

The previous 2008 OCAP BA modeling included a dynamic representation of Central Valley Project Improvement Act (CVPIA) 3406(b)(2) water allocation, management, and related actions (B2). The selection of discretionary actions for use of B2 water in each year was based on a May 2003 U.S. Department of the Interior (the Department) policy decision. The use of B2 water is assumed to continue in conjunction with the USFWS and NMFS BO RPA actions. The CalSim II implementation used for modeling for the EIS does not dynamically account for the use of (b)(2) water, but rather assumes predetermined USFWS BO upstream fish objectives for Clear Creek, Sacramento River below Keswick Dam, and American River below Nimbus Dam, and a pulse period exports limit. Other (b)(2) actions are assumed to be accommodated by USFWS and NMFS BO RPA actions for the American River, Stanislaus River, and Delta export restrictions.

Continued CALFED Agreements

The Environmental Water Account (EWA) was established in 2000 by the CALFED Record of Decision (ROD). The EWA was initially identified as a 4-year cooperative effort intended to operate from 2001 through 2004, but was extended through 2007 by agreement between the EWA agencies. It is uncertain, however, whether the EWA will be in place in the future and what actions and assets it may include. Because of this uncertainty, the EWA has not been included in the current CalSim II implementation.

One element of the EWA available assets is the Lower Yuba River Accord (LYRA) Component 1 water. In the absence of the EWA and implementation in CalSim II, the LYRA Component 1 water is assumed to be transferred to south-of-Delta SWP contractors to help mitigate the impact of the NMFS BO on SWP exports during April and May. An additional 500 cfs of capacity is permitted at

Banks Pumping Plant from July through September to export this transferred water.

USFWS BO Actions

The USFWS BO was released on December 15, 2008, in response to Reclamation's request for formal consultation with the USFWS on the coordinated operations of the CVP and SWP in California. To develop CalSim II modeling assumptions for the RPA documented in this BO, DWR led a series of meetings that involved members of fisheries and project agencies. This group has prepared the assumptions and CalSim II implementations to represent the RPA in the No Action Alternative CalSim II simulation. The following actions of the USFWS BO RPA have been included in the No Action Alternative CalSim II simulations:

- Action 1: Adult Delta Smelt migration and entrainment (RPA Component 1, Action 1 – First Flush)
- Action 2: Adult Delta Smelt migration and entrainment (RPA Component 1, Action 2)
- Action 3: Entrainment protection of larval and juvenile Delta Smelt (RPA Component 2)
- Action 4: Estuarine habitat during Fall (RPA Component 3)
- Action 5: Temporary spring Head of Old River barrier (HORB) and the Temporary Barrier Project (RPA Component 2)

A detailed description of the assumptions that have been used to model each action is included in the technical memorandum "Representation of U.S. Fish and Wildlife Service Biological Opinion Reasonable and Prudent Alternative Actions for CalSim II Planning Studies," prepared by an interagency working group under the direction of the lead agencies. Reference information for this technical memorandum is included in Section 5A.B.10.

NMFS BO Salmon Actions

The NMFS Salmon BO on long-term operations of the CVP and SWP was released on June 4, 2009. To develop CalSim II modeling assumptions for the RPAs documented in this BO, DWR led a series of meetings that involved members of fisheries and project agencies. This group has prepared the assumptions and CalSim II implementations to represent the RPA in the No Action Alternative CalSim II simulations for future planning studies. The following NMFS BO RPAs have been included in the No Action Alternative CalSim II simulations:

- Action I.1.1: Clear Creek spring attraction flows
- Action I.4: Wilkins Slough operations
- Action II.1: Lower American River flow management
- Action III.1.4: Stanislaus River flows below Goodwin Dam

- Action IV.1.2: Delta Cross Channel gate operations
- Action IV.2.1: San Joaquin River flow requirements at Vernalis and Delta export restrictions
- Action IV.2.3: Old and Middle River flow management

For Action I.2.1, which calls for a percentage of years that meet certain specified end-of-September and end-of-April storage and temperature criteria resulting from the operation of Lake Shasta, no specific CalSim II modeling code is implemented to simulate the performance measures identified.

A detailed description of the assumptions that have been used to model each action is included in the technical memorandum “Representation of National Marine Fisheries Service Biological Opinion Reasonable and Prudent Alternative Actions for CalSim II Planning Studies,” prepared by an interagency working group under the direction of the lead agencies. This technical memorandum is included in the Section 5A.B.9.

Water Transfers

Lower Yuba River Accord (LYRA)

Acquisitions of Component 1 water under the Lower Yuba River Accord, and use of 500 cfs dedicated capacity at Banks Pumping Plant from July to September are assumed to be used to reduce as much of the impact of the April to May Delta export actions on SWP contractors as possible.

Phase 8 transfers

Phase 8 transfers are not included in the No Action Alternative simulation.

Short-term or Temporary Water Transfers

Short-term or temporary transfers such as Sacramento Valley acquisitions conveyed through Banks Pumping Plant are not included in the No Action Alternative simulation.

5A.B2.1.1.4 Specific Regulatory Assumptions

Lower American Flow Management

The American River Flow Management Standard (ARFMS) is included in the No Action Alternative, the Second Basis of Comparison, and all other alternatives in the EIS (Reclamation 2006).

Delta Outflow (Flow and Salinity)

SWRCB D-1641:

All flow-based Delta outflow requirements per SWRCB D-1641 are included in the No Action Alternative simulation. Similarly, for the February through June period, the X2 standard is included in the No Action Alternative simulation.

USFWS BO (December 2008) Action 4:

USFWS BO Action 4 requires additional Delta outflow to manage X2 in the fall months following Wet and Above Normal years to maintain an average X2 for September and October no greater (more eastward) than 74 kilometers following

Wet years and 81 kilometers following Above Normal years. In November, the inflow to CVP and SWP reservoirs in the Sacramento Basin should be added to reservoir releases to provide an added increment of Delta inflow and to augment Delta outflow up to the fall X2 target. This action is included in the No Action Alternative.

Combined Old and Middle River Flows

USFWS BO restricts south Delta pumping to preserve certain Old and Middle River (OMR) flows in three of its Actions: Action 1 to protect pre-spawning adult Delta Smelt from entrainment during the first flush, Action 2 to protect pre-spawning adults from entrainment and from adverse hydrodynamic conditions, and Action 3 to protect larval Delta Smelt from entrainment. CalSim II simulates these actions to a limited extent.

A brief description of USFWS BO Actions 1 through 3 implementations in CalSim II is as follows: Action 1 is onset based on a turbidity trigger that takes place during or after December. This action requires limit on exports so that the average daily OMR flow is no more negative than -2,000 cfs for a total duration of 14 days, with a 5-day running average no more negative than -2,500 cfs (within 25 percent of the monthly criteria). Action 1 ends after 14 days of duration or when Action 3 is triggered based on a temperature criterion. Action 2 starts immediately after Action 1 and requires a range of net daily OMR flows to be no more negative than -1,250 to -5,000 cfs (with a 5-day running average within 25 percent of the monthly criteria). Action 2 continues until Action 3 is triggered. Action 3 also requires net daily OMR flow to be no more negative than -1,250 to -5,000 cfs based on a 14-day running average (with a simultaneous 5-day running average within 25 percent). Although the range is similar to Action 2, the Action implementation is different. Action 3 continues until June 30, or when water temperature reaches a certain threshold. A more detailed description of the implementation of these actions is provided in Section 5A.B.8.

NMFS BO Action 4.2.3 requires OMR flow management to protect emigrating juvenile winter-run, yearling spring-run, and Central Valley Steelhead within the lower Sacramento and San Joaquin rivers from entrainment into south Delta channels and at the export facilities in the south Delta. This action requires reducing exports from January 1 through June 15 to limit negative OMR flows to -2,500 to -5,000 cfs. CalSim II assumes OMR flows required in NMFS BO are covered by OMR flow requirements developed for Actions 1 through 3 of the USFWS BO as described in Section 5A.B.8.

South Delta Export-San Joaquin River Inflow Ratio

NMFS BO Action 4.2.1 requires exports to be capped at a certain fraction of San Joaquin River flow at Vernalis during April and May while maintaining a health and safety pumping of 1,500 cfs.

Exports at the South Delta Intakes

Exports at Jones and Banks Pumping Plant are restricted to their permitted capacities per SWRCB D-1641 requirements. In addition, the south Delta exports are subject to Vernalis flow-based export limits during April and May as required by Action 4.2.1. An additional 500 cfs pumping is allowed to reduce the impact of NMFS BO Action 4.2.1 on SWP during the July through September period.

Under D-1641 the combined export of the CVP Tracy Pumping Plant and SWP Banks Pumping Plant is limited to a percentage of Delta inflow. The percentage ranges from 35 to 45 percent during February (depending on the January eight river index) and 35 percent during the months of March through June. For the rest of the months, 65 percent of the Delta inflow is allowed to be exported.

A minimum health and safety pumping of 1,500 cfs is assumed from January through June.

Delta Water Quality

The No Action Alternative simulation includes SWRCB D-1641 salinity requirements. However, not all salinity requirements are included as CalSim II is not capable of predicting salinities in the Delta. Instead, empirically based equations and models are used to relate interior salinity conditions with the flow conditions. DWR's Artificial Neural Network (ANN) is used to predict and interpret salinity conditions at the Emmaton, Jersey Point, Rock Slough, and Collinsville stations. Emmaton and Jersey Point standards are for protecting water quality conditions for agricultural use in the western Delta, and they are in effect from April 1 to August 15. The electrical conductivity (EC) requirement at Emmaton varies from 0.45 millimhos per centimeter (mmhos/cm) to 2.78 mmhos/cm, depending on the water year type. The EC requirement at Jersey Point varies from 0.45 to 2.20 mmhos/cm, depending on the water year type. The Rock Slough standard is for protecting water quality conditions for municipal and industrial (M&I) use for water exported through the Contra Costa Canal. It is a year-round standard that requires a certain number of days in a year with chloride concentration less than 150 milligrams per liter. The number of days requirement is dependent upon the water year type. The Collinsville standard is applied during October through May months to protect water quality conditions for migrating fish species, and it varies between 12.5 mmhos/cm in May and 19.0 mmhos/cm in October.

The sea-level rise change assumed at the Year 2030 results in a modified flow-salinity relationship in the Delta. An ANN, which is capable of emulating DSM2 results under the 15-cm sea-level rise condition at the Year 2030 is used to simulate the flow-salinity relationship in CalSim II simulation for the No Action Alternative.

San Joaquin River Restoration Program

Friant Dam releases required by the San Joaquin River Restoration Program are included in the No Action Alternative, the Second Basis of Comparison, and all other alternatives. A more detailed description of the San Joaquin River Restoration Program is presented in Appendix 3A, "No Action Alternative: Central Valley Project and State Water Project Operations".

5A.B2.1.1.5 Operations Criteria

Fremont Weir Operations

To provide seasonal floodplain inundation in the Yolo Bypass, the 17.5- and the 11.5-foot elevation gates are opened between December 1 and March 31. This may extend to May 15, depending on hydrologic conditions and measures to minimize land use and ecological conflicts in the bypass. As a simplification for modeling, the gates are assumed opened until April 30 in all years. The gates are operated to limit maximum spill to 6,000 cfs until the Sacramento River stage reaches the existing Fremont Weir crest elevation. When the river stage is at or above the existing Fremont Weir crest elevation, the notch gates are assumed to be closed. While desired inundation period is on the order of 30 to 45 days, gates are not managed to limit to this range; instead, the duration of the event is governed by the Sacramento River flow conditions. To provide greater opportunity for the fish in the bypass to migrate upstream into the Sacramento River, the 11.5-foot elevation gate is assumed to be open for an extended period between September 15 and June 30. As a simplification for modeling, the period of operation for this gate is assumed to be September 1 to June 30. The spills through the 11.5-foot elevation gate are limited to 100 cfs.

Delta Cross Channel Gate Operations

SWRCB D-1641 Delta Cross Channel (DCC) standards provide for closure of the DCC gates for fisheries protection at certain times of the year. From November through January, the DCC may be closed for up to 45 days. From February 1 through May 20, the gates are closed every day. The gates may also be closed for 14 days during the May 21 through June 15 time period. Reclamation determines the timing and duration of the closures after discussion with USFWS, California Department of Fish and Wildlife (DFW), and NMFS.

NMFS BO Action 4.1.2 requires gates to be operated as described in the BO based on the presence of salmonids and water quality from October 1 through December 14; gates should be closed from December 15 to January 31, except short-term operations to maintain water quality. CalSim II includes the NMFS BO DCC gate operations in addition to the D-1641 gate operations. When the daily flows in the Sacramento River at Wilkins Slough exceed 7,500 cfs (flow assumed to flush salmon into the Delta), DCC is closed for a certain number of days in a month as described in Section B-11. From October 1 to December 14, if the flow trigger condition is such that additional days of DCC gates closure is called for, however water quality conditions are a concern and the DCC gates remain open, then Delta exports are limited to 2,000 cfs for each day in question.

Allocation Decisions

CalSim II includes allocation logic for determining deliveries to north-of-Delta and south-of-Delta CVP and SWP contractors. The delivery logic uses runoff forecast information, which incorporates uncertainty in the hydrology and standardized rule curves (i.e. Water Supply Index versus Demand Index Curve). The rule curves relate forecasted water supplies to deliverable “demand,” and then use deliverable “demand” to assign subsequent delivery levels to estimate the water available for delivery and carryover storage. Updates of delivery levels occur monthly from January 1 through May 1 for the SWP and March 1 through May 1 for the CVP as runoff forecasts become more certain. The south-of-Delta SWP delivery is determined based on water supply parameters and operational constraints. The CVP system wide delivery and south-of-Delta delivery are determined similarly upon water supply parameters and operational constraints with specific consideration for export constraints.

San Luis Operations

CalSim II sets targets for San Luis storage each month that are dependent on the current South-of-Delta allocation and upstream reservoir storage. When upstream reservoir storage is high, allocations and San Luis fill targets are increased. During a prolonged drought when upstream storage is low, allocations and fill targets are correspondingly low. For the No Action Alternative simulation, the San Luis rule curve is managed to minimize situations in which shortages may occur due to lack of storage or exports.

New Melones Operations

In addition to flood control, New Melones is operated for four different purposes: fishery flows, water quality, Bay-Delta flow, and water supply.

Fishery

In the No Action Alternative simulation, fishery flows refer to flow requirements of the 2009 NMFS BO Action III.1.3. These flows are patterned to provide fall attraction flows in October and outmigration pulse flows in spring months (April 15 through May 15 in all years), and total up to 98.9 TAF to 589.5 TAF annually depending on the hydrological conditions based on the New Melones water supply forecast (the end-of-February New Melones Storage, plus the March through September forecast of inflow to the reservoir) (Tables 5A.B.2 through 5A.B.4).

Table 5A.B.2 Annual Fishery Flow Allocation in New Melones

New Melones Water Supply Forecast (TAF)	Fishery Flows (TAF)
0 to 1,399.9	185.3
1,400 to 1,999.9	234.1
2,000 to 2,499.9	346.7
2,500 to 2,999.9	483.7
≥ 3,000	589.5

Table 5A.B.3 Monthly "Base" Flows for Fisheries Purposes Based on the Annual Fishery Volume

Annual Fishery Flow Volume (TAF)	Monthly Fishery Base Flows (cfs)											
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. 1-15	May 16–31	June	July	Aug.	Sept.
98.9	110	200	200	125	125	125	250	250	0	0	0	0
185.3	577.4	200	200	212.9	214.3	200	200	150	150	150	150	150
234.1	635.5	200	200	219.4	221.4	200	500	284.4	200	200	200	200
346.7	774.2	200	200	225.8	228.6	200	1,471.4	1,031.3	363.3	250	250	250
483.7	796.8	200	200	232.3	235.7	1,521	1,614.3	1,200	940	300	300	300
589.5	841.9	300	300	358.1	364.3	1,648.4	2,442.9	1,725	1,100	429	400	400

Table 5A.B.4 April 15 through May 15 "Pulse" Flows for Fisheries Purposes Based on the Annual Fishery Volume

Annual Fishery Flow Volume (TAF)	Fishery Pulse Flows (cfs)	Fishery Pulse Flows (cfs)
	April 15-30	May 1-15
185.3	687.5	666.7
234.1	1,000.0	1,000.0
346.7	1,625.0	1,466.7
483.7	1,212.5	1,933.3
589.5	925.0	2,206.7

Water Quality

Water quality releases include releases to meet the SWRCB D-1641 salinity objectives at Vernalis and the Decision 1422 (D-1422) dissolved oxygen objectives at Ripon.

The Vernalis water quality requirement (SWRCB D-1641) is an EC requirement of 700 and 1000 mmhos/cm for the irrigation (April through August) and non-irrigation (September through March) seasons, respectively.

Additional releases are made to the Stanislaus River below Goodwin Dam if necessary, to meet the D-1422 dissolved oxygen content objective. Surrogate flows representing releases for dissolved oxygen requirement in CalSim II are presented in Table 5A.B.5. The surrogate flows are reduced for critical years where New Melones water supply forecast (the end-of-February New Melones Storage, plus the March through September forecast of inflow to the reservoir) is less than 940 TAF. These flows are met through releases from New Melones without any annual volumetric limit.

Table 5A.B.5 Surrogate Flows for D1422 DO Requirement at Vernalis (TAF)

	Non-Critical Years	Critical Years
January	0.0	0.0
February	0.0	0.0
March	0.0	0.0
April	0.0	0.0
May	0.0	0.0
June	15.2	11.9
July	16.3	12.3
August	17.4	12.3
September	14.8	11.9
October	0.0	0.0
November	0.0	0.0
December	0.0	0.0

Bay-Delta Flows

Bay-Delta flow requirements are defined by D-1641 flow requirements at Vernalis (not including pulse flows during the April 15 through May 16 period). These flows are met through releases from New Melones without any annual volumetric limit.

D-1641 requires the flow at Vernalis to be maintained during the February through June period. The flow requirement is based on the required location of X2 and the San Joaquin Valley water year hydrologic classification (60-20-20 Index), as summarized in Table 5A.B.6.

Table 5A.B.6 Bay-Delta Vernalis Flow Objectives (average monthly cfs)

60-20-20 Index	Flow Required if X2 is West of Chipps Island	Flow required if X2 is East of Chipps Island
Wet	3,420	2,130
Above Normal	3,420	2,130
Below Normal	2,280	1,420
Dry	2,280	1,420
Critical	1,140	710

Water Supply

Water supply refers to deliveries from New Melones to water rights holders (Oakdale Irrigation District [ID] and South San Joaquin ID) and CVP eastside contractors (Stockton East Water District [WD] and Central San Joaquin Water Control District [WCD]).

Water is provided to Oakdale ID and South San Joaquin ID in accordance with their 1988 Settlement Agreement with Reclamation (up to 600 TAF based on hydrologic conditions), limited by consumptive use. The conservation account of up to 200 TAF storage capacity defined under this agreement is not modeled in CalSim II.

Water Supply-CVP Eastside Contractors

Annual allocations are determined using New Melones water supply forecast (the end-of-February New Melones Storage, plus the March through September forecast of inflow to the reservoir) for Stockton East WD and Central San Joaquin WCD (Table 5A.B.7) and are distributed throughout 1 year using monthly patterns.

Table 5A.B.7 CVP Contractor Allocations

New Melones Water Supply Forecast (TAF)	CVP Contractor Allocation (TAF)
<1,400	0
1,400 to 1,800	49
>1,800	155

5A.B2.1.2 DSM2 Assumptions for No Action Alternative

5A.B2.1.2.1 River Flows

For the No Action Alternative DSM2 simulation, the river flows at the DSM2 boundaries are based on the monthly flow time series from CalSim II.

5A.B2.1.2.2 Tidal Boundary

For the No Action Alternative, the tidal boundary condition at Martinez is based on an adjusted astronomical tide normalized for sea-level rise (Ateljevich and Yu 2007) and is modified to account for the sea-level rise using the correlations derived based on three-dimensional (UnTRIM) modeling of the Bay-Delta with sea-level rise at Year 2030.

5A.B2.1.2.3 Water Quality

Martinez EC

For the No Action Alternative, the Martinez EC boundary condition in the DSM2 planning simulation is estimated using the G-model based on the net Delta outflow simulated in CalSim II and the pure astronomical tide (Ateljevich 2001), as modified to account for the salinity changes related to the sea-level rise using the correlations derived based on the three-dimensional (UnTRIM) modeling of the Bay-Delta with sea-level rise at Year 2030.

Vernalis EC

For the No Action Alternative DSM2 simulation, the Vernalis EC boundary condition is based on the monthly San Joaquin EC time series estimated in CalSim II.

5A.B2.1.2.4 Morphological Changes

No additional morphological changes were assumed as part of the No Action Alternative simulation. The DSM2 model and grid developed as part of the 2009 recalibration effort (DWR 2009) was used for the No Action Alternative modeling.

5A.B2.1.2.5 Facilities

Delta Cross Channel

DCC gate operations are modeled in DSM2. The number of days in a month the DCC gates are open is based on the monthly time series from CalSim II.

South Delta Temporary Barriers

South Delta Temporary Barriers are included in the No Action Alternative simulation. The three agricultural temporary barriers located on Old River, Middle River, and Grant Line Canal are included in the model. The fish barrier located at the Head of Old River is also included in the model.

Clifton Court Forebay Gates

Clifton Court Forebay gates are operated based on the Priority 3 operation, where the gate operations are synchronized with the incoming tide to minimize the impacts to low water levels in nearby channels. The Priority 3 operation is described in the 2008 OCAP BA Appendix F Section 5.2 (Reclamation 2008b).

5A.B2.1.2.6 Operations Criteria

South Delta Temporary Barriers

South Delta Temporary Barriers are operated based on San Joaquin flow conditions. Head of Old River Barrier is assumed to be only installed from September 16 to November 30 and is not installed in the spring months, based on the USFWS BO Action 5. The agricultural barriers on Old and Middle Rivers are assumed to be installed starting from May 16, and the one on Grant Line Canal from June 1. All three agricultural barriers are allowed to operate until November 30. The tidal gates on Old and Middle River agricultural barriers are assumed to be tied open from May 16 to May 31.

Montezuma Salinity Control Gate

The radial gates in the Montezuma Slough Salinity Control Gate Structure are assumed to be tidally operating from October through February each year to minimize propagation of high salinity conditions into the interior Delta.

5A.B2.2 Second Basis of Comparison

The Second Basis of Comparison was developed assuming projected Year 2030 conditions. The Second Basis of Comparison assumptions include CVP and SWP operations prior to the RPAs, except for the ones that are constructed (e.g., Red Bluff Pumping Plant), implemented, legislatively mandated (e.g., San Joaquin River Restoration Plan), or that have undergone a substantial degree of progress (e.g., Yolo Bypass Salmonid Habitat and Fish Passage). Similar to the No Action Alternative, the Second Basis of Comparison models do not include any potential future habitat restoration areas due to the uncertainty of system effects depending on potential locations of such areas within the Delta.

The Second Basis of Comparison includes projected climate change and sea-level rise assumptions corresponding to the Year 2030. Change in climate results in the changes in the reservoir and tributary inflows are included in CalSim II. The sea-level rise changes result in modified flow-salinity relationships in the Delta. The climate change and sea-level rise assumptions at Year 2030 are described in detail in Section 5A.B.2. CalSim II simulation of the Second Basis of Comparison does not consider any adaptation measures that would result in managing the CVP and SWP system in a different manner than today to reduce climate impacts. For example, future changes in reservoir flood control reservation to better accommodate a seasonally changing hydrograph may be considered under future programs, but are not considered under the EIS.

5A.B2.2.1 CalSim II Assumptions for Second Basis of Comparison

5A.B2.2.1.1 Hydrology

Inflows/Supplies

Consistent with the No Action Alternative simulation.

Level of Development

Consistent with the No Action Alternative simulation.

Demands, Water Rights, CVP and SWP Contracts

Consistent with the No Action Alternative simulation.

5A.B2.2.1.2 Facilities

Facilities assumptions under the Second Basis of Comparison are consistent with the No Action Alternative simulation.

Fremont Weir

Consistent with the No Action Alternative simulation.

CVP C.W. Bill Jones Pumping Plant (Tracy Pumping Plant) Capacity

Consistent with the No Action Alternative simulation.

SWP Banks Pumping Plant (Banks Pumping Plant) Capacity

Consistent with the No Action Alternative simulation.

CCWD Intakes

Consistent with the No Action Alternative simulation.

5A.B2.2.1.3 Regulatory Standards

The regulatory standards that govern the operations of the CVP and SWP facilities under the Second Basis of Comparison are briefly described below. Specific assumptions related to key regulatory standards are also outlined below.

D-1641 Operations

D-1641 Operations simulated under the Second Basis of Comparison are consistent with the No Action Alternative simulation.

Significant elements of D-1641 include X2 standards, E/I) ratios, Delta water quality standards, real-time Delta Cross Channel operation, and San Joaquin flow standards.

Coordinated Operation Agreement (COA)

Consistent with the No Action Alternative simulation.

CVPIA (b)(2) Assumptions

Consistent with the No Action Alternative simulation.

Continued CALFED Agreements

Consistent with the No Action Alternative simulation.

USFWS BO Actions

The 2008 USFWS BO RPAs are not implemented under the Second Basis of Comparison.

NMFS BO Actions

The 2009 NMFS BO RPAs are not implemented under the Second Basis of Comparison.

Water Transfers

Water transfers assumptions simulated under the Second Basis of Comparison are consistent with the No Action Alternative simulation.

5A.B2.2.1.4 Specific Regulatory Assumptions

Lower American Flow Management

Consistent with the No Action Alternative simulation.

Delta Outflow (Flow and Salinity)

SWRCB D-1641

Consistent with the No Action Alternative simulation.

USFWS BO (December 2008) Action 4

USFWS BO Action 4 is not included under the Second Basis of Comparison.

Combined Old and Middle River Flows

No requirement for minimum combined Old and Middle River flows is included in the Second Basis of Comparison.

South Delta Export-San Joaquin River Inflow Ratio

NMFS BO Action 4.2.1 requires exports to be capped at a certain fraction of San Joaquin River flow at Vernalis during April and May while maintaining a health and safety pumping of 1,500 cfs.

Exports at the South Delta Intakes

The Second Basis of Comparison, similar to the No Action Alternative, includes export restrictions at Jones and Banks Pumping Plant per SWRCB D-1641 requirements.

Under D-1641, the combined export of the CVP Tracy Pumping Plant and SWP Banks Pumping Plant is limited to a percentage of Delta inflow. The percentage ranges from 35 percent to 45 percent during February depending on the January eight river index and is 35 percent during March through June months. For the rest of the months, 65 percent of the Delta inflow is allowed to be exported.

Further limitations on south Delta exports due to NMFS BO Action 4.2.1 are not included under the Second Basis of Comparison.

A minimum health and safety pumping of 1,500 cfs is assumed from January through June.

Delta Water Quality

Consistent with the No Action Alternative simulation.

The sea-level rise change assumed at the Year 2030 results in a modified flow-salinity relationship in the Delta. An ANN, which is capable of emulating the DSM2 model results under the 15-cm sea-level rise condition at the Year 2030, is used to simulate the flow-salinity relationship in CalSim II simulation for the Second Basis of Comparison.

San Joaquin River Restoration Program

Consistent with the No Action Alternative simulation.

5A.B2.2.1.5 Operations Criteria

Fremont Weir Operations

Consistent with the No Action Alternative simulation.

Delta Cross Channel Gate Operations

SWRCB D-1641 DCC standards provide for closure of the DCC gates for fisheries protection at certain times of the year. From November through January, the DCC may be closed for up to 45 days. From February 1 through May 20, the gates are closed. The gates may also be closed for 14 days during the May 21 through June 15 time period. Reclamation determines the timing and duration of the closures after discussion with USFWS, California Department of Fish and Wildlife (DFW), and NMFS.

The NMFS BO Action 4.1.2 that specifies DCC operations is not included in the Second Basis of Comparison.

Allocation Decisions

The rules and assumptions used for allocation decisions under the Second Basis of Comparison are consistent with the No Action Alternative simulation.

San Luis Operations

The rules and assumptions used for San Luis operations under the Second Basis of Comparison are consistent with the No Action Alternative simulation.

New Melones Operations

In addition to flood control, New Melones is operated for four different purposes: fishery flows, water quality, Bay-Delta flow, and water supply.

Fishery

Because the Second Basis of Comparison represents regulatory environment prior to the 2008 USFWS and 2009 NMFS BOs, fishery flows in this simulation refer to flow requirements of the 1997 New Melones Interim Plan of Operations (IPO). These flows include an outmigration pulse flow in April and May. Total annual volume dedicated to fishery flows vary from 0 to 467 TAF depending on the hydrologic conditions defined by the New Melones water supply forecast (the end-of-February New Melones Storage, plus the March through September forecast of inflow to the reservoir) (Tables 5A.B.8 through 5A.B.10).

Table 5A.B.8 Annual Fishery Flow Allocation in New Melones

New Melones Water Supply Forecast (TAF)	Fishery Flows (TAF)
0	0
1,400	98
2,000	125
2,500	345
3,000	467
6,000	467

Table 5A.B.9 Monthly "Base" Flows for Fisheries Purposes Based on the Annual Fishery Volume

Annual Fishery Flow Volume (TAF)	Monthly Fishery Base Flows (cfs)											
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. 1-15	May 16–31	June	July	Aug.	Sept.
98.4	110	200	200	125	125	125	250	250	0	0	0	0
243.3	200	250	250	250	250	250	300	300	200	200	200	200
253.8	250	275	275	275	275	275	300	300	200	200	200	200
310.3	250	300	300	300	300	300	900	900	250	250	250	250
410.2	350	350	350	350	350	350	1,500	1,500	800	300	300	300
466.8	350	400	400	400	400	400	1,500	1,500	1,500	300	300	300

Table 5A.B.10 April 15 through May 15 "Pulse" Flows for Fisheries Purposes Based on the Annual Fishery Volume

Annual Fishery Flow Volume (TAF)	Fishery Pulse Flows (CFS) April 15 – May 15
0	0
98	500
125	1,500
345	1,500
467	1,500
467	1,500

Water Quality

Consistent with the No Action Alternative simulation.

Bay-Delta Flows

Consistent with the No Action Alternative simulation.

Water Supply

Consistent with the No Action Alternative simulation.

Water Supply-CVP Eastside Contractors

Consistent with the No Action Alternative simulation.

5A.B2.2.2 DSM2 Assumptions for Second Basis of Comparison

5A.B2.2.2.1 River Flows

Consistent with the No Action Alternative simulation.

5A.B2.2.2.2 Tidal Boundary

Consistent with the No Action Alternative simulation.

5A.B2.2.2.3 Water Quality

Martinez EC

Consistent with the No Action Alternative simulation.

Vernalis EC

Consistent with the No Action Alternative simulation.

5A.B2.2.2.4 Morphological Changes

Consistent with the No Action Alternative simulation.

5A.B2.2.2.5 Facilities

Delta Cross Channel

Delta Cross Channel gate operations are modeled in DSM2. The number of days in a month the DCC gates are open is based on the monthly time series from

CalSim II. DCC gate operations in Second Basis of Comparison are different than those in the No Action Alternative simulation as described previously in this section.

South Delta Temporary Barriers

South Delta Temporary Barriers are included similar to the No Action Alternative. However, the operation of the HORB is different in the Second Basis of Comparison as explained in the following section.

Clifton Court Forebay Gates

Consistent with the No Action Alternative simulation.

5A.B2.2.2.6 Operations Criteria

South Delta Temporary Barriers

Similar to the No Action Alternative simulation with the exception that the USFWS BO Action 5 is not included in the Second Basis of Comparison. Therefore, HORB is installed in spring months (April 1 through May 31) in addition to fall months (September 16 through November 30).

Montezuma Salinity Control Gate

Consistent with the No Action Alternative simulation.

5A.B3 Assumptions for Alternatives Model Simulations

This section describes the CalSim II and DSM2 modeling assumptions for the Alternatives 3 and 5. Alternative 3 is generally consistent with the Second Basis of Comparison, and Alternative 5 is generally consistent with the No Action Alternative. Assumptions that are different from the Second Basis of Comparison for Alternative 3 and from the No Action Alternative for Alternative 5 are described in detail below. Other assumptions that are consistent with the respective basis of comparison, are provided in short form for completeness.

CVP and SWP operational assumptions are identical under the No Action Alternative and Alternative 2; and under the Second Basis of Comparison and Alternatives 1 and 4. Therefore, separate discussions related to assumptions for Alternatives 1, 2, and 4 are not included in this appendix.

5A.B3.1 Alternative 3

Alternative 3 model assumptions generally follow the Second Basis of Comparison simulation with the exception of the Old and Middle River Flows requirement, and a different set of assumptions for the New Melones operation that are based on the Oakdale ID's 2012 proposal [OID et al. 2012]. Alternative 3 includes other assumptions that are not modeled such as predation control, trap and haul fish passage, trap at head of Old River and barge to Chipps Island, and ocean harvest limits for Central Valley Chinook Salmon. Detailed descriptions of

Alternative 3 assumptions are described in the Chapter 3, Description of Alternatives.

Alternative 3 CalSim II and DSM2 assumptions that are different from the Second Basis of comparison are described below.

5A.B3.1.1 CalSim II Assumptions for Alternative 3

5A.B3.1.1.1 Demands, Water Rights, CVP and SWP Contracts

Similar to the Second Basis of Comparison and the No Action Alternative.

5A.B3.1.1.2 Facilities

Fremont Weir

Consistent with the Second Basis of Comparison and the No Action Alternative.

Banks Pumping Plant Capacity

Consistent with the Second Basis of Comparison and the No Action Alternative.

Jones Pumping Plant Capacity

Consistent with the Second Basis of Comparison and the No Action Alternative.

5A.B3.1.1.3 Regulatory Standards

Delta Outflow Index (Flow and Salinity)

SWRCB D-1641

Consistent with the Second Basis of Comparison and the No Action Alternative.

USFWS BO Action 4

Consistent with the Second Basis of Comparison.

Combined Old and Middle River Flows

The combined Old and Middle River (OMR) flow criteria are based on concepts addressed in the 2008 USFWS and 2009 NMFS BOs related to adaptive restrictions for temperature, turbidity, salinity, and presence of Delta Smelt. The OMR flow criteria in the Alternative 3 are similar to those of the No Action Alternative, with the exception of the following changes:

- Action 1 that protects the pre-spawning adult Delta Smelt from entrainment is modified to limit exports such that the average daily OMR flow is no more negative than -3,500 cfs for a total duration of 14 days, with a 5-day running average no more negative than 4,375 cfs (within 25 percent of the monthly criteria).
- Action 2 that protects adult Delta Smelt within the Delta from entrainment is modified to limit exports so that the average daily OMR flow is no more negative than -3,500 or -7,500 cfs depending on the previous month’s ending X2 location (-3,500 cfs if X2 is east of Roe Island, or -7,500 cfs if X2 is west of Roe Island), with a 5-day running average within 25 percent of the monthly criteria (no more negative than -4,375 cfs if X2 is east of Roe Island, or -9,375 cfs if X2 is west of Roe Island).

- Action 3 that protects larval and juvenile Delta Smelt from entrainment is modified to limit exports so that the average daily OMR flow is no more negative than -1,250, 3,500, or 7,500 cfs, depending on the previous month's ending X2 location (-1,250 cfs if X2 is east of Chipps Island, -7,500 cfs if X2 is west of Roe Island, or -3,500 cfs if X2 is between Chipps and Roe Island, inclusively), with a 5-day running average within 25 percent of the monthly criteria (no more negative than -1,562 cfs if X2 is east of Chipps Island, -9,375 cfs if X2 is west of Roe Island, or -4,375 cfs if X2 is between Chipps and Roe Island).
- Temporal off-ramp for Action 3 is assumed to occur no later than June 15 (changed from June 30).
- An off-ramp based on QWest (westerly flow on the San Joaquin River past Jersey Point calculated as a combination of San Joaquin River at Blind Point, Three Mile Slough and Dutch Slough) is assumed. If Qwest is greater than 12,000 cfs, then the Action 3 is discontinued. Because Action 2 is defined to occur between Actions 1 and 3, the Qwest off ramp also results in discontinuation of Action 2 if it happens before Action 3 is triggered. In monthly CalSim II modeling, the previous month's QWest value is used for determining the off-ramp, therefore if the off-ramp occurs within the previous month, RPA Actions in that previous month are assumed to continue until the end of the month.

South Delta Export-San Joaquin River Inflow Ratio

Consistent with the Second Basis of Comparison.

Exports at the South Delta Intakes

The south Delta exports in Alternative 3 are operated per SWRCB D-1641. Similar to the Second Basis of comparison, the combined export of the CVP Tracy Pumping Plant and SWP Banks Pumping Plant is limited to a percentage of the total Delta inflow, based on the export-inflow ratio specified under D-1641.

Delta Water Quality

Alternative 3 includes SWRCB D-1641 salinity requirements consistent with the Second Basis of Comparison and the No Action Alternative.

San Joaquin River Restoration Program

Consistent with the No Action Alternative simulation.

5A.B3.1.1.4 Operations Criteria

Fremont Weir Operations

Consistent with the Second Basis of Comparison and the No Action Alternative.

Delta Cross Channel Gate Operations

Consistent with the Second Basis of Comparison.

Allocation Decisions

The rules and assumptions used for determining the allocations in the Alternative 3 CalSim II simulation are similar to the No Action Alternative simulation.

San Luis Operations

The rules and assumptions used for San Luis operations under the Alternative 3 are consistent with the No Action Alternative and the Second Basis of Comparison simulations.

New Melones Operations

In addition to flood control, New Melones is operated for four different purposes: fishery flows, water quality, Bay-Delta flow, and water supply.

Fishery

In the Alternative 3 simulation, fishery flows are modeled per Oakdale Irrigation District's 2012 proposal (OID et al. 2012). These flows include an outmigration pulse flow from April 1 through May 15. Total annual volume dedicated to fishery flows vary from 174 to 318 TAF depending on the hydrologic conditions defined by the New Melones water supply forecast (the end-of-February New Melones Storage, plus the March through September forecast of inflow to the reservoir) (Tables 5A.B.11 through 5A.B.13).

Table 5A.B.11 Annual Fishery Flow Allocation in New Melones

New Melones Water Supply Forecast (TAF)	Fishery Base Flows (TAF)
0 to 1,800	174
1,801 to 2,500	235
>2,500	318

Table 5A.B.12 Monthly "Base" Flows for Fisheries Purposes Based on the Annual Fishery Volume

Annual Fishery Flow Volume (TAF)	Monthly Fishery Base Flows (cfs)											
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
235	252	300	300	150	173	200	200	200	200	200	200	200
318	300	300	300	300	300	300	1,500	850	200	200	200	200

Table 5A.B.13 April 1 through May 31 "Pulse" Flows for Fisheries Purposes Based on the Annual Fishery Volume

New Melones Water Supply Forecast (TAF)	Fishery Pulse Flows (CFS) April 1–May 31
0 to 1,800	750
1,801 to 2,500	1,500
>2,500	1,500

Water Quality

No D-1641 water quality releases are assumed in Alternative 3.

D-1422 dissolved oxygen compliance point is moved to the Orange Blossom Bridge under the Alternative 3. However, for modeling purposes, surrogate flows in CalSim II are assumed to be the same as those to meet the Ripon compliance point (surrogate flows consistent with the Second Basis of Comparison and the No Action Alternative).

Bay-Delta Flows

No D-1641 Bay-Delta flow requirements are assumed under the Alternative 3.

Water Supply

Water supply refers to deliveries from New Melones to water rights holders (Oakdale ID and South San Joaquin ID) and CVP eastside contractors (Stockton East WD and Central San Joaquin WCD).

Water is provided to Oakdale ID and South San Joaquin ID in accordance with their 1988 Settlement Agreement with Reclamation (up to 600 TAF based on hydrologic conditions), limited by consumptive use. The conservation account of up to 200 TAF storage capacity defined under this agreement is not modeled in CalSim II.

Water Supply-CVP Eastside Contractors

Annual allocations are determined using New Melones water supply forecast (the end-of-February New Melones Storage, plus the March through September forecast of inflow to the reservoir) for Stockton East WD and Central San Joaquin WCD (Table 5A.B.14) and are distributed throughout 1 year using monthly patterns.

Table 5A.B.14 CVP Contractor Allocations

New Melones Water Supply Forecast (TAF)	CVP Contractor Allocation (TAF)
<1,400	10
1,400 to 1,800	59
>1,800	155

5A.B3.1.2 DSM2 Assumptions for Alternative 3

5A.B3.1.2.1 Tidal Boundary

Consistent with the Second Basis of Comparison and the No Action Alternative.

5A.B3.1.2.2 Water Quality

Martinez EC

Consistent with the Second Basis of Comparison and the No Action Alternative.

5A.B3.1.2.3 Morphological Changes

Consistent with the Second Basis of Comparison and the No Action Alternative.

5A.B3.1.2.4 Facilities

South Delta Temporary Barriers

Consistent with the Second Basis of Comparison and the No Action Alternative.

5A.B3.1.2.5 Operations Criteria

South Delta Temporary Barriers

Consistent with the No Action Alternative, South Delta Temporary Barriers are operated based on San Joaquin flow conditions. Head of Old River Barrier is assumed to be only installed from September 16 to November 30 and is not installed in the spring months, based on the USFWS BO Action 5. The agricultural barriers on Old and Middle Rivers are assumed to be installed starting from May 16, and the one on Grant Line Canal from June 1. All three agricultural barriers are allowed to operate until November 30. The tidal gates on Old and Middle River agricultural barriers are assumed to be tied open from May 16 to May 31.

Montezuma Salinity Control Gate

Consistent with the Second Basis of Comparison and the No Action Alternative.

5A.B3.2 Alternative 5

Alternative 5 model assumptions generally follow the No Action Alternative simulation with the exception of more positive Old and Middle River Flows requirement in April and May, and D 1641 pulse flows at Vernalis. Detailed descriptions of Alternative 5 assumptions are described in Chapter 3, Description of Alternatives.

Alternative 5 CalSim II and DSM2 assumptions that are different from the No Action Alternative are described below.

5A.B3.2.1 CalSim II Assumptions for Alternative 5

5A.B3.2.1.1 Demands, Water Rights, CVP and SWP Contracts

Similar to the Second Basis of Comparison and the No Action Alternative.

5A.B3.2.1.2 Facilities

Fremont Weir

Consistent with the No Action Alternative and the Second Basis of Comparison.

Banks Pumping Plant Capacity

Consistent with the No Action Alternative and the Second Basis of Comparison.

Jones Pumping Plant Capacity

Consistent with the No Action Alternative and the Second Basis of Comparison.

5A.B3.2.1.3 Regulatory Standards

Delta Outflow Index (Flow and Salinity)

SWRCB D-1641

All flow-based Delta outflow requirements included in SWRCB D-1641 are consistent with the No Action Alternative. Similarly, for the February through June period, the X2 standard is included consistent with the No Action Alternative.

USFWS BO Action 4

USFWS BO Action 4 requires additional Delta outflow to manage X2 in the fall months following the Wet and Above Normal years. This action is included in Alternative 5. The assumptions for this action under Alternative 5 are consistent with the No Action Alternative.

Combined Old and Middle River Flows

The Alternative 5 OMR flow requirement is similar to the No Action Alternative with the exception of positive OMR flows in April and May in all years.

South Delta Export-San Joaquin River Inflow Ratio

Consistent with the No Action Alternative.

Exports at the South Delta Intakes

Similar to the No Action Alternative, with the exception that the minimum health and safety pumping of 1,500 cfs is not assumed for the months of April and May under Alternative 5.

Delta Water Quality

Consistent with the No Action Alternative and the Second Basis of Comparison.

San Joaquin River Restoration Program

Consistent with the No Action Alternative simulation.

5A.B3.2.1.4 Operations Criteria

Fremont Weir Operations

Consistent with the No Action Alternative and the Second Basis of Comparison.

Delta Cross Channel Gate Operations

Consistent with the No Action Alternative and the Second Basis of Comparison.

Allocation Decisions

The rules and assumptions used for allocation decisions under Alternative 5 are consistent with the No Action Alternative simulation.

San Luis Operations

The rules and assumptions used for San Luis Operations under Alternative 5 are consistent with the No Action Alternative simulation.

New Melones Operations

New Melones operations assumed in Alternative 5 is similar to the No Action Alternative with the exception of D-1641 Vernalis pulse flows.

Fishery

Similar to the No Action Alternative simulation, fishery flows refer to flow requirements of the 2009 NMFS BO Action III.1.3 under Alternative 5.

Water Quality

Consistent with the No Action Alternative.

Bay-Delta Flows

Bay-Delta flow requirements are defined by D-1641 flow requirements at Vernalis (not including pulse flows during the April 15 through May 16 period). These flows are met through releases from New Melones without any annual volumetric limit.

D-1641 requires flows at Vernalis to be maintained during the February through June period and is based on the required location of X2 and the San Joaquin Valley water year hydrologic classification (60-20-20 Index) as summarized in Table 5A.B.15.

Table 5A.B.15 Bay-Delta Vernalis Flow Objectives (average monthly cfs)

60-20-20 Index	Flow Required if X2 is West of Chipps Island	Flow required if X2 is East of Chipps Island
Wet	3,420	2,130
Above Normal	3,420	2,130
Below Normal	2,280	1,420
Dry	2,280	1,420
Critical	1,140	710

In addition to the D-1641 “base” flows, D-1641 pulse flows for the April 15 through May 15 period are also simulated under Alternative 5 (Table 5A.B.16).

Table 5A.B.16 Bay-Delta Vernalis Flow Objectives (average monthly cfs)

60-20-20 Index	Pulse Flow Required if X2 is West of Chipps Island	Pulse Flow required if X2 is East of Chipps Island
Wet	8,620	7,330
Above Normal	7,020	5,730
Below Normal	5,480	4,620
Dry	4,880	4,020
Critical	3,540	3,110

Water Supply

Water supply refers to deliveries from New Melones to water rights holders (Oakdale ID and South San Joaquin ID) and CVP eastside contractors (Stockton East WD and Central San Joaquin WCD).

Water is provided to Oakdale ID and South San Joaquin ID in accordance with their 1988 Settlement Agreement with Reclamation (up to 600 TAF based on hydrologic conditions), limited by consumptive use. The conservation account of up to 200 TAF storage capacity defined under this agreement is not modeled in CalSim II.

Water Supply-CVP Eastside Contractors

Annual allocations are determined using New Melones water supply forecast (the end-of-February New Melones Storage, plus the March through September forecast of inflow to the reservoir) for Stockton East WD and Central San Joaquin WCD (Table 5A.B.17), and are distributed throughout 1 year using monthly patterns.

Table 5A.B.17 CVP Contractor Allocations

New Melones Water Supply Forecast (TAF)	CVP Contractor Allocation (TAF)
<1,400	0
1,400 to 1,800	49
>1,800	155

5A.B3.2.2 DSM2 Assumptions for Alternative 5

5A.B3.2.2.1 Tidal Boundary

Consistent with the No Action Alternative and the Second Basis of Comparison.

5A.B3.2.2.2 Water Quality

Martinez EC

Consistent with the No Action Alternative and the Second Basis of Comparison.

5A.B3.2.2.3 Morphological Changes

Consistent with the No Action Alternative and the Second Basis of Comparison.

5A.B3.2.2.4 Facilities

South Delta Temporary Barriers

Consistent with the No Action Alternative.

5A.B3.2.2.5 Operations Criteria

South Delta Temporary Barriers

Consistent with the No Action Alternative and the Second Basis of Comparison.

Montezuma Salinity Control Gate

Consistent with the No Action Alternative and the Second Basis of Comparison.

5A.B3.3 Summary of Alternatives Assumptions

A summary table of the EIS alternatives' assumptions is provided below for quick reference (Table 5A.B.18).

1 **Table 5A.B.18 EIS Alternatives CalSim II Model Key Modeling Assumptions Summary**

		No Action Alternative and Alternative 2	Alternatives 1 and 4 and Second Basis of Comparison	Alternative 3	Alternative 5
USFWS BO RPAs	Action 1 – First Flush	Represented	Not Represented	Modified to be operationally less restrictive (-7,500 cfs limit)	Represented
	Action 2 – Adult Protection OMR	Represented	Not Represented	Modified to be operationally less restrictive (-7,500 cfs limit)	Represented
	Action 3 – Juvenile Protection OMR	Represented	Not Represented	Modified to be operationally less restrictive (-7,500 cfs limit)	Modified to be operationally more restrictive
	Action 4 – Fall X2	Represented	Not Represented	Not Represented	Represented
	Action 5 – Spring HORB	Represented	Not Represented	Represented	Represented
NMFS BO RPAs	I.1.1 – Clear Creek Spring Attraction	Represented	Not Represented	Not Represented	Represented
	I.3.1, I.3.2, I.3.3 – Red Bluff Ops	Represented	Represented	Represented	Represented
	I.7 – Yolo Bypass Modification	Represented using BDCP Modeling Logic	Represented using BDCP Modeling Logic	Represented using BDCP Modeling Logic	Represented using BDCP Modeling Logic
	III.1.3 – Goodwin Flow Schedule	Represented per Appendix 2E Table	Fishery Flows from 1997 IPO	Fishery Flows from OID/SSJID Plan (2012)	Represented per Appendix 2E Table

		No Action Alternative and Alternative 2	Alternatives 1 and 4 and Second Basis of Comparison	Alternative 3	Alternative 5
NMFS BO RPAs	IV.1.2 – DCC Ops	Represented per RPA	Represented per D-1641	Represented per D-1641	Represented per RPA
	IV.2.1 – I/E Ratio	Represented	Not Represented	Not Represented	Represented
	IV.2.3 – OMR	See USFWS Actions 1-3	See USFWS Actions 1-3	See USFWS Actions 1-3	See USFWS Actions 1-3
Spring Delta Outflow		D-1641	D-1641	D-1641	Increased from D-1641 due to OMR Action in April and May
Releases from Goodwin	Fishery Flows	NMFS RPA III.1.3 (Appendix 2E)	Fishery Flows from 1997 Interim Plan of Operations	Fishery Flows from OID/SSJID Proposal (2012)	NMFS RPA III.1.3 (Appendix 2E)
	Vernalis Base Flow	D-1641 – no cap	D-1641 – no cap	N/A	D-1641 – no cap
	Vernalis Pulse Flow	N/A	N/A	N/A	D-1641 – no cap
	Vernalis Salinity	D-1641—no cap	D-1641—no cap	N/A	D-1641 – no cap
	Dissolved Oxygen	D-1641 standard at Ripon	D-1641 standard at Ripon	D-1641 standard at Orange Blossom Bridge (no model changes)	D-1641 standard at Ripon
OID/SSJID Deliveries		1988 Agreement limited by consumptive use, no conservation account	1988 Agreement limited by consumptive use, no conservation account	1988 Agreement limited by consumptive use, no conservation account	1988 Agreement limited by consumptive use, no conservation account
CVP Contractor Allocations		Based on New Melones Index: <1,400 = 0 TAF 1,400-1,800 = 49 TAF >1,800 = 155 TAF	Based on New Melones Index: <1,400 = 0 TAF 1,400-1,800 = 49 TAF >1,800 = 155 TAF	Based on New Melones Index: <1,400 = 0 TAF 1,400-1,800 = 59 TAF >1,800 = 155 TAF	Based on New Melones Index: <1,400 = 0 TAF 1,400-1,800 = 49 TAF >1,800 = 155 TAF

5A.B4 Timeframe of Evaluation

The No Action Alternative, the Second Basis of Comparison, and the other alternatives are simulated at Year 2030 conditions. Changes in climate conditions and sea level (15-cm rise) were assumed at Year 2030 and are consistent within all alternatives.

Using this approach, the climate scenario was derived based on sampling of the ensemble of global climate model projections rather than one single realization or a handful of individual realizations. The Q5 scenario that represents the central tendency of the climate projections was selected for the EIS analysis.

Simulation of climate change and sea-level rise effects in CalSim II modeling of the alternatives is accomplished by:

- Incorporating the modified CalSim II inputs reflecting climate change for parameters including, inflows, water year types, runoff forecasts, and Delta water temperature.
- Incorporating modified ANNs to reflect the flow-salinity response under sea level change.

Simulation of the tidal marsh restoration areas and sea-level rise effects in DSM2 modeling of the alternatives is accomplished by:

- Incorporating consistent grid changes identified in corroboration simulation into the DSM2 model for the sea-level rise condition.
- Modifying the downstream stage and EC boundary conditions at Martinez in the DSM2 model using the appropriate regression equation for the 15-cm sea-level rise. The adjusted astronomical tide specified at Martinez in the alternatives is modified using the correlations shown in Table 5A.B.19. The Martinez EC boundary condition resulting from the G-model is modified using the correlations specified in the Table 5A.B.19.

Table 5A.B.19 Correlation to Transform Baseline Martinez Stage and EC for use in Alternatives DSM2 Simulations at Year 2030

Scenario	Martinez Stage (feet NGVD 29)		Martinez EC (µS/cm)	
	Correlation	Lag (min)	Correlation	Lag (min)
Year 2030 (15cm SLR)	Y = 1.0033*X + .47	-1	Y = 0.9954* X + 556.3	0

Notes:

X = Baseline Martinez stage or EC

Y = Alternative Martinez stage or EC

5A.B5 No Action Alternative and Second Basis of Comparison Callout Tables

5A.B5.1 CalSim II Assumptions

This subsection provides a summary of the CalSim II assumptions for the No Action Alternative and the Second Basis of Comparison (Table 5A.B.20).

5A.B5.2 DSM2 Assumptions

This subsection provides a summary of the DSM2 assumptions for the No Action Alternative and the Second Basis of Comparison (Table 5A.B.21).

5A.B6 American River Demands

This section includes the information in the "Bay Delta Conservation Plan EIR/EIS Project—CalSim II Baselines Models—American River Assumptions," dated February 17, 2010.

5A.B6.1 Introduction

The following is a summary of the assumptions that are EIS alternatives. For specific diversion-related assumptions, see the following section.

- American River Flow Management is included, as required by the June 2009 NMFS Biological Opinion Action II.1.
- Water rights and CVP demands are assumed at a full buildout condition with CVP contracts at full contract amounts
- Placer County Water Agency (PCWA) Pump Station is included at full demand
- Freeport Regional Water Project (FRWP) is included at full demand (East Bay Municipal Utility District (EBMUD) CVP contracts and SCWA CVP contract and new appropriative water rights and water acquisitions as modeled in the FRWP EIS/R)
    - Sacramento River Water Reliability Project is not included
    - Sacramento Area Water Forum is not included (dry year "wedge" reductions and mitigation water releases are not included)

5A.B6.2 Summary of Demands

The Table 5A.B.22 below summarizes the water rights, CVP contract amounts, and demand amounts for each diverter in the American River system in the No Action Alternative and the Second Basis of Comparison.

1 **Table 5A.B.20 CalSim II Inputs – Assumptions**

	No Action Alternative Assumption	Second Basis of Comparison Assumption
Planning horizon[a]	Year 2030	Same
Demarcation date[a]	March 2012	Same
Period of simulation	82 years (1922-2003)	Same
HYDROLOGY		
Inflows/Supplies	Historical with modifications for operations upstream of rim reservoirs and with changed climate at Year 2030	Same
Level of development	Projected 2030 level[c]	Same
DEMANDS, WATER RIGHTS, CVP and SWP CONTRACTS		
Sacramento River Region (excluding American River)		
CVP[d]	Land-use based, full buildout of contract amounts	Same
SWP (FRSA)[e]	Land-use based, limited by contract amounts	Same
Non-project	Land-use based, limited by water rights and SWRCB Decisions for Existing Facilities	Same
Antioch Water Works	Pre-1914 water right	Same
Federal refuges[f]	Firm Level 2 water needs	Same
Sacramento River Region—American River[g]		
Water rights	Year 2025, full water rights	Same
CVP	Year 2025, full contracts, including Freeport Regional Water Project	Same
San Joaquin River Region[h]		
Friant Unit	Limited by contract amounts, based on current allocation policy	Same
Lower Basin	Land-use based, based on district level operations and constraints	Same

	No Action Alternative Assumption	Second Basis of Comparison Assumption
Stanislaus River[i]	Land-use based, Revised Operations Plan[t] and NMFS BO (June 2009) Actions III.1.2 and III.1.3[v]	Land-use based, Revised Operations Plan[t]
San Francisco Bay, Central Coast, Tulare Lake and South Coast Regions (CVP and SWP project facilities)		
CVP[d]	Demand based on contract amounts	Same
CCWD[j]	195 TAF/year CVP contract supply and water rights	Same
SWP[e,k]	Demand based on Table A amounts	Same
Article 56	Based on 2001-2008 contractor requests	Same
Article 21	MWD demand up to 200 TAF/month from December to March subject to conveyance capacity, Kern County Water Agency demand up to 180 TAF/month, and other contractor demands up to 34 TAF/month in all months, subject to conveyance capacity	Same
North Bay Aqueduct (NBA)	77 TAF/yr demand under SWP contracts, up to 43.7 cfs of excess flow under Fairfield, Vacaville, and Benicia Settlement Agreement	Same
Federal refuges[f]	Firm Level 2 water needs	Same
FACILITIES		
Systemwide	Existing facilities	Same
Sacramento River Region		
Shasta Lake	Existing, 4,552 TAF capacity	Same
Red Bluff Diversion Dam	Diversion dam operated with gates out all year, NMFS BO (June 2009) Action I.3.1[v]; assume permanent facilities in place	Same
Colusa Basin	Existing conveyance and storage facilities	Same
Upper American River[g,l]	PCWA American River Pump Station	Same
Lower Sacramento River	Freeport Regional Water Project[n]	Same
San Joaquin River Region		
Millerton Lake (Friant Dam)	Existing, 520 TAF capacity	Same

	No Action Alternative Assumption	Second Basis of Comparison Assumption
Lower San Joaquin River	City of Stockton Delta Water Supply Project, 30-mgd capacity	Same
Delta Region		
SWP Banks Pumping Plant (South Delta)	Physical capacity is 10,300 cfs but 6,680 cfs permitted capacity in all months up to 8,500 cfs during Dec. 15 through Mar. 15 depending on Vernalis flow conditions[o]; additional capacity of 500 cfs (up to 7,180 cfs) allowed for July through Sept. for reducing impact of NMFS BO (June 2009) Action IV.2.1 Phase II[v] on SWP[w]	Physical capacity is 10,300 cfs but 6,680 cfs permitted capacity in all months up to 8,500 cfs during Dec. 15 through Mar. 15 depending on Vernalis flow conditions[o]; additional capacity of 500 cfs (up to 7,180 cfs) allowed for July through Sept. for reducing impact of B2 Actions.
CVP C.W. Bill Jones Pumping Plant (Tracy Pumping Plant)	Permit capacity is 4,600 cfs in all months (allowed for by the Delta-Mendota Canal-California Aqueduct Intertie)	Same
Upper Delta-Mendota Canal Capacity	Existing plus 400 cfs Delta-Mendota Canal-California Aqueduct Intertie	Same
CCWD Intakes	Los Vaqueros existing storage capacity, 160 TAF, existing pump locations, AIP included[p]	Same
San Francisco Bay Region		
South Bay Aqueduct (SBA)	SBA rehabilitation, 430 cfs capacity from junction with California Aqueduct to Zone 7 Water Agency diversion point	Same
South Coast Region		
California Aqueduct East Branch	Existing capacity	Same
REGULATORY STANDARDS		
North Coast Region		
Trinity River		
Minimum flow below Lewiston Dam	Trinity EIS Preferred Alternative (369-815 TAF/year)	Same

	No Action Alternative Assumption	Second Basis of Comparison Assumption
Trinity Reservoir end-of-September minimum storage	Trinity EIS Preferred Alternative (600 TAF as able)	Same
Sacramento River Region		
Clear Creek		
Minimum flow below Whiskeytown Dam	Downstream water rights, 1963 Reclamation Proposal to USFWS and NPS, predetermined CVPIA 3406(b)(2) flows[q], and NMFS BO (June 2009) Action I.1.1[v]	Downstream water rights, 1963 Reclamation Proposal to USFWS and NPS, predetermined CVPIA 3406(b)(2) flows[q]
Upper Sacramento River		
Shasta Lake end-of-September minimum storage	NMFS 2004 Winter-run Biological Opinion, (1900 TAF in non-critically dry years), and NMFS BO (June 2009) Action I.2.1[v]	NMFS 2004 Winter-run Biological Opinion, (1900 TAF in non-critically dry years)
Minimum flow below Keswick Dam	SWRCB WR 90-5, predetermined CVPIA 3406(b)(2) flows[q], and NMFS BO (June 2009) Action I.2.2[v]	SWRCB WR 90-5, predetermined CVPIA 3406(b)(2) flows[q]
Feather River		
Minimum flow below Thermalito Diversion Dam	2006 Settlement Agreement (700/800 cfs)	Same
Minimum flow below Thermalito Afterbay outlet	1983 DWR, DFW Agreement (750-1,700 cfs)	Same
Yuba River		
Minimum flow below Daguerre Point Dam	D-1644 Operations (Lower Yuba River Accord)[r]	Same
American River		
Minimum flow below Nimbus Dam	American River Flow Management[s] as required by NMFS BO (June 2009) Action II.1[v]	Same
Minimum Flow at H Street Bridge	SWRCB D-893	Same

	No Action Alternative Assumption	Second Basis of Comparison Assumption
Lower Sacramento River		
Minimum flow near Rio Vista	SWRCB D-1641	Same
San Joaquin River Region		
Mokelumne River		
Minimum flow below Camanche Dam	FERC 2916-029, 1996 (Joint Settlement Agreement) (100-325 cfs)	Same
Minimum flow below Woodbridge Diversion Dam	FERC 2916-029, 1996 (Joint Settlement Agreement) (25-300 cfs)	Same
Stanislaus River		
Minimum flow below Goodwin Dam	1987 Reclamation, DFW agreement, and flows required for NMFS BO (June 2009) Action III.1.2 and III.1.3[v]	1987 Reclamation, DFW agreement
Minimum dissolved oxygen	SWRCB D-1422	Same
Merced River		
Minimum flow below Crocker-Huffman Diversion Dam	Davis-Grunsky (180-220 cfs, Nov.-Mar.), and Cowell Agreement	Same
Minimum flow at Shaffer Bridge	FERC 2179 (25-100 cfs)	Same
Tuolumne River		
Minimum flow at Lagrange Bridge	FERC 2299-024, 1995 (Settlement Agreement) (94-301 TAF/yr)	Same
San Joaquin River		
San Joaquin River below Friant Dam/ Mendota Pool	San Joaquin River Restoration-full flows, not constrained by current canal capacity[u]	Same
Maximum salinity near Vernalis	SWRCB D-1641	Same
Minimum flow near Vernalis	SWRCB D-1641, and NMFS BO (June 2009) Action IV.2.1[v]	SWRCB D-1641

	No Action Alternative Assumption	Second Basis of Comparison Assumption
Sacramento River – San Joaquin Delta Region		
Delta Outflow Index (Flow and Salinity)	SWRCB D-1641 and USFWS BO (Dec. 2008) Action 4	SWRCB D-1641
Delta Cross Channel gate operation	SRWCB D-1641 with additional days closed from Oct. 1 – Jan. 31 based on NMFS BO (June 2009) Action IV.1.2[v] (closed during flushing flows from Oct. 1 – Dec. 14 unless adverse water quality conditions)	SRWCB D-1641
South Delta exports (Jones Pumping Plant and Banks Pumping Plant)	SWRCB D-1641, Vernalis flow-based export limits Apr. 1 – May 31 as required by NMFS BO (June 2009) Action IV.2.1[v] (additional 500 cfs allowed for July – Sept. For reducing impact on SWP)[w]	SWRCB D-1641 (additional 500 cfs allowed for July – Sept. For reducing impact of B2 Actions)
Combined Flow in OMR	USFWS BO (Dec. 2008) Actions 1 through 3 and NMFS BO (June 2009) Action IV.2.3[v]	None
OPERATIONS CRITERIA: RIVER-SPECIFIC		
Sacramento River Region		
Upper Sacramento River		
Flow objective for navigation (Wilkins Slough)	NMFS BO (June 2009) Action I.4[v]; 3,500 – 5,000 cfs based on CVP water supply condition	Same
American River		
Folsom Dam flood control	Variable 400/670 flood control diagram (without outlet modifications)	Same
Feather River		
Flow at Mouth of Feather River (above Verona)	Maintain DFW/DWR flow target of 2,800 cfs for Apr. through Sept. dependent on Oroville inflow and FRSA allocation	Same
San Joaquin River Region		
Stanislaus River		
Flow below Goodwin Dam[i]	Revised Operations Plan[t] and NMFS BO (June 2009) Action III.1.2 and III.1.3[v]	Revised Operations Plan[t]

	No Action Alternative Assumption	Second Basis of Comparison Assumption
San Joaquin River		
Salinity at Vernalis	Grasslands Bypass Project (full implementation)	Same
OPERATIONS CRITERIA: SYSTEMWIDE		
CVP water allocation		
Settlement/Exchange	100 percent (75 percent in Shasta critical years)	Same
Refuges	100 percent (75 percent in Shasta critical years)	Same
Agriculture Service	100 percent-0 percent based on supply, South-of-Delta allocations are additionally limited due to D-1641, USFWS BO (Dec. 2008) and NMFS BO (June 2009) export restrictions[v]	100 percent-0 percent based on supply, South-of-Delta allocations are additionally limited due to D-1641
Municipal & Industrial Service	100 percent-50 percent based on supply, South-of-Delta allocations are additionally limited due to D-1641, USFWS BO (Dec. 2008) and NMFS BO (June 2009) export restrictions[v]	100 percent-50 percent based on supply, South-of-Delta allocations are additionally limited due to D-1641
SWP water allocation		
North of Delta (FRSA)	Contract specific	Same
South of Delta (including North Bay Aqueduct)	Based on supply; equal prioritization between Ag and M&I based on Monterey Agreement; allocations are additionally limited due to D-1641 and USFWS BO (Dec. 2008) and NMFS BO (June 2009) export restrictions[v]	Based on supply; equal prioritization between Ag and M&I based on Monterey Agreement; allocations are additionally limited due to D-1641
CVP-SWP coordinated operations		
Sharing of responsibility for in-basin-use	1986 Coordinated Operations Agreement (FRWP EBMUD and 2/3 of the North Bay Aqueduct diversions considered as Delta Export; 1/3 of the North Bay Aqueduct diversion as in-basin-use)	Same
Sharing of surplus flows	1986 Coordinated Operations Agreement	Same

	No Action Alternative Assumption	**Second Basis of Comparison Assumption**
Sharing of total allowable export capacity for project-specific priority pumping	Equal sharing of export capacity under SWRCB D-1641, USFWS BO (Dec. 2008) and NMFS BO (June 2009) export restrictions[v]	Equal sharing of export capacity under SWRCB D-1641
Water transfers	Acquisitions by SWP contractors are wheeled at priority in Banks Pumping Plant over non-SWP users; LYRA included for SWP contractors[w]	Same
Sharing of total allowable export capacity for lesser priority and wheeling-related pumping	Cross Valley Canal wheeling (max of 128 TAF/year), CALFED ROD defined Joint Point of Diversion (JPOD)	Same
San Luis Reservoir	San Luis Reservoir is allowed to operate to a minimum storage of 100 TAF	Same
CVPIA 3406(b)(2)[v,q]		
Policy Decision	Per May 2003 Department Decision:	Same
Allocation	800 TAF, 700 TAF in 40-30-30 dry years, and 600 TAF in 40-30-30 critical years as a function of Ag allocation	Same
Actions	Predetermined upstream fish flow objectives below Whiskeytown and Keswick Dams, non-discretionary NMFS BO (June 2009) actions for the American and Stanislaus Rivers, and NMFS BO (June 2009) and USFWS BO (Dec. 2008) actions leading to export restrictions[v]	Predetermined upstream fish flow objectives below Whiskeytown and Keswick Dams
Accounting	Releases for non-discretionary USFWS BO (Dec. 2008) and NMFS BO (June 2009)[v] actions may or may not always be deemed (b)(2) actions; in general, it is anticipated that, accounting of these actions using (b)(2) metrics, the sum would exceed the (b)(2) allocation in many years; therefore no additional actions are considered and no accounting logic is included in the model [q]	No accounting logic is included in the model

	No Action Alternative Assumption	Second Basis of Comparison Assumption
WATER MANAGEMENT ACTIONS		
Water Transfer Supplies (long-term programs)		
Lower Yuba River Accord[w]	Yuba River acquisitions for reducing impact of NMFS BO export restrictions[v] on SWP	Yuba River acquisitions
Phase 8	None	None
Water Transfers (short-term or temporary programs)		
Sacramento Valley acquisitions conveyed through Banks Pumping Plant[x]	Post-analysis of available capacity	Post-analysis of available capacity

Notes:

a. These assumptions were developed under the direction of the DWR and Reclamation in 2010. Only operational components of 2008 USFWS and 2009 NMFS BOs as of demarcation date of No Action Alternative and the No action Alternative assumptions are included. Restoration of at least 8,000 acres of intertidal and associated subtidal habitat in the Delta and Suisun Marsh required by the 2008 USFWS BO and restoration of at least 17,000 to 20,000 acres of floodplain rearing habitat for juvenile winter-run and spring-run Chinook Salmon and Central Valley Steelhead in the Yolo Bypass and/or suitable areas of the lower Sacramento River required by the NMFS 2009 BO are not included in the No Action Alternative assumptions because environmental documents of projects regarding these actions were not completed as of the publication date of the Notice of Preparation/Notice of Intent (February 13, 2009).

b. The Sacramento Valley hydrology used in the No Action Alternative CalSim II model reflects nominal 2005 land-use assumptions. The nominal 2005 land use was determined by interpolation between the 1995 and projected 2020 land-use assumptions associated with Bulletin 160-98. The San Joaquin Valley hydrology reflects 2005 land-use assumptions developed by Reclamation. Existing-level projected land-use assumptions are being coordinated with the California Water Plan Update for future models.

c. The Sacramento Valley hydrology used in the No Action Alternative CalSim II model reflects 2020 land-use assumptions associated with Bulletin 160-98. The San Joaquin Valley hydrology reflects draft 2030 land-use assumptions developed by Reclamation. Development of Future-level projected land-use assumptions are being coordinated with the California Water Plan Update for future models.

d. CVP contract amounts have been updated according to existing and amended contracts as appropriate. Assumptions regarding CVP agricultural and M&I service contracts and Settlement Contract amounts are documented in the Delivery Specifications attachments.

e. SWP contract amounts have been updated as appropriate based on recent Table A transfers/agreements. Assumptions regarding SWP agricultural and M&I contract amounts are documented in the Delivery Specifications attachments.

f. Water needs for Federal refuges have been reviewed and updated as appropriate. Assumptions regarding firm Level 2 refuge water needs are documented in the Delivery Specifications attachments. Refuge Level 4 (and incremental Level 4) water is not analyzed.

g. Assumptions regarding American River water rights and CVP contracts are documented in the Delivery Specifications attachments. The Sacramento Area Water Forum agreement, its dry year diversion reductions, Middle Fork Project operations and “mitigation” water is not included.

h. The new CalSim II representation of the San Joaquin River has been included in this model package (CalSim II San Joaquin River Model, Reclamation, 2005). Updates to the San Joaquin River have been included since the preliminary model release in August 2005. The model reflects the difficulties of ongoing groundwater overdraft problems. The 2030 level of development representation of the San Joaquin River Basin does not make any attempt to offer solutions to groundwater overdraft problems. In addition a dynamic groundwater simulation is not yet developed for the San Joaquin River Valley. Groundwater extraction/recharge and stream-groundwater interaction are static assumptions and may not accurately reflect a response to simulated actions. These limitations should be considered in the analysis of results.

i. The CalSim II model representation for the Stanislaus River does not necessarily represent Reclamation’s current or future operational policies. A suitable plan for supporting flows has not been developed for NMFS BO (June 2009) Action 3.1.3.

j. The actual amount diverted is operated in conjunction with supplies from the Los Vaqueros project. The existing Los Vaqueros storage capacity is 160 TAF. Associated water rights for Delta excess flows are included.

k. Under No Action Alternative, it is assumed that SWP Contractors demand for Table A allocations vary from 3.0 to 4.1 million acre-feet (MAF)/year. Under the No Action Alternative, it is assumed that SWP Contractors can take delivery of all Table A allocations and Article 21 supplies. Article 56 provisions are assumed and allow for SWP Contractors to manage storage and delivery conditions such that full Table A allocations can be delivered. Article 21 deliveries are limited in Wet years under the assumption that demand is decreased in these conditions. Article 21 deliveries for the NBA are dependent on excess conditions only, all other Article 21 deliveries also require that San Luis Reservoir be at capacity and that Banks Pumping Plant and the California Aqueduct have available capacity to divert from the Delta for direct delivery.

l. PCWA American River pumping facility upstream of Folsom Lake is included in both the Existing and No Action Alternative No Action Alternative. The diversion is assumed to be 35.5 TAF/Yr.

m. footnote removed

n. footnote removed

o. Current USACE permit for Banks Pumping Plant allows for an average diversion rate of 6,680 cfs in all months. Diversion rate can increase up to 1/3 of the rate of San Joaquin River flow at Vernalis from Dec. 15th to Mar. 15th, up to a maximum diversion of 8,500 cfs, if Vernalis flow exceeds 1,000 cfs.

p. The CCWD AIP is an intake at Victoria Canal that operates as an alternate Delta diversion for Los Vaqueros Reservoir. This assumption is consistent with the future no-project condition defined by the Los Vaqueros Enlargement study team.

q. CVPIA (b)(2) fish actions are not dynamically determined in the CalSim II model, nor is (b)(2) accounting done in the model. Since the USFWS BO and NMFS BO were issued, the Department has exercised its discretion to use (b)(2) in the delta by accounting some or all of the export reductions required under those biological opinions as (b)(2) actions. It is therefore assumed for modeling purposes that (b)(2) availability for other delta actions will be limited to covering the CVP’s VAMP export reductions. Similarly, since the USFWS BO and NMFS BO were issued, the Department has exercised its discretion to use (b)(2) upstream by accounting some or all of the release augmentations (relative to the hypothetical (b)(2) base case) below Whiskeytown, Nimbus, and Goodwin as (b)(2) actions. It is therefore assumed for modeling purposes that (b)(2) availability for other upstream actions will be limited to covering Sacramento releases, in the fall and winter. For modeling purposes, predetermined time series of minimum instream flow requirements are specified. The time series are based on the Aug. 2008 BA Study 7.0 and Study 8.0 simulations which did include dynamically determined (b)(2) actions.

r. D-1644 and the Lower Yuba River Accord is assumed to be implemented for Existing and No Action Alternative No Action Alternative. The Yuba River is not dynamically modeled in CalSim II. Yuba River hydrology and availability of water acquisitions under the Lower Yuba River Accord are based on modeling performed and provided by the Lower Yuba River Accord EIS/EIR study team.

s. Under Existing Conditions, the flow components of the proposed American River Flow Management are as required by the NMFS BO (June 4, 2009).

t. The model operates the Stanislaus River using a 1997 Interim Plan of Operation-like structure, i.e., allocating water for Stockton East Water District and CSJWCD, Vernalis water quality dilution, and Vernalis D-1641 flow requirements based on the New Melones Index. Oakdale Irrigation District and South San Joaquin Irrigation District allocations are based on their 1988 agreement and Ripon DO requirements are represented by a static set of minimum instream flow requirements during June thru Sept. Instream flow requirements for fish below Goodwin are based on NMFS BO Action III.1.2. NMFS BO Action IV.2.1's flow component is not assumed to be in effect.

u. SJR Restoration Water Year 2010 Interim Flows Project are assumed, but are *not input into the models; operation not regularly defined at this time*

v. In cooperation with Reclamation, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife, the Department of Water Resources has developed assumptions for implementation of the USFWS BO (Dec. 15, 2008) and NMFS BO (June 4, 2009) in CalSim II.

w. Acquisitions of Component 1 water under the Lower Yuba River Accord, and use of 500 cfs dedicated capacity at Banks Pumping Plant during July through Sept., are assumed to be used to reduce as much of the impact of the April through May Delta export actions on SWP contractors as possible.

x. Only acquisitions of Lower Yuba River Accord Component 1 water are included.

Table 5A.B.21 DSM2 Assumptions

	No Action Alternative Assumption	Second Basis of Comparison Assumption
Period of simulation	82 years (1922-2003)[a,b]	Same
REGIONAL SUPPLIES		
Boundary flows	Monthly time series from CalSim II output (alternatives provide different flows and exports)[c]	Same
REGIONAL DEMANDS AND CONTRACTS		
Ag flows (DICU)	2005 Level, DWR Bulletin 160-98[d]	2020 Level, DWR Bulletin 160-98[d]
TIDAL BOUNDARY		
Martinez stage	15-minute adjusted astronomical tide[a]	Same
WATER QUALITY		
Vernalis EC	Monthly time series from CalSim II output[e]	Monthly time series from CalSim II output[e]
Agricultural Return EC	Municipal Water Quality Investigation Program analysis	Same
Martinez EC	Monthly net Delta Outflow from CalSim II output and G-model[f]	Monthly net Delta Outflow from CalSim II output and G-model[f]
MORPHOLOGICAL CHANGES		
Mokelumne River	None	None
San Joaquin River	None	None
Middle River	None	None
Dutch Slough Restoration Project	None	None

	No Action Alternative Assumption	Second Basis of Comparison Assumption
FACILITIES		
Contra Costa Water District Delta Intakes	Rock Slough Pumping Plant, Old River at Highway 4 Intake	Rock Slough Pumping Plant, Old River at Highway 4 Intake and Alternate Improvement Project Intake on Victoria Canal
South Delta barriers	Temporary Barriers Program	Same
Two Gate Program	None	None
Franks Tract Program	None	None
SPECIFIC PROJECTS		
Water Supply Intake Projects		
Freeport Regional Water Project	None	Monthly output from CalSim II
Stockton Delta Water Supply Project	None	Monthly output from CalSim II
Antioch Water Works	Monthly output from CalSim II	Monthly output from CalSim II
Sanitary and Agricultural Discharge Projects		
Veale Tract Drainage Relocation	The Veale Tract Water Quality Improvement Project, funded by CALFED, relocates the agricultural drainage outlet that was relocated from Rock Slough channel to the southern end of Veale Tract, on Indian Slough[k]	Same
OPERATIONS CRITERIA		
Delta Cross Channel	Monthly time series of number of days open from CalSim II output	Monthly time series of number of days open from CalSim II output
Clifton Court Forebay	Priority 3, gate operations synchronized with incoming tide to minimize impacts to low water levels in nearby channels	Same

	No Action Alternative Assumption	Second Basis of Comparison Assumption
South Delta barriers	Temporary Barriers Project operated based on San Joaquin River flow time series from CalSim II output; HORB is assumed only installed[l] Sept. 16 through Nov. 30; agricultural barriers on OMR are assumed to be installed starting from May 16 and on Grant Line Canal from June 1; all three barriers are allowed to be operated until November 30; May 16 to May 31; the tidal gates are assumed to be tied open for the barriers on Old and Middle Rivers[m].	Temporary Barriers Project operated based on San Joaquin River flow time series from CalSim II output; HORB is assumed installed[l] April 1 through May 31 and Sept. 16 through Nov. 30; agricultural barriers on OMR are assumed to be installed starting from May 16 and on Grant Line Canal from June 1; all three barriers are allowed to be operated until November 30; May 16 to May 31; the tidal gates are assumed to be tied open for the barriers on ORM[m]

Notes:

a. A new adjusted astronomical tide for use in DSM2 planning studies has been developed by DWR's Bay Delta Office Modeling Support Branch Delta Modeling Section in cooperation with the Common Assumptions workgroup. This tide is based on a more extensive observed dataset and covers the entire 82-year period of record.

b. The 16-year period of record is the simulation period for which DSM2 has been commonly used for impacts analysis in many previous projects, and includes varied water year types.

c. Although monthly CalSim II output was used as the DSM2-HYDRO input, the Sacramento and San Joaquin rivers were interpolated to daily values in order to smooth the transition from high to low and low to high flows. DSM2 then uses the daily flow values along with a 15-minute adjusted astronomical tide to simulate effect of the spring and neap tides.

d. The Delta Island Consumptive Use (DICU) model is used to calculate diversions and return flows for all Delta islands based on the level of development assumed. The nominal 2005 Delta region hydrology land use was determined by interpolation between the 1995 and projected 2020 land-use assumptions associated with Bulletin 160-98.

e. CalSim II calculates monthly EC for the San Joaquin River, which was then converted to daily EC using the monthly EC and flow for the San Joaquin River. Fixed concentrations of 150, 175, and 125 μmhos/cm were assumed for the Sacramento River, Yolo Bypass, and eastside streams, respectively.

f. Net Delta outflow based on the CalSim II flows was used with an updated G-model to calculate Martinez EC. Under changed climate conditions, Martinez EC is modified to account for the sea-level rise at early (15 cm) and late (45 cm) long-term phases (Year 2060).

g. footnote removed.

h. footnote removed.

i. footnote removed.

j. footnote removed.

k. Information was obtained based on the information from the draft final “Delta Region Drinking Water Quality Management Plan” dated June 2005 prepared under the CALFED Water Quality Program and a presentation by David Briggs at SWRCB public workshop for periodic review. The presentation “Compliance Location at Contra Costa Canal at Pumping Plant #1 – Addressing Local Degradation” notes that the Veale Tract drainage relocation project will be operational in June 2005. The DICU drainage currently simulated at node 204 is moved to node 202 in DSM2.

l. Based on the USFWS BO Action 5, HORB is assumed to be not installed in April or May; therefore HORB is only installed in the fall, as shown.

m. Based on the USFWS BO Action 5 and the project description provided in the page 119.

Table 5A.B.22 American River Diversions Assumed in the No Action Alternative and Second Basis of Comparison

		No Action Alternative and Second Basis of Comparison (TAF/yr)	**No Action Alternative and Second Basis of Comparison (TAF/yr)**	**No Action Alternative and Second Basis of Comparison (TAF/yr)**
	Diversion Location	**CVP M&I[a] Contracts (maximum[a])**	**Water Rights (maximum)**	**Diversion Limit (maximum capacity)**
Placer County Water Agency	Auburn Dam Site	–	65.0	65.0
Total		**0**	**65.0**	**65.0**
Sacramento Suburban Water District[b]	Folsom Reservoir	–	0	0
City of Folsom – includes P.L. 101-514		7	27	34
Folsom Prison		–	5	5
San Juan Water District (Placer County)		–	25	25
San Juan Water District (Sac County) – includes P.L. 101-514	Folsom Reservoir	24.2	33	57.2
El Dorado Irrigation District		7.55	17	24.55
City of Roseville		32	30	62.0
Placer County Water Agency		35	–	35
El Dorado County – P.L.101-514		15	–	15
Total		**120.8**	**137.0**	**257.8**

	Diversion Location	No Action Alternative and Second Basis of Comparison (TAF/yr) CVP M&I[a] Contracts (maximum[a])	No Action Alternative and Second Basis of Comparison (TAF/yr) Water Rights (maximum)	No Action Alternative and Second Basis of Comparison (TAF/yr) Diversion Limit (maximum capacity)
So. Cal WC/Arden Cordova WC	Folsom South Canal	–	5	5
California Parks and Recreation		5	–	5
SMUD		30	15	45
Canal Losses		–	1	1
Total		**35**	**21**	**56**
City of Sacramento[c]	Lower American River	–	225.6	225.6
Carmichael Water District		–	12	12
Total		**0**	**237.6**	**237.6**
Total American River Diversions		**155.8**	**460.6**	**616.4**
Sacramento River Diversions				
City of Sacramento	Lower Sacramento River	–	86.19	86.19
Sacramento County Water Agency		30	–	30
Sacramento County Water Agency—P.L. 101-514		15	–	15
Sacramento County Water Agency—water rights and acquisitions		–	Varies[d], average 32.58	Varies[d], average 32.58

	Diversion Location	No Action Alternative and Second Basis of Comparison (TAF/yr) CVP M&I[a] Contracts (maximum[a])	No Action Alternative and Second Basis of Comparison (TAF/yr) Water Rights (maximum)	No Action Alternative and Second Basis of Comparison (TAF/yr) Diversion Limit (maximum capacity)
East Bay Municipal Utilities District		133	–	Varies[e] , average 8.2
Total Sacramento River Diversions		**178**	**118.8**	**172.0**
Total		**333.8**	**579.4**	**788.4**

Notes:

a. When the CVP Contract quantity exceeds the quantity of the Diversion Limit minus the Water Right (if any), the diversion modeled is the quantity allocated to the CVP Contract (based on the CVP contract quantity shown times the CVP M&I allocation percentage) plus the Water Right (if any), but with the sum limited to the quantity of the Diversion Limit

b. Diversion is only allowed if and when Mar-Nov Folsom Unimpaired Inflow (FUI) exceeds 1,600 TAF

c. When the Hodge single dry year criteria is triggered, Mar-Nov FUI falls below 400 TAF, diversion on the American River is limited to 50 TAF/yr; based on monthly Hodge flow limits assumed for the American, diversion on the Sacramento River may be increased to 223 TAF due to reductions of diversions on American River

d. SCWA targets 68 TAF of surface water supplies annually. The portion unmet by CVP contract water is assumed to come from two sources:

  (1) Delta “excess” water- averages 16.5 TAF annually, but varies according to availability. SCWA is assumed to divert excess flow when it is available, and when there is available pumping capacity.

  (2) “Other” water- derived from transfers and/or other appropriated water, averaging 14.8 TAF annually but varying according remaining unmet demand.

e. EBMUD CVP diversions are governed by the Amendatory Contract, stipulating:

  (1) 133 TAF maximum diversion in any given year

  (2) 165 TAF maximum diversion amount over any 3 year period

  (3) Diversions allowed only when EBMUD total storage drops below 500 TAF

  (4) 155 cfs maximum diversion rate

5A.B7 Delivery Specifications

This section lists the CVP and SWP contract amounts and other water rights assumptions used in the EIS No Action Alternative and No Action Alternative CalSim II simulations (Tables 5A.B.23 through 5A.B.27).

5A.B8 USFWS RPA Implementation

The information included in this section is consistent with what was provided to and agreed upon by the lead agencies in the technical memorandum, "Representation of U.S. Fish and Wildlife Service Biological Opinion Reasonable and Prudent Alternative Actions for CalSim II Planning Studies" on February 10, 2010 (updated May 18, 2010).

5A.B8.1 Representation of U.S. Fish and Wildlife Service Biological Opinion Reasonable and Prudent Alternative Actions for CalSim II Planning Studies

The USFWS BO was released on December 15, 2008. To develop CalSim II modeling assumptions for the RPA in the BO, DWR led a series of meetings that involved members of fisheries and project agencies. The purpose for establishing this group was to prepare the assumptions and CalSim II implementations to represent the RPAs in Existing and Future Condition CalSim II simulations for future planning studies.

This memorandum summarizes the approach that resulted from these meetings and the modeling assumptions that were laid out by the group. The scope of this memorandum is limited to the December 15, 2008 BO. Unless otherwise indicated, all descriptive information of the RPAs is taken from Appendix B of the BO.

Table 5A.B.28 lists the participants that contributed to the meetings and information summarized in this document.

The RPAs in the USFWS BO are based on physical and biological phenomena that do not lend themselves to simulations using a monthly time step. Much scientific and modeling judgment has been employed to represent the implementation of the RPAs. The group believes the logic put into CalSim II represents the RPAs as best as possible at this time, given the scientific understanding of environmental factors enumerated in the BO and the limited historical data for some of these factors.

1 **Table 5A.B.23 Delta – Future Conditions**

CVP/SWP Contractor	Geographic Location	Water Right (TAF/yr)	SWP Table A Amount (TAF)		SWP Article 21 Demand (TAF/mon)	CVP Water Service Contracts (TAF/yr)	
			Ag	M&I		AG	M&I
North Delta							
City of Vallejo	City of Vallejo	–	–	–	–	–	16.0
CCWD*	Contra Costa County	–	–	–	–	–	195.0
Napa County FC&WCD	North Bay Aqueduct	–	–	29.03	1.0	–	–
Solano County WA	North Bay Aqueduct	–	–	47.51	1.0	–	–
Fairfield, Vacaville, and Benicia Agreement	North Bay Aqueduct	31.60	–	–	–	–	–
City of Antioch	City of Antioch	18.0	–	–	–	–	–
Total North Delta		**49.6**	**0.0**	**76.5**	**2.0**	**0.0**	**211.0**
South Delta							
Delta Water Supply Project	City of Stockton	32.4	–	–	–	–	–
Total South Delta		**32.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total		**82.0**	**0.0**	**76.5**	**2.0**	**0.0**	**211.0**

Table 5A.B.24 CVP North-of-the-Delta – Future Conditions

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)
		AG	M&I			
Anderson Cottonwood ID	Sacramento River Redding Subbasin	–	–	128.0	–	–
Clear Creek C.S.D.		13.8	1.5	–	–	–
Bella Vista WD		22.1	2.4	–	–	–
Shasta C.S.D.		–	1.0	–	–	–
Sac R. Misc. Users		–	–	3.4	–	–
Redding, City of		–	–	21.0	–	–
City of Shasta Lake		2.5	0.3	–	–	–
Mountain Gate C.S.D.			0.4	–	–	–
Shasta County Water Agency		0.5	0.5	–	–	–
Redding, City of/Buckeye		–	6.1	–	–	–
Total		**38.9**	**12.2**	**152.4**		**0.0**
Corning WD	Corning Canal	23.0	–	–	–	–
Proberta WD		3.5	–	–	–	–
Thomes Creek WD		6.4	–	–	–	–
Total		**32.9**	**0.0**	**0.0**	–	**0.0**
Kirkwood WD	Tehama-Colusa Canal	2.1	–	–	–	–
Glide WD		10.5	–	–	–	–
Kanawha WD		45.0	–	–	–	–
Orland-Artois WD		53.0	–	–	–	–

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)
		AG	M&I			
Colusa, County of		20.0	–	–	–	–
Colusa County WD		62.2	–	–	–	–
Davis WD		4.0	–	–	–	–
Dunnigan WD		19.0	–	–	–	–
La Grande WD		5.0	–	–	–	–
Westside WD		65.0	–	–	–	–
Total		**285.8**	**0.0**	**0.0**	–	**0.0**
Sac. R. Misc. Users	Sacramento River	–	–	1.5	–	–
Glenn Colusa ID	Glenn-Colusa Canal	–	–	441.5	–	–
		–	–	383.5	–	–
Sacramento NWR		–	–	–	–	53.4
Delevan NWR		–	–	–	–	24.0
Colusa NWR		–	–	–	–	28.8
Colusa Drain M.W.C.	Colusa Basin Drain	–	–	7.7	–	–
		–	–	62.3	–	–
Total		**0.0**	**0.0**	**895.0**	–	**106.2**
Princeton-Cordova-Glenn ID	Sacramento River	–	–	67.8	–	–
Provident ID		–	–	54.7	–	–
Maxwell ID		–	–	1.8	–	–
		–	–	16.2	–	–

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)
		AG	M&I			
Sycamore Family Trust		–	–	31.8	–	–
Roberts Ditch IC		–	–	4.4	–	–
Sac R. Misc. Users[b]		–	–	4.9	–	–
		–	–	9.5	–	–
Total		**0.0**	**0.0**	**191.2**	–	**0.0**
Reclamation District 108	Sacramento River	–	–	12.9	–	–
		–	–	219.1	–	–
River Garden Farms		–	–	29.8	–	–
Meridian Farms WC		–	–	35.0	–	–
Pelger Mutual WC		–	–	8.9	–	–
Reclamation District 1004		–	–	71.4	–	–
Carter MWC		–	–	4.7	–	–
Sutter MWC		–	–	226.0	–	–
Tisdale Irrigation & Drainage Co.		–	–	9.9	–	–
Sac R. Misc. Users		–	–	103.4	–	–
		–	–	0.9	–	–
Feather River WD export		20.0	–	–	–	–
Total		**20.0**	**0.0**	**722.1**	–	**0.0**
Sutter NWR	Sutter bypass water for Sutter NWR	–	–	–	–	25.9
Gray Lodge WMA	Feather River	–	–	–	–	41.4
Butte Sink Duck Clubs		–	–	–	–	15.9
Total		**0.0**	**0.0**	**0.0**		**83.2**

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)
		AG	**M&I**			
Sac. R. Misc. Users	Sacramento River	–	–	56.8	–	–
City of West Sacramento		–	–	23.6	–	–
Davis-Woodland Water Supply Project		DSA 65	–	–	–	–
Total		**0.0**	**0.0**	**80.4**	–	**0.0**
Sac R. Misc. Users	Lower Sacramento River	–	–	4.8	–	–
Natomas Central MWC		–	–	120.2	–	–
Pleasant Grove-Verona MWC		–	–	26.3	–	–
City of Sacramento		–	0.0	–	0.0	–
PCWA (Water Rights)		–	0.0	–	0.0	–
Total		**0.0**	**0.0**	**151.3**	**0.0**	–
Total CVP North-of-Delta		**377.6**	**12.2**	**2,193.8**	**0.0**	**189.4**

Notes:

* Level 4 Refuge water needs are not included.

Table 5A.B.25 CVP South-of-the-Delta – Future Conditions

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/ Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)	Losses (TAF/yr)
		AG	M&I				
Byron-Bethany ID	Upper DMC	20.6		–	–	–	–
Tracy, City of		–	10.0	–	–	–	–
		–	5.0	–	–	–	–
		–	5.0	–	–	–	–
Banta Carbona ID		20.0		–	–	–	–
Total		**40.6**	**20.0**	**0.0**	**0.0**	**0.0**	**0.0**
Del Puerto WD	Upper DMC	12.1	–	–	–	–	–
Davis WD		5.4	–	–	–	–	–
Foothill WD		10.8	–	–	–	–	–
Hospital WD		34.1	–	–	–	–	–
Kern Canon WD		7.7	–	–	–	–	–
Mustang WD		14.7	–	–	–	–	–
Orestimba WD		15.9	–	–	–	–	–
Quinto WD		8.6	–	–	–	–	–
Romero WD		5.2	–	–	–	–	–
Salado WD		9.1	–	–	–	–	–
Sunflower WD		16.6	–	–	–	–	–
West Stanislaus WD		50.0	–	–	–	–	–
Patterson WD		16.5	–	–	6.0	–	–
Total		**206.7**	**0.0**	**0.0**	**6.0**	**0.0**	**0.0**

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/ Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)	Losses (TAF/yr)
		AG	M&I				
Upper DMC Loss	Upper DMC	–	–	–	–	–	18.5
Panoche WD	Lower DMC Volta	6.6	–	–	–	–	–
San Luis WD		65.0	–	–	–	–	–
Laguna WD		0.8	–	–	–	–	–
Eagle Field WD		4.6	–	–	–	–	–
Mercy Springs WD		2.8	–	–	–	–	–
Oro Loma WD		4.6	–	–	–	–	–
Total		**84.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Central California ID	Lower DMC Volta	–	–	140.0	–	–	–
Grasslands via CCID	Lower DMC Volta	–	–	–	–	81.8	–
Los Banos WMA		–	–	–	–	11.2	–
Kesterson NWR	Lower DMC Volta	–	–	–	–	10.5	–
Freitas – SJBAP		–	–	–	–	6.3	–
Salt Slough – SJBAP		–	–	–	–	8.6	–
China Island – SJBAP		–	–	–	–	7.0	–
Volta WMA		–	–	–	–	13.0	–
Grassland via Volta Wasteway		–	–	–	–	23.2	–
Total		**0.0**	**0.0**	**140.0**	**0.0**	**161.5**	**0.0**

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/ Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)	Losses (TAF/yr)
		AG	M&I				
Fresno Slough WD	San Joaquin River at Mendota Pool	4.0	–	–	0.9	–	–
James ID		35.3	–	–	9.7	–	–
Coelho Family Trust		2.1	–	–	1.3	–	–
Tranquillity ID		13.8	–	–	20.2	–	–
Tranquillity PUD		0.1	–	–	0.1	–	–
Reclamation District 1606		0.2	–	–	0.3	–	–
Central California ID		–	–	392.4	–	–	–
Columbia Canal Co.		–	–	59.0	–	–	–
Firebaugh Canal Co.		–	–	85.0	–	–	–
San Luis Canal Co.		–	–	23.6	–	–	–
M.L. Dudley Company		–	–	–	2.3	–	–
Grasslands WD		–	–	–	–	29.0	–
Mendota WMA		–	–	–	–	27.6	–
Losses		–	–	–	–	–	101.5
Total		**55.5**	**0.0**	**560.0**	**34.8**	**56.6**	**101.5**
San Luis Canal Co.	San Joaquin River at Sack Dam	–	–	140.0	–	–	–
Grasslands WD		–	–	–	–	2.3	–
Los Banos WMA		–	–	–	–	12.4	–
San Luis NWR		–	–	–	–	19.5	–
West Bear Creek NWR		–	–	–	–	7.5	–
East Bear Creek NWR		–	–	–	–	8.9	–
Total		**0.0**	**0.0**	**140.0**	**0.0**	**50.6**	**0.0**

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/ Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)	Losses (TAF/yr)
		AG	M&I				
San Benito County WD (Ag)	San Felipe	35.6	–	–	–	–	–
Santa Clara Valley WD (Ag)		33.1	–	–	–	–	–
Pajaro Valley WD		6.3	–	–	–	–	–
San Benito County WD (M&I)		–	8.3	–	–	–	–
Santa Clara Valley WD (M&I)		–	119.4	–	–	–	–
Total		**74.9**	**127.7**	**0.0**	**0.0**	**0.0**	**0.0**
San Luis WD	CA reach 3	60.1	–	–	–	–	–
CA, State Parks and Rec		2.3	–	–	–	–	–
Affonso/Los Banos Gravel Co.		0.3	–	–	–	–	–
Total		**62.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Panoche WD	CVP Dos Amigos Pumping Plant/ CA reach 4	87.4	–	–	–	–	–
Pacheco WD		10.1	–	–	–	–	–
Total		**97.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Westlands WD (Centinella)	CA reach 4	2.5	–	–	–	–	–
Westlands WD (Broadview WD)		27.0	–	–	–	–	–
Westlands WD (Mercy Springs WD)		4.2	–	–	–	–	–
Westlands WD (Widern WD)		3.0	–	–	–	–	–
Total		**36.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/ Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)	Losses (TAF/yr)
		AG	M&I				
Westlands WD: CA Joint Reach 4	CA reach 4	219.0	–	–	–	–	–
Westlands WD: CA Joint Reach 5	CA reach 5	570.0	–	–	–	–	–
Westlands WD: CA Joint Reach 6	CA reach 6	219.0	–	–	–	–	–
Westlands WD: CA Joint Reach 7	CA reach 7	142.0	–	–	–	–	–
Total		**1150.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Avenal, City of	CA reach 7	–	3.5	–	3.5	–	–
Coalinga, City of		–	10.0	–	–	–	–
Huron, City of		–	3.0	–	–	–	–
Total		**0.0**	**16.5**	**0.0**	**3.5**	**0.0**	**0.0**
CA Joint Reach 3 – Loss	CVP Dos Amigos PP/CA reach 3	–	–	–	–	–	2.5
CA Joint Reach 4 – Loss	CA reach 4	–	–	–	–	–	10.1
CA Joint Reach 5 – Loss	CA reach 5	–	–	–	–	–	30.1
CA Joint Reach 6 – Loss	CA reach 6	–	–	–	–	–	12.5
CA Joint Reach 7 – Loss	CA reach 7	–	–	–	–	–	8.5
Total		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**63.7**
Cross Valley Canal – CVP	CA reach 14	–	–	–	–	–	–
Fresno, County of		3.0	–	–	–	–	–
Hills Valley ID-Amendatory		3.3	–	–	–	–	–
Kern-Tulare WD		40.0	–	–	–	–	–
Lower Tule River ID		31.1	–	–	–	–	–

CVP Contractor	Geographic Location	CVP Water Service Contracts (TAF/yr)		Settlement/ Exchange Contractor (TAF/yr)	Water Rights/ Non-CVP (TAF/yr)	Level 2 Refuges* (TAF/yr)	Losses (TAF/yr)
		AG	M&I				
Pixley ID		31.1	–	–	–	–	–
Rag Gulch WD		13.3	–	–	–	–	–
Tri-Valley WD		1.1	–	–	–	–	–
Tulare, County of		5.3	–	–	–	–	–
Kern NWR		–	–	–	–	11.0	–
Pixley NWR		–	–	–	–	1.3	–
Total		**128.3**	**0.0**	**0.0**	**0.0**	**12.3**	**0.0**
Total CVP South-of-Delta		**1,937.1**	**164.2**	**840.0**	**44.3**	**281.0**	**183.7**

Notes:
*Level 4 Refuge water supplies are not included.

1 **Table 5A.B.26 SWP North-of-the-Delta – Future Conditions**

SWP CONTRACTOR	Geographic Location	FRSA Amount (TAF)	Water Right (TAF/yr)	Table A Amount (TAF)		Article 21 Demand (TAF/mon)	Other (TAF/yr)
				Ag	M&I		
Feather River							
Palermo	FRSA	–	17.6	–	–	–	–
County of Butte	Feather River	–	–	–	27.5	–	–
Thermalito	FRSA	–	8.0	–	–	–	–
Western Canal	FRSA	150.0	145.0	–	–	–	–
Joint Board	FRSA	550.0	5.0	–	–	–	–
City of Yuba City	Feather River	–	–	–	9.6	–	–
Feather WD	FRSA	17.0	–	–	–	–	–
Garden, Oswald, Joint Board	FRSA	–	–	–	–	–	–
Garden	FRSA	12.9	5.1	–	–	–	–
Oswald	FRSA	2.9	–	–	–	–	–
Joint Board	FRSA	50.0	–	–	–	–	–
Plumas, Tudor	FRSA	–	–	–	–	–	–
Plumas	FRSA	8.0	6.0	–	–	–	–
Tudor	FRSA	5.1	0.2	–	–	–	–
Total Feather River Area		**795.8**	**186.9**	**0.0**	**37.1**	–	–

SWP CONTRACTOR	Geographic Location	FRSA Amount (TAF)	Water Right (TAF/yr)	Table A Amount (TAF)		Article 21 Demand (TAF/mon)	Other (TAF/yr)
				Ag	M&I		
Other							
Yuba County Water Agency	Yuba River	–	–	–	–	–	Variable
		–	–	–	–	–	333.6
Camp Far West ID	Yuba River	–	–	–	–	–	12.6
Bear River Exports	American R/DSA70	–	–	–	–	–	Variable
		–	–	–	–	–	95.2
Feather River Exports to American River (left bank to DSA70)	American R/DSA70	–	11.0	–	–	–	–

Table 5A.B.27 SWP South-of-the-Delta –Future Conditions

SWP Contractor	Geographic Location	Table A Amount (TAF)		Article 21 Demand (TAF/mon)	Losses (TAF/yr)
		Ag	M&I		
Alameda Co. FC&WCD, Zone 7	SBA reaches 1-4	–	47.60	1.00	–
	SBA reaches 5-6	–	33.02	None	–
	Total	–	**80.62**	**1.00**	–
Alameda County WD	SBA reaches 7-8	–	42.00	1.00	–
Santa Clara Valley WD	SBA reach 9	–	100.00	4.00	–
Oak Flat WD	CA reach 2A	5.70	–	None	–
County of Kings	CA reach 8C	9.31	–	None	–
Dudley Ridge WD	CA reach 8D	50.34	–	1.00	–
Empire West Side ID	CA reach 8C	2.00	–	1.00	–
Kern County Water Agency	CA reaches 3, 9-13B	608.86	134.60	None	–
	CA reaches 14A-C	99.20	–	180.00	–
	CA reaches 15A-16A	59.40	–	None	–
	CA reach 31A	80.67	–	None	–
	Total	**848.13**	**134.60**	**180.00**	–
Tulare Lake Basin WSD	CA reaches 8C-8D	88.92	–	15.00	–
San Luis Obispo Co. FC&WCD	CA reaches 33A-35	–	25.00	None	–
Santa Barbara Co. FC&WCD	CA reach 35	–	45.49	None	–
Antelope Valley-East Kern WA	CA reaches 19-20B, 22A-B	–	141.40	1.00	–
Castaic Lake WA	CA reach 31A	12.70	–	1.00	–
	CA reach 30	–	82.50	None	–
	Total	**12.70**	**82.50**	**1.00**	–
Coachella Valley WD	CA reach 26A	–	138.35	2.00	–

SWP Contractor	Geographic Location	Table A Amount (TAF)		Article 21 Demand (TAF/mon)	Losses (TAF/yr)
		Ag	M&I		
Crestline-Lake Arrowhead WA	CA reach 24	–	5.80	None	–
Desert WA	CA reach 26A	–	55.75	5.00	–
Littlerock Creek ID	CA reach 21	–	2.30	None	–
Mojave WA	CA reaches 19, 22B-23	–	82.80	None	–
Metropolitan WDSC	CA reach 26A	–	148.67	90.70	–
	CA reach 30	–	756.69	74.80	–
	CA reaches 28G-H	–	102.71	27.60	–
	CA reach 28J	–	903.43	6.90	–
	Total	–	**1911.50**	**200.00**	–
Palmdale WD	CA reaches 20A-B	–	21.30	None	–
San Bernardino Valley MWD	CA reach 26A	–	102.60	None	–
San Gabriel Valley MWD	CA reach 26A	–	28.80	None	–
San Gorgonio Pass WA	CA reach 26A	–	17.30	None	–
Ventura County FCD	CA reach 29H	–	3.15	None	–
	CA reach 30	–	16.85	None	–
	Total	–	**20.00**	–	–

SWP Contractor	Geographic Location	Table A Amount (TAF)		Article 21 Demand (TAF/mon)	Losses (TAF/yr)
		Ag	M&I		
SWP Losses	CA reaches 1-2	–	–	–	7.70
	SBA reaches 1-9	–	–	–	0.60
	CA reach 3	–	–	–	10.80
	CA reach 4	–	–	–	2.60
	CA reach 5	–	–	–	3.90
	CA reach 6	–	–	–	1.20
	CA reach 7	–	–	–	1.60
	CA reaches 8C-13B	–	–	–	11.90
	Wheeler Ridge Pumping Plant and CA reaches 14A-C	–	–	–	3.60
	Chrisman Pumping Plant and CA reaches 15A-18A	–	–	–	1.80
	Pearblossom Pumping Plant and CA reaches 17-21	–	–	–	5.10
	Mojave Pumping Plant and CA reaches 22A-23	–	–	–	4.00
	REC and CA reaches 24-28J	–	–	–	1.40
	CA reaches 29A-29F	–	–	–	1.90
	Castaic PWP and CA reach 29H	–	–	–	3.10
	REC and CA reach 30	–	–	–	2.40
	Total	–	–	–	**63.60**
Total		**1,017.10**	**3,038.11**	**412.00**	**63.60**

Table 5A.B.28 Meeting Participants

Aaron Miller/DWR Steve Ford/DWR Randi Field/Reclamation Gene Lee/Reclamation Lenny Grimaldo/Reclamation	Derek Hilts/USFWS Steve Detwiler/USFWS Matt Nobriga/CDFW Jim White/CDFW Craig Anderson/NMFS
Parviz Nader-Tehrani/DWR Erik Reyes/DWR Sean Sou/DWR	Robert Leaf/CH2M HILL Derya Sumer/CH2M HILL

The simulated OMR flow conditions and CVP and SWP Delta export operations, resulting from these assumptions, are believed to be a reasonable representation of conditions expected to prevail under the RPAs over large spans of years (refer to CalSim II modeling results for more details on simulated operations). Actual OMR flow conditions and Delta export operations will differ from simulated operations for numerous reasons, including having near real-time knowledge and/or estimates of turbidity, temperature, and fish spatial distribution that are unavailable for use in CalSim II over a long period of record. Because these factors and others are believed to be critical for smelt entrainment risk management, the USFWS adopted an adaptive process in defining the RPAs. Given the relatively generalized representation of the RPAs, assumed for CalSim II modeling, much caution is required when interpreting outputs from the model.

5A.B8.1.1 Action 1: Adult Delta Smelt Migration and Entrainment (RPA Component 1, Action 1 – First Flush)

5A.B8.1.1.1 Action 1 Summary:

Objective: A fixed duration action to protect pre-spawning adult Delta Smelt from entrainment during the first flush, and to provide advantageous hydrodynamic conditions early in the migration period.

Action: Limit exports so that the average daily combined OMR flow is no more negative than -2,000 cfs for a total duration of 14 days, with a 5-day running average no more negative than -2,500 cfs (within 25 percent).

Timing:

Part A: December 1 to December 20 – The Smelt Working Group (SWG) may recommend a start date to the USFWS based upon an examination of turbidity data from Prisoner’s Point, Holland Cut, Victoria Canal and salvage data from CVP and SWP (see below), and other parameters important to the protection of Delta Smelt including (but not limited to) preceding conditions of X2, the Fall Midwater Trawl Survey (FMWT), and river flows. The USFWS will make the final determination.

Part B: After December 20 – The action will begin if the 3-day average turbidity at Prisoner’s Point, Holland Cut, and Victoria Canal exceeds 12 nephelometric turbidity units (NTU). However the SWG can recommend a delayed start or interruption based on other conditions such as Delta inflow that may affect vulnerability to entrainment.

Triggers (Part B):

Turbidity: Three-day average of 12 NTU or greater at all three turbidity stations (Prisoner's Point, Holland Cut, and Victoria Canal)

OR

Salvage: Three days of Delta Smelt salvage after December 20 at either facility or cumulative daily salvage count that is above a risk threshold based upon the daily salvage index approach reflected in a daily salvage index value greater than or equal to 0.5 (daily Delta Smelt salvage greater than one-half of the prior year FMWT index value).

The window for triggering Action 1 concludes when either off-ramp condition described below is met. These off-ramp conditions may occur without Action 1 ever being triggered. If this occurs, then Action 3 is triggered, unless the USFWS concludes on the basis of the totality of available information that Action 2 should be implemented instead.

Off-ramps:

Temperature: Water temperature reaches 12 degrees Celsius (°C) based on a three station daily mean at the temperature stations Mossdale, Antioch, and Rio Vista

OR

Biological: Onset of spawning (presence of spent females in the Spring Kodiak Trawl Survey [SKT] or at Banks or Jones).

5A.B8.1.1.2 Action 1 Assumptions for CalSim II Modeling Purposes:

An approach was selected based on hydrologic and assumed turbidity conditions. Under this general assumption, Part A of the action was never assumed because, on the basis of historical salvage data, it was considered unlikely or rarely to occur. Part B of the action was assumed to occur if triggered by turbidity conditions. This approach was believed to tend to a more conservative interpretation of the frequency, timing, and extent of this action. The assumptions used for modeling are as follows:

Action: Limit exports so that the average daily OMR flow is no more negative than -2,000 cfs for a total duration of 14 days, with a 5-day running average no more negative than 2,500 cfs (within 25 percent of the monthly criteria).

Timing: If turbidity-trigger conditions first occur in December, then the action starts on December 21; if turbidity-trigger conditions first occur in January, then the action starts on January 1; if turbidity-trigger conditions first occur in February, then the action starts on February 1; and if turbidity-trigger conditions first occur in March, then the action starts on March 1. It is assumed that once the action is triggered, it continues for 14 days.

Triggers: Only an assumed turbidity trigger that is based on hydrologic outputs was considered. A surrogate salvage trigger or indicator was not included because there was no way to model it.

Turbidity: If the monthly average unimpaired Sacramento River Index (four-river index: sum of Sacramento, Yuba, Feather, and American Rivers) exceeds 20,000 cfs, then it is assumed that an event, in which the 3-day average turbidity at Hood exceeds 12 NTU, has occurred within the month. It is assumed that an event at Sacramento River is a reasonable indicator of this condition occurring, within the month, at all three turbidity stations: Prisoner's Point, Holland Cut, and Victoria Canal.

A chart showing the relationship between turbidity at Hood (number of days with turbidity is greater than 12 NTU) and Sacramento River Index (sum of monthly flow at four stations on the Sacramento, Feather, Yuba and American Rivers, from 2003 to 2006) is shown on Figure 5A.B.1. For months when average Sacramento River Index is between 20,000 cfs and 25,000 cfs, a transition is observed in number of days with Hood turbidity greater than 12 NTU. For months when average Sacramento River Index is above 25,000 cfs, Hood turbidity was always greater than 12 NTU for as many as 5 days or more within the month in which the flow occurred. For a conservative approach, 20,000 cfs is used as the threshold value.

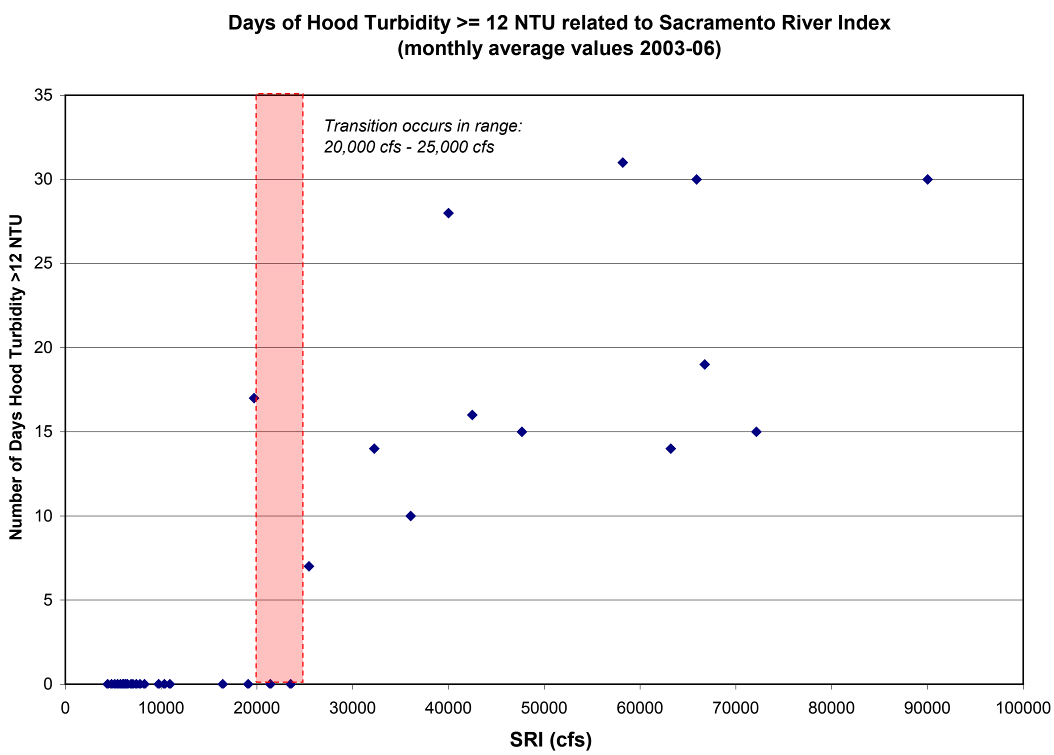


Figure 5A.B.1 Relationship between Turbidity at Hood and Sacramento River Index

Salvage: It is assumed that salvage would occur when first flush occurs.

Off-ramps: Only temperature-based off-ramping is considered. A surrogate biological off-ramp indicator was not included.

<u>Temperature:</u> Because the water temperature data at the three temperature stations (Antioch, Mossdale, and Rio Vista) are only available for years after 1984, another parameter was sought for use as an alternative indicator. It is observed that monthly average air temperature at Sacramento Executive Airport generally trends with the three-station average water temperature (see Figure 5A.B.2). Using this alternative indicator, monthly average air temperature is assumed to occur in the middle of the month, and values are interpolated on a daily basis to obtain daily average water temperature. Using the correlation between air and water temperature, estimated daily water temperatures are estimated from the 82-year monthly average air temperature. Dates when the three-station average temperature reaches 12°C are recorded and used as input in CalSim II. A 1:1 correlation was used for simplicity instead of using the trend line equation illustrated on Figure 5A.B.2.

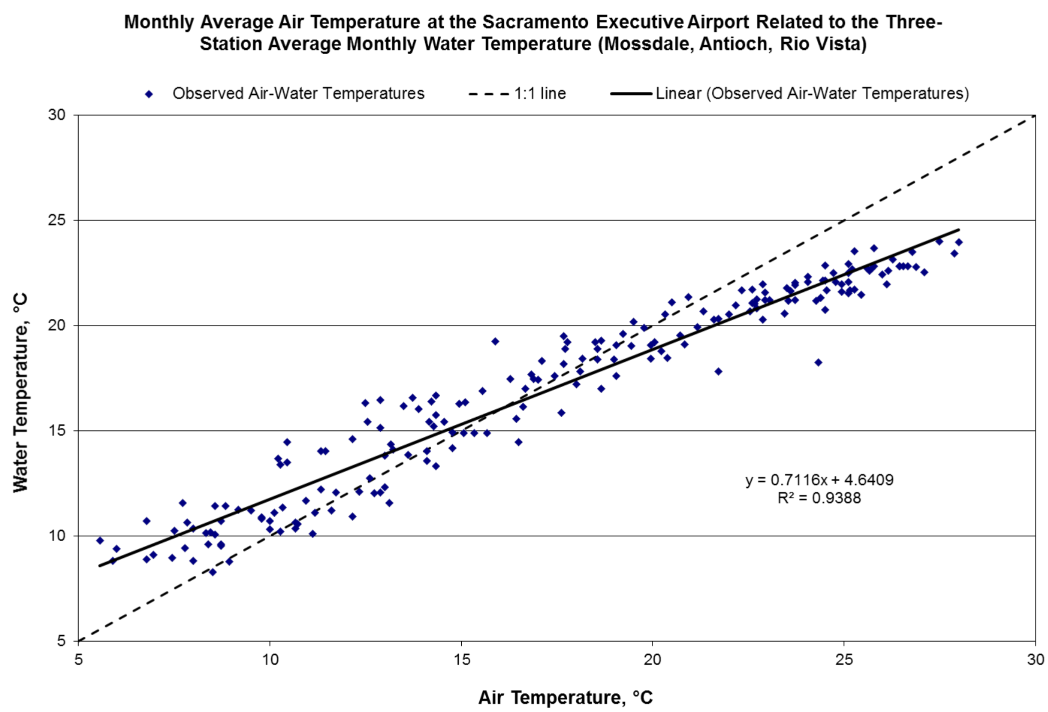


Figure 5A.B.2 Relationship between Monthly Average Air Temperature at the Sacramento Executive Airport and the Three-station Average Monthly Water Temperature

Other Modeling Considerations: For monthly analysis for the month of December (in which Action 1 does not begin until December 21), a background OMR flow must be assumed for the purpose of calculating a day-weighted average for implementing a partial-month action condition. When necessary, the background OMR flow for December was assumed to be -8,000 cfs.

For the additional condition to meet a 5-day running average no more negative than 2,500 cfs (within 25 percent), Paul Hutton's equation is used. Hutton concluded that with stringent OMR standards (1,250 to 2,500 cfs), the 5-day average would control more frequently than the 14-day average, but it is less likely to control at higher flows. Therefore, the CalSim II implementation includes both a 14-day (approximately monthly average) and a 5-day average flow criteria based on Hutton's methodology.

Rationale: The following is an overall summary of the rationale for the preceding interpretation of RPA Action 1.

December 1 to December 20 for initiating Action 1 is not considered because seasonal peaks of Delta Smelt salvage are rare prior to December 20. Adult Delta Smelt spawning migrations often begin following large precipitation events that happen after mid-December.

Salvage of adult Delta Smelt often corresponds with increases in turbidity and exports. On the basis of the above discussion and Figure 5A.B.2, Sacramento River Index greater than 25,000 cfs is assumed to be an indicator of turbidity trigger being reached at all three turbidity stations: Prisoner's Point, Holland Cut, and Victoria Canal. Most sediment enters the Delta from the Sacramento River during flow pulses; therefore, a flow indicator based on only Sacramento River flow is used.

The 12°C threshold for the off-ramp criterion is a conservative estimate of when Delta Smelt larvae begin successfully hatching. Once hatched, the larvae move into the water column where they are potentially vulnerable to entrainment.

Results: Using these assumptions, in a typical CalSim II 82-year simulation (1922 through 2003 hydrologic conditions), Action 1 will occur 29 times in the December 21 to January 3 period, 14 times in the January 1 to January 14 period, 13 times in the February 1 to February 14 period, and 17 times in the March 1 to March 14 period. In three of these 17 occurrences (1934, 1991, and 2001), Action 3 is triggered before Action 1 and therefore Action 1 is bypassed. Action 1 is not triggered in nine of the 82 years (1924, 1929, 1931, 1955, 1964, 1976, 1977, 1985, and 1994), typically critically dry years. Refer to CalSim II modeling results for more details on simulated operations of OMR, Delta exports, and other parameters of interest.

5A.B8.1.2 Action 2: Adult Delta Smelt Migration and Entrainment (RPA Component 1, Action 2)

5A.B8.1.2.1 Action 2 Summary:

Objective: An action implemented using an adaptive process to tailor protection to changing environmental conditions after Action 1. As in Action 1, the intent is to protect pre-spawning adults from entrainment and, to the extent possible, from adverse hydrodynamic conditions.

Action: The range of net daily OMR flows will be no more negative than -1,250 to -5,000 cfs. Depending on extant conditions (and the general guidelines below), specific OMR flows within this range are recommended by the SWG from the onset of Action 2 through its termination (see Adaptive Process description in the BO). The SWG would provide weekly recommendations based upon review of the sampling data, from real-time salvage data at the CVP and SWP, and utilizing most up-to-date technological expertise and knowledge relating population status and predicted distribution to monitored physical variables of flow and turbidity. The USFWS will make the final determination.

Timing: Beginning immediately after Action 1. Before this date (in time for operators to implement the flow requirement) the SWG will recommend specific requirement OMR flows based on salvage and on physical and biological data on an ongoing basis. If Action 1 is not implemented, the SWG may recommend a start date for the implementation of Action 2 to protect adult Delta Smelt.

Suspension of Action:

Flow: OMR flow requirements do not apply whenever a 3-day flow average is greater than or equal to 90,000 cfs in Sacramento River at Rio Vista and 10,000 cfs in San Joaquin River at Vernalis. Once such flows have abated, the OMR flow requirements of the Action are again in place.

Off-ramps:

Temperature: Water temperature reaches 12°C based on a three-station daily average at the temperature stations: Rio Vista, Antioch, and Mossdale.

OR

Biological: Onset of spawning (presence of a spent female in SKT or at either facility).

5A.B8.1.2.2 Action 2 Assumptions for CalSim II Modeling Purposes:

An approach was selected based on the occurrence of Action 1 and X2 salinity conditions. This approach selects from between two OMR flow tiers depending on the previous month's X2 position, and is never more constraining than an OMR criterion of -3,500 cfs. The assumptions used for modeling are as follows:

Action: Limit exports so that the average daily OMR flow is no more negative than -3,500 or -5,000 cfs depending on the previous month's ending X2 location (-3,500 cfs if X2 is east of Roe Island, or -5,000 cfs if X2 is west of Roe Island), with a 5-day running average within 25 percent of the monthly criteria (no more negative than -4,375 cfs if X2 is east of Roe Island, or -6,250 cfs if X2 is west of Roe Island).

Timing: Begins immediately after Action 1 and continues until initiation of Action 3.

In a typical CalSim II 82-year simulation, Action 1 was not triggered in nine of the 82 years. In these conditions it is assumed that OMR flow should be maintained no more negative than -5,000 cfs.

Suspension of Action: A flow peaking analysis, developed by Paul Hutton (2009), is used to determine the likelihood of a 3-day flow average greater than or equal to 90,000 cfs in Sacramento River at Rio Vista and a 3-day flow average greater than or equal to 10,000 cfs in San Joaquin River at Vernalis occurring within the month. It is assumed that when the likelihood of these conditions occurring exceeds 50 percent, Action 2 is suspended for the full month, and OMR flow requirements do not apply. The likelihood of these conditions occurring is evaluated each month, and Action 2 is suspended for 1 month at a time whenever both of these conditions occur.

The equations for likelihood (frequency of occurrence) are as follows:

- Frequency of Rio Vista 3-day flow average > 90,000 cfs:
  - 0 percent when Freeport monthly flow < 50,000 cfs, OR
  - (0.00289 × Freeport monthly flow – 146) percent when 50,000 cfs ≤ Freeport plus Yolo Bypass monthly flow ≤ 85,000 cfs, OR
  - 100 percent when Freeport monthly flow >85,000 cfs
- Frequency of Vernalis 3-day flow average > 10,000 cfs:
  - 0 percent when Vernalis monthly flow < 6,000 cfs, OR
  - (0.00901 × Vernalis monthly flow – 49) percent when 6,000 cfs ≤ Vernalis monthly flow ≤ 16,000 cfs, OR
  - 100 percent when Vernalis monthly flow >16,000 cfs

The frequency of the Rio Vista 3-day flow average > 90,000 cfs equals 50 percent when Freeport plus Yolo Bypass monthly flow is 67,820 cfs and the frequency of Vernalis 3-day flow average > 10,000 cfs equals 50 percent Vernalis monthly flow is 10,988 cfs. Therefore these two flow values are used as thresholds in the model.

Off-ramps: Only temperature-based off-ramping is considered. A surrogate biological off-ramp indicator was not included.

<u>Temperature:</u> Because the water temperature data at the three temperature stations (Antioch, Mossdale, and Rio Vista) are only available for years after 1984, another parameter was sought for use as an alternative indicator. It is observed that monthly average air temperature at Sacramento Executive Airport generally trends with the three-station average water temperature (Figure 5A.B.2). Using this alternative indicator, monthly average air temperature is assumed to occur in the middle of the month, and values are interpolated on a daily basis to obtain daily average water temperature. Using the correlation between air and water temperature, daily water temperatures are estimated from the 82-year monthly average air temperature. Dates when the three-station average temperature reaches 12°C are recorded and used as input in CalSim II. A 1:1 correlation was used for simplicity instead of using the trend line equation illustrated on Figure 5A.B.2.

Rationale: The following is an overall summary of the rationale for the preceding interpretation of RPA Action 2.

Action 2 requirements are based on X2 location that is dependent on the Delta outflow. If outflows are very high, fewer Delta Smelt will spawn east of Sherman Lake; therefore, the need for OMR restrictions is lessened.

In the case of Action 1 not being triggered, CDFW suggested OMR > -5,000 cfs, following the actual implementation of the BO in winter 2009 because some adult Delta Smelt might move into the Central Delta without a turbidity event.

Action 2 is suspended when the likelihood of a 3-day flow average greater than or equal to 90,000 cfs in Sacramento River at Rio Vista and a 3-day flow average greater than or equal to 10,000 cfs in San Joaquin River at Vernalis occurring concurrently within the month exceeds 50 percent, because at extreme high flows the majority of adult Delta Smelt will be distributed downstream of the Delta and entrainment concerns will be very low.

The 12°C threshold for the off-ramp criterion is a conservative estimate of when Delta Smelt larvae begin successfully hatching. Once hatched, the larvae move into the water column where they are potentially vulnerable to entrainment.

Results: Using these assumptions, in a typical CalSim II 82-year simulation (1922 through 2003 hydrologic conditions), Action 1, and therefore Action 2, does not occur in 12 of the 82 years (1924, 1929, 1931, 1934, 1955, 1964, 1976, 1977, 1985, 1991, 1994, and 2001), typically critically dry years. The criteria for suspension of OMR minimum flow requirements, described above, results in potential suspension of Action 2 (if Action 2 is active) six times in January, 11 times in February, six times in March (however, Action 2 was not active three of these six times), and two times in April. The result is that Action 2 is in effect 37 times in January (with OMR at -3,500 cfs 29 times, and at -5,000 cfs 8 times), 43 times in February (with OMR at -3,500 cfs 25 times, and at -5,000 cfs 18 times), 31 times in March (with OMR at -3,500 cfs 14 times, and at -5,000 cfs 17 times), and 80 times in April (with OMR at -3,500 cfs 46 times, and at -5,000 cfs 34 times). The frequency each month is a cumulative result of the action being triggered in the current or prior months. Refer to CalSim II modeling results for more details on simulated operations of OMR, Delta exports, and other parameters of interest.

5A.B8.1.3 Action 3: Entrainment Protection of Larval and Juvenile Delta Smelt (RPA Component 2)

5A.B8.1.3.1 Action 3 Summary:

Objective: Minimize the number of larval Delta Smelt entrained at the facilities by managing the hydrodynamics in the Central Delta flow levels pumping rates spanning a time sufficient for protection of larval Delta Smelt, e.g., by using a VAMP-like action. Because protective OMR flow requirements vary over time (especially between years), the action is adaptive and flexible within appropriate constraints.

Action: Net daily OMR flow will be no more negative than -1,250 to -5,000 cfs based on a 14-day running average with a simultaneous 5-day running average within 25 percent of the applicable requirement for OMR. Depending on extant conditions (and the general guidelines below), specific OMR flows within this range are recommended by the SWG from the onset of Action 3 through its termination (see Adaptive Process in Introduction). The SWG would provide these recommendations based upon weekly review of sampling data, from real-time salvage data at the CVP and SWP, and expertise and knowledge relating population status and predicted distribution to monitored physical variables of flow and turbidity. The USFWS will make the final determination.

Timing: Initiate the action after reaching the triggers below, which are indicative of spawning activity and the probable presence of larval Delta Smelt in the South and Central Delta. Based upon daily salvage data, the SWG may recommend an earlier start to Action 3. The USFWS will make the final determination.

Triggers:

Temperature: When temperature reaches 12°C based on a three-station average at the temperature stations: Mossdale, Antioch, and Rio Vista.

OR

Biological: Onset of spawning (presence of spent females in SKT or at either facility).

Off-ramps:

Temporal: June 30;

OR

Temperature: Water temperature reaches a daily average of 25°C for three consecutive days at Clifton Court Forebay.

5A.B8.1.4 Action 3 Assumptions for CalSim II Modeling Purposes:

An approach was selected based on assumed temperature and X2 salinity conditions. This approach selects from among three OMR flow tiers depending on the previous month's X2 position and ranges from an OMR criteria of -1,250 to -5,000 cfs. Because of the potential low export conditions that could occur at an OMR criterion of -1,250 cfs, a criterion for minimum exports for health and safety is also assumed. The assumptions used for modeling are as follows:

Action: Limit exports so that the average daily OMR flow is no more negative than -1,250, -3,500, or -5,000 cfs, depending on the previous month's ending X2 location (-1,250 cfs if X2 is east of Chipps Island, -5,000 cfs if X2 is west of Roe Island, or -3,500 cfs if X2 is between Chipps and Roe Island, inclusively), with a 5-day running average within 25 percent of the monthly criteria (no more negative than -1,562 cfs if X2 is east of Chipps Island, -6,250 cfs if X2 is west of Roe Island, or -4,375 cfs if X2 is between Chipps and Roe Island). The more constraining of this OMR requirement or the VAMP requirement will be selected during the VAMP period (April 15 to May 15). Additionally, in the case of the month of June, the OMR criterion from May is maintained through June (it is assumed that June OMR should not be more constraining than May).

Timing: Begins immediately upon temperature trigger conditions and continues until off-ramp conditions are met.

Triggers: Only temperature trigger conditions are considered. A surrogate biological trigger was included.

Temperature: Because the water temperature data at the three temperature stations (Antioch, Mossdale, and Rio Vista) are only available for years after 1984, another parameter was sought to be used as an alternative indicator. It is observed that monthly average air temperature at Sacramento Executive Airport generally trends with the three-station average water temperature (Figure 5A.B.2). Using this alternative indicator, monthly average air temperature is assumed to occur in the middle of the month, and values are interpolated on a daily basis to obtain daily average water temperature. Using the correlation between air and water temperature, estimated daily water temperatures are estimated from the 82-year monthly average air temperature. Dates when the three-station average temperature reaches 12°C are recorded and used as input in CalSim II. A 1:1 correlation was used for simplicity instead of using the trend line equation illustrated on Figure 5A.B.2.

Biological: Onset of spawning is assumed to occur no later than May 30.

Clarification Note: This text previously read "Onset of spawning is assumed to occur no later than April 30", where the CalSim II lookup table has May 30 as the date. Based on RPA team discussions in August 2009, it was agreed upon that onset of spawning could not be modeled in CalSim II. This trigger was actually coded as a placeholder in case in the future this trigger was to be used; the date was selected purposefully in a way that it wouldn't affect modeling results. Temperature trigger for Action 3 does occur before end of April. Therefore it does not matter whether the document is corrected to read May 30 or the model lookup table is changed to April 30.

Off-ramps:

Temporal: It is assumed that the ending date of the action would be no later than June 30.

OR

Temperature: Only 17 years of data are available for Clifton Court water temperature. A similar approach as used in the temperature trigger was considered. However, because 3 consecutive days of water temperature greater than or equal to 25°C is required, a correlation between air temperature and water temperature did not work well for this off-ramp criterion. Out of the 17 recorded years, in 1 year the criterion was triggered in May (May 31), and in 3 years it was triggered in June (June 3, 21, and 27). In all other years it was observed in July or later. With only four data points before July, it was not possible to generate a rule based on statistics. Therefore, temporal off-ramp criterion (June 30) is used for all years.

Health and Safety: In CalSim II, a minimum monthly Delta export criterion of 300 cfs for SWP and 600 cfs (or 800 cfs depending on Shasta storage) for CVP is assumed. This assumption is suitable for dry-year conditions when allocations are low and storage releases are limited; however, minimum monthly exports need to be made for protection of public health and safety (health and safety deliveries upstream of San Luis Reservoir).

In consideration of the severe export restrictions associated with the OMR criteria established in the RPAs, an additional set of health and safety criterion is assumed. These export restrictions could lead to a situation in which supplies are available and allocated; however, exports are curtailed forcing San Luis to have an accelerated drawdown rate. For dam safety at San Luis Reservoir, 2 feet per day is the maximum acceptable drawdown rate. Drawdown occurs faster in summer months and peaks in June when the agricultural demands increase. To avoid rapid drawdown in San Luis Reservoir, a relaxation of OMR is allowed so that exports can be maintained at 1,500 cfs in all months if needed.

This modeling approach may not fit the real-life circumstances. In summer months, especially in June, the assumed 1,500 cfs for health and safety may not be sufficient to keep San Luis drawdown below a safe 2 feet per day; under such circumstances the projects would be required to increase pumping in order to maintain dam safety.

Rationale: The following is an overall summary of the rationale for the preceding interpretation of RPA Action 3.

The geographic distribution of larval and juvenile Delta Smelt is tightly linked to X2 (or Delta outflow). Therefore, the percentage of the population likely to be found east of Sherman Lake is also influenced by the location of X2. The X2-based OMR criteria were intended to model an expected management response to the general increase in Delta Smelt's risk of entrainment as a function of increasing X2.

The 12°C threshold for the trigger criterion is a conservative estimate of when Delta Smelt larvae begin successfully hatching. Once hatched, the larvae move into the water column where they are potentially vulnerable to entrainment.

The annual salvage season for Delta Smelt typically ends as South Delta water temperatures warm to lethal levels during summer. This usually occurs in late June or early July. The laboratory-derived upper lethal temperature for Delta Smelt is 25.4°C.

Results: Action 3 occurs 30 times in February (with OMR at -1,250 cfs 9 times, at -3,500 cfs 11 times, and at -5,000 cfs 10 times), 76 times in March (with OMR at -1,250 cfs 15 times, at -3,500 cfs 27 times, and at -5,000 cfs 34 times), all times (82) in April (with OMR at -1,250 cfs 17 times, at -3,500 cfs 29 times, and at -5,000 cfs 35 times), all times (82) in May (with OMR at -1,250 cfs 19 times, at -3,500 cfs 37 times, and at -5,000 cfs 26 times), and 70 times in June (with OMR at -1,250 cfs 7 times, at -3,500 cfs 37 times, and at -5,000 cfs 26 times). Refer to CalSim II modeling results for more details on simulated operations of OMR, Delta exports and other parameters of interest. (Note: The above information is based on the August 2009 version of the model and documents the development process; more recent versions of the model may have different results.)

5A.B8.1.5 Action 4: Estuarine Habitat During Fall (RPA Component 3)

5A.B8.1.5.1 Action 4 Summary:

Objective: Improve fall habitat for Delta Smelt by managing of X2 through increasing Delta outflow during fall when the preceding water year was wetter than normal. This will help return ecological conditions of the estuary to that which occurred in the late 1990s when smelt populations were much larger. Flows provided by this action are expected to provide direct and indirect benefits to Delta Smelt. Both the direct and indirect benefits to Delta Smelt are considered equally important to minimize adverse effects.

Action: Subject to adaptive management as described below, provide sufficient Delta outflow to maintain average X2 for September and October no greater (more eastward) than 74 kilometers in the fall following Wet years and 81 kilometers in the fall following Above Normal years. The monthly average X2 position is to be maintained at or seaward of these location for each individual month and not averaged over the 2-month period. In November, the inflow to CVP and SWP reservoirs in the Sacramento Basin will be added to reservoir releases to provide an added increment of Delta inflow and to augment Delta outflow up to the fall X2 target. The action will be evaluated and may be modified or terminated as determined by the USFWS.

Timing: September 1 to November 30.

Triggers: Wet and Above Normal water-year type classification from the 1995 Water Quality Control Plan that is used to implement D-1641.

5A.B8.1.5.2 Action 4 Assumptions for CalSim II Modeling Purposes:

Model is modified to increase Delta outflow to meet monthly average X2 requirements for September and October and subsequent November reservoir release actions in Wet and Above Normal years. No off-ramps are considered for reservoir release capacity constraints. Delta exports may or may not be reduced as part of reservoir operations to meet this action. The action is summarized in Table 5A.B.29.

Table 5A.B.29 Summary of Action 4 implementation in CalSim II

Fall Months following Wet or Above Normal Years	Action Implementation
September	Meet monthly average X2 requirement (74 km in Wet years, 81 km in Above Normal years)
October	Meet monthly average X2 requirement (74 km in Wet years, 81 km in Above Normal years)
November	Add reservoir releases up to natural inflow as needed to continue to meet monthly average X2 requirement (74 km in Wet years, 81 km in Above Normal years)

Rationale: Action 4 requirements are based on determining X2 location. Adjustment and retraining of the ANN was also completed to address numerical sensitivity concerns.

Results: There are 38 September and 37 October months that the action is triggered over the 82-year simulation period.

5A.B8.1.6 Action 5: Temporary Spring Head of Old River Barrier and the Temporary Barrier Project (RPA Component 2)

5A.B8.1.6.1 Action 5 Summary:

Objective: To minimize entrainment of larval and juvenile Delta Smelt at Banks and Jones or from being transported into the South and Central Delta, where they could later become entrained.

Action: Do not install the spring HORB if Delta Smelt entrainment is a concern. If installation of the HORB is not allowed, the agricultural barriers would be installed as described in the project description. If installation of the HORB is allowed, the Temporary Barrier Project (TBP) flap gates would be tied in the open position until May 15.

Timing: The timing of the action would vary depending on the conditions. The normal installation of the spring temporary HORB and the TBP is in April.

Triggers: For Delta Smelt, installation of the HORB will only occur when particle tracking modeling results show that entrainment levels of Delta Smelt will not increase beyond 1 percent at Station 815 as a result of installing the HORB.

Off-ramps: If Action 3 ends or May 15, whichever comes first.

5A.B8.1.6.2 Action 5 Assumptions for CalSim II and DSM2 Modeling Purposes:

The South Delta Improvement Program Stage 1 is not included in the Existing and Future Condition assumptions being used for CalSim II and DSM2 baselines. The TBP is assumed instead. The TBP specifies that HORB be installed and operated during April 1 through May 31 and September 16 through November 30. In response to the USFWS BO, Action 5, the HORB is assumed to not be installed during April 1 through May 31.

5A.B9 NMFS RPA Implementation

The information included in this section is consistent with what was provided to and agreed by the lead agencies in the, "Representation of U.S. Fish and Wildlife Service Biological Opinion Reasonable and Prudent Alternative Actions for CalSim II Planning Studies", on February 10, 2010 (updated May 18, 2010).

5A.B9.1 Representation of National Marine Fisheries Service Biological Opinion Reasonable and Prudent Alternative Actions for CalSim II Planning Studies

The NMFS BO was released on June 4, 2009. To develop CalSim II modeling assumptions to represent the operations related RPA actions required by this BO, DWR led a series of meetings that involved members of fisheries and project agencies. The purpose for establishing this group was to prepare the assumptions and CalSim II implementations to represent the RPAs in both Existing- and Future-Condition CalSim II simulations for future planning studies.

This memorandum summarizes the approach that resulted from these meetings and the modeling assumptions that were laid out by the group. The scope of this memorandum is limited to the June 4, 2009 BO. All descriptive information of the RPAs is taken from the BO.

Table 5A.B.30 lists the participants that contributed to the meetings and information summarized in this document.

Table 5A.B.30 Meeting Participants

Aaron Miller/DWR Randi Field/Reclamation Lenny Grimaldo/Reclamation Henry Wong/Reclamation	Derek Hilts/USFWS Roger Guinee/ USFWS Matt Nobriga/CDFW Bruce Oppenheim/ NMFS
Parviz Nader-Tehrani/ DWR Erik Reyes/ DWR Sean Sou/ DWR Paul A. Marshall/ DWR Ming-Yen Tu/ DWR Xiaochun Wang/ DWR	Robert Leaf/CH2M HILL Derya Sumer/CH2M HILL

The RPA actions in NMFS's BO are based on physical and biological processes that do not lend themselves to simulations using a monthly time step. Much scientific and modeling judgment has been employed to represent the implementation of the RPAs. The group believes the logic put into CalSim II represents the RPAs as best as possible at this time, given the scientific understanding of environmental factors enumerated in the BO and the limited historical data for some of these factors.

Given the relatively generalized representation of the RPAs assumed for CalSim II modeling, much caution is required when interpreting outputs from the model.

5A.B9.1.1 Action Suite 1.1 Clear Creek

Suite Objective: The RPA actions described below were developed based on a careful review of past flow studies, current operations, and future climate change scenarios. These actions are necessary to address adverse project effects on flow and water temperature that reduce the viability of spring-run and Central Valley Steelhead in Clear Creek.

5A.B9.1.1.1 Action 1.1.1 Spring Attraction Flows

Objective: Encourage spring-run movement to upstream Clear Creek habitat for spawning.

Action: Reclamation shall annually conduct at least two pulse flows in Clear Creek in May and June of at least 600 cfs for at least 3 days for each pulse, to attract adult spring-run holding in the Sacramento River main stem.

Action 1.1.1 Assumptions for CalSim II Modeling Purposes

Action: Model is modified to meet 600 cfs for 3 days twice in May. In the CalSim II analysis, flows sufficient to increase flow up to 600 cfs for a total of 6 days are added to the flows that would have otherwise occurred in Clear Creek.

Rationale: CalSim II is a monthly model. The monthly flow in Clear Creek is an underestimate of the actual flows that would occur subject to daily operational constraints at Whiskeytown Reservoir. The additional flow to meet 600 cfs for a total of 6 days was added to the monthly average flow model.

5A.B9.1.1.2 Action 1.1.5 Thermal Stress Reduction

Objective: To reduce thermal stress to over-summering steelhead and spring-run during holding, spawning, and embryo incubation.

Action: Reclamation shall manage Whiskeytown releases to meet a daily water temperature of: (1) 60°F at the Igo gauge from June 1 through September 15 and (2) 56°F at the Igo gauge from September 15 to October 31.

5A.B9.1.1.3 Action 1.1.5 Assumptions for CalSim II Modeling Purposes

Action: It is assumed that temperature operations can perform reasonably well with flows included in model.

Rationale: A temperature model of Whiskeytown Reservoir has been developed by Reclamation. Further analysis using this or other temperature model is required to verify the statement that temperature operations can perform reasonably well with flows included in model.

5A.B9.1.2 Action Suite 1.2 Shasta Operations

Objectives: To address the avoidable and unavoidable adverse effects of Shasta operations on winter-run and spring-run:

- Ensure a sufficient cold water pool to provide suitable temperatures for winter-run spawning between Balls Ferry and Bend Bridge in most years, without sacrificing the potential for cold water management in a subsequent year. Additional actions to those in the 2004 CVP and SWP operations opinion are needed, due to increased vulnerability of the population to temperature effects attributable to changes in Trinity River ROD operations, projected climate change hydrology, and increased water demands in the Sacramento River system.
- Ensure suitable spring-run temperature regimes, especially in September and October. Suitable spring-run temperatures will also partially minimize

temperature effects to naturally spawning, non-listed Sacramento River fall-run, an important prey base for endangered Southern Residents.

- Establish a second population of winter-run in Battle Creek as soon as possible, to partially compensate for unavoidable project-related effects on the one remaining population.
- Restore passage at Shasta Reservoir with experimental reintroductions of winter-run to the upper Sacramento and/or McCloud rivers, to partially compensate for unavoidable project related effects on the remaining population.

5A.B9.1.2.1 Action 1.2.1 Performance Measures

Objective: To establish and operate to a set of performance measures for temperature compliance points and End-of-September (EOS) carryover storage, enabling Reclamation and NMFS to assess the effectiveness of this suite of actions over time. Performance measures will help to ensure that the beneficial variability of the system from changes in hydrology will be measured and maintained.

Action: To ensure a sufficient cold water pool to provide suitable temperatures, long-term performance measures for temperature compliance points and EOS carryover storage at Shasta Reservoir shall be attained. Performance measures for EOS carryover storage at Shasta Reservoir are as follows:

- 87 percent of years: Minimum EOS storage of 2.2 MAF
- 82 percent of years: Minimum EOS storage of 2.2 MAF and end-of-April storage of 3.8 MAF in following year (to maintain potential to meet Balls Ferry compliance point)
- 40 percent of years: Minimum EOS storage 3.2 MAF (to maintain potential to meet Jelly's Ferry compliance point in following year)

Performance measures (measured as a 10-year running average) for temperature compliance points during summer season are:

- Meet Clear Creek Compliance point 95 percent of time
- Meet Balls Ferry Compliance point 85 percent of time
- Meet Jelly's Ferry Compliance point 40 percent of time
- Meet Bend Bridge Compliance point 15 percent of time

5A.B9.1.2.2 Action 1.2.1 Assumptions for CalSim II Modeling Purposes

Action: No specific CalSim II modeling code is implemented to simulate the performance measures identified. System performance will be assessed and evaluated through post-processing of various model results.

Rationale: Given that the performance criteria are based on the CalSim II modeling data used in preparation of the Biological Assessment, the system performance after application of the RPAs should be similar as a percentage of years that the end-of-April storage and temperature compliance requirements are met over the simulation period. Post-processing of modeling results will be compared to various new operating scenarios as needed to evaluate performance criteria and appropriateness of the rules developed.

5A.B9.1.2.3 Action 1.2.2 November through February Keswick Release Schedule (Fall Actions)

Objective: Minimize impacts to listed species and naturally spawning non-listed fall-run from high water temperatures by implementing standard procedures for release of cold water from Shasta Reservoir.

Action: Depending on EOS carryover storage and hydrology, Reclamation shall develop and implement a Keswick release schedule, and reduce deliveries and exports as needed to achieve performance measures.

Action 1.2.2 Assumptions for CalSim II Modeling Purposes

Action: No specific CalSim II modeling code is implemented to simulate the performance measures identified. Keswick flows based on operation of 3406(b)(2) releases in OCAP Study 7.1 (for Existing) and Study 8 (for Future) are used in CalSim II. These flows will be reviewed for appropriateness under this action**.** A post-process based evaluation similar to what has been explained in Action 1.2.1 will be conducted.

Rationale: Performance measures are set as percentage of years that the end-of-September and temperature compliance requirements are met over the simulation period. Post-processing of modeling results will be compared to various new operating scenarios as needed to evaluate performance criteria and appropriateness of the rules developed.

5A.B9.1.2.4 Action 1.2.3 February Forecast; March – May 14 Keswick Release Schedule (Spring Actions)

Objective: To conserve water in Shasta Reservoir in the spring in order to provide sufficient water to reduce adverse effects of high water temperature in the summer months for winter-run, without sacrificing carryover storage in the fall.

Action:

- Reclamation shall make its February forecast of deliverable water based on an estimate of precipitation and runoff within the Sacramento River basin at least as conservative as the 90 percent probability of exceedance. Subsequent updates of water delivery commitments must be based on monthly forecasts at least as conservative as the 90 percent probability of exceedance.
- Reclamation shall make releases to maintain a temperature compliance point not in excess of 56°F between Balls Ferry and Bend Bridge from April 15 through May 15.

Action 1.2.3 Assumptions for CalSim II Modeling Purposes

Action: No specific CalSim II modeling code is implemented to simulate the performance measures identified. It is assumed that temperature operations can perform reasonably well with flows included in model.

Rationale: Temperature models of Shasta Lake and the Sacramento River have been developed by Reclamation. This modeling reflects current facilities for temperature controlled releases. Further analysis using this or another temperature model can further verify that temperature operations can perform reasonably well with flows included in model and temperatures are met reliably at each of the compliance points. In the future, it may be that adjusted flow schedules may need to be developed based on development of temperature model runs in conjunction with CalSim II modeled operations.

5A.B9.1.2.5 Action 1.2.4 May 15 through October Keswick Release Schedule (Summer Action)

Objective: To manage the cold water storage within Shasta Reservoir and make cold water releases from Shasta Reservoir to provide suitable habitat temperatures for winter-run, spring-run, Central Valley Steelhead, and Southern Distinct Population Segment (DPS) of Green Sturgeon in the Sacramento River between Keswick Dam and Bend Bridge, while retaining sufficient carryover storage to manage for next year's cohorts. To the extent feasible, manage for suitable temperatures for naturally spawning fall-run.

Action: Reclamation shall manage operations to achieve daily average water temperatures in the Sacramento River between Keswick Dam and Bend Bridge as follows:

- Not in excess of 56°F at compliance locations between Balls Ferry and Bend Bridge from May 15 through September 30 for protection of winter-run, and not in excess of 56°F at the same compliance locations between Balls Ferry and Bend Bridge from October 1 through October 31 for protection of mainstem spring run, whenever possible.
- Reclamation shall operate to a final Temperature Management Plan starting May 15 and ending October 31.

Action 1.2.4 Assumptions for CalSim II Modeling Purposes

Action: No specific CalSim II modeling code is implemented to simulate the performance measures identified. It is assumed that temperature operations can perform reasonably well with flows included in model. During the detailed effects analysis, temperature modeling and post-processing will be used to verify temperatures are met at the compliance points. In the long-term approach, for a complete interpretation of the action, development of temperature model runs are needed to develop flow schedules if needed for implementation into CalSim II.

Rationale: Temperature models of Shasta Lake and the Sacramento River have been developed by Reclamation. This modeling reflects current facilities for temperature controlled releases. Further analysis using this or another temperature model is required to verify the statement that temperature operations can perform reasonably well with flows included in model and temperatures are met reliably at each of the compliance points. Alternative flow schedules may need to be developed based on development of temperature model runs in conjunction with CalSim II modeled operations.

5A.B9.1.3 Action Suite 1.3 Red Bluff Diversion Dam (RBDD) Operations

Objectives: Reduce mortality and delay of adult and juvenile migration of winter-run, spring-run, Central Valley Steelhead, and Southern DPS of Green Sturgeon caused by the presence of the diversion dam and the configuration of the operable gates. Reduce adverse modification of the passage element of critical habitat for these species. Provide unimpeded upstream and downstream fish passage in the long-term by raising the gates year-round, and minimize adverse effects of continuing dam operations, while pumps are constructed to replace the loss of the diversion structure.

5A.B9.1.3.1 Action 1.3.1 Operations after May 14, 2012: Operate RBDD with Gates Out

Action: No later than May 15, 2012, Reclamation shall operate RBDD with gates out all year to allow unimpeded passage for listed anadromous fish.

Action 1.3.1 Assumptions for CalSim II Modeling Purposes

Action: Adequate permanent facilities for diversion are assumed; therefore, no constraint on diversion schedules is included in the Future condition modeling.

5A.B9.1.3.2 Action 1.3.2 Interim Operations

Action: Until May 14, 2012, Reclamation shall operate RBDD according to the following schedule:

- September 1—June 14: Gates open. No emergency closures of gates are allowed.
- June 15—August 31: Gates may be closed at Reclamation's discretion, if necessary to deliver water to TCCA.

Action 1.3.2 Assumptions for CalSim II Modeling Purposes

Action: Adequate interim/temporary facilities for diversion are assumed; therefore, no constraint on diversion schedules is included in the No Action Alternative modeling.

5A.B9.1.4 Action 1.4 Wilkins Slough Operations

Objective: Enhance the ability to manage temperatures for anadromous fish below Shasta Dam by operating Wilkins Slough in the manner that best conserves the dam's cold water pool for summer releases.

Action: The Sacramento River Temperature Task Group (SRTTG) shall make recommendations for Wilkins Slough minimum flows for anadromous fish in critically dry years, in lieu of the current 5,000 cfs navigation criterion to NMFS by December 1, 2009. In critically dry years, the SRTTG will make a recommendation.

5A.B9.1.4.1 Action 1.4 Assumptions for CalSim II Modeling Purposes

Action: Current rules for relaxation of NCP in CalSim II (based on BA models) will be used. In CalSim II, NCP flows are relaxed depending on allocations for agricultural contractors. Table 5A.B.31 is used to determine the relaxation.

Table 5A.B.31 NCP Flow Schedule with Relaxation

CVP AG Allocation (percent)	NCP Flow (cfs)
< 10	3,250
10–25	3,500
25–40	4,000
40–65	4,500
> 65	5,000

Rationale: The allocation-flow criteria have been used in the CalSim II model for many years. The low allocation year relaxations were added to improve operations of Shasta Lake subject to 1.9 MAF carryover target storage. These criteria may be reevaluated subject to the requirements of Action 1.2.1.

5A.B9.1.5 Action 2.1 Lower American River Flow Management

Objective: To provide minimum flows for all steelhead life stages.

Action: Implement the flow schedule specified in the Water Forum's Flow Management Standard (FMS), which is summarized in Appendix 2-D of the NMFS BO.

5A.B9.1.5.1 Action 2.1 Assumptions for CalSim II Modeling Purposes

Action: The AFRMP Minimum Release Requirements (MRR) range from 800 to 2,000 cfs based on a sequence of seasonal indices and adjustments. The minimum Nimbus Dam release requirement is determined by applying the appropriate water availability index (Index Flow). Three water availability indices (i.e., Four Reservoir Index (FRI), Sacramento River Index (SRI), and the Impaired Folsom Inflow Index (IFII)) are applied during different times of the year, which provides adaptive flexibility in response to changing hydrological and operational conditions.

During some months, Prescriptive Adjustments may be applied to the Index Flow, resulting in the MRR. If there is no Prescriptive Adjustment, the MRR is equal to the Index Flow.

Discretionary Adjustments for water conservation or fish protection may be applied during the period extending from June through October. If Discretionary Adjustments are applied, then the resultant flows are referred to as the Adjusted Minimum Release Requirement (Adjusted MRR).

The MRR and Adjusted MRR may be suspended in the event of extremely dry conditions, represented by "conference years" or "off-ramp criteria". Conference years are defined when the projected March through November unimpaired inflow into Folsom Reservoir is less than 400,000 acre-feet. Off-ramp criteria are triggered if forecasted Folsom Reservoir storage at any time during the next 12 months is less than 200,000 acre-feet.

Rationale: Minimum instream flow schedule specified in the Water Forum's FMS is implemented in the model.

5A.B9.1.6 Action 2.2 Lower American River Temperature Management

Objective: Maintain suitable temperatures to support over-summer rearing of juvenile steelhead in the lower American River.

Action: Reclamation shall develop a temperature management plan that contains: (1) forecasts of hydrology and storage; (2) a modeling run or runs, using these forecasts, demonstrating that the temperature compliance point can be attained (see Coldwater Management Pool Model approach in Appendix 2-D); (3) a plan of operation based on this modeling run that demonstrates that all other non-discretionary requirements are met; and (4) allocations for discretionary deliveries that conform to the plan of operation.

5A.B9.1.6.1 Action 2.2 Assumptions for CalSim II Modeling Purposes

Action: The flows in the model reflect the FMS implemented under Action 2.1. It is assumed that temperature operations can perform reasonably well with flows included in model.

Rationale: Temperature models of Folsom Lake and the American River were developed in the 1990s. Model development for long-range planning purposes may be required. Further analysis using a verified long-range planning level temperature model is required to verify the statement that temperature operations can perform reasonably well with flows included in the model and when temperatures are met reliably

5A.B9.1.7 Action Suite 3.1 Stanislaus River/Eastside Division Actions

Overall Objectives: (1) Provide sufficient definition of operational criteria for Eastside Division to ensure viability of the steelhead population on the Stanislaus River, including freshwater migration routes to and from the Delta; and (2) halt or reverse adverse modification of steelhead critical habitat.

5A.B9.1.7.1 Action 3.1.2 Provide Cold Water Releases to Maintain Suitable Steelhead Temperatures

Action: Reclamation shall manage the cold water supply within New Melones Reservoir and make cold water releases from New Melones Reservoir to provide suitable temperatures for CV steelhead rearing, spawning, egg incubation smoltification, and adult migration in the Stanislaus River downstream of Goodwin Dam.

Action 3.1.2 Assumptions for CalSim II Modeling Purposes

Action: No specific CalSim II modeling code is implemented to simulate the performance measures identified. It is assumed that temperature operations can perform reasonably well with flow operations resulting from the minimum flow requirements described in Action 3.1.3.

Rationale: Temperature models of New Melones Lake and the Stanislaus River have been developed by Reclamation. Further analysis using this or another temperature model can further verify that temperature operations perform reasonably well with flows included in model and temperatures are met reliably. Development of temperature model runs is needed to refine the flow schedules assumed.

5A.B9.1.7.2 Action 3.1.3 Operate the East Side Division Dams to Meet the Minimum Flows, as Measured at Goodwin Dam

Objective: To maintain minimum base flows to optimize Central Valley Steelhead habitat for all life history stages and to incorporate habitat maintaining geomorphic flows in a flow pattern that will provide migratory cues to smolts and facilitate out-migrant smolt movement on declining limb of pulse.

Action: Reclamation shall operate releases from the East Side Division reservoirs to achieve a minimum flow schedule as prescribed in NMFS BO Appendix 2-E. When operating at higher flows than specified, Reclamation shall implement ramping rates for flow changes that will avoid stranding and other adverse effects on Central Valley Steelhead.

Action 3.1.3 Assumptions for CalSim II Modeling Purposes

Action: Minimum flows based on Appendix 2-E flows (presented in Figure 5A.B.3) are assumed consistent to what was modeled by NMFS (May 14 and 15, 2009 CalSim II models provided by NMFS; relevant logic merged into baselines models).

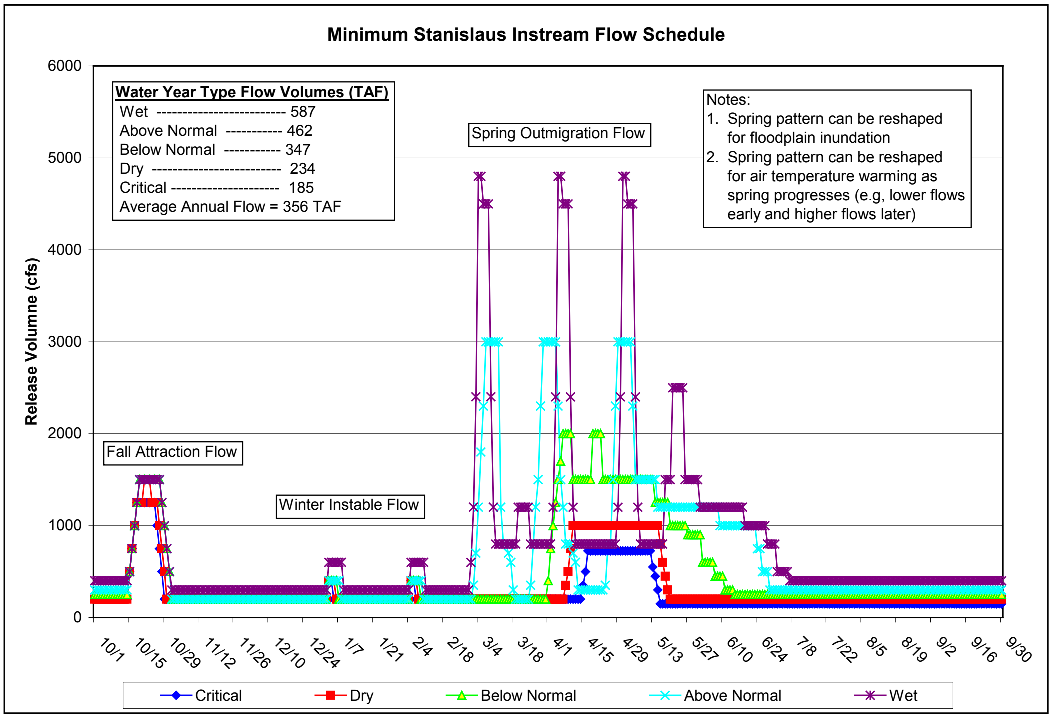


Figure 5A.B.3 Minimum Stanislaus instream flow schedule as prescribed in Appendix 2-E of the NMFS BO (06/04/09)

Annual allocation in New Melones is modeled to ensure availability of required instream flows (Table 5A.B.32) based on a water supply forecast that is comprised of end-of-February New Melones Storage (in TAF) plus forecasted inflow to New Melones from March 1 to September 30 (in TAF). The forecasted inflow is calculated using perfect foresight in the model. An allocated volume of water is released according to water year type following the monthly flow schedule illustrated in Figure 5A.B.3.

Table 5A.B.32 New Melones Allocations to Meet Minimum Instream Flow Requirements

New Melones index (TAF)	Annual Allocation Required for Instream Flows (TAF)
< 1000	0 to 98.9
1,000 to 1,399	98.9
1,400 to 1,724	185.3
1,725 to 2,177	234.1
2,178 to 2,386	346.7
2,387 to 2,761	461.7
2,762 to 6,000	586.9

Rationale: This approach was reviewed by National Oceanic and Atmospheric Administration (NOAA) fisheries and verified that the year typing and New Melones allocation scheme are consistent with the modeling prepared for the BO.

5A.B9.1.8 Action Suite 4.1 Delta Cross Channel Gate Operation, and Engineering Studies of Methods to Reduce Loss of Salmonids in Georgiana Slough and Interior Delta

5A.B9.1.8.1 Action 4.1.2 DCC Gate Operation

Objective: Modify DCC gate operation to reduce direct and indirect mortality of emigrating juvenile salmonids and Green Sturgeon in November, December, and January.

Action: During the period between November 1 and June 15, DCC gate operations will be modified from the proposed action to reduce loss of emigrating salmonids and Green Sturgeon. From December 1 to January 31, the gates will remain closed, except as operations are allowed using the implementation procedures/modified Salmon Decision Tree.

Timing: November 1 through June 15.

Triggers: Action triggers and description of action as defined in NMFS BO are presented in Table 5A.B.33.

Table 5A.B.33 NMFS BO DCC Gate Operation Triggers and Actions

Date	Action Triggers	Action Responses
October 1 – November 30	Water quality criteria per D-1641 are met and either the Knights Landing Catch Index (KLCI) or the Sacramento Catch Index (SCI) are greater than 3 fish per day, but less than or equal to 5 fish per day.	Within 24 hours of trigger, DCC gates are closed. Gates will remain closed for 3 days.
	Water quality criteria per D-1641 are met and either the KLCI or SCI is greater than 5 fish per day.	Within 24 hours, close the DCC gates and keep closed until the catch index is less than 3 fish per day at both the Knights Landing and Sacramento monitoring sites.
	The KLCI or SCI triggers are met, but water quality criteria are not met per D-1641 criteria.	DOSS reviews monitoring data and makes recommendation to NMFS and WOMT per procedures in Action IV.5.

Date	Action Triggers	Action Responses
December 1 – December 14	Water quality criteria are met per D-1641.	DCC gates are closed. If Chinook Salmon migration experiments are conducted during this time period (e.g., Delta Action 8 or similar studies), the DCC gates may be opened according to the experimental design, with NMFS' prior approval of the study.
	Water quality criteria are not met, but both the KLCI and SCI are less than 3 fish per day.	DCC gates may be opened until the water quality criteria are met. Once water quality criteria are met, the DCC gates will be closed within 24 hours of compliance.
	Water quality criteria are not met, but either the KLCI or SCI is greater than 3 fish per day.	DOSS reviews monitoring data and makes recommendation to NMFS and WOMT per procedures in Action IV.5
December 15 – January 31	December 15 – January 31	DCC Gates Closed.
	NMFS-approved experiments are being conducted.	Agency sponsoring the experiment may request gate opening for up to 5 days; NMFS will determine whether opening is consistent with ESA obligations.
	One-time event between December 15 and January 5, when necessary, to maintain Delta water quality in response to the astronomical high tide, coupled with low inflow conditions.	Upon concurrence of NMFS, DCC Gates may be opened 1 hour after sunrise to 1 hour before sunset, for up to 3 days, then return to full closure. Reclamation and DWR will also reduce Delta exports down to a health and safety level during the period of this action.
February 1 – May 15	D-1641 mandatory gate closure.	Gates closed, per WQCP criteria.
May 16 – June 15	D-1641 gate operations criteria	DCC gates may be closed for up to 14 days during this period, per 2006 WQCP, if NMFS determines it is necessary.

Action 4.1.2 Assumptions for CalSim II Modeling Purposes

Action: The DCC gate operations for October 1 through January 31 were layered on top of the D-1641 gate operations already included in the CalSim II model. The general assumptions regarding the NMFS DCC operations are summarized in Table 5A.B.34.

Timing: October 1 through January 31.

Table 5A.B.34 DCC Gate Operation Triggers and Actions as Modeled in CalSim II

Date	Modeled Action Triggers	Modeled Action Responses
October 1 – December 14	Sacramento River daily flow at Wilkins Slough exceeding 7,500 cfs; flow assumed to flush salmon into the Delta	Each month, the DCC gates are closed for the number of days estimated to exceed the threshold value.
	Water quality conditions at Rock Slough subject to D-1641 standards	Each month, the DCC gates are not closed if it results in violation of the D-1641 standard for Rock Slough; if DCC gates are not closed due to water quality conditions, exports during the days in question are restricted to 2,000 cfs.
December 15 – January 31	December 15-January 31	DCC Gates Closed.

Flow Trigger: It is assumed that from October 1 to December 14, the DCC will be closed if Sacramento River daily flow at Wilkins Slough exceeds 7,500 cfs. Using historical data (1945 through 2003, USGS gauge 11390500 "Sacramento River below Wilkins Slough near Grimes, CA"), a linear relationship is obtained between average monthly flow at Wilkins Slough and the number of days in month where the flow exceeds 7,500 cfs. This relation is then used to estimate the number of days of DCC closure for the October 1 to December 14 time period (Figure 5A.B.4).

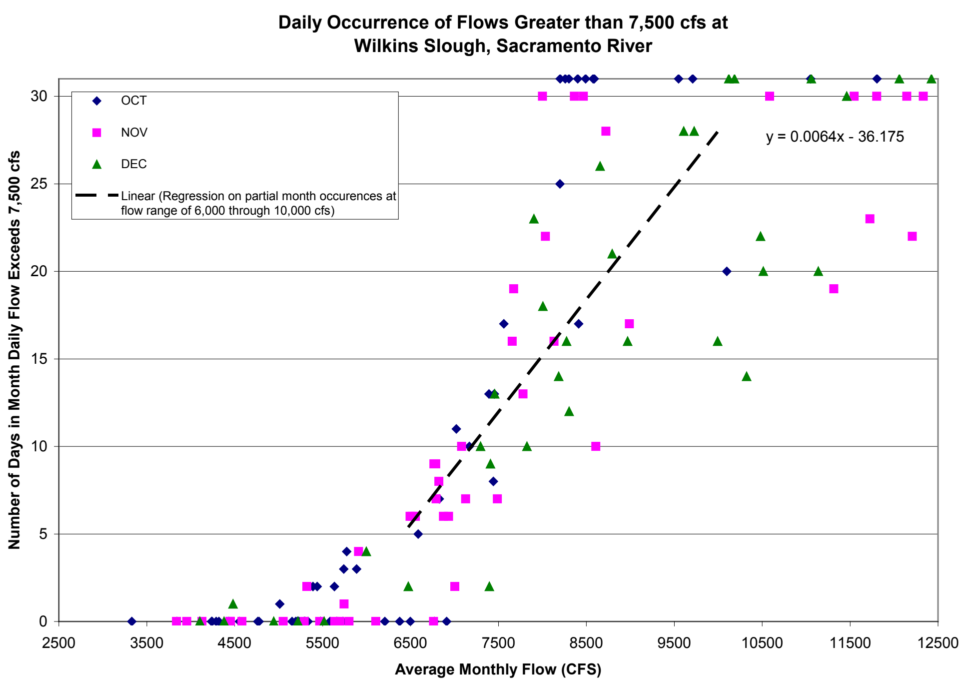


Figure 5A.B.4 Relationship between monthly averages of Sacramento River flows and number of days that daily flow exceeds 7,500 cfs in a month at Wilkins Slough

It is assumed that from December 15 through January 31 that the DCC gates are closed under all flow conditions.

Water Quality: It is assumed that during the October 1 – December 14 time period, the DCC gates may remain open if water quality is a concern. Using the CalSim II-ANN flow-salinity model for Rock Slough, the current month's chloride level at Rock Slough is estimated assuming DCC closure per NMFS BO. The estimated chloride level is compared against the Rock Slough chloride standard (monthly average). If estimated chloride level exceeds the standard, the gate closure is modeled per D-1641 schedule (for the entire month).

It is assumed that during the December 15 through January 31 time period the DCC gates are closed under all water quality conditions.

Export Restriction: During the October 1 to December 14 time period, if the flow trigger condition is such that additional days of DCC gates closed is called for, however water quality conditions are a concern and the DCC gates remain open, then Delta exports are limited to 2,000 cfs for each day in question. A monthly Delta export restriction is calculated based on the trigger and water quality conditions described above.

Rationale: The proposed representation in CalSim II should adequately represent the limited water quality concerns are that Sacramento River flows are low during the extreme high tides of December.

5A.B9.1.9 Action Suite 4.2 Delta Flow Management

5A.B9.1.9.1 Action 4.2.1 San Joaquin River Inflow to Export Ratio

Objectives: To reduce the vulnerability of emigrating Central Valley Steelhead within the lower San Joaquin River to entrainment into the channels of the South Delta and at the pumps due to the diversion of water by the export facilities in the South Delta, by increasing the inflow to export ratio. To enhance the likelihood of salmonids successfully exiting the Delta at Chipps Island by creating more suitable hydraulic conditions in the main stem of the San Joaquin River for emigrating fish, including greater net downstream flows.

Action: For CVP and SWP operations under this action, "The Phase II: Operations beginning is 2012" is assumed. From April 1 through May 31, (1) Reclamation shall continue to implement the Goodwin flow schedule for the Stanislaus River prescribed in Action 3.1.3 and Appendix 2-E of the NMFS BO); and (2) Combined CVP and SWP exports shall be restricted to the ratio depicted in table 5A.B.35 below based on the applicable San Joaquin River Index, but will be no less than 1,500 cfs (consistent with the health and safety provision governing this action.)

Action 4.2.1 Assumptions for CalSim II Modeling Purposes

Action: Flows at Vernalis during April and May will be based on the Stanislaus River flow prescribed in Action 3.1.3 and the flow contributions from the rest of the San Joaquin River basin consistent with the representation of VAMP contained in the BA modeling. In many years this flow may be less than the minimum Vernalis flow identified in the NMFS BO.

Exports are restricted as illustrated in Table 5A.B.35.

Table 5A.B.35 Maximum Combined CVP and SWP Export during April and May

San Joaquin River Index	Combined CVP and SWP Export Ratio
Critically dry	1:1
Dry	2:1
Below normal	3:1
Above normal	4:1
Wet	4:1

Rationale: Although the described model representation does not produce the full Vernalis flow objective outlined in the NMFS BO, it does include the elements that are within the control of the CVP and SWP, and that are reasonably certain to occur for the purpose of the EIS/EIR modeling.

In the long-term, a future SWRCB flow standard at Vernalis may potentially incorporate the full flow objective identified in the BO; and the Merced and Tuolumne flows would be based on the outcome of the current SWRCB and Federal Energy Regulatory Commission (FERC) processes that are underway.

5A.B9.1.10 Action 4.2.3 Old and Middle River Flow Management

Objective: Reduce the vulnerability of emigrating juvenile winter-run, yearling spring-run, and Central Valley Steelhead within the lower Sacramento and San Joaquin rivers to entrainment into the channels of the South Delta and at the pumps due to the diversion of water by the export facilities in the South Delta. Enhance the likelihood of salmonids successfully exiting the Delta at Chipps Island by creating more suitable hydraulic conditions in the mainstem of the San Joaquin River for emigrating fish, including greater net downstream flows.

Action: From January 1 through June 15, reduce exports, as necessary, to limit negative flows to -2,500 to -5,000 cfs in Old and Middle Rivers, depending on the presence of salmonids. The reverse flow will be managed within this range to reduce flows toward the pumps during periods of increased salmonid presence. Refer to NMFS BO document for the negative flow objective decision tree.

5A.B9.1.11 Action 4.2.3 Assumptions for CalSim II Modeling Purposes

Action: Old and Middle River flows required in this BO are assumed to be covered by OMR flow requirements developed for actions 1 through 3 of the USFWS BO Most Likely Scenario.

Rationale: Based on a review of available data, it appears that implementation of actions 1 through 3 of the USFWS RPA, and action 4.2.1 of the NOAA RPA will adequately cover this action within the CalSim II simulation. If necessary, additional post-processing of results could be conducted to verify this assumption.

Although the described model representation does not produce the full Vernalis flow objective outlined in the NMFS BO, it does include the elements that are within the control of the CVP and SWP, and that are reasonably certain to occur for the purpose of the EIS/EIR modeling.

In the long-term, a future SWRCB flow standard at Vernalis may potentially incorporate the full flow objective identified in the BO; and the Merced and Tuolumne flows would be based on the outcome of the current SWRCB and FERC processes that are underway.

5A.B9.1.12 Action 4.2.3 Old and Middle River Flow Management

Objective: Reduce the vulnerability of emigrating juvenile winter-run, yearling spring-run, and Central Valley Steelhead within the lower Sacramento and San Joaquin rivers to entrainment into the channels of the South Delta and at the pumps due to the diversion of water by the export facilities in the South Delta. Enhance the likelihood of salmonids successfully exiting the Delta at Chipps Island by creating more suitable hydraulic conditions in the mainstem of the San Joaquin River for emigrating fish, including greater net downstream flows.

Action: From January 1 through June 15, reduce exports, as necessary, to limit negative flows to -2,500 to -5,000 cfs in Old and Middle Rivers, depending on the presence of salmonids. The reverse flow will be managed within this range to reduce flows toward the pumps during periods of increased salmonid presence. Refer to NMFS BO document for the negative flow objective decision tree.

5A.B9.1.12.1 Action 4.2.3 Assumptions for CalSim II Modeling Purposes

Action: Old and Middle River flows required in this BO are assumed to be covered by OMR flow requirements developed for actions 1 through 3 of the USFWS BO Most Likely Scenario.

Rationale: Based on a review of available data, it appears that implementation of actions 1 through 3 of the USFWS RPA, and action 4.2.1 of the NOAA RPA will adequately cover this action within the CalSim II simulation. If necessary, additional post-processing of results could be conducted to verify this assumption.

5A.B10 References

DWR (California Department of Water Resources). 2009. *DSM2 Recalibration*. Prepared for California Department of Water Resources. October.

DWR, Reclamation, USFWS and NMFS (California Department of Water Resources, Bureau of Reclamation, U.S. Fish and Wildlife Service, and National Marine Fisheries Service). 2013. *Draft Environmental Impact Report/Environmental Impact Statement for the Bay Delta Conservation Plan*. November.

OID, SSJID, SEWD (Oakdale Irrigation District, South San Joaquin Irrigation District, Stockton East Water District). 2012. Letter to Ms. Janice Piñero, Bureau of Reclamation, *Comments on Scope of the Environmental Impact Statement Concerning Modifications to the Continued Long-Term Operation of the Central Valley Project, In A Coordinated Manner with the State Water Project*. June 28.

SWRCB (State Water Resources Control Board). 2000. *Revised Water Right Decision 1641*. March 15.

Reclamation (Bureau of Reclamation). 2006. *Lower American River Flow Management Standard. Draft Report*. July 31.

_____. 2008a. *Central Valley Project and State Water Project Operations Criteria and Plan Biological Assessment, Appendix D CalSim-II Model.* May.

_____. 2008b. *Central Valley Project and State Water Project Operations Criteria and Plan Biological Assessment, Appendix F DSM2 Model*. May.

Appendix 5A, Section C

CalSim II and DSM2 Modeling Results

5A.1 Introduction

This appendix provides CalSim II and DSM2 model simulation results for alternatives evaluated for the EIS. Figures and tables are provided to illustrate and summarize the results. The different types of presentations are explained below.

Probability of Exceedance Plots. Probability of exceedance plots provide the frequency of occurrence of values of a parameter that exceed a reference value. For this appendix, the calculation of exceedance probability is done by ranking the data. For example, for the Shasta storage end of September exceedance plot, Shasta storage values at the end of September for each simulated year are sorted in ascending order. The smallest value would have a probability of exceedance of 100 percent since all other values would be greater than that value, and the largest value would have a probability of exceedance of 0 percent. All the values are plotted with probability of exceedance on the x-axis and the value of the parameter on the y-axis. Following the same example, if for one scenario, Shasta end of September of 2,000 TAF corresponds to 80 percent probability, it implies that Shasta end-of September storage is higher than 2,000 TAF in 80 percent of the years under the simulated conditions.

Box and Whisker Diagrams. These plots display the distribution of data based on the following statistical summary: minimum, first quartile (25th percentile that corresponds to 75 percent exceedance probability), mean, median (50 percent exceedance probability), third quartile (75th percentile that corresponds to 25 percent exceedance probability), and maximum.

Monthly Pattern Plots. Monthly pattern plots provide average values for a parameter for each month of the year. The averaging may be done on a long-term basis, which means that it is being averaged over the full number of simulated years, or it may be done for a set of simulated years that have a certain year type. In this appendix, year types are determined using the Sacramento Valley 40-30-30 Index developed by the State Water Resources Control Board (SWRCB). In this appendix, for year type based averages, the year type for each simulated year is assumed to be the classification of the year under projected climate at Year 2030 conditions. This type of plot is used to obtain insight to the monthly variation of phenomena throughout the year.

Long-Term Average Summary and Year Type Based Statistics Summary Tables. These tables provide parameter values for each 10 percent increment of exceedance probability (rows) for each month (columns) as well as long-term and year-type averages (using the Sacramento Valley 40-30-30 Index developed by the SWRCB for projected climate at Year 2030) for each month. For a few parameters, such as Delta outflow, annual total or average values are added to the tables (for volume and rates, respectively).

Long-Term Average Summary and Dry and Critical Year Type Based Summary Tables. These tables are primarily used to report average annual Central Valley Project (CVP) and State Water Project (SWP) deliveries for each hydrologic region. Values are averaged either for all the years (long-term) or for dry and critical years (using the Sacramento Valley 40-30-30 Index developed by the SWRCB for projected climate at Year 2030). This table is also provided in a format that summarizes SWP and CVP agricultural and municipal and industrial deliveries to the north and south of Delta.

Long-Term Average Summary for SWP Table A and Article 21 Deliveries. This table provides firm and intermittent SWP deliveries on a long-term average basis.

All plots and tables were prepared to facilitate the following comparisons:

- No Action Alternative (with climate change and sea-level rise at Year 2030) compared to the Second Basis of Comparison (with climate change and sea-level rise at Year 2030)
- Alternatives (with climate change and sea-level rise at Year 2030) compared to the No Action Alternative
- Alternatives (with climate change and sea-level rise at Year 2030) compared to the Second Basis of Comparison

5A.2 Appropriate Use of Model Results

The physical models developed and applied in the Environmental Impact Statement (EIS) analysis are generalized and simplified representations of a complex water resources system. A brief description of appropriate use of the model results to compare two scenarios or to compare against threshold values or standards is presented below.

5A.2.1 Absolute vs. Relative Use of the Model Results

The models are not predictive models (in how they are applied in this project), and therefore the results cannot be considered as absolute with and within a quantifiable confidence interval. The model results are only useful in a comparative analysis and can only serve as an indicator of condition (e.g., compliance with a standard) and of trends (e.g., generalized impacts).

5A.2.2 Appropriate Reporting Time-Step

Due to the assumptions involved in the input data sets and model logic, care must be taken to select the most appropriate time-step for the reporting of model results. Sub-monthly (e.g., weekly or daily) reporting of model results is inappropriate for all models and the results should be presented and interpreted on a monthly basis.

5A.2.3 Statistical Comparisons

Absolute differences computed at a point in time between model results from an alternative and a baseline to evaluate impacts is an inappropriate use of model results (e.g., computing differences between the results from a baseline and an alternative for a particular day or month and year within the period of record of simulation). Likewise computing absolute differences between an alternative (or a baseline) and a specific threshold value or standard is an inappropriate use of model results. Statistics computed based on the absolute differences at a point in time (e.g., average of monthly differences) are an inappropriate use of model results. Computing the absolute differences in this way disregards the changes in antecedent conditions between individual scenarios and distorts the evaluation of impacts of a specific action.

Reporting seasonal patterns from long-term averages and water year type averages is appropriate. Statistics computed based on long-term and water year type averages are an appropriate use of model results. Computing differences between long-term or water year type averages of model results from two scenarios are appropriate. Care should be taken to use the appropriate water year type for presenting water year type average statistics of model results (e.g., D1641 Sacramento River 40-30-30 or San Joaquin River 60-20-20 based on climate modifications). For this study, water year types are based on the projected climate and hydrology at Year 2030.

The most appropriate presentation of monthly and annual model results is in the form of probability distributions and comparisons of probability distributions (e.g., cumulative probabilities). If necessary, comparisons of model results against threshold or standard values should be limited to comparisons based on cumulative probability distributions.

5A.3 CalSim II and DSM2 Model Results

CalSim II and DSM2 model results are presented in the figures at the end of this section as follows:

- C.1. Trinity Storage
- C.2. Shasta Storage
- C.3. Oroville Storage
- C.4. Folsom Storage
- C.5. San Luis Storage
- C.6. New Melones Storage
- C.7. Millerton Storage
- C.8. Trinity Lake Elevation
- C.9. Shasta Lake Elevation

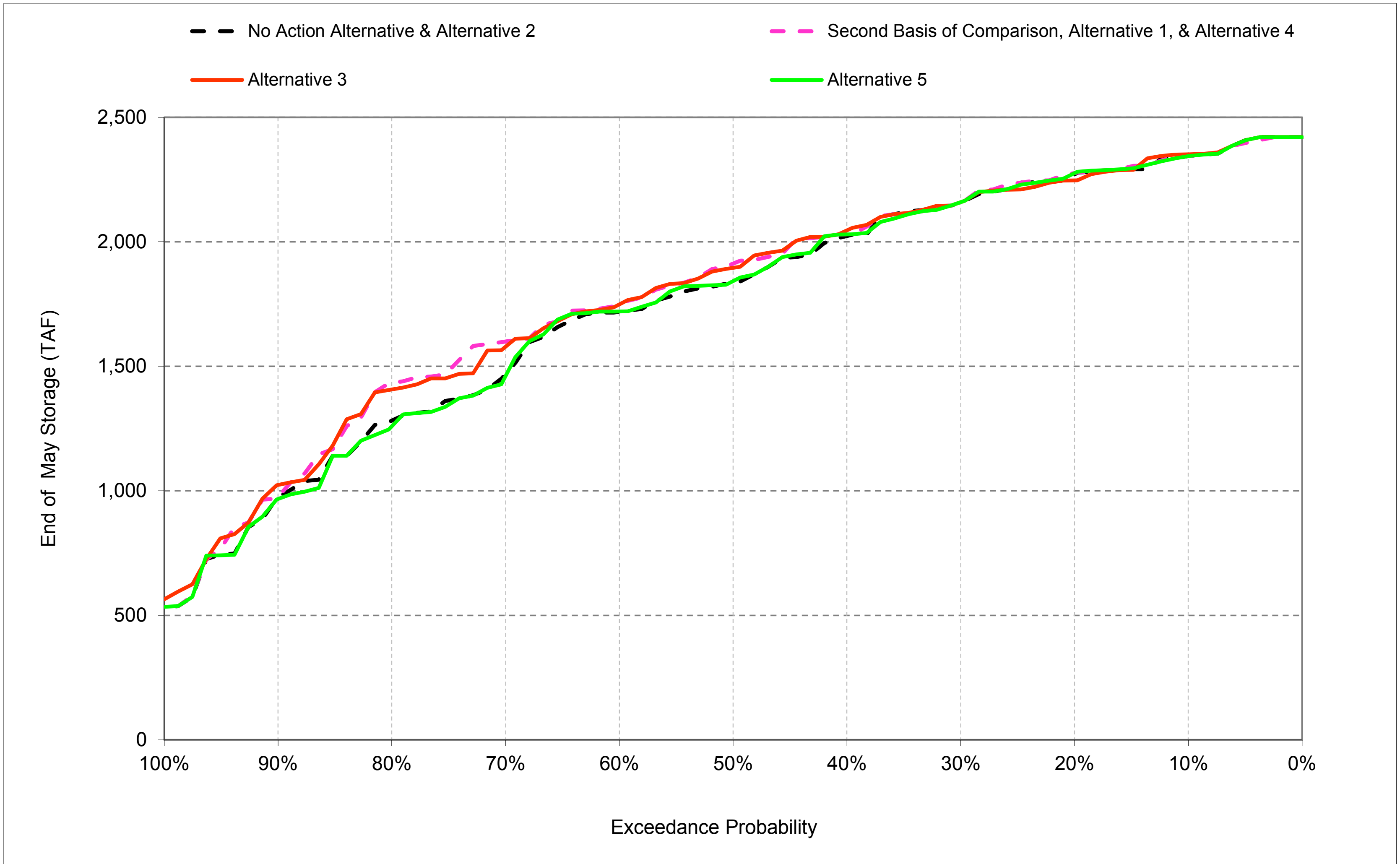
- C.10. Oroville Lake Elevation
- C.11. Folsom Lake Elevation
- C.12. San Luis Lake Elevation
- C.13. New Melones Elevation
- C.14. Millerton Elevation
- C.15. Delta Outflow
- C.16. X2 Position
- C.17. Old and Middle River Flow
- C.18. Exports through Jones and Banks Pumping Plants
- C.19. CVP Deliveries
- C.20. SWP Deliveries
- C.21. Trinity River Flow below Lewiston
- C.22. Clear Creek Flow below Whiskeytown
- C.23. Sacramento River Flow downstream of Keswick Reservoir
- C.24. Sacramento River Flow at Bend Bridge
- C.25. Feather River Flow downstream of Thermalito
- C.26. Fremont Weir Spills
- C.27. American River Flow downstream of Nimbus
- C.28. Sacramento River Flow at Freeport
- C.29. Yolo Bypass Flow
- C.30. Sacramento River Flow a Rio Vista
- C.31. Delta Cross Channel Flow
- C.32. Sutter and Steamboat Slough Flows
- C.33. Qwest Flow
- C.34. San Joaquin River Flow at Vernalis
- C.35. Stanislaus River Flow below Goodwin
- C.36. Stanislaus River Flow at Mouth
- C.37. San Joaquin River Flow downstream of Merced River Confluence
- C.38. San Joaquin River Restoration Flow
- C.39. San Joaquin River Flow at Vernalis minus San Joaquin River Flow downstream of Merced River Confluence

- C.40. Steamboat Slough downstream of Sutter Slough Water Surface Elevation
- C.41. Old River at Tracy Boulevard Water Surface Elevation
- C.42. Mokelumne River at Terminous Water Surface Elevation
- C.43. Sacramento River at Freeport Water Surface Elevation
- C.44. Sacramento River downstream of Delta Cross Channel Water Surface Elevation
- C.45. Sacramento River at Rio Vista Water Surface Elevation

This page left blank intentionally.

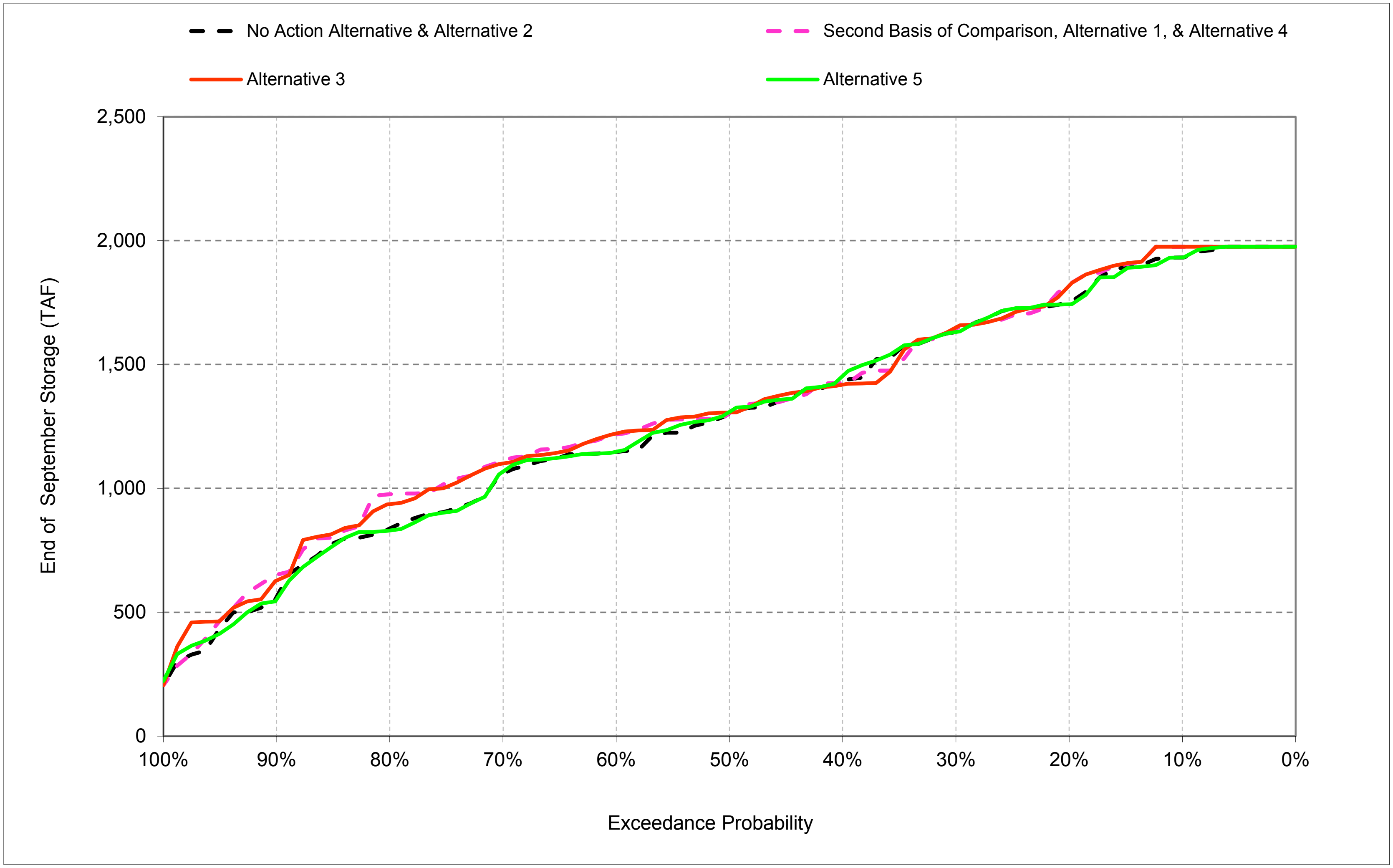
C.1. Trinity Storage

Figure C-1-1. Trinity Lake, End of May Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-1-2. Trinity Lake, End of September Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-1. Trinity Lake, End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,833	1,850	1,900	2,000	2,100	2,284	2,344	2,306	2,261	2,143	1,932
20%	1,764	1,735	1,797	1,889	2,000	2,100	2,251	2,271	2,207	2,064	1,905	1,753
30%	1,542	1,579	1,679	1,774	1,951	2,079	2,218	2,159	2,055	1,913	1,776	1,631
40%	1,383	1,370	1,557	1,673	1,769	1,982	2,115	2,024	1,916	1,774	1,583	1,432
50%	1,217	1,242	1,368	1,500	1,665	1,766	1,908	1,836	1,708	1,563	1,414	1,302
60%	1,119	1,154	1,235	1,277	1,496	1,668	1,793	1,719	1,628	1,423	1,264	1,147
70%	1,033	1,023	1,104	1,154	1,253	1,365	1,486	1,470	1,394	1,283	1,153	1,060
80%	831	855	876	973	1,033	1,139	1,312	1,282	1,222	1,058	924	838
90%	547	592	620	629	734	920	989	973	914	790	599	562
Long Term												
Full Simulation Period[b]	1,233	1,242	1,306	1,385	1,510	1,637	1,779	1,756	1,687	1,549	1,405	1,286
Water Year Types[c]												
Wet (32%)	1,490	1,516	1,630	1,756	1,921	2,053	2,220	2,245	2,190	2,067	1,939	1,784
Above Normal (16%)	1,159	1,178	1,286	1,455	1,658	1,847	2,025	1,999	1,907	1,773	1,619	1,495
Below Normal (13%)	1,393	1,400	1,417	1,488	1,575	1,662	1,817	1,743	1,637	1,470	1,304	1,185
Dry (24%)	1,152	1,148	1,174	1,182	1,274	1,403	1,539	1,490	1,413	1,253	1,104	1,008
Critical (15%)	747	731	746	750	790	872	923	888	862	745	612	536

Alternative 1

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,850	1,850	1,900	2,000	2,100	2,298	2,345	2,302	2,253	2,143	1,975
20%	1,804	1,840	1,850	1,900	2,000	2,100	2,255	2,276	2,193	2,055	1,920	1,822
30%	1,576	1,594	1,740	1,816	1,981	2,091	2,222	2,159	2,074	1,924	1,793	1,645
40%	1,391	1,446	1,568	1,705	1,855	2,019	2,131	2,030	1,918	1,767	1,582	1,426
50%	1,267	1,266	1,396	1,567	1,685	1,818	2,012	1,912	1,773	1,601	1,416	1,304
60%	1,174	1,201	1,230	1,335	1,535	1,709	1,778	1,749	1,677	1,497	1,330	1,218
70%	1,106	1,099	1,179	1,216	1,362	1,484	1,645	1,599	1,537	1,400	1,225	1,111
80%	948	954	983	1,052	1,132	1,274	1,453	1,434	1,338	1,168	1,055	976
90%	634	645	672	724	810	921	1,051	975	917	802	689	651
Long Term												
Full Simulation Period[b]	1,269	1,288	1,352	1,431	1,554	1,678	1,819	1,796	1,727	1,583	1,434	1,319
Water Year Types[c]												
Wet (32%)	1,501	1,535	1,644	1,767	1,931	2,055	2,224	2,250	2,194	2,068	1,939	1,805
Above Normal (16%)	1,208	1,245	1,363	1,524	1,718	1,901	2,079	2,053	1,955	1,815	1,647	1,513
Below Normal (13%)	1,451	1,472	1,492	1,554	1,641	1,729	1,872	1,799	1,696	1,515	1,337	1,204
Dry (24%)	1,178	1,184	1,210	1,230	1,322	1,453	1,586	1,536	1,466	1,302	1,152	1,055
Critical (15%)	819	803	813	825	868	949	999	962	929	811	667	598

Alternative 1 minus No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	17	0	0	0	0	14	1	-4	-8	-1	43
20%	40	105	53	11	0	0	3	5	-14	-9	15	69
30%	34	15	62	42	30	12	5	0	18	12	17	15
40%	8	76	11	32	86	36	17	6	2	-8	-1	-6
50%	50	25	28	67	20	52	104	76	65	38	2	2
60%	55	47	-6	59	39	40	-14	30	49	74	66	71
70%	74	76	75	62	110	119	159	130	143	117	73	51
80%	117	100	107	79	99	136	141	152	117	110	131	139
90%	87	53	52	95	77	1	62	2	3	12	90	89
Long Term												
Full Simulation Period[b]	36	46	45	46	44	42	40	40	40	34	28	33
Water Year Types[c]												
Wet (32%)	11	19	14	11	9	2	4	5	4	0	-1	21
Above Normal (16%)	49	68	77	69	60	54	55	54	49	42	27	18
Below Normal (13%)	59	72	74	66	67	67	54	57	60	44	33	18
Dry (24%)	26	36	36	48	48	49	47	46	53	48	48	48
Critical (15%)	73	72	68	75	78	78	76	74	66	66	56	61

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-2. Trinity Lake, End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,833	1,850	1,900	2,000	2,100	2,284	2,344	2,306	2,261	2,143	1,932
20%	1,764	1,735	1,797	1,889	2,000	2,100	2,251	2,271	2,207	2,064	1,905	1,753
30%	1,542	1,579	1,679	1,774	1,951	2,079	2,218	2,159	2,055	1,913	1,776	1,631
40%	1,383	1,370	1,557	1,673	1,769	1,982	2,115	2,024	1,916	1,774	1,583	1,432
50%	1,217	1,242	1,368	1,500	1,665	1,766	1,908	1,836	1,708	1,563	1,414	1,302
60%	1,119	1,154	1,235	1,277	1,496	1,668	1,793	1,719	1,628	1,423	1,264	1,147
70%	1,033	1,023	1,104	1,154	1,253	1,365	1,486	1,470	1,394	1,283	1,153	1,060
80%	831	855	876	973	1,033	1,139	1,312	1,282	1,222	1,058	924	838
90%	547	592	620	629	734	920	989	973	914	790	599	562
Long Term												
Full Simulation Period[b]	1,233	1,242	1,306	1,385	1,510	1,637	1,779	1,756	1,687	1,549	1,405	1,286
Water Year Types[c]												
Wet (32%)	1,490	1,516	1,630	1,756	1,921	2,053	2,220	2,245	2,190	2,067	1,939	1,784
Above Normal (16%)	1,159	1,178	1,286	1,455	1,658	1,847	2,025	1,999	1,907	1,773	1,619	1,495
Below Normal (13%)	1,393	1,400	1,417	1,488	1,575	1,662	1,817	1,743	1,637	1,470	1,304	1,185
Dry (24%)	1,152	1,148	1,174	1,182	1,274	1,403	1,539	1,490	1,413	1,253	1,104	1,008
Critical (15%)	747	731	746	750	790	872	923	888	862	745	612	536

Alternative 3

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,850	1,850	1,900	2,000	2,100	2,298	2,351	2,298	2,211	2,100	1,975
20%	1,815	1,831	1,849	1,900	2,000	2,100	2,259	2,246	2,204	2,064	1,903	1,818
30%	1,583	1,614	1,719	1,803	1,968	2,069	2,222	2,159	2,064	1,925	1,794	1,649
40%	1,365	1,400	1,572	1,671	1,858	1,995	2,104	2,046	1,937	1,759	1,581	1,419
50%	1,257	1,259	1,420	1,588	1,700	1,823	1,990	1,895	1,784	1,599	1,418	1,307
60%	1,169	1,205	1,233	1,318	1,536	1,721	1,787	1,748	1,674	1,495	1,334	1,221
70%	1,100	1,095	1,187	1,200	1,344	1,472	1,629	1,579	1,525	1,385	1,223	1,100
80%	909	956	961	1,041	1,155	1,250	1,429	1,407	1,322	1,160	1,019	937
90%	628	630	623	681	790	921	1,065	1,023	965	843	690	628
Long Term												
Full Simulation Period[b]	1,266	1,283	1,347	1,427	1,550	1,674	1,816	1,793	1,724	1,580	1,432	1,318
Water Year Types[c]												
Wet (32%)	1,502	1,537	1,643	1,766	1,928	2,053	2,224	2,248	2,192	2,067	1,936	1,805
Above Normal (16%)	1,197	1,230	1,349	1,511	1,707	1,891	2,071	2,045	1,949	1,806	1,646	1,513
Below Normal (13%)	1,434	1,457	1,477	1,542	1,629	1,717	1,858	1,786	1,680	1,509	1,334	1,199
Dry (24%)	1,173	1,179	1,206	1,226	1,318	1,450	1,585	1,537	1,468	1,301	1,152	1,056
Critical (15%)	829	803	817	829	871	952	1,003	968	936	813	664	600

Alternative 3 minus No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	17	0	0	0	0	14	7	-8	-50	-43	43
20%	51	96	52	11	0	0	8	-25	-3	0	-2	65
30%	41	35	41	28	17	-10	4	0	8	12	18	19
40%	-18	30	15	-2	89	13	-11	22	21	-15	-2	-14
50%	39	17	52	88	35	57	82	59	76	36	4	5
60%	49	50	-2	41	39	52	-5	29	46	72	70	74
70%	67	72	83	46	92	108	143	109	130	102	70	41
80%	77	102	85	69	122	111	117	125	100	101	95	99
90%	81	39	3	52	56	2	76	50	52	53	92	66
Long Term												
Full Simulation Period[b]	32	41	40	42	40	38	37	37	37	32	27	32
Water Year Types[c]												
Wet (32%)	11	21	13	10	7	0	3	4	3	0	-3	21
Above Normal (16%)	38	53	63	56	49	45	46	46	42	33	27	18
Below Normal (13%)	41	57	60	54	55	55	40	43	43	38	30	13
Dry (24%)	21	31	32	45	44	47	46	47	55	48	48	48
Critical (15%)	82	73	71	79	81	81	80	80	73	68	53	64

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-3. Trinity Lake, End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,833	1,850	1,900	2,000	2,100	2,284	2,344	2,306	2,261	2,143	1,932
20%	1,764	1,735	1,797	1,889	2,000	2,100	2,251	2,271	2,207	2,064	1,905	1,753
30%	1,542	1,579	1,679	1,774	1,951	2,079	2,218	2,159	2,055	1,913	1,776	1,631
40%	1,383	1,370	1,557	1,673	1,769	1,982	2,115	2,024	1,916	1,774	1,583	1,432
50%	1,217	1,242	1,368	1,500	1,665	1,766	1,908	1,836	1,708	1,563	1,414	1,302
60%	1,119	1,154	1,235	1,277	1,496	1,668	1,793	1,719	1,628	1,423	1,264	1,147
70%	1,033	1,023	1,104	1,154	1,253	1,365	1,486	1,470	1,394	1,283	1,153	1,060
80%	831	855	876	973	1,033	1,139	1,312	1,282	1,222	1,058	924	838
90%	547	592	620	629	734	920	989	973	914	790	599	562
Long Term												
Full Simulation Period[b]	1,233	1,242	1,306	1,385	1,510	1,637	1,779	1,756	1,687	1,549	1,405	1,286
Water Year Types[c]												
Wet (32%)	1,490	1,516	1,630	1,756	1,921	2,053	2,220	2,245	2,190	2,067	1,939	1,784
Above Normal (16%)	1,159	1,178	1,286	1,455	1,658	1,847	2,025	1,999	1,907	1,773	1,619	1,495
Below Normal (13%)	1,393	1,400	1,417	1,488	1,575	1,662	1,817	1,743	1,637	1,470	1,304	1,185
Dry (24%)	1,152	1,148	1,174	1,182	1,274	1,403	1,539	1,490	1,413	1,253	1,104	1,008
Critical (15%)	747	731	746	750	790	872	923	888	862	745	612	536

Alternative 5

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,828	1,850	1,900	2,000	2,100	2,283	2,344	2,306	2,262	2,143	1,932
20%	1,764	1,735	1,803	1,889	2,000	2,100	2,250	2,276	2,207	2,064	1,893	1,743
30%	1,542	1,577	1,694	1,779	1,954	2,084	2,220	2,159	2,055	1,913	1,776	1,631
40%	1,427	1,373	1,560	1,683	1,770	1,994	2,131	2,029	1,921	1,779	1,600	1,453
50%	1,231	1,253	1,376	1,518	1,671	1,771	1,895	1,842	1,728	1,563	1,420	1,309
60%	1,127	1,172	1,247	1,279	1,493	1,669	1,798	1,720	1,634	1,479	1,271	1,148
70%	1,051	1,037	1,098	1,146	1,250	1,378	1,484	1,460	1,390	1,268	1,139	1,067
80%	834	850	879	977	1,036	1,141	1,321	1,259	1,209	1,066	941	830
90%	537	589	594	628	733	908	983	967	922	811	607	553
Long Term												
Full Simulation Period[b]	1,235	1,244	1,309	1,387	1,512	1,638	1,779	1,756	1,688	1,553	1,411	1,288
Water Year Types[c]												
Wet (32%)	1,494	1,520	1,635	1,759	1,926	2,056	2,222	2,246	2,191	2,068	1,940	1,781
Above Normal (16%)	1,155	1,180	1,290	1,459	1,662	1,850	2,030	2,004	1,912	1,778	1,627	1,503
Below Normal (13%)	1,398	1,405	1,422	1,493	1,580	1,667	1,813	1,741	1,637	1,474	1,311	1,190
Dry (24%)	1,155	1,150	1,175	1,183	1,275	1,404	1,540	1,492	1,415	1,259	1,110	1,012
Critical (15%)	744	726	741	743	784	866	913	878	856	755	622	539

Alternative 5 minus No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	-5	0	0	0	0	-1	0	0	1	0	0
20%	0	0	7	0	0	0	-1	5	0	0	-12	-10
30%	0	-2	15	5	2	5	3	0	0	0	0	0
40%	45	3	2	9	1	12	16	6	5	5	17	21
50%	14	12	7	18	6	5	-13	6	19	0	6	7
60%	7	17	12	3	-3	1	5	1	5	56	7	1
70%	18	14	-6	-8	-3	14	-2	-9	-5	-15	-14	8
80%	3	-4	3	4	3	3	9	-23	-13	7	17	-8
90%	-10	-3	-26	-1	-1	-12	-7	-6	8	22	8	-10
Long Term												
Full Simulation Period[b]	1	2	3	2	2	1	0	0	1	4	5	2
Water Year Types[c]												
Wet (32%)	4	3	5	4	4	2	2	2	2	0	0	-2
Above Normal (16%)	-4	2	4	4	4	4	6	6	5	5	8	8
Below Normal (13%)	5	5	5	5	5	5	-5	-2	0	4	7	4
Dry (24%)	3	1	1	1	1	1	1	1	2	6	6	4
Critical (15%)	-2	-5	-4	-7	-6	-6	-10	-10	-7	10	11	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-4. Trinity Lake, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,850	1,850	1,900	2,000	2,100	2,298	2,345	2,302	2,253	2,143	1,975
20%	1,804	1,840	1,850	1,900	2,000	2,100	2,255	2,276	2,193	2,055	1,920	1,822
30%	1,576	1,594	1,740	1,816	1,981	2,091	2,222	2,159	2,074	1,924	1,793	1,645
40%	1,391	1,446	1,568	1,705	1,855	2,019	2,131	2,030	1,918	1,767	1,582	1,426
50%	1,267	1,266	1,396	1,567	1,685	1,818	2,012	1,912	1,773	1,601	1,416	1,304
60%	1,174	1,201	1,230	1,335	1,535	1,709	1,778	1,749	1,677	1,497	1,330	1,218
70%	1,106	1,099	1,179	1,216	1,362	1,484	1,645	1,599	1,537	1,400	1,225	1,111
80%	948	954	983	1,052	1,132	1,274	1,453	1,434	1,338	1,168	1,055	976
90%	634	645	672	724	810	921	1,051	975	917	802	689	651
Long Term												
Full Simulation Period[b]	1,269	1,288	1,352	1,431	1,554	1,678	1,819	1,796	1,727	1,583	1,434	1,319
Water Year Types[c]												
Wet (32%)	1,501	1,535	1,644	1,767	1,931	2,055	2,224	2,250	2,194	2,068	1,939	1,805
Above Normal (16%)	1,208	1,245	1,363	1,524	1,718	1,901	2,079	2,053	1,955	1,815	1,647	1,513
Below Normal (13%)	1,451	1,472	1,492	1,554	1,641	1,729	1,872	1,799	1,696	1,515	1,337	1,204
Dry (24%)	1,178	1,184	1,210	1,230	1,322	1,453	1,586	1,536	1,466	1,302	1,152	1,055
Critical (15%)	819	803	813	825	868	949	999	962	929	811	667	598

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,833	1,850	1,900	2,000	2,100	2,284	2,344	2,306	2,261	2,143	1,932
20%	1,764	1,735	1,797	1,889	2,000	2,100	2,251	2,271	2,207	2,064	1,905	1,753
30%	1,542	1,579	1,679	1,774	1,951	2,079	2,218	2,159	2,055	1,913	1,776	1,631
40%	1,383	1,370	1,557	1,673	1,769	1,982	2,115	2,024	1,916	1,774	1,583	1,432
50%	1,217	1,242	1,368	1,500	1,665	1,766	1,908	1,836	1,708	1,563	1,414	1,302
60%	1,119	1,154	1,235	1,277	1,496	1,668	1,793	1,719	1,628	1,423	1,264	1,147
70%	1,033	1,023	1,104	1,154	1,253	1,365	1,486	1,470	1,394	1,283	1,153	1,060
80%	831	855	876	973	1,033	1,139	1,312	1,282	1,222	1,058	924	838
90%	547	592	620	629	734	920	989	973	914	790	599	562
Long Term												
Full Simulation Period[b]	1,233	1,242	1,306	1,385	1,510	1,637	1,779	1,756	1,687	1,549	1,405	1,286
Water Year Types[c]												
Wet (32%)	1,490	1,516	1,630	1,756	1,921	2,053	2,220	2,245	2,190	2,067	1,939	1,784
Above Normal (16%)	1,159	1,178	1,286	1,455	1,658	1,847	2,025	1,999	1,907	1,773	1,619	1,495
Below Normal (13%)	1,393	1,400	1,417	1,488	1,575	1,662	1,817	1,743	1,637	1,470	1,304	1,185
Dry (24%)	1,152	1,148	1,174	1,182	1,274	1,403	1,539	1,490	1,413	1,253	1,104	1,008
Critical (15%)	747	731	746	750	790	872	923	888	862	745	612	536

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	-17	0	0	0	0	-14	-1	4	8	1	-43
20%	-40	-105	-53	-11	0	0	-3	-5	14	9	-15	-69
30%	-34	-15	-62	-42	-30	-12	-5	0	-18	-12	-17	-15
40%	-8	-76	-11	-32	-86	-36	-17	-6	-2	8	1	6
50%	-50	-25	-28	-67	-20	-52	-104	-76	-65	-38	-2	-2
60%	-55	-47	6	-59	-39	-40	14	-30	-49	-74	-66	-71
70%	-74	-76	-75	-62	-110	-119	-159	-130	-143	-117	-73	-51
80%	-117	-100	-107	-79	-99	-136	-141	-152	-117	-110	-131	-139
90%	-87	-53	-52	-95	-77	-1	-62	-2	-3	-12	-90	-89
Long Term												
Full Simulation Period[b]	-36	-46	-45	-46	-44	-42	-40	-40	-40	-34	-28	-33
Water Year Types[c]												
Wet (32%)	-11	-19	-14	-11	-9	-2	-4	-5	-4	0	1	-21
Above Normal (16%)	-49	-68	-77	-69	-60	-54	-55	-54	-49	-42	-27	-18
Below Normal (13%)	-59	-72	-74	-66	-67	-67	-54	-57	-60	-44	-33	-18
Dry (24%)	-26	-36	-36	-48	-48	-49	-47	-46	-53	-48	-48	-48
Critical (15%)	-73	-72	-68	-75	-78	-78	-76	-74	-66	-66	-56	-61

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-5. Trinity Lake, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,850	1,850	1,900	2,000	2,100	2,298	2,345	2,302	2,253	2,143	1,975
20%	1,804	1,840	1,850	1,900	2,000	2,100	2,255	2,276	2,193	2,055	1,920	1,822
30%	1,576	1,594	1,740	1,816	1,981	2,091	2,222	2,159	2,074	1,924	1,793	1,645
40%	1,391	1,446	1,568	1,705	1,855	2,019	2,131	2,030	1,918	1,767	1,582	1,426
50%	1,267	1,266	1,396	1,567	1,685	1,818	2,012	1,912	1,773	1,601	1,416	1,304
60%	1,174	1,201	1,230	1,335	1,535	1,709	1,778	1,749	1,677	1,497	1,330	1,218
70%	1,106	1,099	1,179	1,216	1,362	1,484	1,645	1,599	1,537	1,400	1,225	1,111
80%	948	954	983	1,052	1,132	1,274	1,453	1,434	1,338	1,168	1,055	976
90%	634	645	672	724	810	921	1,051	975	917	802	689	651
Long Term												
Full Simulation Period[b]	1,269	1,288	1,352	1,431	1,554	1,678	1,819	1,796	1,727	1,583	1,434	1,319
Water Year Types[c]												
Wet (32%)	1,501	1,535	1,644	1,767	1,931	2,055	2,224	2,250	2,194	2,068	1,939	1,805
Above Normal (16%)	1,208	1,245	1,363	1,524	1,718	1,901	2,079	2,053	1,955	1,815	1,647	1,513
Below Normal (13%)	1,451	1,472	1,492	1,554	1,641	1,729	1,872	1,799	1,696	1,515	1,337	1,204
Dry (24%)	1,178	1,184	1,210	1,230	1,322	1,453	1,586	1,536	1,466	1,302	1,152	1,055
Critical (15%)	819	803	813	825	868	949	999	962	929	811	667	598

Alternative 3

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,850	1,850	1,900	2,000	2,100	2,298	2,351	2,298	2,211	2,100	1,975
20%	1,815	1,831	1,849	1,900	2,000	2,100	2,259	2,246	2,204	2,064	1,903	1,818
30%	1,583	1,614	1,719	1,803	1,968	2,069	2,222	2,159	2,064	1,925	1,794	1,649
40%	1,365	1,400	1,572	1,671	1,858	1,995	2,104	2,046	1,937	1,759	1,581	1,419
50%	1,257	1,259	1,420	1,588	1,700	1,823	1,990	1,895	1,784	1,599	1,418	1,307
60%	1,169	1,205	1,233	1,318	1,536	1,721	1,787	1,748	1,674	1,495	1,334	1,221
70%	1,100	1,095	1,187	1,200	1,344	1,472	1,629	1,579	1,525	1,385	1,223	1,100
80%	909	956	961	1,041	1,155	1,250	1,429	1,407	1,322	1,160	1,019	937
90%	628	630	623	681	790	921	1,065	1,023	965	843	690	628
Long Term												
Full Simulation Period[b]	1,266	1,283	1,347	1,427	1,550	1,674	1,816	1,793	1,724	1,580	1,432	1,318
Water Year Types[c]												
Wet (32%)	1,502	1,537	1,643	1,766	1,928	2,053	2,224	2,248	2,192	2,067	1,936	1,805
Above Normal (16%)	1,197	1,230	1,349	1,511	1,707	1,891	2,071	2,045	1,949	1,806	1,646	1,513
Below Normal (13%)	1,434	1,457	1,477	1,542	1,629	1,717	1,858	1,786	1,680	1,509	1,334	1,199
Dry (24%)	1,173	1,179	1,206	1,226	1,318	1,450	1,585	1,537	1,468	1,301	1,152	1,056
Critical (15%)	829	803	817	829	871	952	1,003	968	936	813	664	600

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	6	-4	-42	-42	0
20%	11	-9	-1	0	0	0	5	-29	11	9	-17	-4
30%	6	21	-21	-13	-13	-22	-1	0	-10	1	1	4
40%	-26	-45	4	-34	2	-23	-27	16	20	-8	0	-8
50%	-11	-7	24	21	16	5	-22	-17	11	-2	2	3
60%	-6	3	3	-18	0	12	9	-1	-3	-2	4	3
70%	-7	-4	8	-16	-18	-12	-16	-21	-13	-15	-2	-11
80%	-39	2	-22	-10	23	-25	-24	-26	-16	-9	-36	-40
90%	-5	-14	-49	-43	-20	0	14	48	49	41	2	-23
Long Term												
Full Simulation Period[b]	-4	-5	-5	-4	-5	-4	-3	-3	-2	-2	-2	0
Water Year Types[c]												
Wet (32%)	0	1	-1	-1	-2	-1	-1	-2	-1	0	-3	0
Above Normal (16%)	-11	-15	-14	-13	-11	-10	-8	-8	-7	-9	0	0
Below Normal (13%)	-17	-15	-15	-12	-12	-12	-14	-13	-16	-6	-3	-5
Dry (24%)	-5	-5	-4	-4	-4	-2	-1	0	2	0	0	1
Critical (15%)	10	1	3	3	3	3	4	6	7	2	-3	2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-6. Trinity Lake, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,850	1,850	1,900	2,000	2,100	2,298	2,345	2,302	2,253	2,143	1,975
20%	1,804	1,840	1,850	1,900	2,000	2,100	2,255	2,276	2,193	2,055	1,920	1,822
30%	1,576	1,594	1,740	1,816	1,981	2,091	2,222	2,159	2,074	1,924	1,793	1,645
40%	1,391	1,446	1,568	1,705	1,855	2,019	2,131	2,030	1,918	1,767	1,582	1,426
50%	1,267	1,266	1,396	1,567	1,685	1,818	2,012	1,912	1,773	1,601	1,416	1,304
60%	1,174	1,201	1,230	1,335	1,535	1,709	1,778	1,749	1,677	1,497	1,330	1,218
70%	1,106	1,099	1,179	1,216	1,362	1,484	1,645	1,599	1,537	1,400	1,225	1,111
80%	948	954	983	1,052	1,132	1,274	1,453	1,434	1,338	1,168	1,055	976
90%	634	645	672	724	810	921	1,051	975	917	802	689	651
Long Term												
Full Simulation Period[b]	1,269	1,288	1,352	1,431	1,554	1,678	1,819	1,796	1,727	1,583	1,434	1,319
Water Year Types[c]												
Wet (32%)	1,501	1,535	1,644	1,767	1,931	2,055	2,224	2,250	2,194	2,068	1,939	1,805
Above Normal (16%)	1,208	1,245	1,363	1,524	1,718	1,901	2,079	2,053	1,955	1,815	1,647	1,513
Below Normal (13%)	1,451	1,472	1,492	1,554	1,641	1,729	1,872	1,799	1,696	1,515	1,337	1,204
Dry (24%)	1,178	1,184	1,210	1,230	1,322	1,453	1,586	1,536	1,466	1,302	1,152	1,055
Critical (15%)	819	803	813	825	868	949	999	962	929	811	667	598

Alternative 5

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,850	1,828	1,850	1,900	2,000	2,100	2,283	2,344	2,306	2,262	2,143	1,932
20%	1,764	1,735	1,803	1,889	2,000	2,100	2,250	2,276	2,207	2,064	1,893	1,743
30%	1,542	1,577	1,694	1,779	1,954	2,084	2,220	2,159	2,055	1,913	1,776	1,631
40%	1,427	1,373	1,560	1,683	1,770	1,994	2,131	2,029	1,921	1,779	1,600	1,453
50%	1,231	1,253	1,376	1,518	1,671	1,771	1,895	1,842	1,728	1,563	1,420	1,309
60%	1,127	1,172	1,247	1,279	1,493	1,669	1,798	1,720	1,634	1,479	1,271	1,148
70%	1,051	1,037	1,098	1,146	1,250	1,378	1,484	1,460	1,390	1,268	1,139	1,067
80%	834	850	879	977	1,036	1,141	1,321	1,259	1,209	1,066	941	830
90%	537	589	594	628	733	908	983	967	922	811	607	553
Long Term												
Full Simulation Period[b]	1,235	1,244	1,309	1,387	1,512	1,638	1,779	1,756	1,688	1,553	1,411	1,288
Water Year Types[c]												
Wet (32%)	1,494	1,520	1,635	1,759	1,926	2,056	2,222	2,246	2,191	2,068	1,940	1,781
Above Normal (16%)	1,155	1,180	1,290	1,459	1,662	1,850	2,030	2,004	1,912	1,778	1,627	1,503
Below Normal (13%)	1,398	1,405	1,422	1,493	1,580	1,667	1,813	1,741	1,637	1,474	1,311	1,190
Dry (24%)	1,155	1,150	1,175	1,183	1,275	1,404	1,540	1,492	1,415	1,259	1,110	1,012
Critical (15%)	744	726	741	743	784	866	913	878	856	755	622	539

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	-22	0	0	0	0	-15	-1	4	10	1	-43
20%	-40	-105	-47	-11	0	0	-4	0	14	9	-27	-79
30%	-34	-17	-47	-36	-28	-6	-2	0	-18	-12	-17	-15
40%	37	-73	-9	-22	-85	-25	-1	-1	4	13	18	27
50%	-36	-13	-21	-49	-14	-47	-117	-70	-46	-38	4	4
60%	-48	-30	17	-56	-43	-40	19	-29	-44	-18	-59	-70
70%	-56	-62	-81	-70	-112	-105	-161	-139	-147	-132	-86	-44
80%	-114	-104	-104	-75	-96	-133	-131	-175	-129	-103	-114	-147
90%	-97	-56	-78	-96	-78	-13	-68	-8	5	10	-82	-99
Long Term												
Full Simulation Period[b]	-34	-44	-43	-45	-43	-40	-40	-40	-39	-30	-23	-30
Water Year Types[c]												
Wet (32%)	-7	-16	-9	-8	-5	1	-2	-3	-3	0	1	-23
Above Normal (16%)	-53	-65	-73	-65	-56	-51	-49	-49	-43	-37	-20	-11
Below Normal (13%)	-54	-67	-69	-61	-62	-62	-59	-58	-60	-40	-26	-14
Dry (24%)	-23	-35	-35	-48	-47	-48	-46	-45	-51	-42	-42	-43
Critical (15%)	-75	-77	-72	-82	-84	-84	-86	-84	-73	-56	-45	-59

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

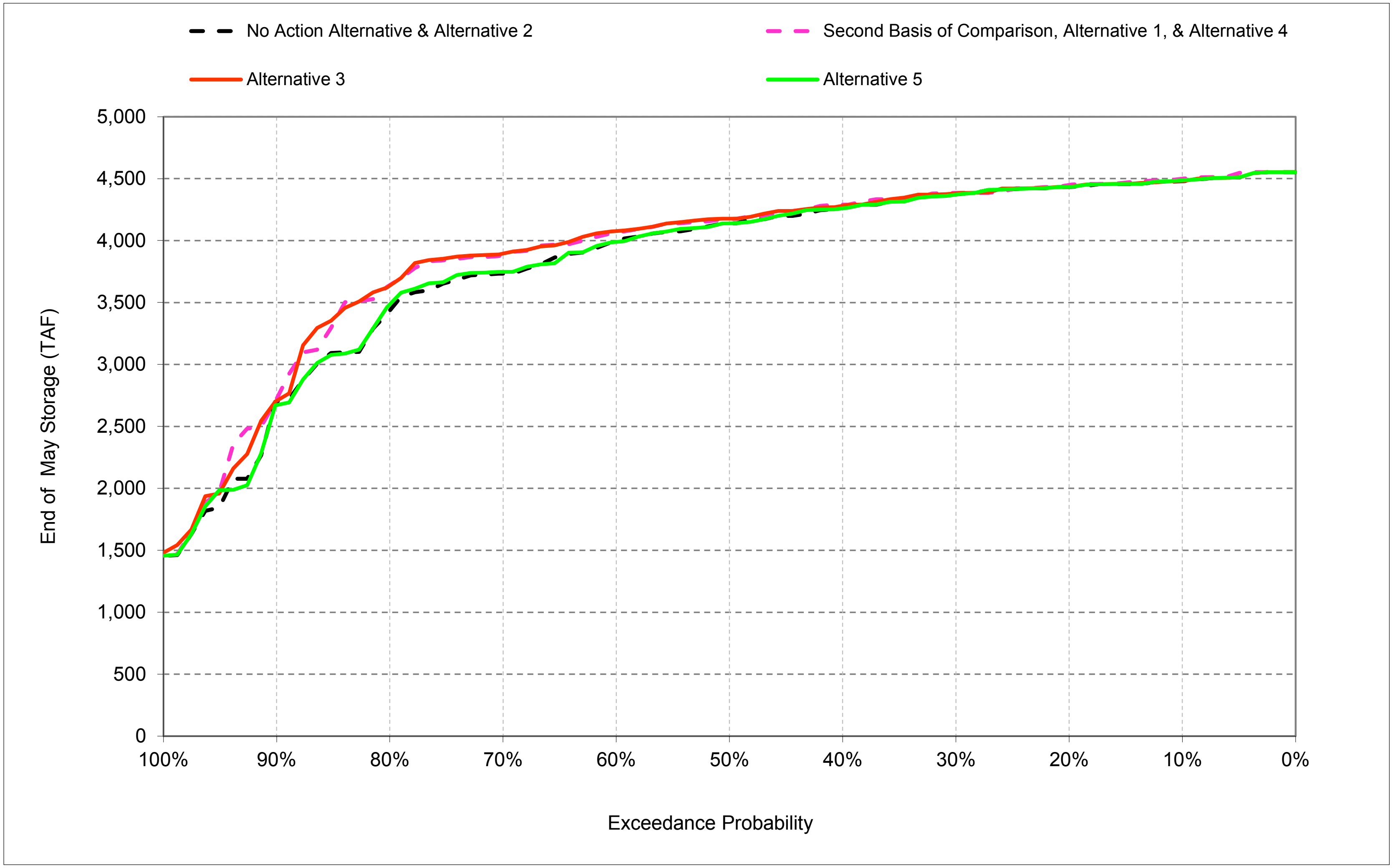
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

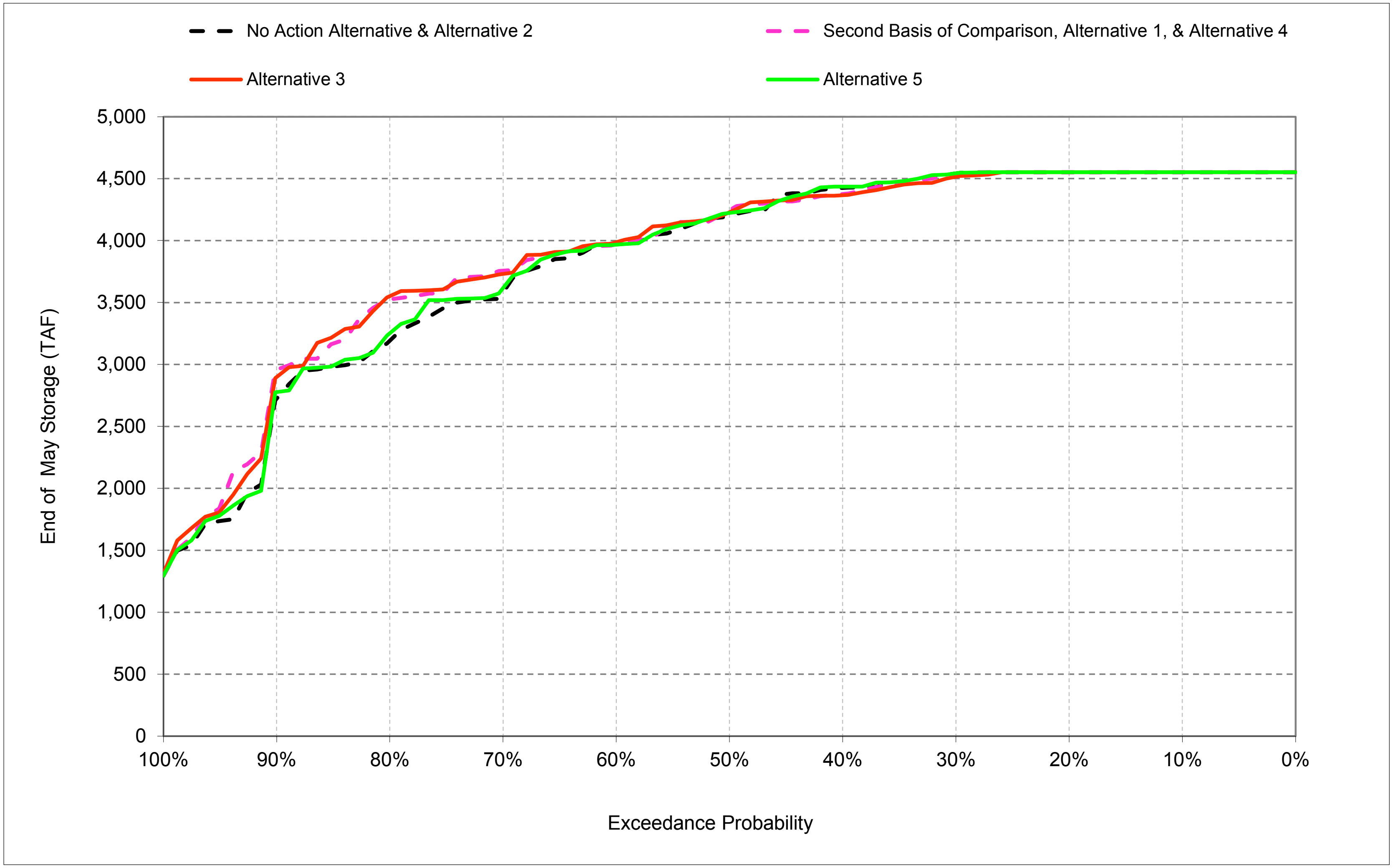
C.2. Shasta Storage

Figure C-2-1. Shasta Lake, End of April Storage



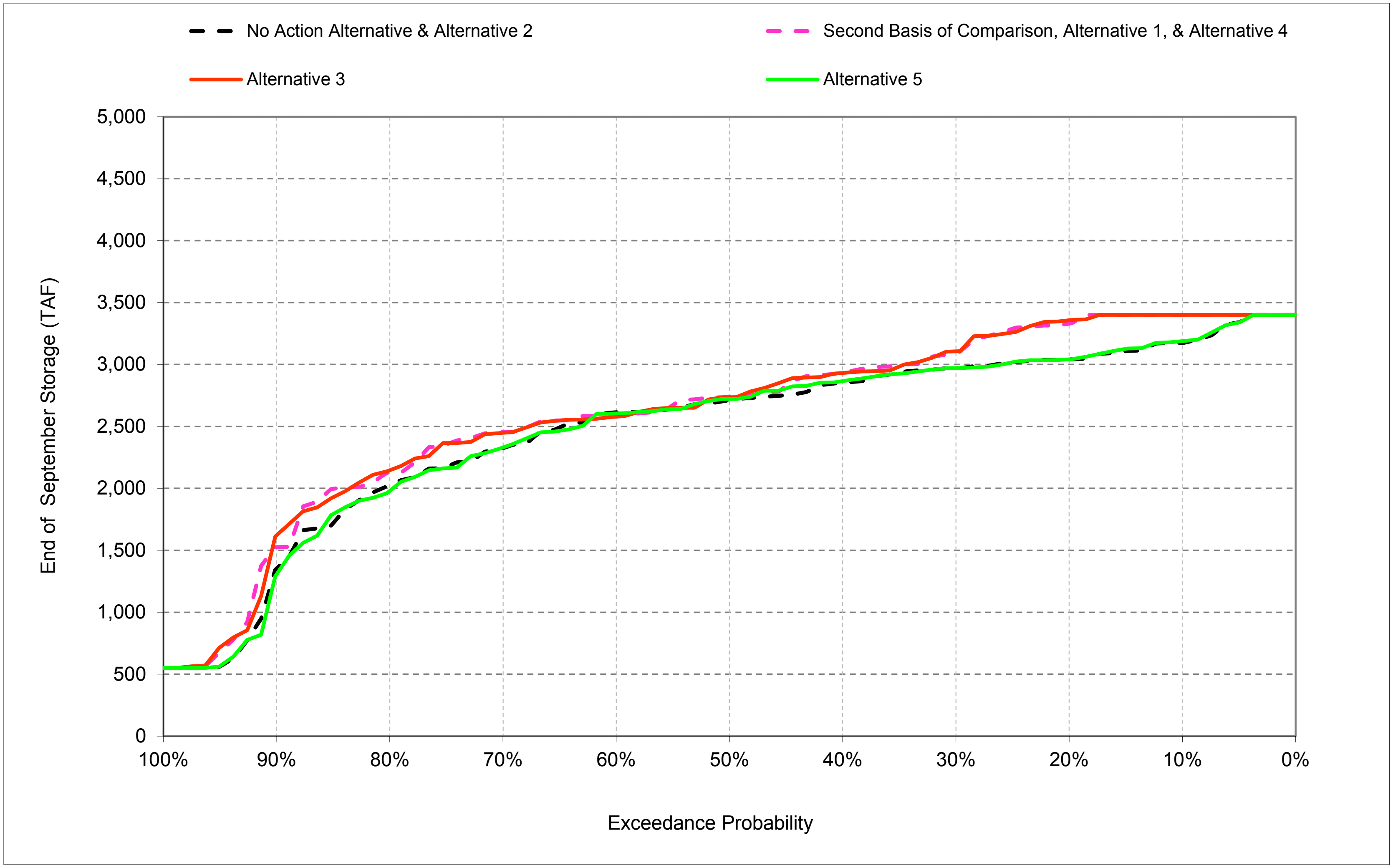
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-2-2. Shasta Lake, End of May Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-2-3. Shasta Lake, End of September Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-1. Shasta Lake, End of Month Storage

No Action Alternative

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,200	3,209	3,322	3,615	3,812	4,217	4,479	4,552	4,452	3,904	3,575	3,176
20%	2,984	2,938	3,289	3,525	3,700	4,114	4,434	4,552	4,282	3,782	3,479	3,041
30%	2,854	2,759	3,252	3,375	3,616	3,998	4,376	4,542	4,196	3,577	3,227	2,970
40%	2,712	2,674	3,020	3,260	3,489	3,948	4,267	4,425	4,008	3,323	3,024	2,852
50%	2,586	2,531	2,759	3,156	3,388	3,764	4,139	4,202	3,774	3,178	2,841	2,713
60%	2,498	2,449	2,542	2,963	3,284	3,576	3,998	3,977	3,553	2,988	2,712	2,614
70%	2,234	2,251	2,345	2,625	3,145	3,422	3,733	3,580	3,299	2,701	2,491	2,324
80%	1,947	1,951	2,151	2,450	2,777	3,139	3,435	3,191	2,815	2,325	2,098	2,025
90%	1,261	1,240	1,336	1,964	2,191	2,552	2,701	2,725	2,357	1,781	1,402	1,354
Long Term												
Full Simulation Period[b]	2,400	2,378	2,591	2,899	3,185	3,553	3,835	3,847	3,519	2,986	2,676	2,483
Water Year Types[c]												
Wet (32%)	2,700	2,719	3,077	3,384	3,589	3,836	4,298	4,460	4,242	3,735	3,410	2,985
Above Normal (16%)	2,369	2,385	2,600	3,167	3,453	4,021	4,404	4,429	4,039	3,407	3,069	2,834
Below Normal (13%)	2,587	2,548	2,686	3,062	3,442	3,814	4,026	3,957	3,588	3,002	2,643	2,608
Dry (24%)	2,345	2,283	2,428	2,621	3,034	3,505	3,737	3,668	3,284	2,767	2,496	2,462
Critical (15%)	1,702	1,633	1,717	1,871	2,031	2,274	2,202	2,088	1,719	1,253	986	937

Alternative 1

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,250	3,252	3,359	3,632	3,911	4,222	4,499	4,552	4,434	3,902	3,563	3,400
20%	3,247	3,252	3,333	3,552	3,771	4,118	4,448	4,552	4,283	3,767	3,380	3,330
30%	3,127	3,199	3,304	3,513	3,673	4,018	4,384	4,532	4,155	3,546	3,174	3,096
40%	2,924	3,028	3,254	3,382	3,569	3,978	4,290	4,375	3,913	3,291	2,980	2,935
50%	2,689	2,753	3,134	3,314	3,487	3,916	4,175	4,245	3,712	3,139	2,781	2,738
60%	2,520	2,594	2,922	3,170	3,354	3,727	4,064	3,971	3,493	2,942	2,636	2,592
70%	2,345	2,467	2,643	2,891	3,252	3,513	3,886	3,757	3,332	2,790	2,527	2,453
80%	2,099	2,145	2,178	2,609	2,978	3,409	3,640	3,525	2,951	2,410	2,127	2,125
90%	1,414	1,350	1,524	2,050	2,383	2,760	2,722	2,958	2,604	1,986	1,584	1,526
Long Term												
Full Simulation Period[b]	2,530	2,578	2,753	3,020	3,285	3,639	3,913	3,907	3,539	3,007	2,674	2,607
Water Year Types[c]												
Wet (32%)	2,817	2,926	3,154	3,406	3,597	3,841	4,301	4,453	4,228	3,733	3,362	3,252
Above Normal (16%)	2,499	2,578	2,808	3,313	3,515	4,038	4,416	4,417	3,979	3,347	2,975	2,921
Below Normal (13%)	2,826	2,846	2,977	3,299	3,646	3,966	4,164	4,042	3,599	3,010	2,601	2,574
Dry (24%)	2,409	2,431	2,578	2,755	3,168	3,644	3,861	3,774	3,333	2,800	2,539	2,496
Critical (15%)	1,873	1,826	1,911	2,050	2,222	2,460	2,386	2,270	1,861	1,409	1,151	1,086

Alternative 1 minus No Action Alternative

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	50	43	37	17	99	5	20	0	-18	-1	-12	224
20%	263	314	43	27	71	3	15	0	1	-15	-99	289
30%	273	440	52	138	57	20	9	-11	-42	-31	-53	126
40%	211	355	234	122	80	30	22	-50	-95	-32	-44	83
50%	103	222	375	158	99	151	36	43	-62	-39	-60	25
60%	23	144	380	207	69	150	67	-6	-60	-46	-76	-22
70%	111	217	297	266	107	91	153	177	33	88	37	129
80%	152	193	28	159	201	271	206	335	136	85	29	99
90%	153	110	188	85	193	208	20	234	246	205	182	172
Long Term												
Full Simulation Period[b]	131	201	162	121	100	86	78	60	20	22	-2	124
Water Year Types[c]												
Wet (32%)	117	208	77	22	8	5	3	-7	-14	-2	-49	267
Above Normal (16%)	130	193	208	146	62	17	12	-11	-60	-60	-94	87
Below Normal (13%)	239	298	291	237	204	152	138	86	10	8	-42	-33
Dry (24%)	64	148	150	135	134	139	123	106	48	33	42	35
Critical (15%)	171	193	194	179	190	186	184	183	142	155	165	149

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-2. Shasta Lake, End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,200	3,209	3,322	3,615	3,812	4,217	4,479	4,552	4,452	3,904	3,575	3,176
20%	2,984	2,938	3,289	3,525	3,700	4,114	4,434	4,552	4,282	3,782	3,479	3,041
30%	2,854	2,759	3,252	3,375	3,616	3,998	4,376	4,542	4,196	3,577	3,227	2,970
40%	2,712	2,674	3,020	3,260	3,489	3,948	4,267	4,425	4,008	3,323	3,024	2,852
50%	2,586	2,531	2,759	3,156	3,388	3,764	4,139	4,202	3,774	3,178	2,841	2,713
60%	2,498	2,449	2,542	2,963	3,284	3,576	3,998	3,977	3,553	2,988	2,712	2,614
70%	2,234	2,251	2,345	2,625	3,145	3,422	3,733	3,580	3,299	2,701	2,491	2,324
80%	1,947	1,951	2,151	2,450	2,777	3,139	3,435	3,191	2,815	2,325	2,098	2,025
90%	1,261	1,240	1,336	1,964	2,191	2,552	2,701	2,725	2,357	1,781	1,402	1,354
Long Term												
Full Simulation Period[b]	2,400	2,378	2,591	2,899	3,185	3,553	3,835	3,847	3,519	2,986	2,676	2,483
Water Year Types[c]												
Wet (32%)	2,700	2,719	3,077	3,384	3,589	3,836	4,298	4,460	4,242	3,735	3,410	2,985
Above Normal (16%)	2,369	2,385	2,600	3,167	3,453	4,021	4,404	4,429	4,039	3,407	3,069	2,834
Below Normal (13%)	2,587	2,548	2,686	3,062	3,442	3,814	4,026	3,957	3,588	3,002	2,643	2,608
Dry (24%)	2,345	2,283	2,428	2,621	3,034	3,505	3,737	3,668	3,284	2,767	2,496	2,462
Critical (15%)	1,702	1,633	1,717	1,871	2,031	2,274	2,202	2,088	1,719	1,253	986	937

Alternative 3

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,250	3,252	3,349	3,639	3,910	4,225	4,481	4,552	4,434	3,884	3,579	3,400
20%	3,200	3,251	3,321	3,552	3,771	4,127	4,435	4,552	4,276	3,764	3,421	3,358
30%	3,094	3,161	3,292	3,513	3,675	4,020	4,382	4,515	4,155	3,528	3,171	3,106
40%	2,918	3,066	3,257	3,370	3,592	3,975	4,281	4,367	3,917	3,296	2,999	2,933
50%	2,680	2,774	3,085	3,277	3,484	3,866	4,177	4,228	3,736	3,148	2,761	2,735
60%	2,475	2,593	2,921	3,173	3,330	3,751	4,078	3,987	3,504	2,992	2,668	2,579
70%	2,379	2,412	2,634	2,889	3,252	3,513	3,895	3,731	3,375	2,802	2,547	2,448
80%	2,107	2,114	2,239	2,610	2,981	3,387	3,636	3,552	2,996	2,475	2,188	2,146
90%	1,527	1,514	1,581	2,107	2,371	2,814	2,706	2,899	2,628	2,089	1,752	1,621
Long Term												
Full Simulation Period[b]	2,525	2,578	2,750	3,019	3,284	3,636	3,914	3,908	3,543	3,013	2,687	2,605
Water Year Types[c]												
Wet (32%)	2,816	2,932	3,161	3,408	3,597	3,841	4,301	4,453	4,221	3,720	3,370	3,244
Above Normal (16%)	2,475	2,555	2,783	3,303	3,509	4,023	4,403	4,401	3,975	3,350	2,998	2,946
Below Normal (13%)	2,818	2,851	2,983	3,302	3,650	3,971	4,176	4,056	3,631	3,036	2,669	2,562
Dry (24%)	2,431	2,451	2,590	2,770	3,189	3,662	3,885	3,798	3,359	2,826	2,542	2,500
Critical (15%)	1,833	1,793	1,877	2,024	2,184	2,424	2,354	2,237	1,836	1,406	1,129	1,066

Alternative 3 minus No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	50	43	27	25	98	8	2	0	-18	-20	4	224
20%	216	313	32	26	71	13	1	0	-7	-17	-58	316
30%	240	402	40	138	59	22	6	-27	-41	-48	-56	136
40%	206	392	237	110	104	27	14	-59	-91	-27	-26	80
50%	94	244	326	122	96	101	39	26	-38	-29	-80	23
60%	-23	143	379	209	46	175	80	11	-49	4	-44	-35
70%	145	162	289	264	107	91	163	151	76	101	56	124
80%	160	163	89	160	204	248	201	361	181	150	90	120
90%	266	274	245	143	180	263	5	174	271	308	351	267
Long Term												
Full Simulation Period[b]	125	200	158	120	99	83	79	60	24	27	11	122
Water Year Types[c]												
Wet (32%)	116	214	84	24	8	5	2	-7	-21	-16	-41	260
Above Normal (16%)	106	170	183	136	56	2	-1	-27	-64	-57	-71	112
Below Normal (13%)	231	302	296	240	208	157	150	99	42	34	26	-46
Dry (24%)	86	168	162	149	155	156	148	130	74	58	45	38
Critical (15%)	131	160	160	153	152	149	152	149	117	153	143	129

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-3. Shasta Lake, End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,200	3,209	3,322	3,615	3,812	4,217	4,479	4,552	4,452	3,904	3,575	3,176
20%	2,984	2,938	3,289	3,525	3,700	4,114	4,434	4,552	4,282	3,782	3,479	3,041
30%	2,854	2,759	3,252	3,375	3,616	3,998	4,376	4,542	4,196	3,577	3,227	2,970
40%	2,712	2,674	3,020	3,260	3,489	3,948	4,267	4,425	4,008	3,323	3,024	2,852
50%	2,586	2,531	2,759	3,156	3,388	3,764	4,139	4,202	3,774	3,178	2,841	2,713
60%	2,498	2,449	2,542	2,963	3,284	3,576	3,998	3,977	3,553	2,988	2,712	2,614
70%	2,234	2,251	2,345	2,625	3,145	3,422	3,733	3,580	3,299	2,701	2,491	2,324
80%	1,947	1,951	2,151	2,450	2,777	3,139	3,435	3,191	2,815	2,325	2,098	2,025
90%	1,261	1,240	1,336	1,964	2,191	2,552	2,701	2,725	2,357	1,781	1,402	1,354
Long Term												
Full Simulation Period[b]	2,400	2,378	2,591	2,899	3,185	3,553	3,835	3,847	3,519	2,986	2,676	2,483
Water Year Types[c]												
Wet (32%)	2,700	2,719	3,077	3,384	3,589	3,836	4,298	4,460	4,242	3,735	3,410	2,985
Above Normal (16%)	2,369	2,385	2,600	3,167	3,453	4,021	4,404	4,429	4,039	3,407	3,069	2,834
Below Normal (13%)	2,587	2,548	2,686	3,062	3,442	3,814	4,026	3,957	3,588	3,002	2,643	2,608
Dry (24%)	2,345	2,283	2,428	2,621	3,034	3,505	3,737	3,668	3,284	2,767	2,496	2,462
Critical (15%)	1,702	1,633	1,717	1,871	2,031	2,274	2,202	2,088	1,719	1,253	986	937

Alternative 5

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,200	3,242	3,322	3,615	3,812	4,217	4,486	4,552	4,451	3,905	3,580	3,188
20%	3,018	2,911	3,293	3,525	3,704	4,114	4,434	4,552	4,282	3,762	3,471	3,041
30%	2,878	2,770	3,252	3,370	3,616	3,998	4,371	4,542	4,196	3,578	3,239	2,971
40%	2,735	2,684	3,037	3,270	3,496	3,944	4,260	4,435	3,973	3,313	3,027	2,866
50%	2,615	2,540	2,771	3,188	3,391	3,756	4,139	4,223	3,785	3,196	2,859	2,722
60%	2,495	2,452	2,537	2,971	3,284	3,590	3,989	3,967	3,595	3,020	2,738	2,605
70%	2,246	2,250	2,355	2,639	3,163	3,417	3,748	3,615	3,292	2,728	2,489	2,330
80%	1,912	1,958	2,146	2,447	2,766	3,151	3,485	3,251	2,855	2,356	2,051	1,979
90%	1,216	1,196	1,281	1,929	2,246	2,565	2,672	2,777	2,423	1,794	1,341	1,308
Long Term												
Full Simulation Period[b]	2,399	2,377	2,593	2,900	3,185	3,552	3,838	3,859	3,534	2,991	2,675	2,483
Water Year Types[c]												
Wet (32%)	2,704	2,716	3,078	3,385	3,590	3,836	4,299	4,461	4,243	3,736	3,410	2,989
Above Normal (16%)	2,369	2,388	2,598	3,164	3,454	4,019	4,401	4,430	4,042	3,409	3,071	2,842
Below Normal (13%)	2,603	2,565	2,704	3,077	3,450	3,820	4,039	3,970	3,602	3,012	2,663	2,620
Dry (24%)	2,344	2,287	2,433	2,627	3,039	3,509	3,745	3,699	3,315	2,787	2,497	2,459
Critical (15%)	1,676	1,611	1,700	1,856	2,015	2,258	2,203	2,104	1,749	1,246	958	910

Alternative 5 minus No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	33	0	0	0	0	7	0	-1	1	5	12
20%	34	-27	3	0	4	0	0	0	0	-20	-9	0
30%	24	11	0	-5	0	0	-5	0	0	1	12	1
40%	22	11	17	10	7	-4	-7	10	-35	-10	3	14
50%	29	9	12	33	2	-8	0	20	11	19	19	9
60%	-2	3	-5	7	0	14	-8	-10	43	32	26	-8
70%	12	-1	10	14	18	-5	15	35	-7	27	-2	6
80%	-35	7	-4	-3	-11	12	50	60	40	30	-47	-46
90%	-45	-44	-55	-35	55	13	-30	53	66	13	-61	-47
Long Term												
Full Simulation Period[b]	-1	0	1	1	0	-1	3	12	15	5	-1	0
Water Year Types[c]												
Wet (32%)	4	-3	1	1	0	0	1	1	1	0	0	4
Above Normal (16%)	0	4	-2	-3	0	-1	-3	2	3	2	2	8
Below Normal (13%)	16	16	18	16	8	6	13	13	14	10	20	12
Dry (24%)	-1	4	5	6	5	4	8	31	31	20	1	-3
Critical (15%)	-25	-22	-17	-15	-16	-16	1	16	31	-7	-28	-26

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-4. Shasta Lake, End of Month Storage

Second Basis of Comparison

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,250	3,252	3,359	3,632	3,911	4,222	4,499	4,552	4,434	3,902	3,563	3,400
20%	3,247	3,252	3,333	3,552	3,771	4,118	4,448	4,552	4,283	3,767	3,380	3,330
30%	3,127	3,199	3,304	3,513	3,673	4,018	4,384	4,532	4,155	3,546	3,174	3,096
40%	2,924	3,028	3,254	3,382	3,569	3,978	4,290	4,375	3,913	3,291	2,980	2,935
50%	2,689	2,753	3,134	3,314	3,487	3,916	4,175	4,245	3,712	3,139	2,781	2,738
60%	2,520	2,594	2,922	3,170	3,354	3,727	4,064	3,971	3,493	2,942	2,636	2,592
70%	2,345	2,467	2,643	2,891	3,252	3,513	3,886	3,757	3,332	2,790	2,527	2,453
80%	2,099	2,145	2,178	2,609	2,978	3,409	3,640	3,525	2,951	2,410	2,127	2,125
90%	1,414	1,350	1,524	2,050	2,383	2,760	2,722	2,958	2,604	1,986	1,584	1,526
Long Term												
Full Simulation Period[b]	2,530	2,578	2,753	3,020	3,285	3,639	3,913	3,907	3,539	3,007	2,674	2,607
Water Year Types[c]												
Wet (32%)	2,817	2,926	3,154	3,406	3,597	3,841	4,301	4,453	4,228	3,733	3,362	3,252
Above Normal (16%)	2,499	2,578	2,808	3,313	3,515	4,038	4,416	4,417	3,979	3,347	2,975	2,921
Below Normal (13%)	2,826	2,846	2,977	3,299	3,646	3,966	4,164	4,042	3,599	3,010	2,601	2,574
Dry (24%)	2,409	2,431	2,578	2,755	3,168	3,644	3,861	3,774	3,333	2,800	2,539	2,496
Critical (15%)	1,873	1,826	1,911	2,050	2,222	2,460	2,386	2,270	1,861	1,409	1,151	1,086

No Action Alternative

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,200	3,209	3,322	3,615	3,812	4,217	4,479	4,552	4,452	3,904	3,575	3,176
20%	2,984	2,938	3,289	3,525	3,700	4,114	4,434	4,552	4,282	3,782	3,479	3,041
30%	2,854	2,759	3,252	3,375	3,616	3,998	4,376	4,542	4,196	3,577	3,227	2,970
40%	2,712	2,674	3,020	3,260	3,489	3,948	4,267	4,425	4,008	3,323	3,024	2,852
50%	2,586	2,531	2,759	3,156	3,388	3,764	4,139	4,202	3,774	3,178	2,841	2,713
60%	2,498	2,449	2,542	2,963	3,284	3,576	3,998	3,977	3,553	2,988	2,712	2,614
70%	2,234	2,251	2,345	2,625	3,145	3,422	3,733	3,580	3,299	2,701	2,491	2,324
80%	1,947	1,951	2,151	2,450	2,777	3,139	3,435	3,191	2,815	2,325	2,098	2,025
90%	1,261	1,240	1,336	1,964	2,191	2,552	2,701	2,725	2,357	1,781	1,402	1,354
Long Term												
Full Simulation Period[b]	2,400	2,378	2,591	2,899	3,185	3,553	3,835	3,847	3,519	2,986	2,676	2,483
Water Year Types[c]												
Wet (32%)	2,700	2,719	3,077	3,384	3,589	3,836	4,298	4,460	4,242	3,735	3,410	2,985
Above Normal (16%)	2,369	2,385	2,600	3,167	3,453	4,021	4,404	4,429	4,039	3,407	3,069	2,834
Below Normal (13%)	2,587	2,548	2,686	3,062	3,442	3,814	4,026	3,957	3,588	3,002	2,643	2,608
Dry (24%)	2,345	2,283	2,428	2,621	3,034	3,505	3,737	3,668	3,284	2,767	2,496	2,462
Critical (15%)	1,702	1,633	1,717	1,871	2,031	2,274	2,202	2,088	1,719	1,253	986	937

No Action Alternative minus Second Basis of Comparison

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-50	-43	-37	-17	-99	-5	-20	0	18	1	12	-224
20%	-263	-314	-43	-27	-71	-3	-15	0	-1	15	99	-289
30%	-273	-440	-52	-138	-57	-20	-9	11	42	31	53	-126
40%	-211	-355	-234	-122	-80	-30	-22	50	95	32	44	-83
50%	-103	-222	-375	-158	-99	-151	-36	-43	62	39	60	-25
60%	-23	-144	-380	-207	-69	-150	-67	6	60	46	76	22
70%	-111	-217	-297	-266	-107	-91	-153	-177	-33	-88	-37	-129
80%	-152	-193	-28	-159	-201	-271	-206	-335	-136	-85	-29	-99
90%	-153	-110	-188	-85	-193	-208	-20	-234	-246	-205	-182	-172
Long Term												
Full Simulation Period[b]	-131	-201	-162	-121	-100	-86	-78	-60	-20	-22	2	-124
Water Year Types[c]												
Wet (32%)	-117	-208	-77	-22	-8	-5	-3	7	14	2	49	-267
Above Normal (16%)	-130	-193	-208	-146	-62	-17	-12	11	60	60	94	-87
Below Normal (13%)	-239	-298	-291	-237	-204	-152	-138	-86	-10	-8	42	33
Dry (24%)	-64	-148	-150	-135	-134	-139	-123	-106	-48	-33	-42	-35
Critical (15%)	-171	-193	-194	-179	-190	-186	-184	-183	-142	-155	-165	-149

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-5. Shasta Lake, End of Month Storage

Second Basis of Comparison

	End of Month Storage (TAF)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	3,250	3,252	3,359	3,632	3,911	4,222	4,499	4,552	4,434	3,902	3,563	3,400
20%	3,247	3,252	3,333	3,552	3,771	4,118	4,448	4,552	4,283	3,767	3,380	3,330
30%	3,127	3,199	3,304	3,513	3,673	4,018	4,384	4,532	4,155	3,546	3,174	3,096
40%	2,924	3,028	3,254	3,382	3,569	3,978	4,290	4,375	3,913	3,291	2,980	2,935
50%	2,689	2,753	3,134	3,314	3,487	3,916	4,175	4,245	3,712	3,139	2,781	2,738
60%	2,520	2,594	2,922	3,170	3,354	3,727	4,064	3,971	3,493	2,942	2,636	2,592
70%	2,345	2,467	2,643	2,891	3,252	3,513	3,886	3,757	3,332	2,790	2,527	2,453
80%	2,099	2,145	2,178	2,609	2,978	3,409	3,640	3,525	2,951	2,410	2,127	2,125
90%	1,414	1,350	1,524	2,050	2,383	2,760	2,722	2,958	2,604	1,986	1,584	1,526
Long Term												
Full Simulation Period[b]	2,530	2,578	2,753	3,020	3,285	3,639	3,913	3,907	3,539	3,007	2,674	2,607
Water Year Types[c]												
Wet (32%)	2,817	2,926	3,154	3,406	3,597	3,841	4,301	4,453	4,228	3,733	3,362	3,252
Above Normal (16%)	2,499	2,578	2,808	3,313	3,515	4,038	4,416	4,417	3,979	3,347	2,975	2,921
Below Normal (13%)	2,826	2,846	2,977	3,299	3,646	3,966	4,164	4,042	3,599	3,010	2,601	2,574
Dry (24%)	2,409	2,431	2,578	2,755	3,168	3,644	3,861	3,774	3,333	2,800	2,539	2,496
Critical (15%)	1,873	1,826	1,911	2,050	2,222	2,460	2,386	2,270	1,861	1,409	1,151	1,086

Alternative 3

	End of Month Storage (TAF)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	3,250	3,252	3,349	3,639	3,910	4,225	4,481	4,552	4,434	3,884	3,579	3,400
20%	3,200	3,251	3,321	3,552	3,771	4,127	4,435	4,552	4,276	3,764	3,421	3,358
30%	3,094	3,161	3,292	3,513	3,675	4,020	4,382	4,515	4,155	3,528	3,171	3,106
40%	2,918	3,066	3,257	3,370	3,592	3,975	4,281	4,367	3,917	3,296	2,999	2,933
50%	2,680	2,774	3,085	3,277	3,484	3,866	4,177	4,228	3,736	3,148	2,761	2,735
60%	2,475	2,593	2,921	3,173	3,330	3,751	4,078	3,987	3,504	2,992	2,668	2,579
70%	2,379	2,412	2,634	2,889	3,252	3,513	3,895	3,731	3,375	2,802	2,547	2,448
80%	2,107	2,114	2,239	2,610	2,981	3,387	3,636	3,552	2,996	2,475	2,188	2,146
90%	1,527	1,514	1,581	2,107	2,371	2,814	2,706	2,899	2,628	2,089	1,752	1,621
Long Term												
Full Simulation Period[b]	2,525	2,578	2,750	3,019	3,284	3,636	3,914	3,908	3,543	3,013	2,687	2,605
Water Year Types[c]												
Wet (32%)	2,816	2,932	3,161	3,408	3,597	3,841	4,301	4,453	4,221	3,720	3,370	3,244
Above Normal (16%)	2,475	2,555	2,783	3,303	3,509	4,023	4,403	4,401	3,975	3,350	2,998	2,946
Below Normal (13%)	2,818	2,851	2,983	3,302	3,650	3,971	4,176	4,056	3,631	3,036	2,669	2,562
Dry (24%)	2,431	2,451	2,590	2,770	3,189	3,662	3,885	3,798	3,359	2,826	2,542	2,500
Critical (15%)	1,833	1,793	1,877	2,024	2,184	2,424	2,354	2,237	1,836	1,406	1,129	1,066

Alternative 3 minus Second Basis of Comparison

	End of Month Storage (TAF)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	0	0	-10	7	-1	3	-17	0	0	-18	16	0
20%	-48	-1	-11	0	0	9	-14	0	-8	-3	41	27
30%	-34	-38	-11	0	2	2	-3	-16	0	-18	-3	10
40%	-5	37	3	-12	24	-3	-9	-8	4	4	18	-2
50%	-8	22	-49	-36	-3	-50	2	-17	24	9	-20	-2
60%	-46	-1	-1	3	-24	25	13	17	11	50	32	-13
70%	34	-55	-8	-2	0	0	10	-26	43	13	19	-5
80%	8	-31	61	1	3	-23	-5	26	45	65	61	21
90%	113	164	57	57	-13	54	-15	-59	25	103	168	95
Long Term												
Full Simulation Period[b]	-6	-1	-3	-1	-1	-3	1	0	4	6	13	-2
Water Year Types[c]												
Wet (32%)	-1	6	7	2	0	0	0	0	-7	-13	8	-8
Above Normal (16%)	-24	-23	-25	-11	-6	-15	-13	-16	-4	3	23	25
Below Normal (13%)	-9	5	5	3	4	5	12	13	32	26	68	-13
Dry (24%)	22	21	12	15	22	17	24	24	26	25	3	4
Critical (15%)	-40	-33	-34	-26	-38	-36	-32	-33	-25	-2	-22	-20

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-6. Shasta Lake, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,250	3,252	3,359	3,632	3,911	4,222	4,499	4,552	4,434	3,902	3,563	3,400
20%	3,247	3,252	3,333	3,552	3,771	4,118	4,448	4,552	4,283	3,767	3,380	3,330
30%	3,127	3,199	3,304	3,513	3,673	4,018	4,384	4,532	4,155	3,546	3,174	3,096
40%	2,924	3,028	3,254	3,382	3,569	3,978	4,290	4,375	3,913	3,291	2,980	2,935
50%	2,689	2,753	3,134	3,314	3,487	3,916	4,175	4,245	3,712	3,139	2,781	2,738
60%	2,520	2,594	2,922	3,170	3,354	3,727	4,064	3,971	3,493	2,942	2,636	2,592
70%	2,345	2,467	2,643	2,891	3,252	3,513	3,886	3,757	3,332	2,790	2,527	2,453
80%	2,099	2,145	2,178	2,609	2,978	3,409	3,640	3,525	2,951	2,410	2,127	2,125
90%	1,414	1,350	1,524	2,050	2,383	2,760	2,722	2,958	2,604	1,986	1,584	1,526
Long Term												
Full Simulation Period[b]	2,530	2,578	2,753	3,020	3,285	3,639	3,913	3,907	3,539	3,007	2,674	2,607
Water Year Types[c]												
Wet (32%)	2,817	2,926	3,154	3,406	3,597	3,841	4,301	4,453	4,228	3,733	3,362	3,252
Above Normal (16%)	2,499	2,578	2,808	3,313	3,515	4,038	4,416	4,417	3,979	3,347	2,975	2,921
Below Normal (13%)	2,826	2,846	2,977	3,299	3,646	3,966	4,164	4,042	3,599	3,010	2,601	2,574
Dry (24%)	2,409	2,431	2,578	2,755	3,168	3,644	3,861	3,774	3,333	2,800	2,539	2,496
Critical (15%)	1,873	1,826	1,911	2,050	2,222	2,460	2,386	2,270	1,861	1,409	1,151	1,086

Alternative 5

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,200	3,242	3,322	3,615	3,812	4,217	4,486	4,552	4,451	3,905	3,580	3,188
20%	3,018	2,911	3,293	3,525	3,704	4,114	4,434	4,552	4,282	3,762	3,471	3,041
30%	2,878	2,770	3,252	3,370	3,616	3,998	4,371	4,542	4,196	3,578	3,239	2,971
40%	2,735	2,684	3,037	3,270	3,496	3,944	4,260	4,435	3,973	3,313	3,027	2,866
50%	2,615	2,540	2,771	3,188	3,391	3,756	4,139	4,223	3,785	3,196	2,859	2,722
60%	2,495	2,452	2,537	2,971	3,284	3,590	3,989	3,967	3,595	3,020	2,738	2,605
70%	2,246	2,250	2,355	2,639	3,163	3,417	3,748	3,615	3,292	2,728	2,489	2,330
80%	1,912	1,958	2,146	2,447	2,766	3,151	3,485	3,251	2,855	2,356	2,051	1,979
90%	1,216	1,196	1,281	1,929	2,246	2,565	2,672	2,777	2,423	1,794	1,341	1,308
Long Term												
Full Simulation Period[b]	2,399	2,377	2,593	2,900	3,185	3,552	3,838	3,859	3,534	2,991	2,675	2,483
Water Year Types[c]												
Wet (32%)	2,704	2,716	3,078	3,385	3,590	3,836	4,299	4,461	4,243	3,736	3,410	2,989
Above Normal (16%)	2,369	2,388	2,598	3,164	3,454	4,019	4,401	4,430	4,042	3,409	3,071	2,842
Below Normal (13%)	2,603	2,565	2,704	3,077	3,450	3,820	4,039	3,970	3,602	3,012	2,663	2,620
Dry (24%)	2,344	2,287	2,433	2,627	3,039	3,509	3,745	3,699	3,315	2,787	2,497	2,459
Critical (15%)	1,676	1,611	1,700	1,856	2,015	2,258	2,203	2,104	1,749	1,246	958	910

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-50	-10	-37	-17	-99	-5	-12	0	17	3	17	-212
20%	-229	-341	-40	-27	-66	-3	-15	0	-1	-5	91	-289
30%	-250	-429	-52	-143	-57	-20	-14	11	42	32	66	-124
40%	-189	-344	-217	-112	-73	-34	-30	60	60	21	47	-69
50%	-73	-213	-363	-125	-96	-160	-36	-22	73	58	78	-15
60%	-25	-141	-385	-199	-69	-137	-75	-3	102	78	102	13
70%	-99	-218	-287	-252	-89	-96	-138	-142	-40	-61	-39	-124
80%	-187	-187	-32	-162	-212	-259	-156	-274	-96	-54	-76	-145
90%	-198	-154	-244	-121	-138	-195	-50	-181	-180	-192	-243	-218
Long Term												
Full Simulation Period[b]	-131	-201	-160	-120	-100	-87	-75	-48	-5	-16	1	-125
Water Year Types[c]												
Wet (32%)	-114	-211	-76	-21	-8	-5	-2	7	15	3	48	-263
Above Normal (16%)	-130	-190	-210	-149	-62	-19	-15	13	63	62	97	-79
Below Normal (13%)	-224	-281	-273	-221	-196	-146	-125	-72	3	1	62	45
Dry (24%)	-64	-144	-145	-129	-129	-135	-116	-75	-18	-13	-41	-38
Critical (15%)	-197	-215	-211	-194	-207	-202	-183	-166	-111	-163	-193	-176

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

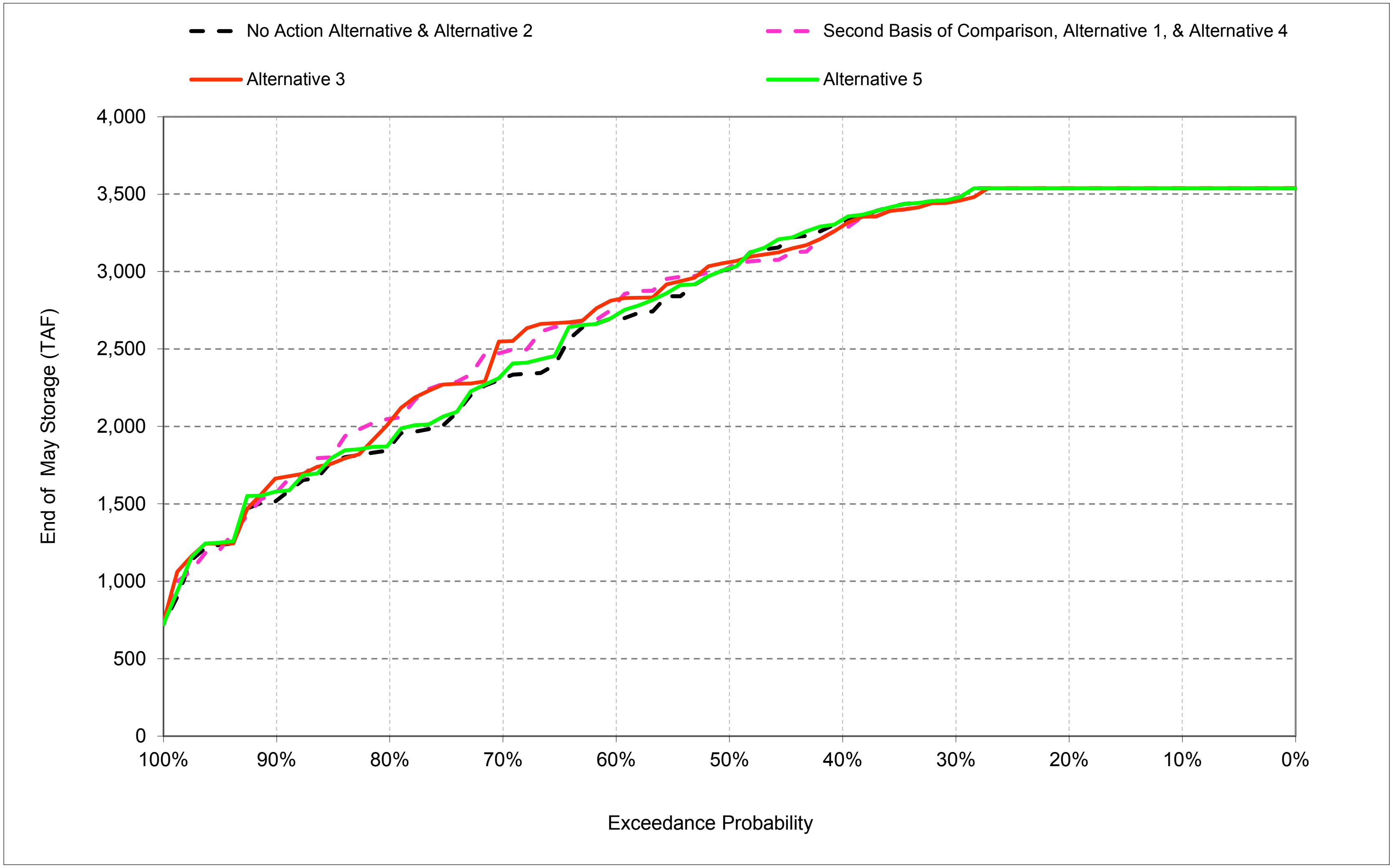
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

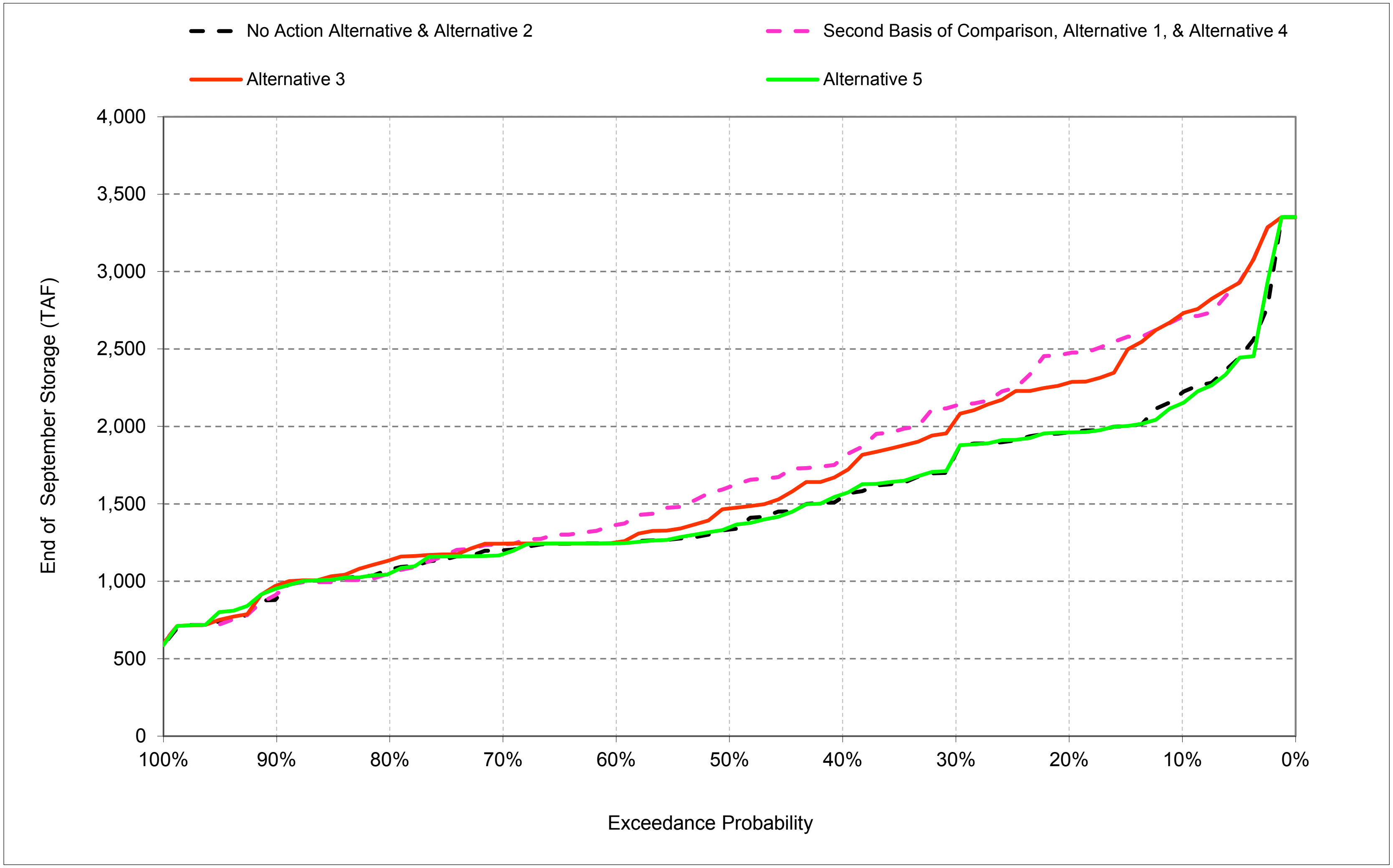
C.3. Oroville Storage

Figure C-3-1. Lake Oroville, End of May Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-3-2. Lake Oroville, End of September Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-1. Lake Oroville, End of Month Storage

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	2,052	2,115	2,719	2,788	2,918	3,035	3,352	3,538	3,538	3,037	2,759	2,218
20%	1,775	1,798	2,033	2,616	2,788	2,964	3,298	3,538	3,538	2,952	2,501	1,962
30%	1,617	1,660	1,802	2,290	2,788	2,898	3,268	3,475	3,361	2,747	2,311	1,824
40%	1,404	1,407	1,593	1,932	2,557	2,788	3,208	3,320	3,112	2,476	1,962	1,544
50%	1,248	1,246	1,394	1,693	2,170	2,639	2,925	3,019	2,833	2,203	1,729	1,334
60%	1,160	1,121	1,252	1,598	1,901	2,265	2,599	2,698	2,459	1,827	1,507	1,248
70%	1,094	1,014	1,097	1,305	1,673	2,034	2,219	2,310	2,002	1,460	1,257	1,201
80%	1,012	955	992	1,145	1,424	1,692	1,906	1,866	1,685	1,241	1,130	1,075
90%	910	894	898	1,007	1,241	1,491	1,668	1,522	1,259	1,102	986	890
Long Term												
Full Simulation Period[b]	1,400	1,393	1,568	1,832	2,147	2,388	2,654	2,751	2,602	2,120	1,819	1,513
Water Year Types[c]												
Wet (32%)	1,691	1,732	2,189	2,554	2,832	2,942	3,300	3,488	3,445	2,964	2,626	2,109
Above Normal (16%)	1,279	1,322	1,485	1,959	2,519	2,892	3,247	3,393	3,232	2,600	2,117	1,659
Below Normal (13%)	1,542	1,497	1,507	1,719	2,122	2,397	2,653	2,714	2,530	1,923	1,513	1,307
Dry (24%)	1,206	1,158	1,177	1,305	1,582	1,938	2,178	2,210	1,951	1,478	1,287	1,144
Critical (15%)	1,092	1,029	1,019	1,108	1,223	1,381	1,408	1,392	1,243	1,018	917	865

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	2,616	2,550	2,788	2,807	2,948	3,052	3,352	3,538	3,538	3,037	2,854	2,707
20%	2,272	2,304	2,464	2,788	2,838	2,990	3,298	3,538	3,531	2,965	2,590	2,473
30%	1,937	2,035	2,166	2,556	2,788	2,937	3,268	3,474	3,285	2,772	2,415	2,135
40%	1,699	1,784	2,024	2,366	2,788	2,841	3,209	3,278	2,983	2,367	2,000	1,795
50%	1,429	1,445	1,715	2,187	2,579	2,788	3,067	3,028	2,658	2,145	1,795	1,609
60%	1,145	1,101	1,402	1,723	2,140	2,641	2,888	2,792	2,438	1,915	1,601	1,365
70%	1,037	1,001	1,079	1,306	1,871	2,230	2,527	2,480	2,064	1,754	1,422	1,239
80%	998	974	999	1,109	1,544	1,806	1,996	2,050	1,769	1,436	1,232	1,052
90%	913	877	889	1,003	1,200	1,472	1,563	1,575	1,325	1,133	995	917
Long Term												
Full Simulation Period[b]	1,588	1,585	1,742	1,978	2,258	2,474	2,735	2,796	2,571	2,160	1,897	1,725
Water Year Types[c]												
Wet (32%)	1,936	1,984	2,354	2,636	2,871	2,942	3,300	3,477	3,402	2,976	2,728	2,569
Above Normal (16%)	1,465	1,523	1,702	2,173	2,648	2,937	3,271	3,357	3,081	2,493	2,087	1,827
Below Normal (13%)	1,823	1,783	1,831	2,037	2,361	2,627	2,875	2,836	2,461	1,930	1,637	1,424
Dry (24%)	1,371	1,324	1,344	1,473	1,764	2,120	2,363	2,357	2,031	1,688	1,427	1,261
Critical (15%)	1,117	1,044	1,041	1,125	1,235	1,406	1,423	1,407	1,219	1,027	911	839

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	564	435	69	19	30	17	0	0	0	0	96	489
20%	496	506	432	172	50	26	0	0	-6	13	88	511
30%	320	375	365	266	0	38	0	-1	-76	25	104	311
40%	295	377	430	434	231	53	1	-42	-129	-108	38	251
50%	180	200	321	494	408	149	142	9	-175	-58	66	275
60%	-15	-20	149	126	239	377	289	94	-21	87	94	116
70%	-58	-12	-18	1	198	196	308	170	62	294	165	39
80%	-14	19	7	-36	121	114	90	185	83	195	102	-23
90%	3	-18	-9	-4	-41	-19	-105	53	66	31	9	27
Long Term												
Full Simulation Period[b]	189	193	174	146	111	86	81	45	-31	40	78	213
Water Year Types[c]												
Wet (32%)	245	252	165	82	39	0	0	-10	-43	12	102	459
Above Normal (16%)	187	201	217	214	129	44	24	-37	-150	-107	-29	167
Below Normal (13%)	281	285	324	318	239	230	222	122	-69	7	125	117
Dry (24%)	165	165	167	168	182	182	185	147	80	210	140	117
Critical (15%)	25	15	22	17	12	25	16	15	-25	8	-6	-26

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-2. Lake Oroville, End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,052	2,115	2,719	2,788	2,918	3,035	3,352	3,538	3,538	3,037	2,759	2,218
20%	1,775	1,798	2,033	2,616	2,788	2,964	3,298	3,538	3,538	2,952	2,501	1,962
30%	1,617	1,660	1,802	2,290	2,788	2,898	3,268	3,475	3,361	2,747	2,311	1,824
40%	1,404	1,407	1,593	1,932	2,557	2,788	3,208	3,320	3,112	2,476	1,962	1,544
50%	1,248	1,246	1,394	1,693	2,170	2,639	2,925	3,019	2,833	2,203	1,729	1,334
60%	1,160	1,121	1,252	1,598	1,901	2,265	2,599	2,698	2,459	1,827	1,507	1,248
70%	1,094	1,014	1,097	1,305	1,673	2,034	2,219	2,310	2,002	1,460	1,257	1,201
80%	1,012	955	992	1,145	1,424	1,692	1,906	1,866	1,685	1,241	1,130	1,075
90%	910	894	898	1,007	1,241	1,491	1,668	1,522	1,259	1,102	986	890
Long Term												
Full Simulation Period[b]	1,400	1,393	1,568	1,832	2,147	2,388	2,654	2,751	2,602	2,120	1,819	1,513
Water Year Types[c]												
Wet (32%)	1,691	1,732	2,189	2,554	2,832	2,942	3,300	3,488	3,445	2,964	2,626	2,109
Above Normal (16%)	1,279	1,322	1,485	1,959	2,519	2,892	3,247	3,393	3,232	2,600	2,117	1,659
Below Normal (13%)	1,542	1,497	1,507	1,719	2,122	2,397	2,653	2,714	2,530	1,923	1,513	1,307
Dry (24%)	1,206	1,158	1,177	1,305	1,582	1,938	2,178	2,210	1,951	1,478	1,287	1,144
Critical (15%)	1,092	1,029	1,019	1,108	1,223	1,381	1,408	1,392	1,243	1,018	917	865

Alternative 3

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,639	2,548	2,788	2,807	2,943	3,052	3,352	3,538	3,538	3,046	2,791	2,727
20%	2,094	2,155	2,500	2,788	2,802	2,983	3,298	3,538	3,522	2,898	2,518	2,283
30%	1,905	1,889	2,078	2,450	2,788	2,938	3,268	3,454	3,177	2,562	2,273	2,045
40%	1,641	1,686	1,860	2,278	2,724	2,839	3,208	3,295	2,954	2,317	1,982	1,701
50%	1,264	1,293	1,647	2,109	2,565	2,788	3,081	3,061	2,744	2,106	1,708	1,470
60%	1,195	1,126	1,375	1,678	2,130	2,642	2,884	2,819	2,450	1,867	1,429	1,251
70%	1,103	1,056	1,110	1,356	1,827	2,179	2,527	2,549	2,185	1,605	1,309	1,244
80%	1,023	964	999	1,157	1,459	1,739	2,034	2,029	1,743	1,344	1,242	1,136
90%	918	905	907	1,016	1,239	1,461	1,663	1,666	1,294	1,167	1,050	974
Long Term												
Full Simulation Period[b]	1,560	1,554	1,717	1,961	2,248	2,472	2,733	2,798	2,580	2,108	1,823	1,674
Water Year Types[c]												
Wet (32%)	1,893	1,931	2,315	2,608	2,854	2,942	3,300	3,473	3,375	2,902	2,630	2,499
Above Normal (16%)	1,405	1,448	1,623	2,109	2,623	2,945	3,280	3,371	3,129	2,494	2,039	1,778
Below Normal (13%)	1,839	1,801	1,846	2,054	2,370	2,636	2,879	2,883	2,610	1,971	1,520	1,354
Dry (24%)	1,332	1,288	1,322	1,454	1,733	2,088	2,329	2,319	1,980	1,548	1,343	1,198
Critical (15%)	1,129	1,067	1,067	1,156	1,275	1,429	1,449	1,437	1,236	1,029	918	862

Alternative 3 minus No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	587	433	69	19	24	17	0	0	0	9	32	508
20%	319	357	468	172	14	19	0	0	-15	-54	16	321
30%	289	228	277	160	0	39	0	-21	-184	-185	-38	221
40%	237	279	267	346	167	51	0	-25	-158	-158	20	157
50%	15	47	253	416	395	149	155	42	-89	-98	-21	136
60%	34	5	123	80	228	377	285	121	-8	40	-78	3
70%	8	42	12	51	154	145	308	239	183	145	51	43
80%	11	10	6	13	35	47	127	164	58	103	112	61
90%	8	11	10	9	-2	-30	-5	144	34	65	64	83
Long Term												
Full Simulation Period[b]	160	161	150	129	102	84	78	48	-22	-11	3	162
Water Year Types[c]												
Wet (32%)	201	199	126	54	23	0	0	-15	-70	-62	4	390
Above Normal (16%)	126	127	138	151	105	53	33	-22	-102	-106	-78	118
Below Normal (13%)	297	303	339	335	248	240	225	169	80	48	8	47
Dry (24%)	127	130	145	149	151	150	151	109	29	70	55	55
Critical (15%)	37	38	48	48	52	48	41	45	-8	10	1	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-3. Lake Oroville, End of Month Storage

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	2,052	2,115	2,719	2,788	2,918	3,035	3,352	3,538	3,538	3,037	2,759	2,218
20%	1,775	1,798	2,033	2,616	2,788	2,964	3,298	3,538	3,538	2,952	2,501	1,962
30%	1,617	1,660	1,802	2,290	2,788	2,898	3,268	3,475	3,361	2,747	2,311	1,824
40%	1,404	1,407	1,593	1,932	2,557	2,788	3,208	3,320	3,112	2,476	1,962	1,544
50%	1,248	1,246	1,394	1,693	2,170	2,639	2,925	3,019	2,833	2,203	1,729	1,334
60%	1,160	1,121	1,252	1,598	1,901	2,265	2,599	2,698	2,459	1,827	1,507	1,248
70%	1,094	1,014	1,097	1,305	1,673	2,034	2,219	2,310	2,002	1,460	1,257	1,201
80%	1,012	955	992	1,145	1,424	1,692	1,906	1,866	1,685	1,241	1,130	1,075
90%	910	894	898	1,007	1,241	1,491	1,668	1,522	1,259	1,102	986	890
Long Term												
Full Simulation Period[b]	1,400	1,393	1,568	1,832	2,147	2,388	2,654	2,751	2,602	2,120	1,819	1,513
Water Year Types[c]												
Wet (32%)	1,691	1,732	2,189	2,554	2,832	2,942	3,300	3,488	3,445	2,964	2,626	2,109
Above Normal (16%)	1,279	1,322	1,485	1,959	2,519	2,892	3,247	3,393	3,232	2,600	2,117	1,659
Below Normal (13%)	1,542	1,497	1,507	1,719	2,122	2,397	2,653	2,714	2,530	1,923	1,513	1,307
Dry (24%)	1,206	1,158	1,177	1,305	1,582	1,938	2,178	2,210	1,951	1,478	1,287	1,144
Critical (15%)	1,092	1,029	1,019	1,108	1,223	1,381	1,408	1,392	1,243	1,018	917	865

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	2,047	2,116	2,763	2,788	2,921	3,035	3,352	3,538	3,538	3,017	2,704	2,150
20%	1,778	1,801	2,036	2,655	2,788	2,964	3,298	3,538	3,538	2,951	2,508	1,961
30%	1,614	1,653	1,810	2,267	2,788	2,898	3,268	3,475	3,367	2,759	2,317	1,829
40%	1,402	1,371	1,559	1,931	2,557	2,788	3,208	3,336	3,132	2,493	2,005	1,562
50%	1,248	1,251	1,433	1,709	2,177	2,642	2,928	3,020	2,849	2,218	1,753	1,349
60%	1,170	1,145	1,252	1,595	1,940	2,279	2,607	2,720	2,516	1,870	1,438	1,245
70%	1,101	1,050	1,095	1,309	1,693	2,044	2,225	2,340	2,049	1,478	1,243	1,176
80%	1,011	974	1,004	1,166	1,440	1,710	1,910	1,894	1,717	1,241	1,135	1,051
90%	894	895	903	1,030	1,250	1,489	1,661	1,579	1,306	1,167	1,050	954
Long Term												
Full Simulation Period[b]	1,403	1,394	1,568	1,836	2,151	2,393	2,660	2,770	2,622	2,134	1,821	1,514
Water Year Types[c]												
Wet (32%)	1,681	1,723	2,179	2,556	2,833	2,942	3,300	3,488	3,447	2,961	2,613	2,103
Above Normal (16%)	1,275	1,310	1,471	1,948	2,512	2,892	3,247	3,401	3,241	2,608	2,125	1,668
Below Normal (13%)	1,552	1,507	1,517	1,728	2,132	2,406	2,663	2,746	2,569	1,959	1,521	1,305
Dry (24%)	1,223	1,173	1,190	1,319	1,595	1,952	2,193	2,255	1,992	1,502	1,295	1,150
Critical (15%)	1,102	1,037	1,025	1,114	1,229	1,383	1,415	1,411	1,266	1,045	929	873

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	-5	1	44	0	3	0	0	0	0	-20	-54	-68
20%	2	3	3	39	0	0	0	0	0	-1	6	-1
30%	-3	-8	8	-23	0	0	0	0	6	12	6	5
40%	-2	-36	-35	0	0	0	0	16	20	18	43	18
50%	0	5	39	16	7	3	2	1	16	15	24	14
60%	10	24	0	-2	39	15	7	22	58	42	-70	-4
70%	7	37	-3	4	21	10	6	30	47	18	-14	-24
80%	0	20	12	21	17	18	4	29	32	0	5	-24
90%	-16	0	5	23	9	-2	-7	57	47	64	64	64
Long Term												
Full Simulation Period[b]	3	1	0	4	5	5	6	19	21	15	2	2
Water Year Types[c]												
Wet (32%)	-10	-9	-10	1	1	0	0	0	2	-3	-13	-7
Above Normal (16%)	-3	-12	-14	-11	-7	0	0	8	9	8	8	9
Below Normal (13%)	10	10	10	9	10	10	10	32	39	36	8	-1
Dry (24%)	17	15	13	13	13	13	15	45	41	23	8	6
Critical (15%)	10	9	6	6	6	3	7	19	22	27	12	8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-4. Lake Oroville, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,616	2,550	2,788	2,807	2,948	3,052	3,352	3,538	3,538	3,037	2,854	2,707
20%	2,272	2,304	2,464	2,788	2,838	2,990	3,298	3,538	3,531	2,965	2,590	2,473
30%	1,937	2,035	2,166	2,556	2,788	2,937	3,268	3,474	3,285	2,772	2,415	2,135
40%	1,699	1,784	2,024	2,366	2,788	2,841	3,209	3,278	2,983	2,367	2,000	1,795
50%	1,429	1,445	1,715	2,187	2,579	2,788	3,067	3,028	2,658	2,145	1,795	1,609
60%	1,145	1,101	1,402	1,723	2,140	2,641	2,888	2,792	2,438	1,915	1,601	1,365
70%	1,037	1,001	1,079	1,306	1,871	2,230	2,527	2,480	2,064	1,754	1,422	1,239
80%	998	974	999	1,109	1,544	1,806	1,996	2,050	1,769	1,436	1,232	1,052
90%	913	877	889	1,003	1,200	1,472	1,563	1,575	1,325	1,133	995	917
Long Term												
Full Simulation Period[b]	1,588	1,585	1,742	1,978	2,258	2,474	2,735	2,796	2,571	2,160	1,897	1,725
Water Year Types[c]												
Wet (32%)	1,936	1,984	2,354	2,636	2,871	2,942	3,300	3,477	3,402	2,976	2,728	2,569
Above Normal (16%)	1,465	1,523	1,702	2,173	2,648	2,937	3,271	3,357	3,081	2,493	2,087	1,827
Below Normal (13%)	1,823	1,783	1,831	2,037	2,361	2,627	2,875	2,836	2,461	1,930	1,637	1,424
Dry (24%)	1,371	1,324	1,344	1,473	1,764	2,120	2,363	2,357	2,031	1,688	1,427	1,261
Critical (15%)	1,117	1,044	1,041	1,125	1,235	1,406	1,423	1,407	1,219	1,027	911	839

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,052	2,115	2,719	2,788	2,918	3,035	3,352	3,538	3,538	3,037	2,759	2,218
20%	1,775	1,798	2,033	2,616	2,788	2,964	3,298	3,538	3,538	2,952	2,501	1,962
30%	1,617	1,660	1,802	2,290	2,788	2,898	3,268	3,475	3,361	2,747	2,311	1,824
40%	1,404	1,407	1,593	1,932	2,557	2,788	3,208	3,320	3,112	2,476	1,962	1,544
50%	1,248	1,246	1,394	1,693	2,170	2,639	2,925	3,019	2,833	2,203	1,729	1,334
60%	1,160	1,121	1,252	1,598	1,901	2,265	2,599	2,698	2,459	1,827	1,507	1,248
70%	1,094	1,014	1,097	1,305	1,673	2,034	2,219	2,310	2,002	1,460	1,257	1,201
80%	1,012	955	992	1,145	1,424	1,692	1,906	1,866	1,685	1,241	1,130	1,075
90%	910	894	898	1,007	1,241	1,491	1,668	1,522	1,259	1,102	986	890
Long Term												
Full Simulation Period[b]	1,400	1,393	1,568	1,832	2,147	2,388	2,654	2,751	2,602	2,120	1,819	1,513
Water Year Types[c]												
Wet (32%)	1,691	1,732	2,189	2,554	2,832	2,942	3,300	3,488	3,445	2,964	2,626	2,109
Above Normal (16%)	1,279	1,322	1,485	1,959	2,519	2,892	3,247	3,393	3,232	2,600	2,117	1,659
Below Normal (13%)	1,542	1,497	1,507	1,719	2,122	2,397	2,653	2,714	2,530	1,923	1,513	1,307
Dry (24%)	1,206	1,158	1,177	1,305	1,582	1,938	2,178	2,210	1,951	1,478	1,287	1,144
Critical (15%)	1,092	1,029	1,019	1,108	1,223	1,381	1,408	1,392	1,243	1,018	917	865

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-564	-435	-69	-19	-30	-17	0	0	0	0	-96	-489
20%	-496	-506	-432	-172	-50	-26	0	0	6	-13	-88	-511
30%	-320	-375	-365	-266	0	-38	0	1	76	-25	-104	-311
40%	-295	-377	-430	-434	-231	-53	-1	42	129	108	-38	-251
50%	-180	-200	-321	-494	-408	-149	-142	-9	175	58	-66	-275
60%	15	20	-149	-126	-239	-377	-289	-94	21	-87	-94	-116
70%	58	12	18	-1	-198	-196	-308	-170	-62	-294	-165	-39
80%	14	-19	-7	36	-121	-114	-90	-185	-83	-195	-102	23
90%	-3	18	9	4	41	19	105	-53	-66	-31	-9	-27
Long Term												
Full Simulation Period[b]	-189	-193	-174	-146	-111	-86	-81	-45	31	-40	-78	-213
Water Year Types[c]												
Wet (32%)	-245	-252	-165	-82	-39	0	0	10	43	-12	-102	-459
Above Normal (16%)	-187	-201	-217	-214	-129	-44	-24	37	150	107	29	-167
Below Normal (13%)	-281	-285	-324	-318	-239	-230	-222	-122	69	-7	-125	-117
Dry (24%)	-165	-165	-167	-168	-182	-182	-185	-147	-80	-210	-140	-117
Critical (15%)	-25	-15	-22	-17	-12	-25	-16	-15	25	-8	6	26

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-5. Lake Oroville, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,616	2,550	2,788	2,807	2,948	3,052	3,352	3,538	3,538	3,037	2,854	2,707
20%	2,272	2,304	2,464	2,788	2,838	2,990	3,298	3,538	3,531	2,965	2,590	2,473
30%	1,937	2,035	2,166	2,556	2,788	2,937	3,268	3,474	3,285	2,772	2,415	2,135
40%	1,699	1,784	2,024	2,366	2,788	2,841	3,209	3,278	2,983	2,367	2,000	1,795
50%	1,429	1,445	1,715	2,187	2,579	2,788	3,067	3,028	2,658	2,145	1,795	1,609
60%	1,145	1,101	1,402	1,723	2,140	2,641	2,888	2,792	2,438	1,915	1,601	1,365
70%	1,037	1,001	1,079	1,306	1,871	2,230	2,527	2,480	2,064	1,754	1,422	1,239
80%	998	974	999	1,109	1,544	1,806	1,996	2,050	1,769	1,436	1,232	1,052
90%	913	877	889	1,003	1,200	1,472	1,563	1,575	1,325	1,133	995	917
Long Term												
Full Simulation Period[b]	1,588	1,585	1,742	1,978	2,258	2,474	2,735	2,796	2,571	2,160	1,897	1,725
Water Year Types[c]												
Wet (32%)	1,936	1,984	2,354	2,636	2,871	2,942	3,300	3,477	3,402	2,976	2,728	2,569
Above Normal (16%)	1,465	1,523	1,702	2,173	2,648	2,937	3,271	3,357	3,081	2,493	2,087	1,827
Below Normal (13%)	1,823	1,783	1,831	2,037	2,361	2,627	2,875	2,836	2,461	1,930	1,637	1,424
Dry (24%)	1,371	1,324	1,344	1,473	1,764	2,120	2,363	2,357	2,031	1,688	1,427	1,261
Critical (15%)	1,117	1,044	1,041	1,125	1,235	1,406	1,423	1,407	1,219	1,027	911	839

Alternative 3

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,639	2,548	2,788	2,807	2,943	3,052	3,352	3,538	3,538	3,046	2,791	2,727
20%	2,094	2,155	2,500	2,788	2,802	2,983	3,298	3,538	3,522	2,898	2,518	2,283
30%	1,905	1,889	2,078	2,450	2,788	2,938	3,268	3,454	3,177	2,562	2,273	2,045
40%	1,641	1,686	1,860	2,278	2,724	2,839	3,208	3,295	2,954	2,317	1,982	1,701
50%	1,264	1,293	1,647	2,109	2,565	2,788	3,081	3,061	2,744	2,106	1,708	1,470
60%	1,195	1,126	1,375	1,678	2,130	2,642	2,884	2,819	2,450	1,867	1,429	1,251
70%	1,103	1,056	1,110	1,356	1,827	2,179	2,527	2,549	2,185	1,605	1,309	1,244
80%	1,023	964	999	1,157	1,459	1,739	2,034	2,029	1,743	1,344	1,242	1,136
90%	918	905	907	1,016	1,239	1,461	1,663	1,666	1,294	1,167	1,050	974
Long Term												
Full Simulation Period[b]	1,560	1,554	1,717	1,961	2,248	2,472	2,733	2,798	2,580	2,108	1,823	1,674
Water Year Types[c]												
Wet (32%)	1,893	1,931	2,315	2,608	2,854	2,942	3,300	3,473	3,375	2,902	2,630	2,499
Above Normal (16%)	1,405	1,448	1,623	2,109	2,623	2,945	3,280	3,371	3,129	2,494	2,039	1,778
Below Normal (13%)	1,839	1,801	1,846	2,054	2,370	2,636	2,879	2,883	2,610	1,971	1,520	1,354
Dry (24%)	1,332	1,288	1,322	1,454	1,733	2,088	2,329	2,319	1,980	1,548	1,343	1,198
Critical (15%)	1,129	1,067	1,067	1,156	1,275	1,429	1,449	1,437	1,236	1,029	918	862

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	23	-2	0	0	-6	0	0	0	0	9	-64	20
20%	-178	-149	36	0	-35	-6	0	0	-9	-66	-72	-190
30%	-31	-147	-88	-107	0	1	0	-19	-108	-210	-142	-90
40%	-58	-98	-164	-88	-64	-3	-1	17	-29	-50	-19	-94
50%	-165	-152	-68	-78	-13	0	13	32	86	-39	-87	-139
60%	49	25	-27	-46	-10	0	-4	27	13	-47	-172	-113
70%	66	54	31	50	-44	-51	0	69	121	-149	-114	5
80%	25	-10	0	48	-86	-68	38	-21	-25	-92	10	84
90%	5	29	18	14	39	-11	100	91	-32	34	55	57
Long Term												
Full Simulation Period[b]	-29	-31	-25	-17	-10	-2	-3	2	9	-52	-74	-51
Water Year Types[c]												
Wet (32%)	-43	-53	-39	-28	-17	0	0	-5	-27	-73	-98	-70
Above Normal (16%)	-61	-75	-78	-64	-24	8	8	14	48	1	-49	-49
Below Normal (13%)	16	18	15	17	9	9	3	47	150	41	-117	-70
Dry (24%)	-38	-35	-22	-19	-31	-32	-34	-38	-51	-140	-84	-62
Critical (15%)	12	23	25	31	39	23	25	30	17	2	7	23

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-6. Lake Oroville, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,616	2,550	2,788	2,807	2,948	3,052	3,352	3,538	3,538	3,037	2,854	2,707
20%	2,272	2,304	2,464	2,788	2,838	2,990	3,298	3,538	3,531	2,965	2,590	2,473
30%	1,937	2,035	2,166	2,556	2,788	2,937	3,268	3,474	3,285	2,772	2,415	2,135
40%	1,699	1,784	2,024	2,366	2,788	2,841	3,209	3,278	2,983	2,367	2,000	1,795
50%	1,429	1,445	1,715	2,187	2,579	2,788	3,067	3,028	2,658	2,145	1,795	1,609
60%	1,145	1,101	1,402	1,723	2,140	2,641	2,888	2,792	2,438	1,915	1,601	1,365
70%	1,037	1,001	1,079	1,306	1,871	2,230	2,527	2,480	2,064	1,754	1,422	1,239
80%	998	974	999	1,109	1,544	1,806	1,996	2,050	1,769	1,436	1,232	1,052
90%	913	877	889	1,003	1,200	1,472	1,563	1,575	1,325	1,133	995	917
Long Term												
Full Simulation Period[b]	1,588	1,585	1,742	1,978	2,258	2,474	2,735	2,796	2,571	2,160	1,897	1,725
Water Year Types[c]												
Wet (32%)	1,936	1,984	2,354	2,636	2,871	2,942	3,300	3,477	3,402	2,976	2,728	2,569
Above Normal (16%)	1,465	1,523	1,702	2,173	2,648	2,937	3,271	3,357	3,081	2,493	2,087	1,827
Below Normal (13%)	1,823	1,783	1,831	2,037	2,361	2,627	2,875	2,836	2,461	1,930	1,637	1,424
Dry (24%)	1,371	1,324	1,344	1,473	1,764	2,120	2,363	2,357	2,031	1,688	1,427	1,261
Critical (15%)	1,117	1,044	1,041	1,125	1,235	1,406	1,423	1,407	1,219	1,027	911	839

Alternative 5

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,047	2,116	2,763	2,788	2,921	3,035	3,352	3,538	3,538	3,017	2,704	2,150
20%	1,778	1,801	2,036	2,655	2,788	2,964	3,298	3,538	3,538	2,951	2,508	1,961
30%	1,614	1,653	1,810	2,267	2,788	2,898	3,268	3,475	3,367	2,759	2,317	1,829
40%	1,402	1,371	1,559	1,931	2,557	2,788	3,208	3,336	3,132	2,493	2,005	1,562
50%	1,248	1,251	1,433	1,709	2,177	2,642	2,928	3,020	2,849	2,218	1,753	1,349
60%	1,170	1,145	1,252	1,595	1,940	2,279	2,607	2,720	2,516	1,870	1,438	1,245
70%	1,101	1,050	1,095	1,309	1,693	2,044	2,225	2,340	2,049	1,478	1,243	1,176
80%	1,011	974	1,004	1,166	1,440	1,710	1,910	1,894	1,717	1,241	1,135	1,051
90%	894	895	903	1,030	1,250	1,489	1,661	1,579	1,306	1,167	1,050	954
Long Term												
Full Simulation Period[b]	1,403	1,394	1,568	1,836	2,151	2,393	2,660	2,770	2,622	2,134	1,821	1,514
Water Year Types[c]												
Wet (32%)	1,681	1,723	2,179	2,556	2,833	2,942	3,300	3,488	3,447	2,961	2,613	2,103
Above Normal (16%)	1,275	1,310	1,471	1,948	2,512	2,892	3,247	3,401	3,241	2,608	2,125	1,668
Below Normal (13%)	1,552	1,507	1,517	1,728	2,132	2,406	2,663	2,746	2,569	1,959	1,521	1,305
Dry (24%)	1,223	1,173	1,190	1,319	1,595	1,952	2,193	2,255	1,992	1,502	1,295	1,150
Critical (15%)	1,102	1,037	1,025	1,114	1,229	1,383	1,415	1,411	1,266	1,045	929	873

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-569	-434	-25	-19	-27	-17	0	0	0	-20	-150	-557
20%	-494	-503	-428	-133	-50	-26	0	0	6	-14	-82	-512
30%	-323	-383	-357	-289	0	-38	0	1	82	-14	-97	-306
40%	-297	-414	-465	-434	-230	-53	-1	58	149	126	5	-233
50%	-181	-194	-282	-478	-402	-146	-140	-8	191	73	-42	-261
60%	25	44	-149	-128	-200	-362	-281	-72	79	-45	-163	-120
70%	65	49	16	3	-177	-186	-303	-140	-15	-276	-180	-63
80%	14	0	5	57	-104	-97	-86	-156	-52	-195	-96	-2
90%	-19	18	14	27	50	17	98	4	-19	33	55	38
Long Term												
Full Simulation Period[b]	-186	-191	-174	-142	-106	-81	-75	-26	51	-25	-76	-211
Water Year Types[c]												
Wet (32%)	-255	-261	-175	-81	-38	0	0	10	45	-15	-115	-466
Above Normal (16%)	-190	-213	-231	-225	-136	-44	-24	44	159	115	37	-159
Below Normal (13%)	-271	-275	-314	-309	-228	-220	-212	-90	109	28	-116	-118
Dry (24%)	-148	-151	-153	-155	-169	-168	-170	-102	-39	-186	-132	-111
Critical (15%)	-15	-7	-17	-11	-7	-23	-8	4	47	19	18	34

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

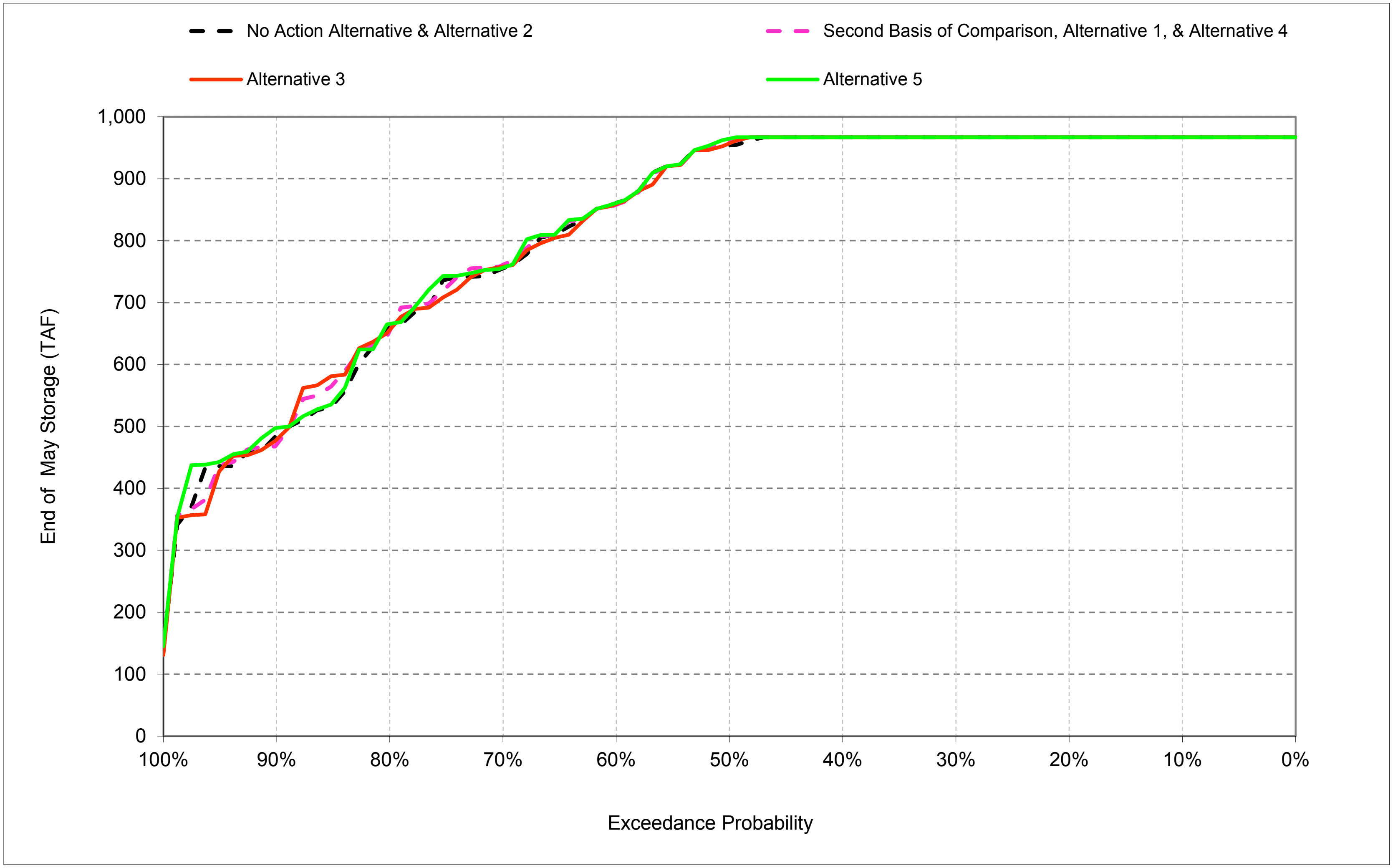
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

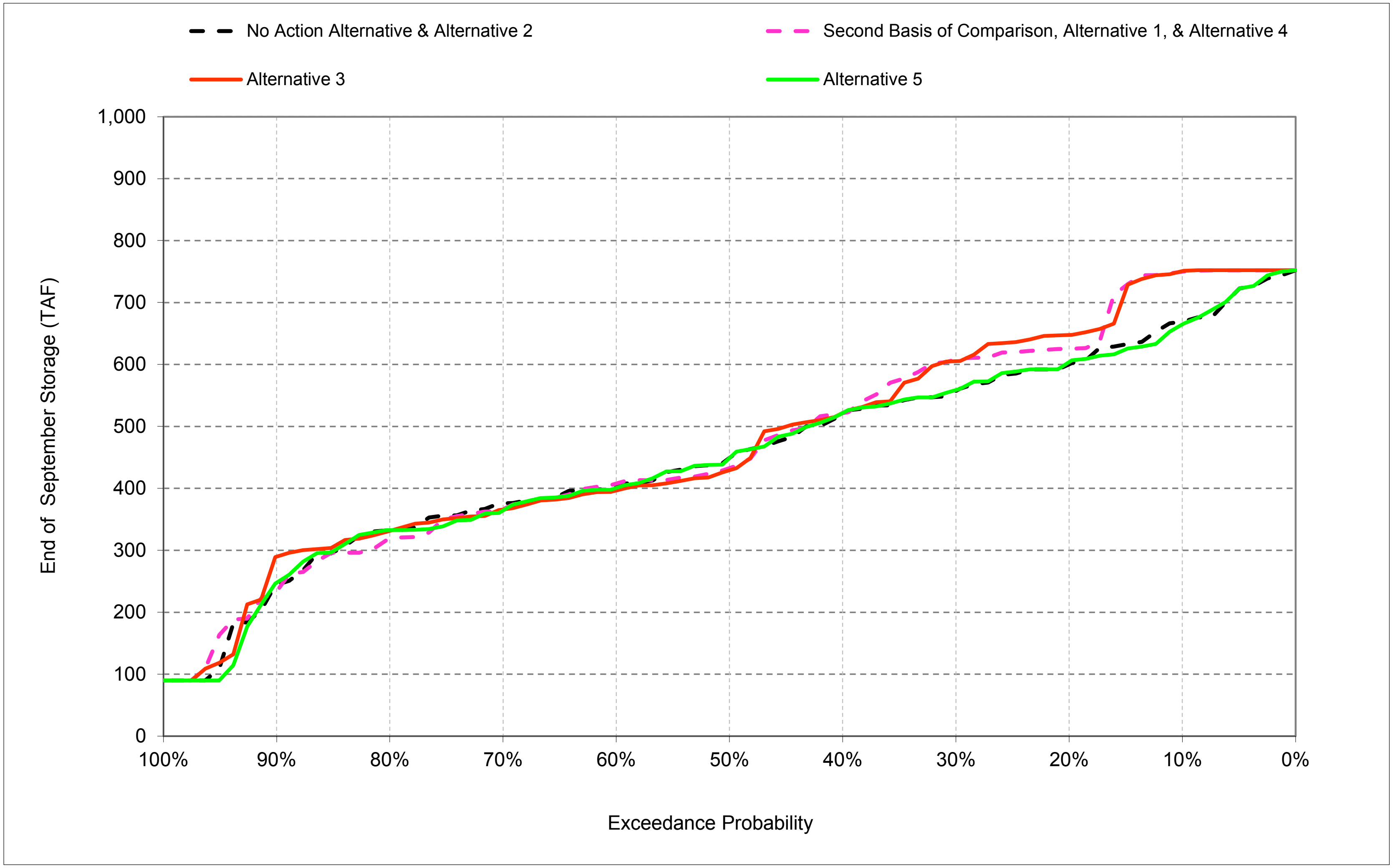
C.4. Folsom Storage

Figure C-4-1. Folsom Lake, End of May Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-4-2. Folsom Lake, End of September Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-1. Folsom Lake, End of Month Storage

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	592	531	567	567	567	661	792	967	967	910	792	669
20%	538	493	567	565	566	656	792	967	967	828	732	600
30%	497	461	539	557	558	652	792	967	967	738	682	557
40%	451	426	498	540	553	646	792	967	933	664	607	521
50%	412	407	444	475	530	633	792	954	874	592	514	449
60%	354	392	416	444	496	621	790	861	761	521	455	402
70%	330	354	390	424	457	593	735	755	677	427	381	376
80%	296	307	349	365	415	542	630	661	549	380	357	332
90%	225	248	240	298	384	429	480	485	432	328	282	244
Long Term												
Full Simulation Period[b]	407	394	439	461	490	589	713	821	765	591	524	455
Water Year Types[c]												
Wet (32%)	454	435	514	518	515	632	785	951	941	800	712	576
Above Normal (16%)	377	380	429	513	531	640	787	946	887	621	552	477
Below Normal (13%)	446	431	467	484	533	619	757	843	780	527	472	453
Dry (24%)	394	383	408	423	479	579	691	760	658	495	443	419
Critical (15%)	324	305	315	320	366	432	475	486	415	327	267	231

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	689	567	567	567	567	661	792	967	967	906	792	750
20%	582	561	567	567	567	657	792	967	967	817	684	625
30%	552	528	566	563	559	653	792	967	965	728	638	608
40%	469	499	525	556	555	646	792	967	908	641	569	522
50%	400	430	500	523	537	633	792	959	807	546	468	433
60%	351	391	456	470	498	621	790	858	745	504	442	408
70%	336	356	405	430	457	601	733	761	630	433	387	366
80%	291	333	352	388	437	563	634	654	544	371	325	318
90%	253	259	266	311	392	455	489	471	426	309	244	233
Long Term												
Full Simulation Period[b]	431	424	457	475	494	592	715	823	757	579	503	471
Water Year Types[c]												
Wet (32%)	483	470	522	524	515	632	785	951	937	793	688	646
Above Normal (16%)	390	412	467	537	538	640	787	946	857	591	522	485
Below Normal (13%)	506	489	502	514	541	626	761	847	739	475	408	387
Dry (24%)	405	399	423	437	486	585	698	769	664	486	432	408
Critical (15%)	339	317	323	325	369	436	469	482	430	352	288	258

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	97	36	0	0	0	0	0	0	0	-4	0	81
20%	45	68	0	2	1	1	0	0	0	-11	-48	25
30%	55	67	27	6	1	2	0	0	-2	-10	-44	51
40%	18	73	26	15	2	0	0	0	-25	-23	-37	1
50%	-12	23	56	48	7	0	0	5	-67	-45	-46	-17
60%	-2	-1	40	26	2	0	0	-3	-16	-17	-13	6
70%	6	1	14	6	0	8	-2	6	-47	7	6	-9
80%	-4	27	3	22	22	21	4	-7	-5	-9	-32	-15
90%	27	11	26	13	8	26	10	-14	-6	-19	-39	-11
Long Term												
Full Simulation Period[b]	24	29	18	14	4	3	1	2	-8	-13	-21	16
Water Year Types[c]												
Wet (32%)	29	35	8	6	0	0	0	0	-4	-7	-25	70
Above Normal (16%)	13	33	38	24	7	0	0	-1	-30	-31	-30	8
Below Normal (13%)	59	58	35	30	8	7	4	4	-41	-52	-64	-66
Dry (24%)	12	16	15	14	7	6	7	9	5	-9	-11	-11
Critical (15%)	14	11	9	5	3	3	-6	-4	16	25	21	28

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-2. Folsom Lake, End of Month Storage

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	592	531	567	567	567	661	792	967	967	910	792	669
20%	538	493	567	565	566	656	792	967	967	828	732	600
30%	497	461	539	557	558	652	792	967	967	738	682	557
40%	451	426	498	540	553	646	792	967	933	664	607	521
50%	412	407	444	475	530	633	792	954	874	592	514	449
60%	354	392	416	444	496	621	790	861	761	521	455	402
70%	330	354	390	424	457	593	735	755	677	427	381	376
80%	296	307	349	365	415	542	630	661	549	380	357	332
90%	225	248	240	298	384	429	480	485	432	328	282	244
Long Term												
Full Simulation Period[b]	407	394	439	461	490	589	713	821	765	591	524	455
Water Year Types[c]												
Wet (32%)	454	435	514	518	515	632	785	951	941	800	712	576
Above Normal (16%)	377	380	429	513	531	640	787	946	887	621	552	477
Below Normal (13%)	446	431	467	484	533	619	757	843	780	527	472	453
Dry (24%)	394	383	408	423	479	579	691	760	658	495	443	419
Critical (15%)	324	305	315	320	366	432	475	486	415	327	267	231

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	688	567	567	567	567	661	792	967	967	921	792	751
20%	592	563	567	567	567	656	792	967	967	814	709	648
30%	548	537	564	564	560	652	792	967	958	726	647	605
40%	483	495	523	556	556	646	792	967	899	636	567	522
50%	396	432	502	520	545	633	792	957	793	546	465	429
60%	348	387	450	469	499	621	790	859	749	485	434	397
70%	329	358	405	431	457	603	734	758	655	431	381	366
80%	304	329	342	389	438	563	649	656	547	392	346	331
90%	259	260	251	297	384	446	484	479	428	312	285	290
Long Term												
Full Simulation Period[b]	432	424	456	474	493	591	714	822	755	580	508	473
Water Year Types[c]												
Wet (32%)	486	473	525	524	515	632	785	951	929	790	690	645
Above Normal (16%)	388	404	454	537	539	640	787	946	851	580	516	479
Below Normal (13%)	513	496	505	514	542	627	764	844	766	506	436	407
Dry (24%)	405	398	420	434	482	580	692	761	654	491	436	411
Critical (15%)	331	314	322	325	370	436	474	485	431	343	291	257

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	96	36	0	0	0	0	0	0	0	12	0	82
20%	54	70	0	2	1	0	0	0	0	-14	-23	48
30%	51	75	25	7	2	0	0	0	-9	-12	-35	48
40%	32	69	25	16	3	0	0	0	-34	-28	-40	1
50%	-16	25	58	45	16	0	0	3	-81	-45	-49	-20
60%	-6	-5	35	25	3	0	0	-2	-12	-36	-22	-6
70%	-1	4	14	7	0	9	-1	3	-22	5	1	-10
80%	8	22	-8	24	23	21	19	-5	-2	12	-10	-1
90%	33	12	11	-1	0	17	5	-6	-4	-15	2	45
Long Term												
Full Simulation Period[b]	25	29	17	13	4	2	1	0	-10	-11	-16	18
Water Year Types[c]												
Wet (32%)	33	38	11	6	0	0	0	0	-12	-10	-22	69
Above Normal (16%)	11	24	25	25	8	0	0	0	-36	-41	-36	2
Below Normal (13%)	67	64	38	30	9	8	6	1	-14	-21	-36	-45
Dry (24%)	11	15	12	11	3	1	1	1	-4	-4	-7	-8
Critical (15%)	7	8	8	5	3	3	-1	-1	16	16	25	27

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-3. Folsom Lake, End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	592	531	567	567	567	661	792	967	967	910	792	669
20%	538	493	567	565	566	656	792	967	967	828	732	600
30%	497	461	539	557	558	652	792	967	967	738	682	557
40%	451	426	498	540	553	646	792	967	933	664	607	521
50%	412	407	444	475	530	633	792	954	874	592	514	449
60%	354	392	416	444	496	621	790	861	761	521	455	402
70%	330	354	390	424	457	593	735	755	677	427	381	376
80%	296	307	349	365	415	542	630	661	549	380	357	332
90%	225	248	240	298	384	429	480	485	432	328	282	244
Long Term												
Full Simulation Period[b]	407	394	439	461	490	589	713	821	765	591	524	455
Water Year Types[c]												
Wet (32%)	454	435	514	518	515	632	785	951	941	800	712	576
Above Normal (16%)	377	380	429	513	531	640	787	946	887	621	552	477
Below Normal (13%)	446	431	467	484	533	619	757	843	780	527	472	453
Dry (24%)	394	383	408	423	479	579	691	760	658	495	443	419
Critical (15%)	324	305	315	320	366	432	475	486	415	327	267	231

Alternative 5

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	592	533	567	567	567	661	792	967	967	869	792	665
20%	538	489	567	565	566	656	792	967	967	818	733	604
30%	503	463	537	557	558	652	792	967	967	738	664	559
40%	455	429	503	541	553	646	792	967	933	665	608	521
50%	412	409	444	479	530	633	792	965	874	595	514	449
60%	353	392	417	448	496	621	790	861	773	524	460	401
70%	329	353	400	422	450	593	736	756	682	432	386	364
80%	294	314	350	370	412	542	626	665	552	383	349	333
90%	227	249	239	299	381	432	484	498	430	331	285	248
Long Term												
Full Simulation Period[b]	407	394	439	461	490	590	715	825	766	587	520	453
Water Year Types[c]												
Wet (32%)	454	435	515	518	515	632	785	952	941	794	710	577
Above Normal (16%)	375	379	428	513	532	640	787	946	888	622	554	478
Below Normal (13%)	440	425	461	483	534	620	758	845	783	523	469	450
Dry (24%)	397	386	411	426	479	579	691	766	664	489	435	410
Critical (15%)	325	304	314	320	367	433	483	499	411	324	257	231

Alternative 5 minus No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	3	0	0	0	0	0	0	0	-40	0	-5
20%	0	-4	0	0	0	0	0	0	0	-10	2	4
30%	6	2	-2	0	0	0	0	0	0	0	-17	2
40%	4	3	4	0	0	0	0	0	0	1	1	1
50%	0	2	0	4	0	0	0	11	0	4	0	0
60%	0	0	1	5	0	0	0	0	12	3	5	-2
70%	-1	-2	10	-3	-8	0	1	1	5	6	5	-11
80%	-1	7	0	4	-3	0	-4	4	3	2	-8	0
90%	2	0	-1	0	-3	3	5	13	-1	3	3	3
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	1	4	1	-4	-4	-2
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	1	0	-6	-2	1
Above Normal (16%)	-2	-1	-1	1	1	0	0	0	1	1	2	1
Below Normal (13%)	-6	-7	-6	-2	0	0	0	2	3	-4	-3	-3
Dry (24%)	3	3	3	2	0	0	0	6	6	-5	-8	-9
Critical (15%)	1	-1	0	0	0	0	8	13	-4	-3	-10	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-4. Folsom Lake, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	689	567	567	567	567	661	792	967	967	906	792	750
20%	582	561	567	567	567	657	792	967	967	817	684	625
30%	552	528	566	563	559	653	792	967	965	728	638	608
40%	469	499	525	556	555	646	792	967	908	641	569	522
50%	400	430	500	523	537	633	792	959	807	546	468	433
60%	351	391	456	470	498	621	790	858	745	504	442	408
70%	336	356	405	430	457	601	733	761	630	433	387	366
80%	291	333	352	388	437	563	634	654	544	371	325	318
90%	253	259	266	311	392	455	489	471	426	309	244	233
Long Term												
Full Simulation Period[b]	431	424	457	475	494	592	715	823	757	579	503	471
Water Year Types[c]												
Wet (32%)	483	470	522	524	515	632	785	951	937	793	688	646
Above Normal (16%)	390	412	467	537	538	640	787	946	857	591	522	485
Below Normal (13%)	506	489	502	514	541	626	761	847	739	475	408	387
Dry (24%)	405	399	423	437	486	585	698	769	664	486	432	408
Critical (15%)	339	317	323	325	369	436	469	482	430	352	288	258

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	592	531	567	567	567	661	792	967	967	910	792	669
20%	538	493	567	565	566	656	792	967	967	828	732	600
30%	497	461	539	557	558	652	792	967	967	738	682	557
40%	451	426	498	540	553	646	792	967	933	664	607	521
50%	412	407	444	475	530	633	792	954	874	592	514	449
60%	354	392	416	444	496	621	790	861	761	521	455	402
70%	330	354	390	424	457	593	735	755	677	427	381	376
80%	296	307	349	365	415	542	630	661	549	380	357	332
90%	225	248	240	298	384	429	480	485	432	328	282	244
Long Term												
Full Simulation Period[b]	407	394	439	461	490	589	713	821	765	591	524	455
Water Year Types[c]												
Wet (32%)	454	435	514	518	515	632	785	951	941	800	712	576
Above Normal (16%)	377	380	429	513	531	640	787	946	887	621	552	477
Below Normal (13%)	446	431	467	484	533	619	757	843	780	527	472	453
Dry (24%)	394	383	408	423	479	579	691	760	658	495	443	419
Critical (15%)	324	305	315	320	366	432	475	486	415	327	267	231

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-97	-36	0	0	0	0	0	0	0	4	0	-81
20%	-45	-68	0	-2	-1	-1	0	0	0	11	48	-25
30%	-55	-67	-27	-6	-1	-2	0	0	2	10	44	-51
40%	-18	-73	-26	-15	-2	0	0	0	25	23	37	-1
50%	12	-23	-56	-48	-7	0	0	-5	67	45	46	17
60%	2	1	-40	-26	-2	0	0	3	16	17	13	-6
70%	-6	-1	-14	-6	0	-8	2	-6	47	-7	-6	9
80%	4	-27	-3	-22	-22	-21	-4	7	5	9	32	15
90%	-27	-11	-26	-13	-8	-26	-10	14	6	19	39	11
Long Term												
Full Simulation Period[b]	-24	-29	-18	-14	-4	-3	-1	-2	8	13	21	-16
Water Year Types[c]												
Wet (32%)	-29	-35	-8	-6	0	0	0	0	4	7	25	-70
Above Normal (16%)	-13	-33	-38	-24	-7	0	0	1	30	31	30	-8
Below Normal (13%)	-59	-58	-35	-30	-8	-7	-4	-4	41	52	64	66
Dry (24%)	-12	-16	-15	-14	-7	-6	-7	-9	-5	9	11	11
Critical (15%)	-14	-11	-9	-5	-3	-3	6	4	-16	-25	-21	-28

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-5. Folsom Lake, End of Month Storage

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	689	567	567	567	567	661	792	967	967	906	792	750
20%	582	561	567	567	567	657	792	967	967	817	684	625
30%	552	528	566	563	559	653	792	967	965	728	638	608
40%	469	499	525	556	555	646	792	967	908	641	569	522
50%	400	430	500	523	537	633	792	959	807	546	468	433
60%	351	391	456	470	498	621	790	858	745	504	442	408
70%	336	356	405	430	457	601	733	761	630	433	387	366
80%	291	333	352	388	437	563	634	654	544	371	325	318
90%	253	259	266	311	392	455	489	471	426	309	244	233
Long Term												
Full Simulation Period[b]	431	424	457	475	494	592	715	823	757	579	503	471
Water Year Types[c]												
Wet (32%)	483	470	522	524	515	632	785	951	937	793	688	646
Above Normal (16%)	390	412	467	537	538	640	787	946	857	591	522	485
Below Normal (13%)	506	489	502	514	541	626	761	847	739	475	408	387
Dry (24%)	405	399	423	437	486	585	698	769	664	486	432	408
Critical (15%)	339	317	323	325	369	436	469	482	430	352	288	258

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	688	567	567	567	567	661	792	967	967	921	792	751
20%	592	563	567	567	567	656	792	967	967	814	709	648
30%	548	537	564	564	560	652	792	967	958	726	647	605
40%	483	495	523	556	556	646	792	967	899	636	567	522
50%	396	432	502	520	545	633	792	957	793	546	465	429
60%	348	387	450	469	499	621	790	859	749	485	434	397
70%	329	358	405	431	457	603	734	758	655	431	381	366
80%	304	329	342	389	438	563	649	656	547	392	346	331
90%	259	260	251	297	384	446	484	479	428	312	285	290
Long Term												
Full Simulation Period[b]	432	424	456	474	493	591	714	822	755	580	508	473
Water Year Types[c]												
Wet (32%)	486	473	525	524	515	632	785	951	929	790	690	645
Above Normal (16%)	388	404	454	537	539	640	787	946	851	580	516	479
Below Normal (13%)	513	496	505	514	542	627	764	844	766	506	436	407
Dry (24%)	405	398	420	434	482	580	692	761	654	491	436	411
Critical (15%)	331	314	322	325	370	436	474	485	431	343	291	257

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	-1	0	0	0	0	0	0	0	0	15	0	1
20%	10	3	0	0	0	-1	0	0	0	-3	24	23
30%	-4	9	-2	1	1	-1	0	0	-7	-2	9	-3
40%	13	-4	-1	1	1	0	0	0	-10	-5	-3	0
50%	-3	3	2	-3	9	0	0	-2	-14	0	-3	-3
60%	-4	-4	-5	-1	1	0	0	1	4	-19	-9	-11
70%	-7	2	0	1	0	1	0	-3	25	-2	-6	0
80%	13	-4	-10	1	1	0	15	2	3	21	22	14
90%	6	1	-15	-14	-8	-9	-5	8	2	4	41	56
Long Term												
Full Simulation Period[b]	0	0	-2	-1	-1	-1	0	-2	-2	2	5	2
Water Year Types[c]												
Wet (32%)	3	4	3	0	0	0	0	0	-8	-3	2	-1
Above Normal (16%)	-3	-9	-13	1	1	0	0	0	-6	-10	-7	-6
Below Normal (13%)	8	6	3	0	1	1	3	-3	27	31	28	21
Dry (24%)	-1	-1	-3	-3	-4	-4	-6	-7	-9	5	4	3
Critical (15%)	-7	-3	-1	0	1	0	5	3	1	-9	4	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-6. Folsom Lake, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	689	567	567	567	567	661	792	967	967	906	792	750
20%	582	561	567	567	567	657	792	967	967	817	684	625
30%	552	528	566	563	559	653	792	967	965	728	638	608
40%	469	499	525	556	555	646	792	967	908	641	569	522
50%	400	430	500	523	537	633	792	959	807	546	468	433
60%	351	391	456	470	498	621	790	858	745	504	442	408
70%	336	356	405	430	457	601	733	761	630	433	387	366
80%	291	333	352	388	437	563	634	654	544	371	325	318
90%	253	259	266	311	392	455	489	471	426	309	244	233
Long Term												
Full Simulation Period[b]	431	424	457	475	494	592	715	823	757	579	503	471
Water Year Types[c]												
Wet (32%)	483	470	522	524	515	632	785	951	937	793	688	646
Above Normal (16%)	390	412	467	537	538	640	787	946	857	591	522	485
Below Normal (13%)	506	489	502	514	541	626	761	847	739	475	408	387
Dry (24%)	405	399	423	437	486	585	698	769	664	486	432	408
Critical (15%)	339	317	323	325	369	436	469	482	430	352	288	258

Alternative 5

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	592	533	567	567	567	661	792	967	967	869	792	665
20%	538	489	567	565	566	656	792	967	967	818	733	604
30%	503	463	537	557	558	652	792	967	967	738	664	559
40%	455	429	503	541	553	646	792	967	933	665	608	521
50%	412	409	444	479	530	633	792	965	874	595	514	449
60%	353	392	417	448	496	621	790	861	773	524	460	401
70%	329	353	400	422	450	593	736	756	682	432	386	364
80%	294	314	350	370	412	542	626	665	552	383	349	333
90%	227	249	239	299	381	432	484	498	430	331	285	248
Long Term												
Full Simulation Period[b]	407	394	439	461	490	590	715	825	766	587	520	453
Water Year Types[c]												
Wet (32%)	454	435	515	518	515	632	785	952	941	794	710	577
Above Normal (16%)	375	379	428	513	532	640	787	946	888	622	554	478
Below Normal (13%)	440	425	461	483	534	620	758	845	783	523	469	450
Dry (24%)	397	386	411	426	479	579	691	766	664	489	435	410
Critical (15%)	325	304	314	320	367	433	483	499	411	324	257	231

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-97	-34	0	0	0	0	0	0	0	-37	0	-85
20%	-44	-72	0	-2	-1	-1	0	0	0	1	49	-21
30%	-49	-65	-29	-6	-1	-2	0	0	2	10	26	-49
40%	-15	-70	-22	-15	-2	0	0	0	25	24	38	0
50%	13	-21	-56	-44	-7	0	0	5	67	49	46	16
60%	2	1	-39	-21	-2	0	0	3	27	20	18	-7
70%	-7	-3	-4	-8	-8	-8	3	-5	52	-1	-1	-2
80%	3	-19	-3	-18	-25	-21	-8	11	8	11	24	15
90%	-26	-10	-27	-13	-12	-23	-5	27	4	22	41	14
Long Term												
Full Simulation Period[b]	-25	-30	-18	-13	-4	-3	0	2	9	9	16	-18
Water Year Types[c]												
Wet (32%)	-29	-35	-8	-6	0	0	0	0	4	1	23	-69
Above Normal (16%)	-16	-34	-39	-24	-6	0	0	1	30	32	32	-7
Below Normal (13%)	-66	-65	-41	-31	-7	-7	-3	-2	44	49	60	63
Dry (24%)	-9	-13	-12	-12	-7	-5	-7	-3	0	4	3	2
Critical (15%)	-14	-12	-9	-5	-2	-3	14	17	-19	-28	-31	-27

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

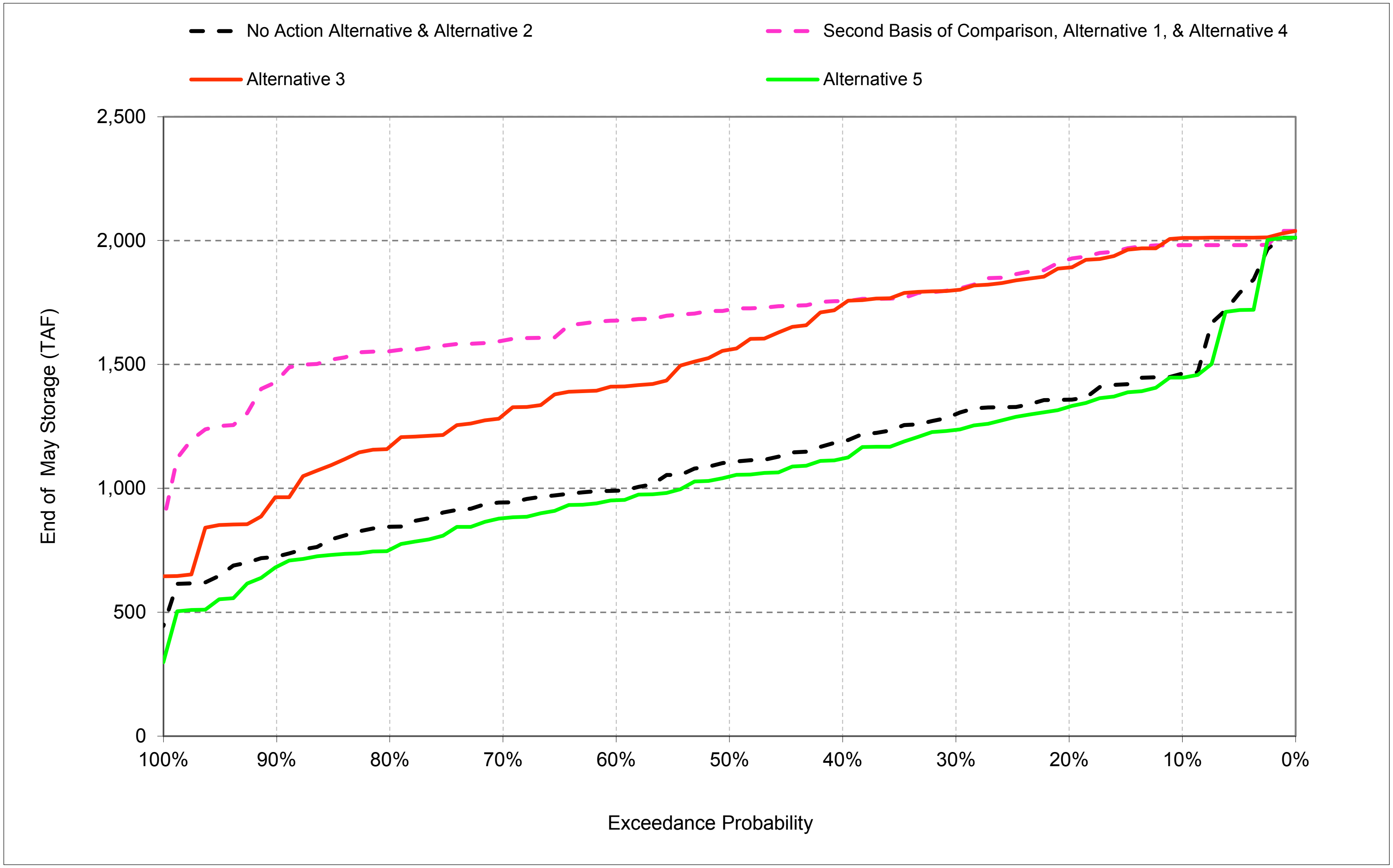
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

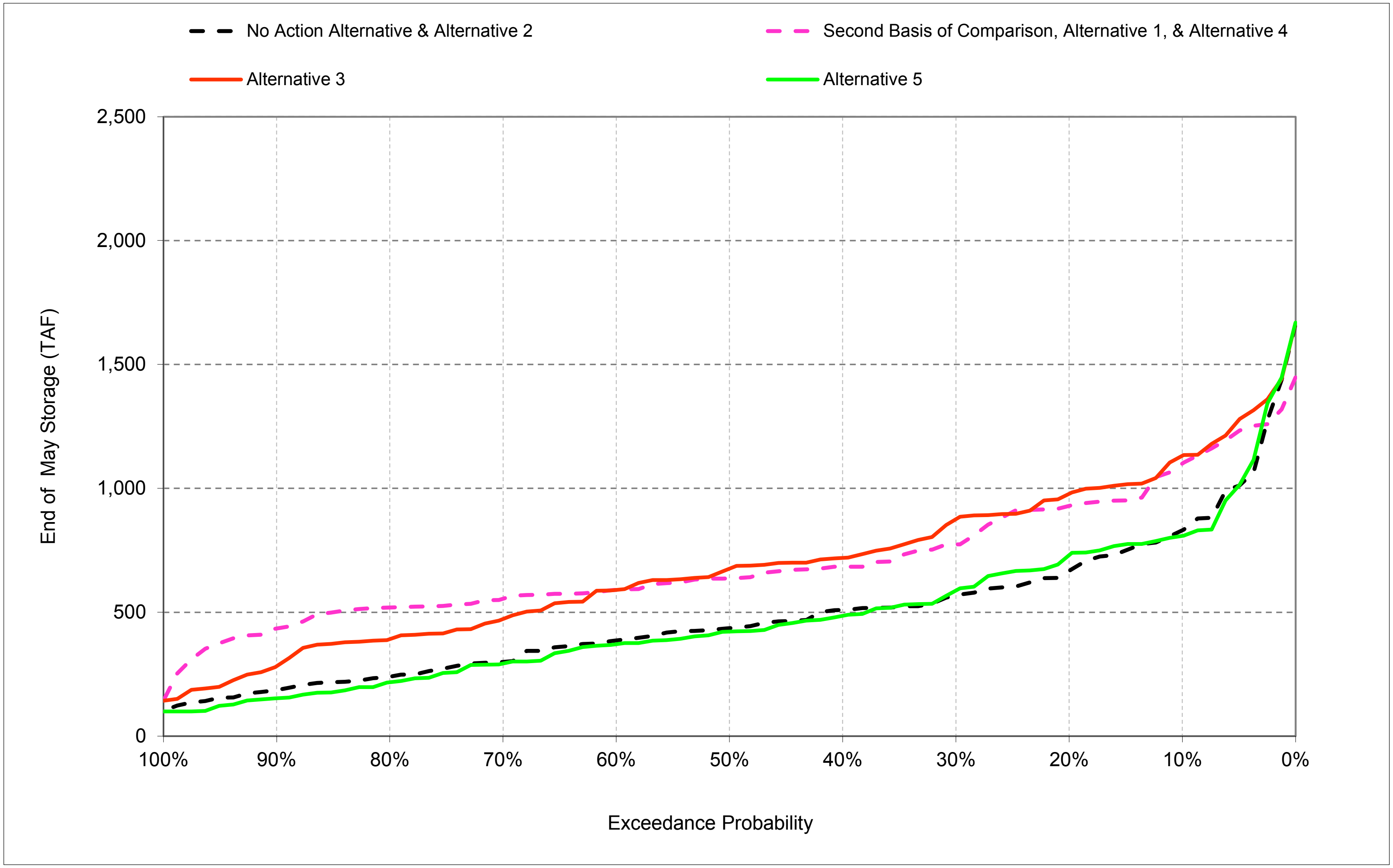
C.5. San Luis Storage

Figure C-5-1-1. San Luis Reservoir (SWP and CVP), End of May Storage



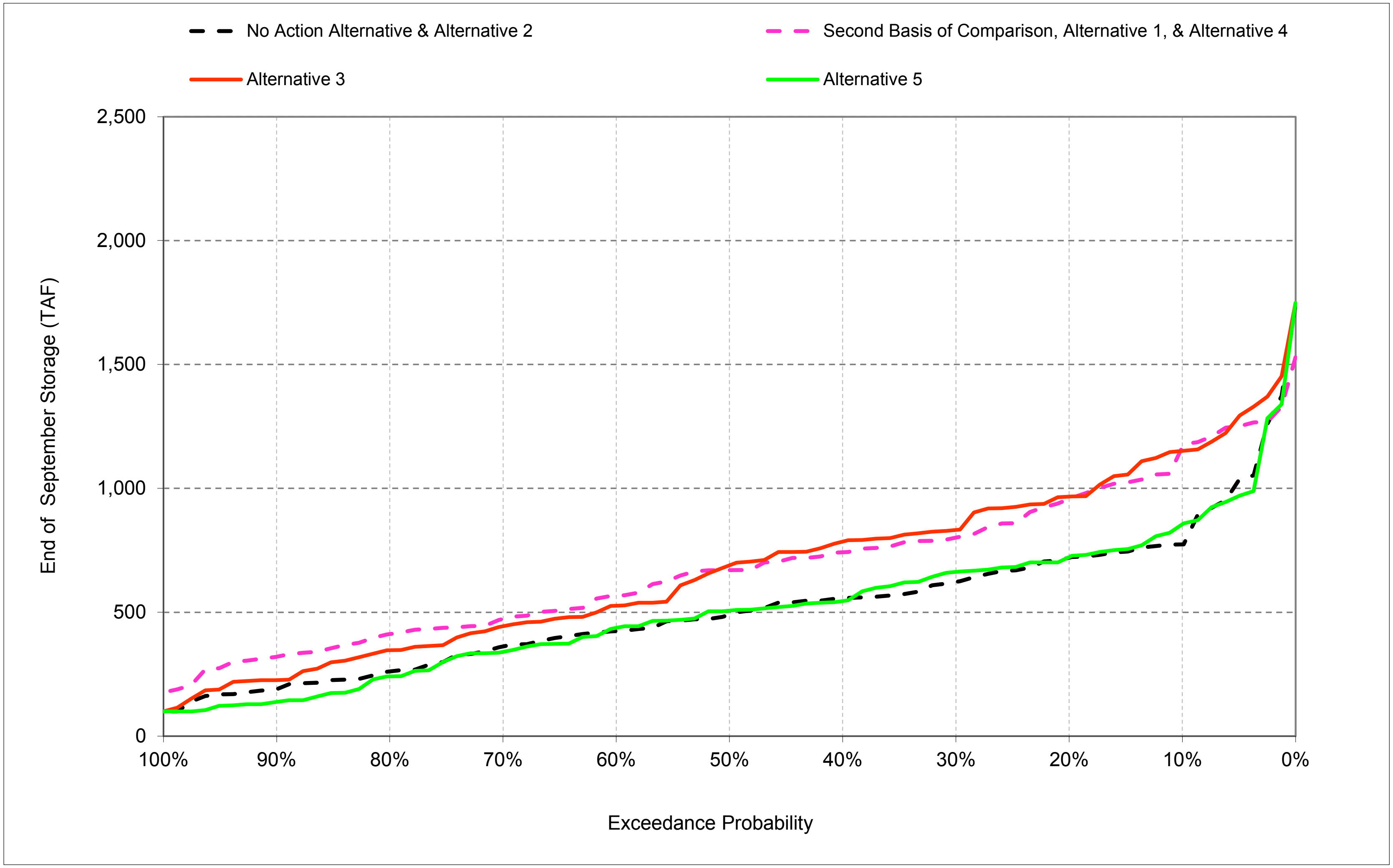
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-5-1-2. San Luis Reservoir (SWP and CVP), End of August Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-5-1-3. San Luis Reservoir (SWP and CVP), End of September Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-1-1. San Luis Reservoir (SWP and CVP), End of Month Storage

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	868	1,032	1,320	1,726	2,029	2,039	1,835	1,463	1,167	970	831	774
20%	728	849	1,157	1,388	1,643	1,898	1,742	1,358	1,024	868	667	720
30%	563	739	1,076	1,328	1,582	1,801	1,620	1,300	915	780	568	623
40%	503	663	979	1,269	1,504	1,716	1,542	1,190	804	670	509	557
50%	471	580	817	1,140	1,410	1,622	1,457	1,106	714	561	436	491
60%	418	484	742	1,016	1,267	1,507	1,358	991	665	489	386	424
70%	334	422	698	969	1,154	1,314	1,218	943	606	435	299	362
80%	276	356	603	808	1,046	1,267	1,119	845	498	354	240	261
90%	206	298	463	751	941	1,087	1,021	724	378	303	186	190
Long Term												
Full Simulation Period[b]	510	628	890	1,171	1,391	1,575	1,431	1,128	793	642	491	521
Water Year Types[c]												
Wet (32%)	555	681	931	1,236	1,526	1,788	1,598	1,251	946	741	628	679
Above Normal (16%)	490	649	957	1,223	1,441	1,661	1,444	1,048	666	466	433	513
Below Normal (13%)	525	624	907	1,141	1,314	1,473	1,312	967	555	500	426	467
Dry (24%)	476	590	867	1,150	1,339	1,494	1,413	1,167	840	763	476	469
Critical (15%)	478	556	752	1,040	1,204	1,252	1,192	1,028	739	544	343	323

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	1,176	1,436	1,728	2,026	2,039	2,039	2,039	1,981	1,738	1,367	1,100	1,166
20%	994	1,178	1,546	1,886	2,039	2,039	2,039	1,924	1,557	1,212	929	957
30%	864	1,071	1,412	1,838	2,036	2,039	2,039	1,804	1,476	1,128	774	801
40%	811	1,013	1,271	1,685	1,993	2,039	2,039	1,756	1,352	1,025	684	742
50%	715	889	1,152	1,616	1,938	2,039	2,023	1,721	1,302	942	637	670
60%	588	750	1,063	1,519	1,877	2,039	1,951	1,677	1,249	901	590	567
70%	461	659	971	1,467	1,805	1,972	1,880	1,596	1,209	852	554	473
80%	356	556	861	1,310	1,671	1,867	1,828	1,553	1,164	815	519	412
90%	268	363	660	1,175	1,508	1,718	1,741	1,433	1,066	751	435	321
Long Term												
Full Simulation Period[b]	711	895	1,180	1,585	1,831	1,941	1,910	1,697	1,338	1,000	705	687
Water Year Types[c]												
Wet (32%)	790	1,017	1,365	1,748	1,965	2,033	2,031	1,852	1,487	1,167	889	925
Above Normal (16%)	658	883	1,213	1,671	1,913	2,001	1,995	1,717	1,263	861	612	631
Below Normal (13%)	854	1,064	1,334	1,742	1,908	1,980	1,908	1,628	1,251	964	635	591
Dry (24%)	617	764	998	1,427	1,728	1,925	1,870	1,665	1,341	1,007	660	596
Critical (15%)	622	709	910	1,257	1,556	1,664	1,623	1,451	1,168	808	545	472

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	308	404	408	300	10	0	204	519	571	397	269	392
20%	265	329	389	498	396	141	297	567	533	345	262	237
30%	301	332	335	510	454	238	419	505	561	348	206	178
40%	308	350	292	416	489	323	497	565	548	355	175	186
50%	244	310	334	476	528	417	566	616	589	382	201	179
60%	170	266	321	503	610	532	593	686	584	413	204	143
70%	127	237	273	497	651	658	663	653	603	418	255	111
80%	80	200	257	502	625	600	709	709	666	461	279	151
90%	62	65	196	424	567	632	720	709	688	449	249	131
Long Term												
Full Simulation Period[b]	200	267	290	414	440	365	479	569	545	358	214	166
Water Year Types[c]												
Wet (32%)	234	336	433	513	439	245	433	601	541	426	261	245
Above Normal (16%)	168	234	257	448	471	341	551	669	598	395	179	117
Below Normal (13%)	329	439	427	601	594	507	596	660	696	465	209	124
Dry (24%)	141	174	130	277	390	431	457	498	501	244	185	127
Critical (15%)	144	153	158	217	352	412	431	423	429	263	202	149

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-1-2. San Luis Reservoir (SWP and CVP), End of Month Storage

No Action Alternative

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	868	1,032	1,320	1,726	2,029	2,039	1,835	1,463	1,167	970	831	774
20%	728	849	1,157	1,388	1,643	1,898	1,742	1,358	1,024	868	667	720
30%	563	739	1,076	1,328	1,582	1,801	1,620	1,300	915	780	568	623
40%	503	663	979	1,269	1,504	1,716	1,542	1,190	804	670	509	557
50%	471	580	817	1,140	1,410	1,622	1,457	1,106	714	561	436	491
60%	418	484	742	1,016	1,267	1,507	1,358	991	665	489	386	424
70%	334	422	698	969	1,154	1,314	1,218	943	606	435	299	362
80%	276	356	603	808	1,046	1,267	1,119	845	498	354	240	261
90%	206	298	463	751	941	1,087	1,021	724	378	303	186	190
Long Term												
Full Simulation Period[b]	510	628	890	1,171	1,391	1,575	1,431	1,128	793	642	491	521
Water Year Types[c]												
Wet (32%)	555	681	931	1,236	1,526	1,788	1,598	1,251	946	741	628	679
Above Normal (16%)	490	649	957	1,223	1,441	1,661	1,444	1,048	666	466	433	513
Below Normal (13%)	525	624	907	1,141	1,314	1,473	1,312	967	555	500	426	467
Dry (24%)	476	590	867	1,150	1,339	1,494	1,413	1,167	840	763	476	469
Critical (15%)	478	556	752	1,040	1,204	1,252	1,192	1,028	739	544	343	323

Alternative 3

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,237	1,441	1,675	1,889	2,039	2,039	2,039	2,011	1,684	1,427	1,132	1,151
20%	985	1,234	1,446	1,710	1,955	2,039	2,036	1,891	1,541	1,256	978	967
30%	901	1,067	1,324	1,581	1,824	2,033	2,004	1,800	1,402	1,133	875	832
40%	801	981	1,253	1,488	1,697	1,903	1,961	1,742	1,331	986	720	785
50%	722	869	1,124	1,383	1,609	1,815	1,770	1,560	1,165	920	676	689
60%	537	765	1,025	1,313	1,501	1,702	1,670	1,411	1,040	806	590	527
70%	377	666	925	1,209	1,436	1,599	1,545	1,295	959	706	473	444
80%	317	491	775	1,066	1,277	1,409	1,397	1,168	837	591	391	347
90%	232	359	605	872	1,003	1,167	1,194	964	614	465	283	227
Long Term												
Full Simulation Period[b]	702	890	1,130	1,381	1,573	1,708	1,695	1,517	1,190	929	690	679
Water Year Types[c]												
Wet (32%)	810	1,033	1,276	1,555	1,810	1,957	1,975	1,851	1,540	1,228	961	980
Above Normal (16%)	619	844	1,109	1,342	1,571	1,756	1,763	1,575	1,155	830	674	703
Below Normal (13%)	834	1,043	1,305	1,489	1,623	1,736	1,651	1,338	899	737	585	561
Dry (24%)	634	804	1,052	1,302	1,455	1,608	1,593	1,413	1,128	926	590	535
Critical (15%)	548	632	804	1,076	1,216	1,256	1,227	1,069	838	572	380	351

Alternative 3 minus No Action Alternative

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	369	409	355	163	10	0	204	548	517	457	301	377
20%	257	384	289	323	312	141	294	534	518	388	311	246
30%	338	328	248	253	243	233	383	500	487	353	307	209
40%	297	318	274	219	193	187	419	552	527	316	210	229
50%	251	289	307	243	200	193	313	454	452	360	240	198
60%	119	281	284	297	234	195	312	420	375	317	204	102
70%	43	244	227	240	282	286	328	352	354	271	173	81
80%	41	135	172	258	231	142	278	323	339	237	151	86
90%	26	61	142	121	63	80	172	239	236	162	97	37
Long Term												
Full Simulation Period[b]	192	262	240	210	182	133	265	389	397	288	199	158
Water Year Types[c]												
Wet (32%)	255	351	345	320	284	170	377	599	593	487	334	300
Above Normal (16%)	130	194	153	119	129	95	319	526	489	363	241	190
Below Normal (13%)	309	419	399	348	309	263	339	371	344	237	160	94
Dry (24%)	158	214	185	152	117	114	180	246	288	163	114	66
Critical (15%)	70	76	53	37	12	4	35	40	99	28	38	28

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-1-3. San Luis Reservoir (SWP and CVP), End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	868	1,032	1,320	1,726	2,029	2,039	1,835	1,463	1,167	970	831	774
20%	728	849	1,157	1,388	1,643	1,898	1,742	1,358	1,024	868	667	720
30%	563	739	1,076	1,328	1,582	1,801	1,620	1,300	915	780	568	623
40%	503	663	979	1,269	1,504	1,716	1,542	1,190	804	670	509	557
50%	471	580	817	1,140	1,410	1,622	1,457	1,106	714	561	436	491
60%	418	484	742	1,016	1,267	1,507	1,358	991	665	489	386	424
70%	334	422	698	969	1,154	1,314	1,218	943	606	435	299	362
80%	276	356	603	808	1,046	1,267	1,119	845	498	354	240	261
90%	206	298	463	751	941	1,087	1,021	724	378	303	186	190
Long Term												
Full Simulation Period[b]	510	628	890	1,171	1,391	1,575	1,431	1,128	793	642	491	521
Water Year Types[c]												
Wet (32%)	555	681	931	1,236	1,526	1,788	1,598	1,251	946	741	628	679
Above Normal (16%)	490	649	957	1,223	1,441	1,661	1,444	1,048	666	466	433	513
Below Normal (13%)	525	624	907	1,141	1,314	1,473	1,312	967	555	500	426	467
Dry (24%)	476	590	867	1,150	1,339	1,494	1,413	1,167	840	763	476	469
Critical (15%)	478	556	752	1,040	1,204	1,252	1,192	1,028	739	544	343	323

Alternative 5

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	835	982	1,306	1,593	2,000	2,039	1,821	1,448	1,216	972	808	855
20%	709	874	1,139	1,403	1,658	1,921	1,727	1,329	1,009	879	731	723
30%	610	740	1,046	1,334	1,596	1,824	1,609	1,236	875	755	588	663
40%	540	656	993	1,238	1,494	1,723	1,509	1,120	718	613	485	545
50%	487	589	880	1,137	1,399	1,614	1,416	1,048	689	544	422	507
60%	417	510	743	1,044	1,285	1,490	1,300	953	622	454	371	437
70%	314	423	705	975	1,175	1,382	1,203	880	523	400	293	341
80%	266	348	592	833	1,062	1,275	1,114	753	445	311	217	241
90%	192	260	455	759	932	1,045	926	684	356	269	153	138
Long Term												
Full Simulation Period[b]	508	620	886	1,167	1,390	1,575	1,404	1,069	745	611	483	516
Water Year Types[c]												
Wet (32%)	576	706	958	1,251	1,539	1,804	1,624	1,279	984	787	680	726
Above Normal (16%)	488	622	932	1,213	1,440	1,660	1,447	1,046	672	477	442	520
Below Normal (13%)	541	628	923	1,157	1,335	1,496	1,305	928	524	476	414	463
Dry (24%)	464	572	856	1,139	1,327	1,481	1,324	1,002	691	655	412	418
Critical (15%)	429	505	698	994	1,166	1,216	1,103	875	600	428	284	270

Alternative 5 minus No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-33	-50	-14	-133	-28	0	-14	-15	49	2	-23	80
20%	-19	25	-18	15	15	23	-15	-28	-15	11	64	3
30%	47	1	-30	6	14	24	-11	-64	-39	-25	20	40
40%	37	-6	13	-31	-10	7	-33	-70	-86	-57	-24	-11
50%	16	9	63	-2	-10	-8	-41	-58	-25	-17	-14	16
60%	-1	26	1	28	18	-16	-58	-38	-43	-35	-15	13
70%	-20	1	6	6	21	69	-15	-63	-83	-35	-6	-22
80%	-10	-8	-12	25	16	8	-5	-92	-53	-43	-23	-20
90%	-15	-38	-8	8	-9	-42	-95	-40	-22	-34	-33	-51
Long Term												
Full Simulation Period[b]	-2	-8	-4	-4	-2	0	-27	-59	-48	-30	-8	-5
Water Year Types[c]												
Wet (32%)	20	25	27	15	13	16	26	28	38	46	52	47
Above Normal (16%)	-2	-27	-24	-10	-2	-1	3	-2	6	10	8	7
Below Normal (13%)	16	4	16	17	21	23	-7	-39	-31	-24	-12	-4
Dry (24%)	-12	-18	-11	-11	-12	-13	-89	-165	-149	-107	-64	-51
Critical (15%)	-50	-51	-53	-46	-38	-36	-89	-154	-140	-116	-59	-53

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-1-4. San Luis Reservoir (SWP and CVP), End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,176	1,436	1,728	2,026	2,039	2,039	2,039	1,981	1,738	1,367	1,100	1,166
20%	994	1,178	1,546	1,886	2,039	2,039	2,039	1,924	1,557	1,212	929	957
30%	864	1,071	1,412	1,838	2,036	2,039	2,039	1,804	1,476	1,128	774	801
40%	811	1,013	1,271	1,685	1,993	2,039	2,039	1,756	1,352	1,025	684	742
50%	715	889	1,152	1,616	1,938	2,039	2,023	1,721	1,302	942	637	670
60%	588	750	1,063	1,519	1,877	2,039	1,951	1,677	1,249	901	590	567
70%	461	659	971	1,467	1,805	1,972	1,880	1,596	1,209	852	554	473
80%	356	556	861	1,310	1,671	1,867	1,828	1,553	1,164	815	519	412
90%	268	363	660	1,175	1,508	1,718	1,741	1,433	1,066	751	435	321
Long Term												
Full Simulation Period[b]	711	895	1,180	1,585	1,831	1,941	1,910	1,697	1,338	1,000	705	687
Water Year Types[c]												
Wet (32%)	790	1,017	1,365	1,748	1,965	2,033	2,031	1,852	1,487	1,167	889	925
Above Normal (16%)	658	883	1,213	1,671	1,913	2,001	1,995	1,717	1,263	861	612	631
Below Normal (13%)	854	1,064	1,334	1,742	1,908	1,980	1,908	1,628	1,251	964	635	591
Dry (24%)	617	764	998	1,427	1,728	1,925	1,870	1,665	1,341	1,007	660	596
Critical (15%)	622	709	910	1,257	1,556	1,664	1,623	1,451	1,168	808	545	472

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	868	1,032	1,320	1,726	2,029	2,039	1,835	1,463	1,167	970	831	774
20%	728	849	1,157	1,388	1,643	1,898	1,742	1,358	1,024	868	667	720
30%	563	739	1,076	1,328	1,582	1,801	1,620	1,300	915	780	568	623
40%	503	663	979	1,269	1,504	1,716	1,542	1,190	804	670	509	557
50%	471	580	817	1,140	1,410	1,622	1,457	1,106	714	561	436	491
60%	418	484	742	1,016	1,267	1,507	1,358	991	665	489	386	424
70%	334	422	698	969	1,154	1,314	1,218	943	606	435	299	362
80%	276	356	603	808	1,046	1,267	1,119	845	498	354	240	261
90%	206	298	463	751	941	1,087	1,021	724	378	303	186	190
Long Term												
Full Simulation Period[b]	510	628	890	1,171	1,391	1,575	1,431	1,128	793	642	491	521
Water Year Types[c]												
Wet (32%)	555	681	931	1,236	1,526	1,788	1,598	1,251	946	741	628	679
Above Normal (16%)	490	649	957	1,223	1,441	1,661	1,444	1,048	666	466	433	513
Below Normal (13%)	525	624	907	1,141	1,314	1,473	1,312	967	555	500	426	467
Dry (24%)	476	590	867	1,150	1,339	1,494	1,413	1,167	840	763	476	469
Critical (15%)	478	556	752	1,040	1,204	1,252	1,192	1,028	739	544	343	323

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-308	-404	-408	-300	-10	0	-204	-519	-571	-397	-269	-392
20%	-265	-329	-389	-498	-396	-141	-297	-567	-533	-345	-262	-237
30%	-301	-332	-335	-510	-454	-238	-419	-505	-561	-348	-206	-178
40%	-308	-350	-292	-416	-489	-323	-497	-565	-548	-355	-175	-186
50%	-244	-310	-334	-476	-528	-417	-566	-616	-589	-382	-201	-179
60%	-170	-266	-321	-503	-610	-532	-593	-686	-584	-413	-204	-143
70%	-127	-237	-273	-497	-651	-658	-663	-653	-603	-418	-255	-111
80%	-80	-200	-257	-502	-625	-600	-709	-709	-666	-461	-279	-151
90%	-62	-65	-196	-424	-567	-632	-720	-709	-688	-449	-249	-131
Long Term												
Full Simulation Period[b]	-200	-267	-290	-414	-440	-365	-479	-569	-545	-358	-214	-166
Water Year Types[c]												
Wet (32%)	-234	-336	-433	-513	-439	-245	-433	-601	-541	-426	-261	-245
Above Normal (16%)	-168	-234	-257	-448	-471	-341	-551	-669	-598	-395	-179	-117
Below Normal (13%)	-329	-439	-427	-601	-594	-507	-596	-660	-696	-465	-209	-124
Dry (24%)	-141	-174	-130	-277	-390	-431	-457	-498	-501	-244	-185	-127
Critical (15%)	-144	-153	-158	-217	-352	-412	-431	-423	-429	-263	-202	-149

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-1-5. San Luis Reservoir (SWP and CVP), End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,176	1,436	1,728	2,026	2,039	2,039	2,039	1,981	1,738	1,367	1,100	1,166
20%	994	1,178	1,546	1,886	2,039	2,039	2,039	1,924	1,557	1,212	929	957
30%	864	1,071	1,412	1,838	2,036	2,039	2,039	1,804	1,476	1,128	774	801
40%	811	1,013	1,271	1,685	1,993	2,039	2,039	1,756	1,352	1,025	684	742
50%	715	889	1,152	1,616	1,938	2,039	2,023	1,721	1,302	942	637	670
60%	588	750	1,063	1,519	1,877	2,039	1,951	1,677	1,249	901	590	567
70%	461	659	971	1,467	1,805	1,972	1,880	1,596	1,209	852	554	473
80%	356	556	861	1,310	1,671	1,867	1,828	1,553	1,164	815	519	412
90%	268	363	660	1,175	1,508	1,718	1,741	1,433	1,066	751	435	321
Long Term												
Full Simulation Period[b]	711	895	1,180	1,585	1,831	1,941	1,910	1,697	1,338	1,000	705	687
Water Year Types[c]												
Wet (32%)	790	1,017	1,365	1,748	1,965	2,033	2,031	1,852	1,487	1,167	889	925
Above Normal (16%)	658	883	1,213	1,671	1,913	2,001	1,995	1,717	1,263	861	612	631
Below Normal (13%)	854	1,064	1,334	1,742	1,908	1,980	1,908	1,628	1,251	964	635	591
Dry (24%)	617	764	998	1,427	1,728	1,925	1,870	1,665	1,341	1,007	660	596
Critical (15%)	622	709	910	1,257	1,556	1,664	1,623	1,451	1,168	808	545	472

Alternative 3

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,237	1,441	1,675	1,889	2,039	2,039	2,039	2,011	1,684	1,427	1,132	1,151
20%	985	1,234	1,446	1,710	1,955	2,039	2,036	1,891	1,541	1,256	978	967
30%	901	1,067	1,324	1,581	1,824	2,033	2,004	1,800	1,402	1,133	875	832
40%	801	981	1,253	1,488	1,697	1,903	1,961	1,742	1,331	986	720	785
50%	722	869	1,124	1,383	1,609	1,815	1,770	1,560	1,165	920	676	689
60%	537	765	1,025	1,313	1,501	1,702	1,670	1,411	1,040	806	590	527
70%	377	666	925	1,209	1,436	1,599	1,545	1,295	959	706	473	444
80%	317	491	775	1,066	1,277	1,409	1,397	1,168	837	591	391	347
90%	232	359	605	872	1,003	1,167	1,194	964	614	465	283	227
Long Term												
Full Simulation Period[b]	702	890	1,130	1,381	1,573	1,708	1,695	1,517	1,190	929	690	679
Water Year Types[c]												
Wet (32%)	810	1,033	1,276	1,555	1,810	1,957	1,975	1,851	1,540	1,228	961	980
Above Normal (16%)	619	844	1,109	1,342	1,571	1,756	1,763	1,575	1,155	830	674	703
Below Normal (13%)	834	1,043	1,305	1,489	1,623	1,736	1,651	1,338	899	737	585	561
Dry (24%)	634	804	1,052	1,302	1,455	1,608	1,593	1,413	1,128	926	590	535
Critical (15%)	548	632	804	1,076	1,216	1,256	1,227	1,069	838	572	380	351

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	61	5	-53	-137	0	0	0	29	-54	60	32	-15
20%	-9	56	-100	-176	-84	0	-3	-33	-15	43	48	9
30%	37	-4	-88	-257	-212	-6	-35	-4	-74	5	102	31
40%	-11	-32	-18	-197	-296	-136	-78	-14	-21	-39	36	43
50%	7	-20	-27	-232	-329	-224	-253	-162	-137	-22	39	19
60%	-50	16	-38	-206	-376	-337	-281	-266	-209	-95	0	-40
70%	-84	7	-46	-257	-369	-373	-335	-301	-250	-146	-82	-30
80%	-39	-65	-85	-245	-394	-459	-431	-385	-327	-225	-128	-65
90%	-36	-5	-55	-302	-504	-552	-548	-469	-452	-286	-152	-94
Long Term												
Full Simulation Period[b]	-9	-6	-50	-204	-258	-233	-215	-180	-148	-70	-15	-8
Water Year Types[c]												
Wet (32%)	21	16	-88	-193	-155	-76	-56	-2	53	61	72	55
Above Normal (16%)	-38	-40	-104	-329	-342	-245	-233	-143	-108	-32	63	73
Below Normal (13%)	-20	-20	-29	-253	-285	-244	-257	-290	-352	-227	-50	-30
Dry (24%)	17	40	55	-125	-273	-317	-277	-252	-214	-81	-70	-61
Critical (15%)	-74	-77	-106	-180	-340	-408	-396	-383	-330	-235	-164	-121

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-1-6. San Luis Reservoir (SWP and CVP), End of Month Storage

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	1,176	1,436	1,728	2,026	2,039	2,039	2,039	1,981	1,738	1,367	1,100	1,166
20%	994	1,178	1,546	1,886	2,039	2,039	2,039	1,924	1,557	1,212	929	957
30%	864	1,071	1,412	1,838	2,036	2,039	2,039	1,804	1,476	1,128	774	801
40%	811	1,013	1,271	1,685	1,993	2,039	2,039	1,756	1,352	1,025	684	742
50%	715	889	1,152	1,616	1,938	2,039	2,023	1,721	1,302	942	637	670
60%	588	750	1,063	1,519	1,877	2,039	1,951	1,677	1,249	901	590	567
70%	461	659	971	1,467	1,805	1,972	1,880	1,596	1,209	852	554	473
80%	356	556	861	1,310	1,671	1,867	1,828	1,553	1,164	815	519	412
90%	268	363	660	1,175	1,508	1,718	1,741	1,433	1,066	751	435	321
Long Term												
Full Simulation Period[b]	711	895	1,180	1,585	1,831	1,941	1,910	1,697	1,338	1,000	705	687
Water Year Types[c]												
Wet (32%)	790	1,017	1,365	1,748	1,965	2,033	2,031	1,852	1,487	1,167	889	925
Above Normal (16%)	658	883	1,213	1,671	1,913	2,001	1,995	1,717	1,263	861	612	631
Below Normal (13%)	854	1,064	1,334	1,742	1,908	1,980	1,908	1,628	1,251	964	635	591
Dry (24%)	617	764	998	1,427	1,728	1,925	1,870	1,665	1,341	1,007	660	596
Critical (15%)	622	709	910	1,257	1,556	1,664	1,623	1,451	1,168	808	545	472

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	835	982	1,306	1,593	2,000	2,039	1,821	1,448	1,216	972	808	855
20%	709	874	1,139	1,403	1,658	1,921	1,727	1,329	1,009	879	731	723
30%	610	740	1,046	1,334	1,596	1,824	1,609	1,236	875	755	588	663
40%	540	656	993	1,238	1,494	1,723	1,509	1,120	718	613	485	545
50%	487	589	880	1,137	1,399	1,614	1,416	1,048	689	544	422	507
60%	417	510	743	1,044	1,285	1,490	1,300	953	622	454	371	437
70%	314	423	705	975	1,175	1,382	1,203	880	523	400	293	341
80%	266	348	592	833	1,062	1,275	1,114	753	445	311	217	241
90%	192	260	455	759	932	1,045	926	684	356	269	153	138
Long Term												
Full Simulation Period[b]	508	620	886	1,167	1,390	1,575	1,404	1,069	745	611	483	516
Water Year Types[c]												
Wet (32%)	576	706	958	1,251	1,539	1,804	1,624	1,279	984	787	680	726
Above Normal (16%)	488	622	932	1,213	1,440	1,660	1,447	1,046	672	477	442	520
Below Normal (13%)	541	628	923	1,157	1,335	1,496	1,305	928	524	476	414	463
Dry (24%)	464	572	856	1,139	1,327	1,481	1,324	1,002	691	655	412	418
Critical (15%)	429	505	698	994	1,166	1,216	1,103	875	600	428	284	270

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	-341	-454	-423	-434	-39	0	-218	-534	-522	-395	-292	-312
20%	-285	-304	-407	-483	-381	-118	-312	-595	-548	-334	-199	-235
30%	-254	-331	-366	-503	-440	-215	-430	-568	-601	-372	-186	-138
40%	-271	-356	-278	-447	-499	-316	-530	-636	-634	-412	-199	-197
50%	-229	-300	-272	-478	-539	-425	-607	-674	-613	-398	-214	-163
60%	-170	-240	-320	-475	-592	-549	-651	-724	-627	-448	-219	-130
70%	-147	-236	-266	-491	-631	-589	-677	-716	-686	-452	-261	-133
80%	-90	-208	-269	-478	-609	-593	-714	-801	-719	-504	-302	-171
90%	-76	-104	-204	-416	-576	-674	-815	-749	-710	-483	-282	-183
Long Term												
Full Simulation Period[b]	-202	-275	-294	-418	-442	-366	-506	-628	-592	-388	-222	-171
Water Year Types[c]												
Wet (32%)	-214	-311	-407	-498	-426	-229	-408	-573	-503	-380	-210	-199
Above Normal (16%)	-170	-261	-281	-458	-473	-342	-548	-671	-591	-385	-170	-111
Below Normal (13%)	-313	-435	-411	-584	-572	-483	-603	-699	-727	-489	-221	-128
Dry (24%)	-153	-192	-141	-289	-402	-444	-546	-663	-650	-352	-249	-178
Critical (15%)	-193	-204	-212	-263	-390	-448	-520	-577	-569	-379	-261	-202

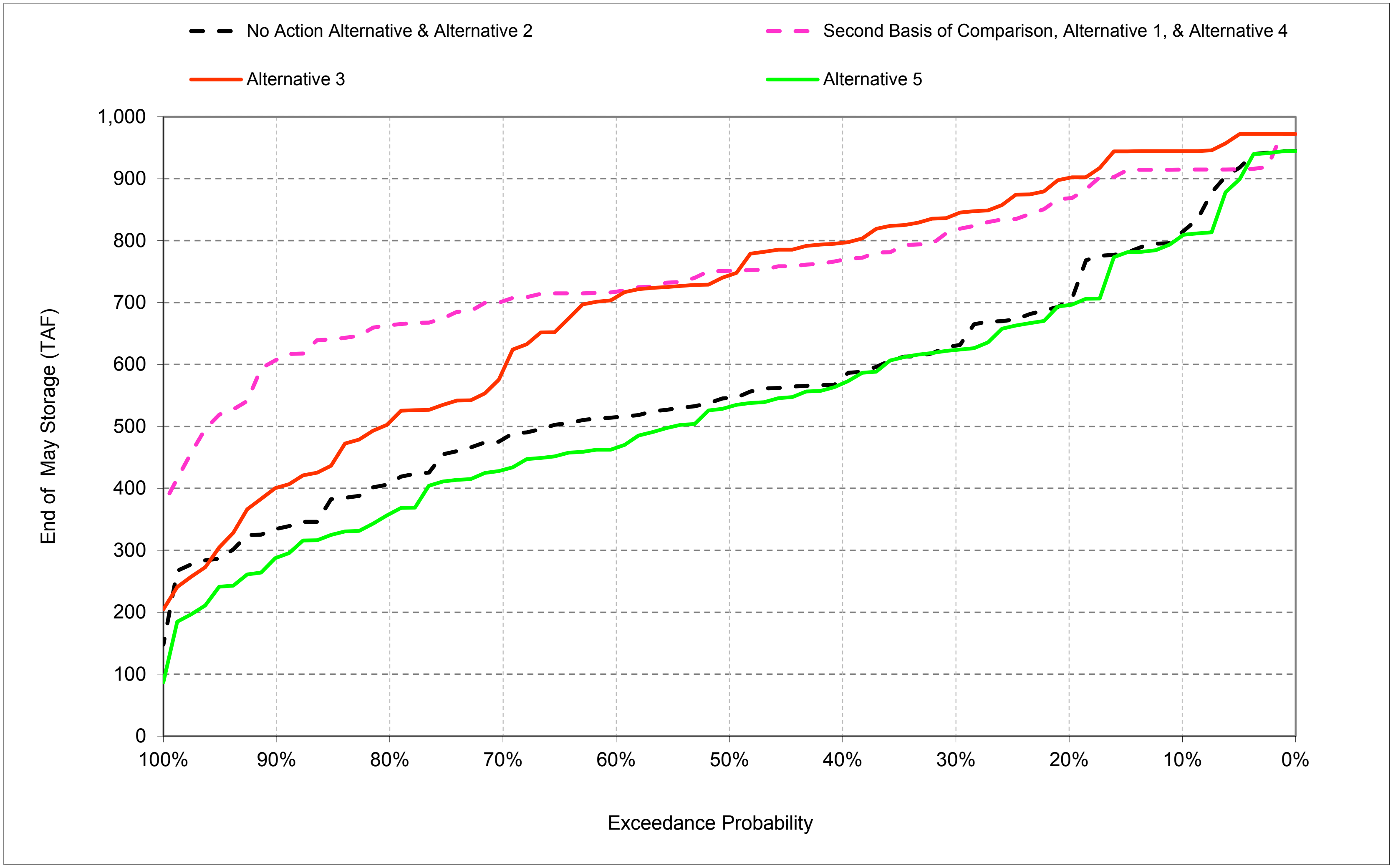
a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

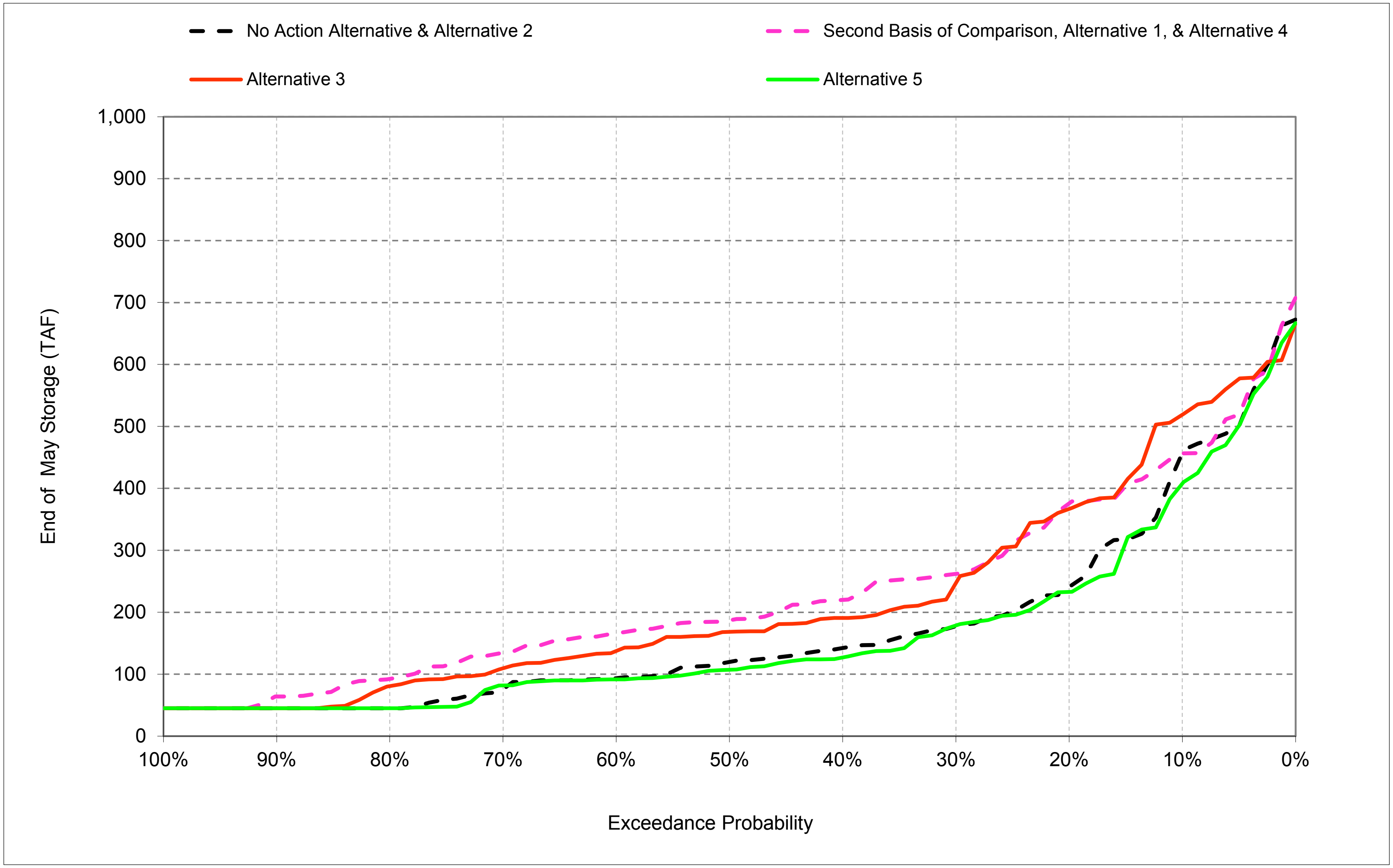
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-5-2-1. San Luis Reservoir (CVP), End of May Storage



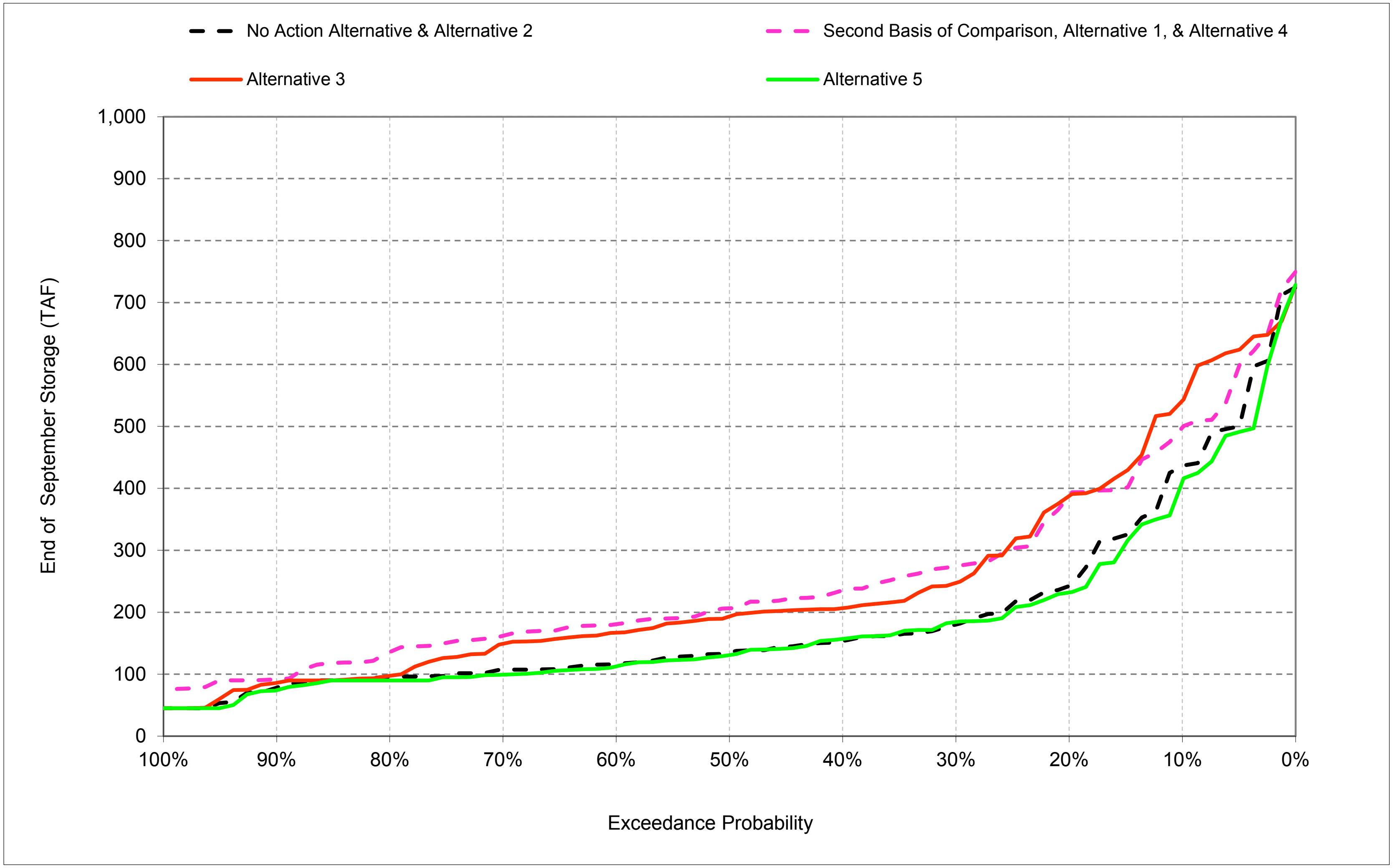
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-5-2-2. San Luis Reservoir (CVP), End of August Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-5-2-3. San Luis Reservoir (CVP), End of September Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-2-1. San Luis Reservoir (CVP), End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	408	488	706	888	972	972	921	814	690	505	457	436
20%	278	373	573	741	904	972	870	703	603	403	241	242
30%	233	367	553	684	798	930	830	630	464	303	178	180
40%	201	367	544	660	762	861	768	579	387	283	142	154
50%	183	350	512	622	728	808	707	546	365	231	120	135
60%	175	324	493	599	666	758	681	515	337	170	93	116
70%	160	283	454	575	610	704	626	479	286	135	76	107
80%	136	244	386	526	561	615	552	408	229	99	45	96
90%	109	172	300	428	515	545	487	335	161	45	45	78
Long Term												
Full Simulation Period[b]	232	347	510	631	717	783	710	566	396	258	173	191
Water Year Types[c]												
Wet (32%)	232	354	522	652	777	886	812	662	516	311	196	209
Above Normal (16%)	218	365	535	646	739	828	728	547	366	165	111	127
Below Normal (13%)	234	350	526	634	694	745	658	492	296	216	163	203
Dry (24%)	226	329	495	623	688	734	675	545	358	282	173	193
Critical (15%)	258	339	465	583	633	627	577	481	325	239	197	209

Alternative 1

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	519	632	834	972	972	972	972	915	727	577	456	498
20%	394	529	719	958	972	972	972	868	681	507	376	388
30%	326	473	657	847	972	972	972	817	599	428	262	274
40%	292	426	607	800	964	972	972	769	542	381	220	236
50%	247	402	567	758	926	972	972	751	520	321	187	206
60%	213	355	534	715	875	972	922	717	486	256	166	181
70%	188	330	518	684	825	935	883	702	449	222	134	162
80%	168	294	474	646	777	870	841	663	420	198	93	136
90%	119	247	374	547	637	775	751	608	352	158	64	92
Long Term												
Full Simulation Period[b]	288	420	591	760	865	916	896	748	533	343	230	254
Water Year Types[c]												
Wet (32%)	273	422	609	788	916	967	966	823	589	358	228	260
Above Normal (16%)	280	421	595	773	903	953	953	760	510	227	117	166
Below Normal (13%)	296	448	628	801	876	920	885	708	467	294	210	232
Dry (24%)	293	412	568	736	827	896	857	715	521	401	256	268
Critical (15%)	316	406	552	688	770	792	760	664	517	385	332	335

Alternative 1 minus No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	112	144	128	84	0	0	51	101	38	72	-2	62
20%	116	155	147	217	68	0	102	165	78	104	135	146
30%	93	106	104	163	174	42	142	186	135	125	84	94
40%	91	59	63	140	202	111	204	190	156	98	78	82
50%	63	52	55	136	198	164	265	205	156	91	67	71
60%	38	31	41	117	209	214	241	202	149	87	73	64
70%	27	47	64	109	215	232	257	223	162	88	58	55
80%	32	50	88	120	216	254	288	255	191	99	48	40
90%	10	75	74	119	122	230	264	273	192	113	19	13
Long Term												
Full Simulation Period[b]	56	73	82	129	148	133	186	182	137	85	58	63
Water Year Types[c]												
Wet (32%)	41	68	87	136	138	81	154	160	73	47	32	50
Above Normal (16%)	62	56	60	127	164	125	225	213	144	62	6	39
Below Normal (13%)	62	97	103	167	182	175	227	216	171	78	47	29
Dry (24%)	67	83	73	113	139	162	182	170	163	119	83	75
Critical (15%)	58	67	87	105	137	165	183	183	192	146	135	126

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-2-2. San Luis Reservoir (CVP), End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	408	488	706	888	972	972	921	814	690	505	457	436
20%	278	373	573	741	904	972	870	703	603	403	241	242
30%	233	367	553	684	798	930	830	630	464	303	178	180
40%	201	367	544	660	762	861	768	579	387	283	142	154
50%	183	350	512	622	728	808	707	546	365	231	120	135
60%	175	324	493	599	666	758	681	515	337	170	93	116
70%	160	283	454	575	610	704	626	479	286	135	76	107
80%	136	244	386	526	561	615	552	408	229	99	45	96
90%	109	172	300	428	515	545	487	335	161	45	45	78
Long Term												
Full Simulation Period[b]	232	347	510	631	717	783	710	566	396	258	173	191
Water Year Types[c]												
Wet (32%)	232	354	522	652	777	886	812	662	516	311	196	209
Above Normal (16%)	218	365	535	646	739	828	728	547	366	165	111	127
Below Normal (13%)	234	350	526	634	694	745	658	492	296	216	163	203
Dry (24%)	226	329	495	623	688	734	675	545	358	282	173	193
Critical (15%)	258	339	465	583	633	627	577	481	325	239	197	209

Alternative 3

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	601	699	886	972	972	972	972	945	842	611	519	541
20%	439	593	771	870	972	972	972	901	715	543	367	388
30%	298	447	652	784	913	972	954	842	661	412	247	247
40%	276	424	589	733	849	960	935	796	601	358	191	207
50%	252	377	552	680	805	903	881	744	529	320	169	193
60%	220	343	519	631	719	841	821	709	490	254	138	167
70%	180	306	502	608	661	766	748	590	401	206	110	149
80%	147	290	446	569	620	676	632	507	304	144	81	97
90%	97	193	341	452	545	543	489	401	237	89	45	86
Long Term												
Full Simulation Period[b]	292	422	583	691	768	823	806	704	525	332	219	245
Water Year Types[c]												
Wet (32%)	308	454	627	747	871	944	943	861	695	434	277	305
Above Normal (16%)	264	399	553	639	724	831	825	717	521	247	148	182
Below Normal (13%)	330	477	653	752	799	837	790	648	429	257	165	218
Dry (24%)	286	407	565	679	728	772	748	640	461	352	231	246
Critical (15%)	265	353	487	594	634	626	596	505	356	237	198	204

Alternative 3 minus No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	193	210	180	84	0	0	51	131	152	106	62	105
20%	161	220	199	129	68	0	102	198	112	141	126	145
30%	66	80	100	101	115	42	124	212	197	109	70	67
40%	74	58	45	74	86	99	166	217	214	76	49	53
50%	69	27	39	59	77	94	174	198	164	89	49	58
60%	45	19	26	32	53	84	140	194	153	84	44	50
70%	20	23	48	33	52	63	122	111	115	71	34	42
80%	11	46	60	44	59	61	80	99	75	45	36	2
90%	-12	22	42	24	31	-2	2	66	76	44	0	8
Long Term												
Full Simulation Period[b]	60	75	74	60	51	40	95	138	129	74	46	53
Water Year Types[c]												
Wet (32%)	76	101	106	95	94	57	132	199	179	123	81	96
Above Normal (16%)	46	34	18	-7	-15	3	97	170	155	82	37	55
Below Normal (13%)	96	126	127	118	106	91	132	156	133	41	3	15
Dry (24%)	60	78	71	56	40	38	73	95	102	70	58	53
Critical (15%)	7	14	22	12	1	-1	19	24	31	-3	1	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-2-3. San Luis Reservoir (CVP), End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	408	488	706	888	972	972	921	814	690	505	457	436
20%	278	373	573	741	904	972	870	703	603	403	241	242
30%	233	367	553	684	798	930	830	630	464	303	178	180
40%	201	367	544	660	762	861	768	579	387	283	142	154
50%	183	350	512	622	728	808	707	546	365	231	120	135
60%	175	324	493	599	666	758	681	515	337	170	93	116
70%	160	283	454	575	610	704	626	479	286	135	76	107
80%	136	244	386	526	561	615	552	408	229	99	45	96
90%	109	172	300	428	515	545	487	335	161	45	45	78
Long Term												
Full Simulation Period[b]	232	347	510	631	717	783	710	566	396	258	173	191
Water Year Types[c]												
Wet (32%)	232	354	522	652	777	886	812	662	516	311	196	209
Above Normal (16%)	218	365	535	646	739	828	728	547	366	165	111	127
Below Normal (13%)	234	350	526	634	694	745	658	492	296	216	163	203
Dry (24%)	226	329	495	623	688	734	675	545	358	282	173	193
Critical (15%)	258	339	465	583	633	627	577	481	325	239	197	209

Alternative 5

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	367	491	703	875	972	972	921	808	686	505	408	410
20%	271	367	570	721	859	972	861	696	552	398	233	232
30%	218	367	550	689	794	925	827	624	449	287	179	184
40%	191	359	539	644	764	851	751	569	383	245	127	157
50%	183	344	512	621	715	809	712	532	351	199	107	131
60%	170	307	489	592	664	758	651	466	286	154	92	113
70%	157	275	423	550	603	701	628	430	243	122	82	99
80%	135	224	375	474	553	617	526	359	171	79	45	90
90%	107	165	293	422	503	526	449	288	83	45	45	74
Long Term												
Full Simulation Period[b]	223	337	500	624	712	778	694	535	371	241	165	183
Water Year Types[c]												
Wet (32%)	228	356	525	657	781	891	819	670	525	321	205	213
Above Normal (16%)	213	346	517	634	728	818	720	541	366	168	112	126
Below Normal (13%)	226	342	516	625	695	747	655	478	289	217	159	203
Dry (24%)	215	314	481	609	675	721	634	470	293	235	150	176
Critical (15%)	236	318	442	566	620	613	531	398	250	179	164	175

Alternative 5 minus No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-41	3	-3	-13	0	0	0	-6	-3	0	-49	-25
20%	-7	-7	-2	-20	-45	0	-9	-8	-51	-4	-8	-10
30%	-15	0	-3	5	-5	-4	-3	-7	-15	-16	1	4
40%	-10	-8	-4	-15	1	-10	-17	-10	-4	-38	-15	4
50%	0	-5	0	-1	-13	1	4	-14	-14	-31	-13	-4
60%	-5	-17	-4	-7	-2	1	-30	-49	-51	-16	-2	-4
70%	-3	-9	-30	-25	-6	-3	3	-49	-43	-13	6	-8
80%	-1	-20	-11	-51	-8	1	-26	-50	-58	-20	0	-6
90%	-2	-6	-6	-6	-12	-19	-38	-46	-77	0	0	-4
Long Term												
Full Simulation Period[b]	-9	-10	-10	-7	-6	-5	-16	-31	-25	-17	-8	-8
Water Year Types[c]												
Wet (32%)	-4	2	3	5	4	5	7	8	9	10	9	4
Above Normal (16%)	-5	-19	-19	-12	-11	-10	-8	-6	0	3	1	-1
Below Normal (13%)	-8	-8	-10	-9	1	2	-3	-14	-7	1	-4	-1
Dry (24%)	-11	-15	-13	-14	-13	-13	-41	-75	-65	-46	-23	-17
Critical (15%)	-22	-21	-24	-17	-13	-14	-46	-82	-75	-61	-33	-34

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-2-4. San Luis Reservoir (CVP), End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	519	632	834	972	972	972	972	915	727	577	456	498
20%	394	529	719	958	972	972	972	868	681	507	376	388
30%	326	473	657	847	972	972	972	817	599	428	262	274
40%	292	426	607	800	964	972	972	769	542	381	220	236
50%	247	402	567	758	926	972	972	751	520	321	187	206
60%	213	355	534	715	875	972	922	717	486	256	166	181
70%	188	330	518	684	825	935	883	702	449	222	134	162
80%	168	294	474	646	777	870	841	663	420	198	93	136
90%	119	247	374	547	637	775	751	608	352	158	64	92
Long Term												
Full Simulation Period[b]	288	420	591	760	865	916	896	748	533	343	230	254
Water Year Types[c]												
Wet (32%)	273	422	609	788	916	967	966	823	589	358	228	260
Above Normal (16%)	280	421	595	773	903	953	953	760	510	227	117	166
Below Normal (13%)	296	448	628	801	876	920	885	708	467	294	210	232
Dry (24%)	293	412	568	736	827	896	857	715	521	401	256	268
Critical (15%)	316	406	552	688	770	792	760	664	517	385	332	335

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	408	488	706	888	972	972	921	814	690	505	457	436
20%	278	373	573	741	904	972	870	703	603	403	241	242
30%	233	367	553	684	798	930	830	630	464	303	178	180
40%	201	367	544	660	762	861	768	579	387	283	142	154
50%	183	350	512	622	728	808	707	546	365	231	120	135
60%	175	324	493	599	666	758	681	515	337	170	93	116
70%	160	283	454	575	610	704	626	479	286	135	76	107
80%	136	244	386	526	561	615	552	408	229	99	45	96
90%	109	172	300	428	515	545	487	335	161	45	45	78
Long Term												
Full Simulation Period[b]	232	347	510	631	717	783	710	566	396	258	173	191
Water Year Types[c]												
Wet (32%)	232	354	522	652	777	886	812	662	516	311	196	209
Above Normal (16%)	218	365	535	646	739	828	728	547	366	165	111	127
Below Normal (13%)	234	350	526	634	694	745	658	492	296	216	163	203
Dry (24%)	226	329	495	623	688	734	675	545	358	282	173	193
Critical (15%)	258	339	465	583	633	627	577	481	325	239	197	209

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-112	-144	-128	-84	0	0	-51	-101	-38	-72	2	-62
20%	-116	-155	-147	-217	-68	0	-102	-165	-78	-104	-135	-146
30%	-93	-106	-104	-163	-174	-42	-142	-186	-135	-125	-84	-94
40%	-91	-59	-63	-140	-202	-111	-204	-190	-156	-98	-78	-82
50%	-63	-52	-55	-136	-198	-164	-265	-205	-156	-91	-67	-71
60%	-38	-31	-41	-117	-209	-214	-241	-202	-149	-87	-73	-64
70%	-27	-47	-64	-109	-215	-232	-257	-223	-162	-88	-58	-55
80%	-32	-50	-88	-120	-216	-254	-288	-255	-191	-99	-48	-40
90%	-10	-75	-74	-119	-122	-230	-264	-273	-192	-113	-19	-13
Long Term												
Full Simulation Period[b]	-56	-73	-82	-129	-148	-133	-186	-182	-137	-85	-58	-63
Water Year Types[c]												
Wet (32%)	-41	-68	-87	-136	-138	-81	-154	-160	-73	-47	-32	-50
Above Normal (16%)	-62	-56	-60	-127	-164	-125	-225	-213	-144	-62	-6	-39
Below Normal (13%)	-62	-97	-103	-167	-182	-175	-227	-216	-171	-78	-47	-29
Dry (24%)	-67	-83	-73	-113	-139	-162	-182	-170	-163	-119	-83	-75
Critical (15%)	-58	-67	-87	-105	-137	-165	-183	-183	-192	-146	-135	-126

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-2-5. San Luis Reservoir (CVP), End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	519	632	834	972	972	972	972	915	727	577	456	498
20%	394	529	719	958	972	972	972	868	681	507	376	388
30%	326	473	657	847	972	972	972	817	599	428	262	274
40%	292	426	607	800	964	972	972	769	542	381	220	236
50%	247	402	567	758	926	972	972	751	520	321	187	206
60%	213	355	534	715	875	972	922	717	486	256	166	181
70%	188	330	518	684	825	935	883	702	449	222	134	162
80%	168	294	474	646	777	870	841	663	420	198	93	136
90%	119	247	374	547	637	775	751	608	352	158	64	92
Long Term												
Full Simulation Period[b]	288	420	591	760	865	916	896	748	533	343	230	254
Water Year Types[c]												
Wet (32%)	273	422	609	788	916	967	966	823	589	358	228	260
Above Normal (16%)	280	421	595	773	903	953	953	760	510	227	117	166
Below Normal (13%)	296	448	628	801	876	920	885	708	467	294	210	232
Dry (24%)	293	412	568	736	827	896	857	715	521	401	256	268
Critical (15%)	316	406	552	688	770	792	760	664	517	385	332	335

Alternative 3

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	601	699	886	972	972	972	972	945	842	611	519	541
20%	439	593	771	870	972	972	972	901	715	543	367	388
30%	298	447	652	784	913	972	954	842	661	412	247	247
40%	276	424	589	733	849	960	935	796	601	358	191	207
50%	252	377	552	680	805	903	881	744	529	320	169	193
60%	220	343	519	631	719	841	821	709	490	254	138	167
70%	180	306	502	608	661	766	748	590	401	206	110	149
80%	147	290	446	569	620	676	632	507	304	144	81	97
90%	97	193	341	452	545	543	489	401	237	89	45	86
Long Term												
Full Simulation Period[b]	292	422	583	691	768	823	806	704	525	332	219	245
Water Year Types[c]												
Wet (32%)	308	454	627	747	871	944	943	861	695	434	277	305
Above Normal (16%)	264	399	553	639	724	831	825	717	521	247	148	182
Below Normal (13%)	330	477	653	752	799	837	790	648	429	257	165	218
Dry (24%)	286	407	565	679	728	772	748	640	461	352	231	246
Critical (15%)	265	353	487	594	634	626	596	505	356	237	198	204

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	81	67	52	0	0	0	0	30	114	34	63	43
20%	45	65	52	-88	0	0	0	33	34	36	-9	0
30%	-28	-26	-5	-63	-59	0	-18	26	62	-16	-15	-27
40%	-16	-1	-18	-66	-115	-12	-37	27	58	-23	-29	-29
50%	5	-24	-15	-78	-121	-69	-91	-7	9	-1	-19	-13
60%	8	-13	-15	-84	-156	-131	-101	-9	4	-3	-29	-14
70%	-7	-24	-16	-76	-163	-169	-135	-112	-48	-17	-25	-13
80%	-21	-4	-28	-77	-157	-193	-208	-156	-116	-54	-12	-38
90%	-22	-53	-32	-95	-92	-231	-262	-207	-116	-70	-19	-6
Long Term												
Full Simulation Period[b]	4	2	-8	-69	-97	-93	-91	-44	-8	-11	-11	-9
Water Year Types[c]												
Wet (32%)	35	33	18	-42	-45	-24	-22	39	106	76	48	46
Above Normal (16%)	-16	-22	-42	-134	-179	-122	-128	-43	11	21	31	16
Below Normal (13%)	33	29	25	-49	-77	-83	-95	-60	-38	-37	-44	-14
Dry (24%)	-7	-5	-2	-57	-99	-124	-109	-74	-61	-49	-25	-22
Critical (15%)	-52	-53	-65	-94	-135	-166	-164	-159	-161	-148	-134	-131

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-2-6. San Luis Reservoir (CVP), End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	519	632	834	972	972	972	972	915	727	577	456	498
20%	394	529	719	958	972	972	972	868	681	507	376	388
30%	326	473	657	847	972	972	972	817	599	428	262	274
40%	292	426	607	800	964	972	972	769	542	381	220	236
50%	247	402	567	758	926	972	972	751	520	321	187	206
60%	213	355	534	715	875	972	922	717	486	256	166	181
70%	188	330	518	684	825	935	883	702	449	222	134	162
80%	168	294	474	646	777	870	841	663	420	198	93	136
90%	119	247	374	547	637	775	751	608	352	158	64	92
Long Term												
Full Simulation Period[b]	288	420	591	760	865	916	896	748	533	343	230	254
Water Year Types[c]												
Wet (32%)	273	422	609	788	916	967	966	823	589	358	228	260
Above Normal (16%)	280	421	595	773	903	953	953	760	510	227	117	166
Below Normal (13%)	296	448	628	801	876	920	885	708	467	294	210	232
Dry (24%)	293	412	568	736	827	896	857	715	521	401	256	268
Critical (15%)	316	406	552	688	770	792	760	664	517	385	332	335

Alternative 5

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	367	491	703	875	972	972	921	808	686	505	408	410
20%	271	367	570	721	859	972	861	696	552	398	233	232
30%	218	367	550	689	794	925	827	624	449	287	179	184
40%	191	359	539	644	764	851	751	569	383	245	127	157
50%	183	344	512	621	715	809	712	532	351	199	107	131
60%	170	307	489	592	664	758	651	466	286	154	92	113
70%	157	275	423	550	603	701	628	430	243	122	82	99
80%	135	224	375	474	553	617	526	359	171	79	45	90
90%	107	165	293	422	503	526	449	288	83	45	45	74
Long Term												
Full Simulation Period[b]	223	337	500	624	712	778	694	535	371	241	165	183
Water Year Types[c]												
Wet (32%)	228	356	525	657	781	891	819	670	525	321	205	213
Above Normal (16%)	213	346	517	634	728	818	720	541	366	168	112	126
Below Normal (13%)	226	342	516	625	695	747	655	478	289	217	159	203
Dry (24%)	215	314	481	609	675	721	634	470	293	235	150	176
Critical (15%)	236	318	442	566	620	613	531	398	250	179	164	175

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-153	-141	-131	-97	0	0	-51	-107	-41	-71	-48	-88
20%	-122	-162	-149	-237	-113	0	-111	-173	-129	-109	-143	-156
30%	-108	-106	-107	-158	-178	-47	-145	-193	-150	-141	-83	-90
40%	-101	-67	-68	-155	-200	-121	-221	-200	-160	-136	-93	-79
50%	-63	-57	-55	-137	-211	-163	-260	-219	-169	-122	-80	-75
60%	-42	-48	-45	-123	-212	-214	-271	-252	-200	-103	-75	-68
70%	-30	-56	-95	-134	-222	-234	-254	-272	-205	-100	-53	-63
80%	-33	-70	-99	-171	-224	-253	-314	-305	-249	-119	-48	-46
90%	-12	-81	-80	-125	-134	-249	-302	-319	-269	-113	-19	-17
Long Term												
Full Simulation Period[b]	-65	-83	-91	-136	-154	-138	-202	-212	-162	-102	-66	-71
Water Year Types[c]												
Wet (32%)	-44	-66	-84	-132	-134	-76	-147	-152	-64	-38	-24	-47
Above Normal (16%)	-67	-74	-79	-139	-175	-135	-233	-219	-144	-59	-5	-40
Below Normal (13%)	-70	-105	-112	-176	-181	-173	-230	-230	-178	-77	-51	-29
Dry (24%)	-79	-98	-86	-127	-152	-175	-223	-244	-228	-165	-106	-92
Critical (15%)	-80	-88	-110	-122	-150	-179	-229	-265	-267	-206	-168	-160

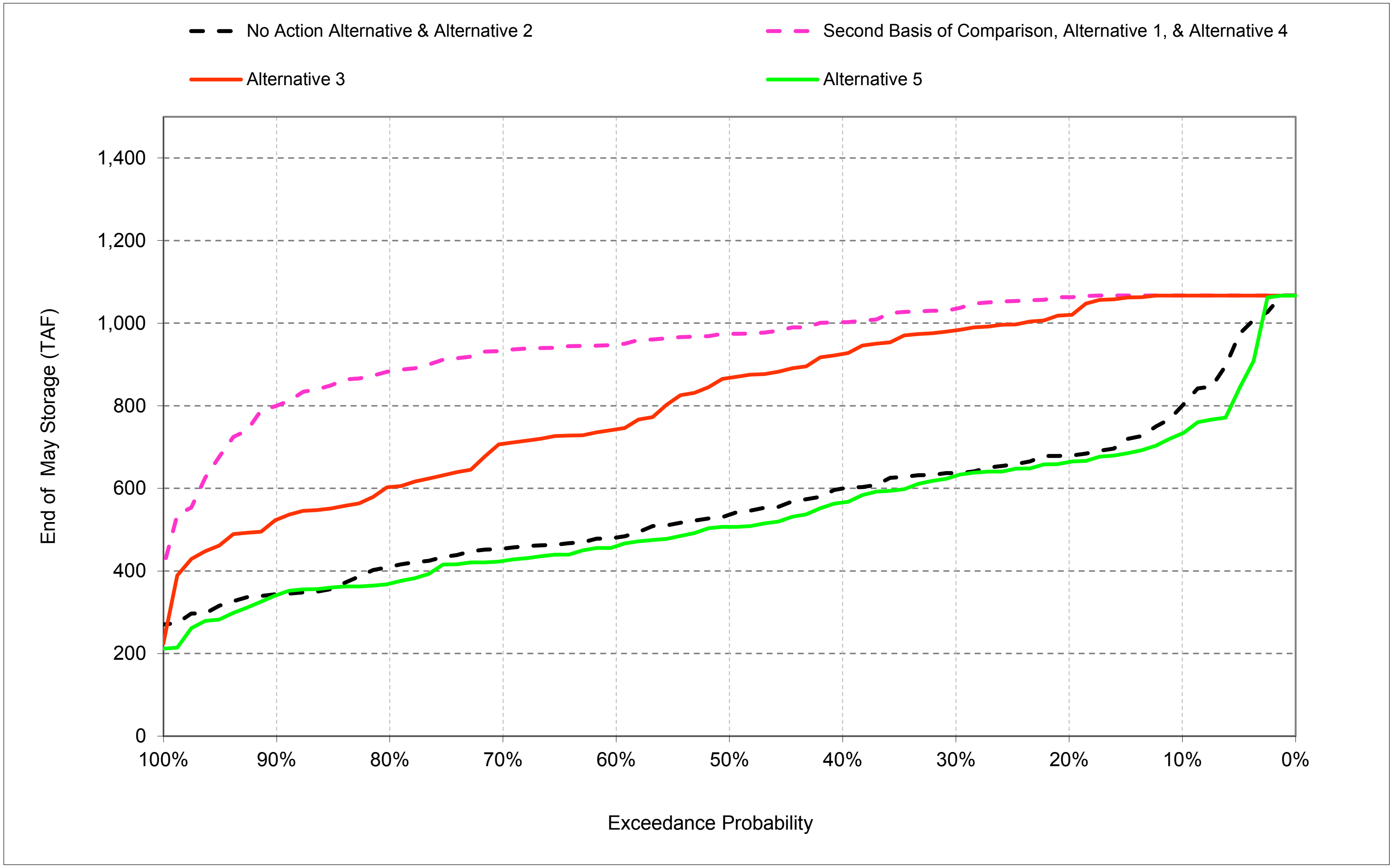
a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

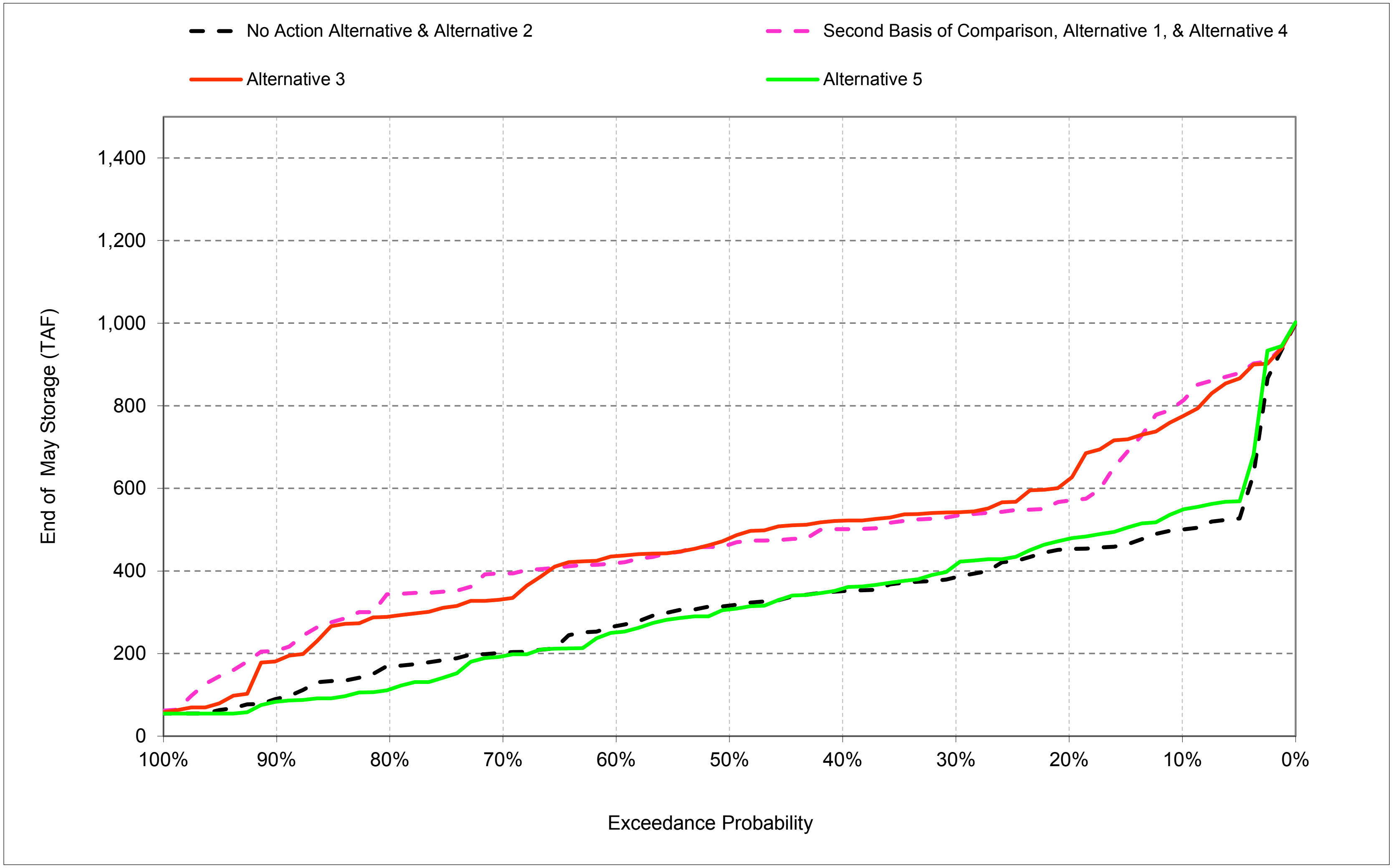
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-5-3-1. San Luis Reservoir (SWP), End of May Storage



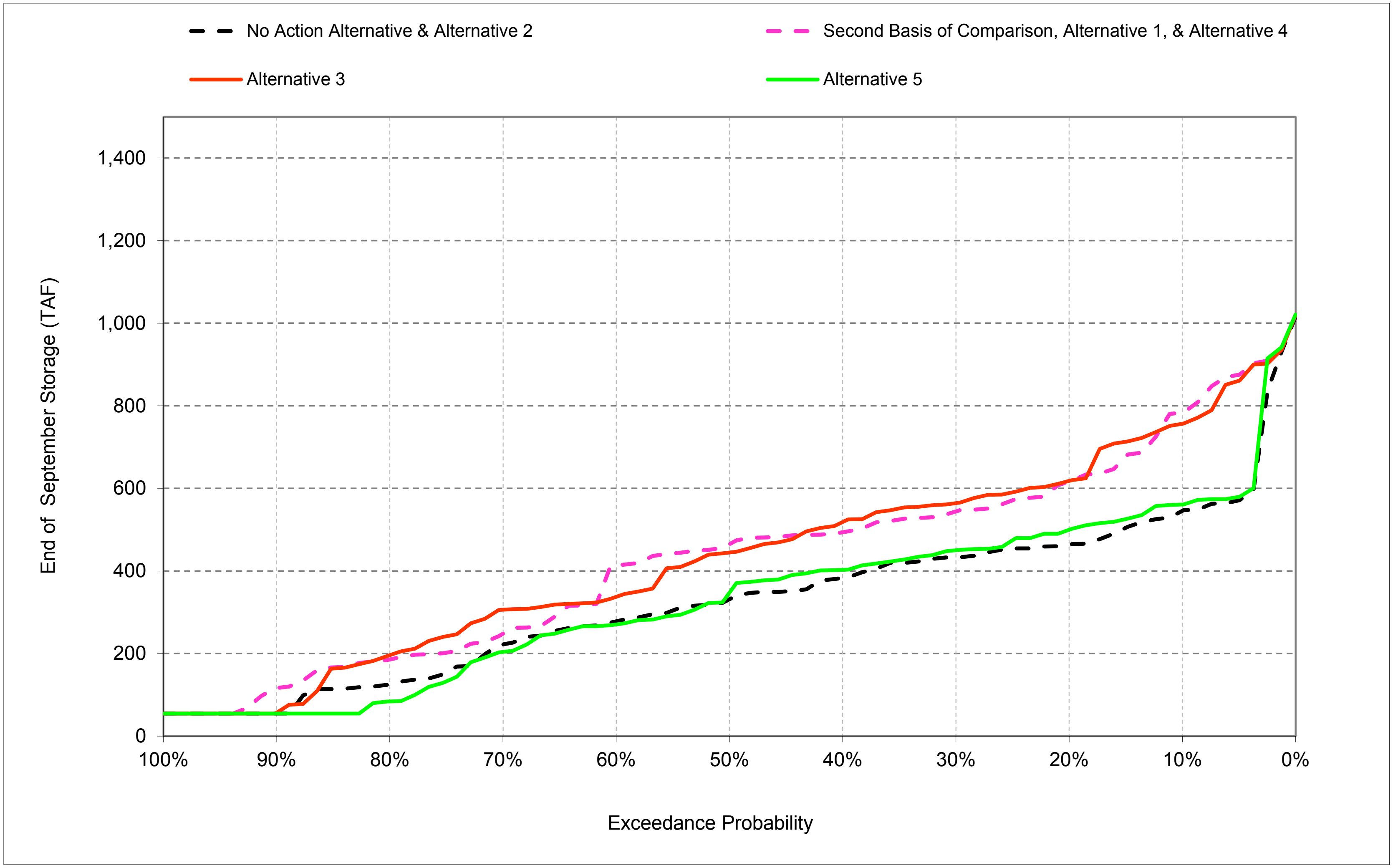
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-5-3-2. San Luis Reservoir (SWP), End of August Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-5-3-3. San Luis Reservoir (SWP), End of September Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-3-1. San Luis Reservoir (SWP), End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	532	574	700	925	1,067	1,067	964	800	613	595	501	545
20%	414	443	605	795	878	1,025	916	679	528	495	453	464
30%	339	357	524	656	801	942	821	637	455	450	385	433
40%	304	327	449	581	719	894	777	600	405	402	351	383
50%	254	242	362	495	657	804	749	536	361	351	316	332
60%	205	164	243	431	609	755	667	481	321	317	266	278
70%	166	88	200	369	511	664	590	454	283	298	202	222
80%	75	55	153	303	435	556	530	410	250	229	170	126
90%	55	55	59	243	380	502	458	344	212	173	91	55
Long Term												
Full Simulation Period[b]	278	281	381	540	674	792	721	562	397	384	318	330
Water Year Types[c]												
Wet (32%)	323	327	410	584	749	901	787	589	430	430	432	470
Above Normal (16%)	272	284	421	577	702	832	716	501	300	301	322	387
Below Normal (13%)	291	274	381	507	620	728	653	475	259	284	263	264
Dry (24%)	250	261	373	527	650	760	738	623	482	481	303	277
Critical (15%)	220	218	286	457	571	625	615	548	415	305	145	114

Alternative 1

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	837	847	998	1,067	1,067	1,067	1,067	1,067	1,001	925	811	783
20%	623	695	894	1,067	1,067	1,067	1,067	1,063	911	769	571	617
30%	552	660	803	1,067	1,067	1,067	1,067	1,035	886	713	534	544
40%	482	579	680	977	1,067	1,067	1,067	1,002	849	681	501	494
50%	452	474	622	882	1,067	1,067	1,067	974	826	651	464	465
60%	352	406	487	800	1,066	1,067	1,067	948	779	628	419	414
70%	212	268	439	664	953	1,067	1,027	934	739	604	394	248
80%	133	166	287	585	850	1,029	994	883	702	539	344	186
90%	55	77	130	486	740	941	921	800	643	474	207	117
Long Term												
Full Simulation Period[b]	422	475	589	825	966	1,025	1,014	949	805	657	475	433
Water Year Types[c]												
Wet (32%)	517	595	756	960	1,049	1,066	1,066	1,030	898	809	661	665
Above Normal (16%)	377	462	618	898	1,010	1,049	1,043	957	753	635	495	465
Below Normal (13%)	558	616	705	941	1,032	1,060	1,023	920	784	671	426	359
Dry (24%)	324	352	430	692	901	1,029	1,012	951	820	606	404	329
Critical (15%)	306	304	358	569	786	872	863	787	651	422	213	137

Alternative 1 minus No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	305	273	297	142	0	0	103	267	387	330	310	238
20%	209	251	289	272	189	42	151	384	382	274	118	153
30%	213	303	279	411	266	125	246	398	431	263	149	111
40%	178	252	231	395	348	173	290	402	444	279	150	110
50%	199	232	260	388	410	263	318	438	466	300	148	133
60%	147	242	245	369	457	312	400	467	458	310	153	136
70%	46	180	239	295	442	403	437	479	456	306	192	26
80%	58	111	134	283	415	474	464	473	452	310	174	60
90%	0	22	71	243	360	439	464	457	431	301	117	62
Long Term												
Full Simulation Period[b]	144	194	209	285	292	233	293	387	408	273	156	103
Water Year Types[c]												
Wet (32%)	194	268	346	376	300	164	279	441	468	379	229	195
Above Normal (16%)	106	178	196	321	308	216	327	456	454	334	173	78
Below Normal (13%)	267	342	325	434	412	332	369	444	525	387	162	95
Dry (24%)	74	91	57	164	250	269	274	328	338	125	101	52
Critical (15%)	85	86	71	112	216	247	248	240	237	118	67	23

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-3-2. San Luis Reservoir (SWP), End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	532	574	700	925	1,067	1,067	964	800	613	595	501	545
20%	414	443	605	795	878	1,025	916	679	528	495	453	464
30%	339	357	524	656	801	942	821	637	455	450	385	433
40%	304	327	449	581	719	894	777	600	405	402	351	383
50%	254	242	362	495	657	804	749	536	361	351	316	332
60%	205	164	243	431	609	755	667	481	321	317	266	278
70%	166	88	200	369	511	664	590	454	283	298	202	222
80%	75	55	153	303	435	556	530	410	250	229	170	126
90%	55	55	59	243	380	502	458	344	212	173	91	55
Long Term												
Full Simulation Period[b]	278	281	381	540	674	792	721	562	397	384	318	330
Water Year Types[c]												
Wet (32%)	323	327	410	584	749	901	787	589	430	430	432	470
Above Normal (16%)	272	284	421	577	702	832	716	501	300	301	322	387
Below Normal (13%)	291	274	381	507	620	728	653	475	259	284	263	264
Dry (24%)	250	261	373	527	650	760	738	623	482	481	303	277
Critical (15%)	220	218	286	457	571	625	615	548	415	305	145	114

Alternative 3

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	791	864	912	1,049	1,067	1,067	1,067	1,067	951	856	774	756
20%	663	730	806	968	1,067	1,067	1,067	1,020	838	752	622	618
30%	552	618	701	854	1,002	1,067	1,067	983	783	706	542	564
40%	457	512	628	801	922	1,055	1,032	925	712	642	522	519
50%	375	451	582	720	835	937	973	867	659	604	479	445
60%	302	411	477	619	774	899	876	743	594	549	436	337
70%	226	286	399	540	671	820	802	708	545	489	331	306
80%	119	181	239	408	598	695	726	603	481	427	290	196
90%	55	57	143	341	415	534	570	524	406	320	182	57
Long Term												
Full Simulation Period[b]	410	467	547	689	805	885	890	813	664	598	471	434
Water Year Types[c]												
Wet (32%)	502	578	649	809	939	1,014	1,032	989	844	794	684	674
Above Normal (16%)	355	444	556	703	847	925	938	857	633	582	526	521
Below Normal (13%)	504	566	652	737	823	899	860	690	470	480	420	343
Dry (24%)	348	396	487	624	727	836	845	773	667	574	359	289
Critical (15%)	283	279	317	482	581	630	631	563	482	336	182	147

Alternative 3 minus No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	259	290	212	124	0	0	103	267	338	262	274	211
20%	248	287	201	174	189	42	151	341	310	258	169	154
30%	213	261	177	198	202	125	246	345	328	255	157	131
40%	153	186	178	220	203	161	255	325	307	240	171	135
50%	121	209	220	226	177	133	224	331	299	253	163	113
60%	97	247	235	188	165	144	208	262	273	231	169	60
70%	59	197	199	171	160	156	212	254	262	191	129	84
80%	44	126	85	106	164	139	196	193	231	198	120	70
90%	0	2	84	98	35	31	113	181	194	147	92	2
Long Term												
Full Simulation Period[b]	132	186	166	149	131	93	169	251	268	213	153	105
Water Year Types[c]												
Wet (32%)	179	251	239	225	190	112	245	400	414	364	253	204
Above Normal (16%)	84	160	135	126	145	93	222	356	334	281	204	135
Below Normal (13%)	213	293	271	230	203	171	207	214	211	196	157	79
Dry (24%)	98	136	114	96	77	76	107	151	185	93	56	12
Critical (15%)	63	62	31	25	11	5	15	16	67	31	36	33

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-3-3. San Luis Reservoir (SWP), End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	532	574	700	925	1,067	1,067	964	800	613	595	501	545
20%	414	443	605	795	878	1,025	916	679	528	495	453	464
30%	339	357	524	656	801	942	821	637	455	450	385	433
40%	304	327	449	581	719	894	777	600	405	402	351	383
50%	254	242	362	495	657	804	749	536	361	351	316	332
60%	205	164	243	431	609	755	667	481	321	317	266	278
70%	166	88	200	369	511	664	590	454	283	298	202	222
80%	75	55	153	303	435	556	530	410	250	229	170	126
90%	55	55	59	243	380	502	458	344	212	173	91	55
Long Term												
Full Simulation Period[b]	278	281	381	540	674	792	721	562	397	384	318	330
Water Year Types[c]												
Wet (32%)	323	327	410	584	749	901	787	589	430	430	432	470
Above Normal (16%)	272	284	421	577	702	832	716	501	300	301	322	387
Below Normal (13%)	291	274	381	507	620	728	653	475	259	284	263	264
Dry (24%)	250	261	373	527	650	760	738	623	482	481	303	277
Critical (15%)	220	218	286	457	571	625	615	548	415	305	145	114

Alternative 5

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	512	520	706	913	1,065	1,067	935	733	620	580	548	561
20%	431	476	577	750	867	1,013	899	664	489	492	478	500
30%	373	369	500	647	806	943	827	630	422	448	415	450
40%	334	318	463	573	724	874	764	566	381	379	358	403
50%	290	235	363	496	666	803	734	507	332	325	307	347
60%	201	194	285	432	618	750	639	460	289	296	251	271
70%	144	116	234	385	525	672	583	424	273	270	194	204
80%	66	66	176	344	446	583	552	369	233	217	113	84
90%	55	55	74	249	378	477	442	342	178	181	84	55
Long Term												
Full Simulation Period[b]	285	283	387	543	678	797	710	533	374	370	318	333
Water Year Types[c]												
Wet (32%)	347	350	433	594	758	912	805	609	459	466	475	513
Above Normal (16%)	275	276	416	579	712	842	727	505	306	309	329	394
Below Normal (13%)	315	286	407	533	641	749	649	451	235	258	255	260
Dry (24%)	249	258	375	530	652	760	690	532	398	420	262	243
Critical (15%)	193	187	256	428	546	603	572	476	350	249	120	95

Alternative 5 minus No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-21	-54	5	-12	-2	0	-29	-68	6	-15	48	15
20%	17	32	-28	-45	-11	-12	-16	-15	-39	-3	25	36
30%	34	12	-24	-9	6	1	6	-7	-33	-2	30	17
40%	30	-9	14	-9	5	-20	-12	-34	-24	-23	7	19
50%	36	-7	2	2	8	-2	-15	-29	-29	-26	-9	16
60%	-4	30	43	1	9	-5	-29	-21	-32	-21	-15	-7
70%	-23	27	34	16	14	8	-7	-30	-10	-27	-8	-18
80%	-9	10	23	42	11	27	21	-41	-18	-12	-57	-42
90%	0	0	15	6	-1	-26	-15	-2	-34	8	-7	0
Long Term												
Full Simulation Period[b]	7	2	6	3	4	5	-11	-29	-23	-14	0	3
Water Year Types[c]												
Wet (32%)	24	23	24	10	9	11	18	20	29	36	43	43
Above Normal (16%)	3	-9	-6	2	10	9	12	4	7	7	7	8
Below Normal (13%)	24	12	26	26	20	21	-4	-24	-24	-25	-8	-3
Dry (24%)	-1	-3	2	2	1	0	-48	-91	-83	-61	-41	-34
Critical (15%)	-28	-30	-30	-29	-24	-22	-44	-71	-65	-55	-26	-19

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-3-4. San Luis Reservoir (SWP), End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	837	847	998	1,067	1,067	1,067	1,067	1,067	1,001	925	811	783
20%	623	695	894	1,067	1,067	1,067	1,067	1,063	911	769	571	617
30%	552	660	803	1,067	1,067	1,067	1,067	1,035	886	713	534	544
40%	482	579	680	977	1,067	1,067	1,067	1,002	849	681	501	494
50%	452	474	622	882	1,067	1,067	1,067	974	826	651	464	465
60%	352	406	487	800	1,066	1,067	1,067	948	779	628	419	414
70%	212	268	439	664	953	1,067	1,027	934	739	604	394	248
80%	133	166	287	585	850	1,029	994	883	702	539	344	186
90%	55	77	130	486	740	941	921	800	643	474	207	117
Long Term												
Full Simulation Period[b]	422	475	589	825	966	1,025	1,014	949	805	657	475	433
Water Year Types[c]												
Wet (32%)	517	595	756	960	1,049	1,066	1,066	1,030	898	809	661	665
Above Normal (16%)	377	462	618	898	1,010	1,049	1,043	957	753	635	495	465
Below Normal (13%)	558	616	705	941	1,032	1,060	1,023	920	784	671	426	359
Dry (24%)	324	352	430	692	901	1,029	1,012	951	820	606	404	329
Critical (15%)	306	304	358	569	786	872	863	787	651	422	213	137

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	532	574	700	925	1,067	1,067	964	800	613	595	501	545
20%	414	443	605	795	878	1,025	916	679	528	495	453	464
30%	339	357	524	656	801	942	821	637	455	450	385	433
40%	304	327	449	581	719	894	777	600	405	402	351	383
50%	254	242	362	495	657	804	749	536	361	351	316	332
60%	205	164	243	431	609	755	667	481	321	317	266	278
70%	166	88	200	369	511	664	590	454	283	298	202	222
80%	75	55	153	303	435	556	530	410	250	229	170	126
90%	55	55	59	243	380	502	458	344	212	173	91	55
Long Term												
Full Simulation Period[b]	278	281	381	540	674	792	721	562	397	384	318	330
Water Year Types[c]												
Wet (32%)	323	327	410	584	749	901	787	589	430	430	432	470
Above Normal (16%)	272	284	421	577	702	832	716	501	300	301	322	387
Below Normal (13%)	291	274	381	507	620	728	653	475	259	284	263	264
Dry (24%)	250	261	373	527	650	760	738	623	482	481	303	277
Critical (15%)	220	218	286	457	571	625	615	548	415	305	145	114

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-305	-273	-297	-142	0	0	-103	-267	-387	-330	-310	-238
20%	-209	-251	-289	-272	-189	-42	-151	-384	-382	-274	-118	-153
30%	-213	-303	-279	-411	-266	-125	-246	-398	-431	-263	-149	-111
40%	-178	-252	-231	-395	-348	-173	-290	-402	-444	-279	-150	-110
50%	-199	-232	-260	-388	-410	-263	-318	-438	-466	-300	-148	-133
60%	-147	-242	-245	-369	-457	-312	-400	-467	-458	-310	-153	-136
70%	-46	-180	-239	-295	-442	-403	-437	-479	-456	-306	-192	-26
80%	-58	-111	-134	-283	-415	-474	-464	-473	-452	-310	-174	-60
90%	0	-22	-71	-243	-360	-439	-464	-457	-431	-301	-117	-62
Long Term												
Full Simulation Period[b]	-144	-194	-209	-285	-292	-233	-293	-387	-408	-273	-156	-103
Water Year Types[c]												
Wet (32%)	-194	-268	-346	-376	-300	-164	-279	-441	-468	-379	-229	-195
Above Normal (16%)	-106	-178	-196	-321	-308	-216	-327	-456	-454	-334	-173	-78
Below Normal (13%)	-267	-342	-325	-434	-412	-332	-369	-444	-525	-387	-162	-95
Dry (24%)	-74	-91	-57	-164	-250	-269	-274	-328	-338	-125	-101	-52
Critical (15%)	-85	-86	-71	-112	-216	-247	-248	-240	-237	-118	-67	-23

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-3-5. San Luis Reservoir (SWP), End of Month Storage

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	837	847	998	1,067	1,067	1,067	1,067	1,067	1,001	925	811	783
20%	623	695	894	1,067	1,067	1,067	1,067	1,063	911	769	571	617
30%	552	660	803	1,067	1,067	1,067	1,067	1,035	886	713	534	544
40%	482	579	680	977	1,067	1,067	1,067	1,002	849	681	501	494
50%	452	474	622	882	1,067	1,067	1,067	974	826	651	464	465
60%	352	406	487	800	1,066	1,067	1,067	948	779	628	419	414
70%	212	268	439	664	953	1,067	1,027	934	739	604	394	248
80%	133	166	287	585	850	1,029	994	883	702	539	344	186
90%	55	77	130	486	740	941	921	800	643	474	207	117
Long Term												
Full Simulation Period[b]	422	475	589	825	966	1,025	1,014	949	805	657	475	433
Water Year Types[c]												
Wet (32%)	517	595	756	960	1,049	1,066	1,066	1,030	898	809	661	665
Above Normal (16%)	377	462	618	898	1,010	1,049	1,043	957	753	635	495	465
Below Normal (13%)	558	616	705	941	1,032	1,060	1,023	920	784	671	426	359
Dry (24%)	324	352	430	692	901	1,029	1,012	951	820	606	404	329
Critical (15%)	306	304	358	569	786	872	863	787	651	422	213	137

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	791	864	912	1,049	1,067	1,067	1,067	1,067	951	856	774	756
20%	663	730	806	968	1,067	1,067	1,067	1,020	838	752	622	618
30%	552	618	701	854	1,002	1,067	1,067	983	783	706	542	564
40%	457	512	628	801	922	1,055	1,032	925	712	642	522	519
50%	375	451	582	720	835	937	973	867	659	604	479	445
60%	302	411	477	619	774	899	876	743	594	549	436	337
70%	226	286	399	540	671	820	802	708	545	489	331	306
80%	119	181	239	408	598	695	726	603	481	427	290	196
90%	55	57	143	341	415	534	570	524	406	320	182	57
Long Term												
Full Simulation Period[b]	410	467	547	689	805	885	890	813	664	598	471	434
Water Year Types[c]												
Wet (32%)	502	578	649	809	939	1,014	1,032	989	844	794	684	674
Above Normal (16%)	355	444	556	703	847	925	938	857	633	582	526	521
Below Normal (13%)	504	566	652	737	823	899	860	690	470	480	420	343
Dry (24%)	348	396	487	624	727	836	845	773	667	574	359	289
Critical (15%)	283	279	317	482	581	630	631	563	482	336	182	147

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	-46	17	-86	-18	0	0	0	0	-49	-68	-37	-27
20%	40	36	-88	-99	0	0	0	-43	-72	-16	51	1
30%	0	-42	-101	-213	-65	0	0	-53	-103	-8	8	20
40%	-25	-67	-53	-175	-145	-12	-35	-77	-138	-39	20	25
50%	-78	-23	-40	-162	-232	-130	-94	-107	-167	-47	15	-20
60%	-50	5	-10	-181	-292	-168	-191	-205	-185	-79	17	-76
70%	13	17	-41	-124	-282	-247	-224	-226	-193	-115	-63	58
80%	-14	15	-49	-177	-252	-335	-268	-280	-221	-112	-54	11
90%	0	-19	13	-145	-325	-408	-351	-276	-237	-154	-25	-60
Long Term												
Full Simulation Period[b]	-13	-8	-43	-135	-161	-140	-124	-136	-140	-59	-4	2
Water Year Types[c]												
Wet (32%)	-15	-17	-107	-151	-110	-52	-34	-41	-54	-15	24	9
Above Normal (16%)	-22	-18	-62	-195	-163	-124	-105	-100	-120	-52	31	56
Below Normal (13%)	-54	-49	-53	-204	-209	-160	-162	-230	-314	-191	-5	-16
Dry (24%)	24	45	57	-68	-173	-193	-167	-178	-153	-32	-45	-40
Critical (15%)	-22	-24	-41	-87	-205	-242	-233	-224	-169	-87	-31	10

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-3-6. San Luis Reservoir (SWP), End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	837	847	998	1,067	1,067	1,067	1,067	1,067	1,001	925	811	783
20%	623	695	894	1,067	1,067	1,067	1,067	1,063	911	769	571	617
30%	552	660	803	1,067	1,067	1,067	1,067	1,035	886	713	534	544
40%	482	579	680	977	1,067	1,067	1,067	1,002	849	681	501	494
50%	452	474	622	882	1,067	1,067	1,067	974	826	651	464	465
60%	352	406	487	800	1,066	1,067	1,067	948	779	628	419	414
70%	212	268	439	664	953	1,067	1,027	934	739	604	394	248
80%	133	166	287	585	850	1,029	994	883	702	539	344	186
90%	55	77	130	486	740	941	921	800	643	474	207	117
Long Term												
Full Simulation Period[b]	422	475	589	825	966	1,025	1,014	949	805	657	475	433
Water Year Types[c]												
Wet (32%)	517	595	756	960	1,049	1,066	1,066	1,030	898	809	661	665
Above Normal (16%)	377	462	618	898	1,010	1,049	1,043	957	753	635	495	465
Below Normal (13%)	558	616	705	941	1,032	1,060	1,023	920	784	671	426	359
Dry (24%)	324	352	430	692	901	1,029	1,012	951	820	606	404	329
Critical (15%)	306	304	358	569	786	872	863	787	651	422	213	137

Alternative 5

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	512	520	706	913	1,065	1,067	935	733	620	580	548	561
20%	431	476	577	750	867	1,013	899	664	489	492	478	500
30%	373	369	500	647	806	943	827	630	422	448	415	450
40%	334	318	463	573	724	874	764	566	381	379	358	403
50%	290	235	363	496	666	803	734	507	332	325	307	347
60%	201	194	285	432	618	750	639	460	289	296	251	271
70%	144	116	234	385	525	672	583	424	273	270	194	204
80%	66	66	176	344	446	583	552	369	233	217	113	84
90%	55	55	74	249	378	477	442	342	178	181	84	55
Long Term												
Full Simulation Period[b]	285	283	387	543	678	797	710	533	374	370	318	333
Water Year Types[c]												
Wet (32%)	347	350	433	594	758	912	805	609	459	466	475	513
Above Normal (16%)	275	276	416	579	712	842	727	505	306	309	329	394
Below Normal (13%)	315	286	407	533	641	749	649	451	235	258	255	260
Dry (24%)	249	258	375	530	652	760	690	532	398	420	262	243
Critical (15%)	193	187	256	428	546	603	572	476	350	249	120	95

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-325	-327	-292	-154	-2	0	-132	-334	-381	-345	-263	-223
20%	-192	-219	-317	-317	-200	-54	-168	-399	-421	-277	-93	-117
30%	-179	-291	-302	-420	-261	-124	-240	-405	-464	-265	-118	-94
40%	-148	-261	-217	-404	-343	-193	-303	-436	-468	-302	-144	-91
50%	-163	-239	-259	-386	-401	-264	-333	-467	-495	-326	-157	-117
60%	-151	-212	-202	-368	-448	-317	-428	-488	-490	-332	-168	-143
70%	-68	-152	-205	-279	-428	-395	-444	-509	-466	-333	-200	-44
80%	-67	-100	-111	-241	-404	-447	-442	-514	-469	-323	-231	-101
90%	0	-22	-56	-237	-361	-465	-479	-458	-465	-294	-124	-62
Long Term												
Full Simulation Period[b]	-137	-192	-203	-281	-288	-228	-304	-416	-431	-286	-156	-100
Water Year Types[c]												
Wet (32%)	-170	-245	-322	-366	-292	-153	-261	-421	-439	-342	-186	-152
Above Normal (16%)	-102	-187	-202	-319	-298	-207	-315	-452	-447	-326	-165	-71
Below Normal (13%)	-242	-330	-299	-408	-391	-310	-373	-469	-549	-412	-170	-98
Dry (24%)	-75	-94	-55	-162	-249	-269	-323	-419	-422	-186	-142	-86
Critical (15%)	-113	-116	-101	-141	-240	-269	-292	-311	-302	-173	-93	-42

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

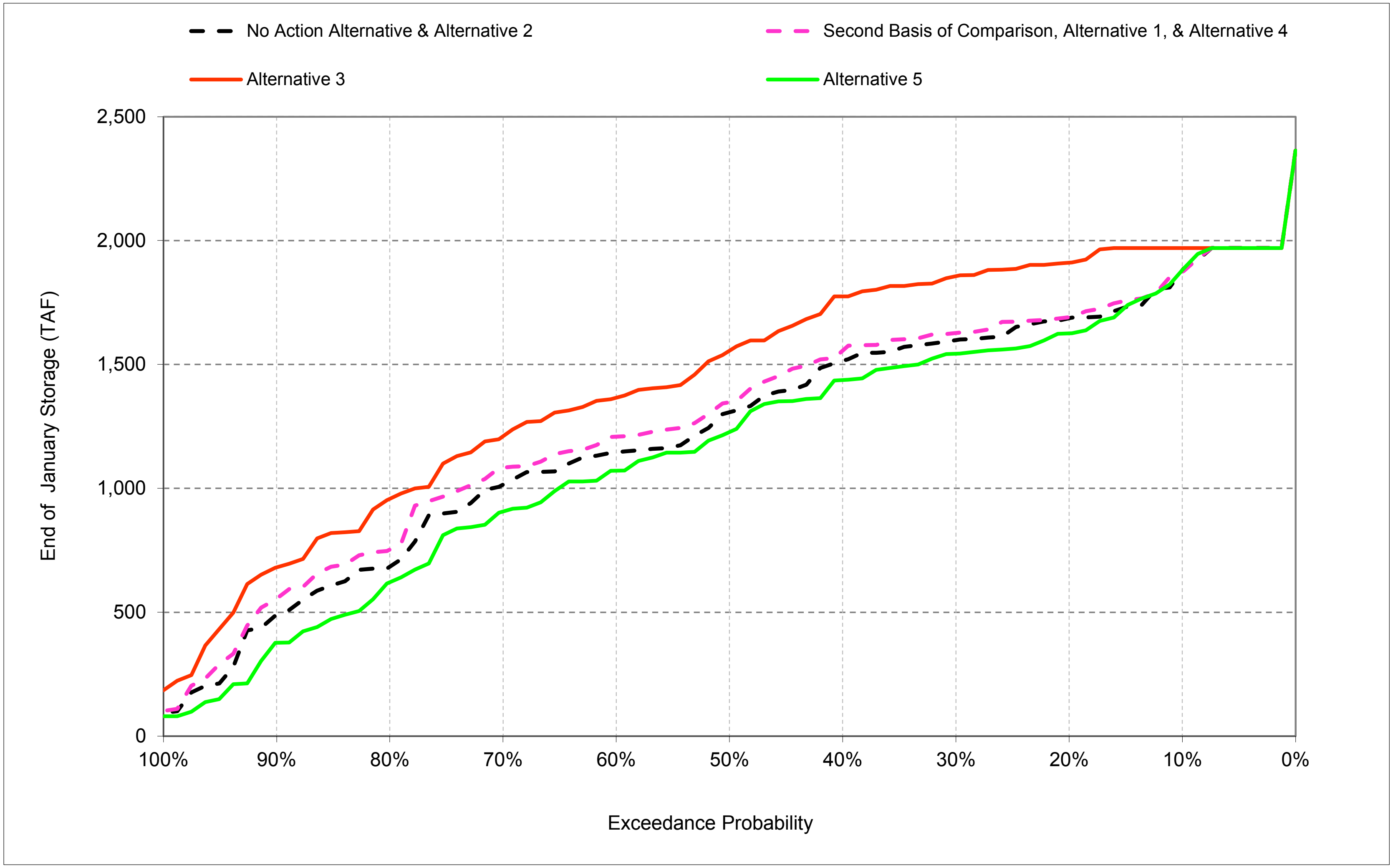
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

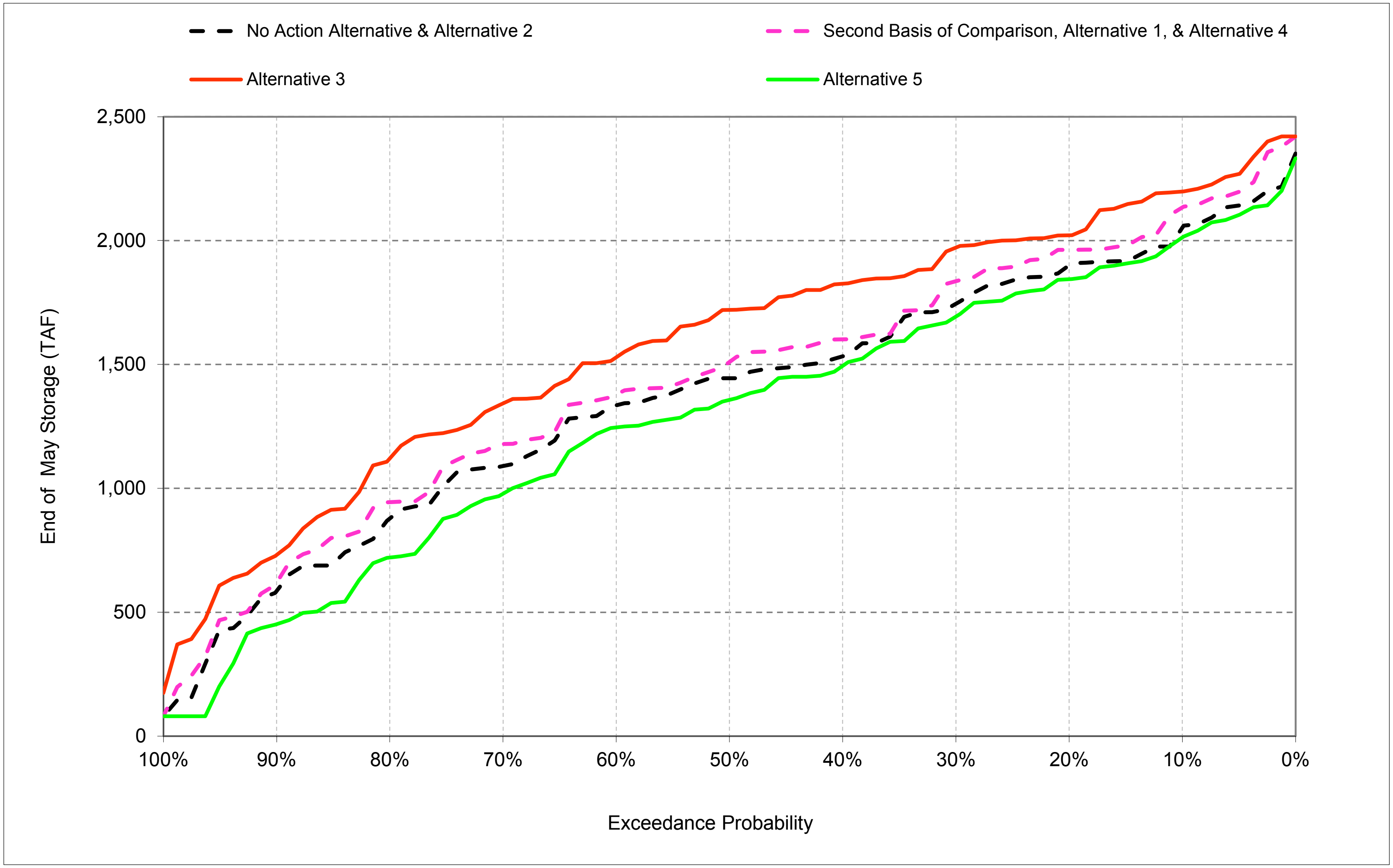
C.6. New Melones Storage

Figure C-6-1. New Melones Reservoir, End of January Storage



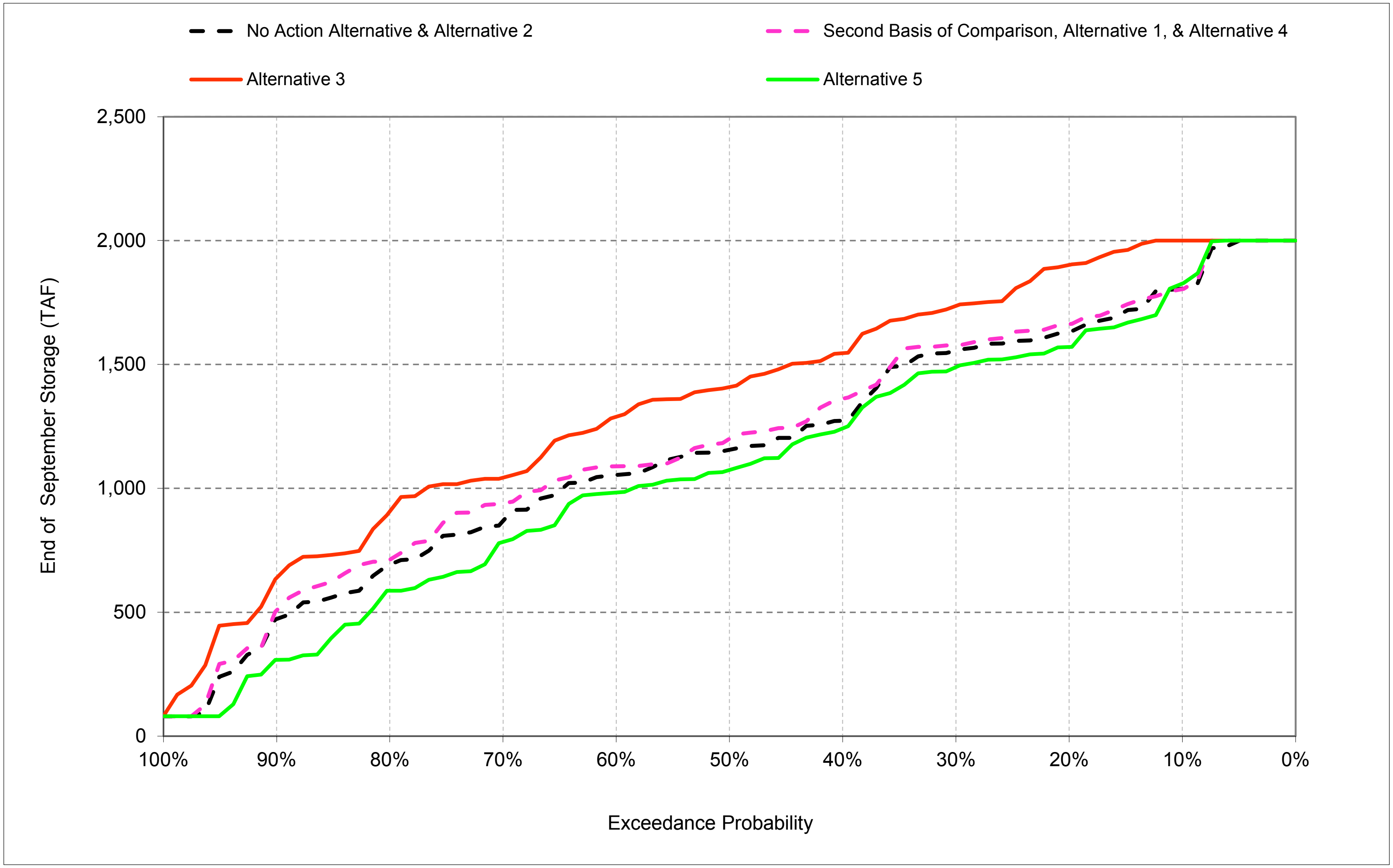
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-6-2. New Melones Reservoir, End of May Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-6-3. New Melones Reservoir, End of September Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-1. New Melones Reservoir, End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,765	1,759	1,823	1,880	1,931	1,980	1,945	2,052	2,075	1,978	1,869	1,805
20%	1,612	1,631	1,647	1,687	1,768	1,799	1,834	1,901	1,876	1,798	1,691	1,633
30%	1,533	1,534	1,556	1,598	1,686	1,729	1,686	1,745	1,786	1,707	1,605	1,556
40%	1,271	1,274	1,432	1,514	1,594	1,618	1,592	1,533	1,539	1,433	1,333	1,273
50%	1,121	1,127	1,154	1,307	1,436	1,535	1,461	1,444	1,392	1,283	1,190	1,156
60%	1,024	1,043	1,080	1,146	1,199	1,273	1,278	1,335	1,277	1,199	1,102	1,054
70%	882	911	986	1,015	1,038	1,057	1,080	1,090	1,087	994	910	868
80%	646	658	684	684	735	808	835	878	872	808	733	693
90%	430	435	440	488	541	569	574	586	630	566	507	473
Long Term												
Full Simulation Period[b]	1,132	1,142	1,180	1,237	1,305	1,348	1,337	1,373	1,381	1,300	1,208	1,159
Water Year Types[c]												
Wet (32%)	1,379	1,390	1,454	1,562	1,666	1,724	1,758	1,878	1,968	1,890	1,773	1,703
Above Normal (16%)	1,029	1,060	1,125	1,214	1,317	1,406	1,413	1,484	1,467	1,372	1,277	1,232
Below Normal (13%)	1,294	1,305	1,326	1,351	1,413	1,438	1,390	1,383	1,359	1,268	1,175	1,133
Dry (24%)	1,094	1,094	1,106	1,121	1,156	1,188	1,154	1,132	1,087	997	914	871
Critical (15%)	624	623	638	645	661	656	602	554	526	476	431	408

Alternative 1

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,801	1,782	1,827	1,875	1,952	2,030	2,017	2,134	2,071	1,977	1,869	1,805
20%	1,657	1,655	1,665	1,690	1,847	1,928	1,884	1,963	1,884	1,830	1,719	1,663
30%	1,575	1,582	1,614	1,627	1,697	1,743	1,751	1,836	1,836	1,743	1,635	1,577
40%	1,366	1,372	1,472	1,556	1,621	1,675	1,649	1,601	1,619	1,510	1,415	1,362
50%	1,200	1,211	1,248	1,348	1,472	1,541	1,484	1,511	1,467	1,357	1,258	1,200
60%	1,089	1,093	1,124	1,209	1,259	1,341	1,373	1,379	1,317	1,224	1,134	1,089
70%	956	989	1,040	1,084	1,099	1,099	1,146	1,179	1,147	1,064	982	940
80%	711	712	730	753	825	932	914	945	903	837	758	712
90%	508	517	515	555	666	664	608	619	697	619	547	507
Long Term												
Full Simulation Period[b]	1,192	1,194	1,226	1,279	1,345	1,397	1,402	1,433	1,420	1,336	1,245	1,194
Water Year Types[c]												
Wet (32%)	1,443	1,446	1,502	1,606	1,709	1,794	1,833	1,962	1,994	1,917	1,803	1,731
Above Normal (16%)	1,092	1,116	1,175	1,261	1,360	1,455	1,481	1,543	1,516	1,419	1,321	1,274
Below Normal (13%)	1,364	1,366	1,378	1,397	1,453	1,479	1,461	1,447	1,415	1,322	1,228	1,183
Dry (24%)	1,149	1,143	1,149	1,161	1,191	1,221	1,210	1,176	1,131	1,039	956	912
Critical (15%)	667	663	674	680	696	690	646	585	557	498	449	426

Alternative 1 minus No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	35	22	4	-5	21	50	71	81	-4	-2	0	-1
20%	45	24	19	4	79	129	50	62	7	33	28	30
30%	42	48	59	29	11	15	65	92	51	36	31	21
40%	94	98	40	42	27	58	56	68	80	77	82	89
50%	79	84	95	40	36	7	23	66	75	74	68	45
60%	64	51	44	63	60	68	95	44	41	25	32	35
70%	75	77	54	69	61	42	66	89	59	69	72	71
80%	66	54	46	69	91	124	79	66	31	28	25	19
90%	77	82	76	67	126	94	34	33	67	53	40	35
Long Term												
Full Simulation Period[b]	59	53	46	42	40	48	64	60	38	37	36	35
Water Year Types[c]												
Wet (32%)	64	56	49	44	43	70	75	84	25	27	30	28
Above Normal (16%)	62	56	50	46	43	48	68	59	49	46	44	42
Below Normal (13%)	69	61	52	46	40	41	71	63	55	54	52	51
Dry (24%)	55	49	43	40	35	33	56	45	44	43	42	42
Critical (15%)	44	40	37	36	35	34	45	31	31	23	18	18

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-2. New Melones Reservoir, End of Month Storage

No Action Alternative

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,765	1,759	1,823	1,880	1,931	1,980	1,945	2,052	2,075	1,978	1,869	1,805
20%	1,612	1,631	1,647	1,687	1,768	1,799	1,834	1,901	1,876	1,798	1,691	1,633
30%	1,533	1,534	1,556	1,598	1,686	1,729	1,686	1,745	1,786	1,707	1,605	1,556
40%	1,271	1,274	1,432	1,514	1,594	1,618	1,592	1,533	1,539	1,433	1,333	1,273
50%	1,121	1,127	1,154	1,307	1,436	1,535	1,461	1,444	1,392	1,283	1,190	1,156
60%	1,024	1,043	1,080	1,146	1,199	1,273	1,278	1,335	1,277	1,199	1,102	1,054
70%	882	911	986	1,015	1,038	1,057	1,080	1,090	1,087	994	910	868
80%	646	658	684	684	735	808	835	878	872	808	733	693
90%	430	435	440	488	541	569	574	586	630	566	507	473
Long Term												
Full Simulation Period[b]	1,132	1,142	1,180	1,237	1,305	1,348	1,337	1,373	1,381	1,300	1,208	1,159
Water Year Types[c]												
Wet (32%)	1,379	1,390	1,454	1,562	1,666	1,724	1,758	1,878	1,968	1,890	1,773	1,703
Above Normal (16%)	1,029	1,060	1,125	1,214	1,317	1,406	1,413	1,484	1,467	1,372	1,277	1,232
Below Normal (13%)	1,294	1,305	1,326	1,351	1,413	1,438	1,390	1,383	1,359	1,268	1,175	1,133
Dry (24%)	1,094	1,094	1,106	1,121	1,156	1,188	1,154	1,132	1,087	997	914	871
Critical (15%)	624	623	638	645	661	656	602	554	526	476	431	408

Alternative 3

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,967	1,954	1,970	1,970	1,970	2,030	2,062	2,198	2,284	2,209	2,103	2,000
20%	1,901	1,905	1,913	1,911	1,970	2,026	1,988	2,021	2,154	2,055	1,955	1,902
30%	1,729	1,727	1,790	1,857	1,925	1,975	1,910	1,972	1,983	1,877	1,785	1,736
40%	1,582	1,596	1,668	1,775	1,851	1,884	1,838	1,826	1,796	1,697	1,601	1,546
50%	1,427	1,416	1,439	1,556	1,660	1,719	1,674	1,721	1,675	1,561	1,460	1,409
60%	1,308	1,316	1,318	1,366	1,426	1,494	1,488	1,529	1,525	1,432	1,335	1,289
70%	1,049	1,073	1,187	1,210	1,289	1,269	1,265	1,343	1,276	1,180	1,092	1,043
80%	875	862	919	957	1,020	1,099	1,056	1,121	1,071	1,001	938	907
90%	635	646	646	681	779	803	734	731	835	756	682	639
Long Term												
Full Simulation Period[b]	1,347	1,351	1,382	1,436	1,491	1,541	1,534	1,580	1,595	1,506	1,408	1,353
Water Year Types[c]												
Wet (32%)	1,562	1,567	1,618	1,720	1,792	1,871	1,906	2,049	2,146	2,057	1,934	1,855
Above Normal (16%)	1,269	1,295	1,356	1,442	1,530	1,620	1,634	1,713	1,720	1,627	1,529	1,481
Below Normal (13%)	1,530	1,536	1,550	1,570	1,620	1,650	1,614	1,617	1,599	1,501	1,403	1,357
Dry (24%)	1,327	1,320	1,326	1,342	1,378	1,409	1,380	1,360	1,319	1,224	1,137	1,091
Critical (15%)	828	824	836	846	866	860	803	751	719	653	593	563

Alternative 3 minus No Action Alternative

	End of Month Storage (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	202	194	147	90	39	50	117	146	209	231	233	195
20%	289	275	266	224	202	227	155	121	277	257	264	269
30%	196	192	234	259	238	246	224	227	197	170	180	180
40%	311	322	236	260	257	266	245	293	256	264	268	273
50%	306	288	286	248	224	185	213	276	283	279	271	253
60%	284	274	238	220	228	221	210	194	249	234	233	235
70%	167	162	201	195	251	213	185	252	188	186	182	175
80%	230	204	235	273	285	290	221	243	198	193	205	214
90%	205	212	206	193	239	234	159	145	206	190	175	167
Long Term												
Full Simulation Period[b]	214	209	202	199	186	193	197	206	213	206	200	194
Water Year Types[c]												
Wet (32%)	183	177	165	158	126	147	149	172	178	168	161	152
Above Normal (16%)	239	235	231	228	213	213	220	229	253	255	252	250
Below Normal (13%)	236	231	224	219	207	212	224	234	239	233	228	224
Dry (24%)	232	226	220	220	222	221	226	228	232	228	223	221
Critical (15%)	205	201	198	201	204	204	202	197	193	177	162	154

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-3. New Melones Reservoir, End of Month Storage

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	1,765	1,759	1,823	1,880	1,931	1,980	1,945	2,052	2,075	1,978	1,869	1,805
20%	1,612	1,631	1,647	1,687	1,768	1,799	1,834	1,901	1,876	1,798	1,691	1,633
30%	1,533	1,534	1,556	1,598	1,686	1,729	1,686	1,745	1,786	1,707	1,605	1,556
40%	1,271	1,274	1,432	1,514	1,594	1,618	1,592	1,533	1,539	1,433	1,333	1,273
50%	1,121	1,127	1,154	1,307	1,436	1,535	1,461	1,444	1,392	1,283	1,190	1,156
60%	1,024	1,043	1,080	1,146	1,199	1,273	1,278	1,335	1,277	1,199	1,102	1,054
70%	882	911	986	1,015	1,038	1,057	1,080	1,090	1,087	994	910	868
80%	646	658	684	684	735	808	835	878	872	808	733	693
90%	430	435	440	488	541	569	574	586	630	566	507	473
Long Term												
Full Simulation Period[b]	1,132	1,142	1,180	1,237	1,305	1,348	1,337	1,373	1,381	1,300	1,208	1,159
Water Year Types[c]												
Wet (32%)	1,379	1,390	1,454	1,562	1,666	1,724	1,758	1,878	1,968	1,890	1,773	1,703
Above Normal (16%)	1,029	1,060	1,125	1,214	1,317	1,406	1,413	1,484	1,467	1,372	1,277	1,232
Below Normal (13%)	1,294	1,305	1,326	1,351	1,413	1,438	1,390	1,383	1,359	1,268	1,175	1,133
Dry (24%)	1,094	1,094	1,106	1,121	1,156	1,188	1,154	1,132	1,087	997	914	871
Critical (15%)	624	623	638	645	661	656	602	554	526	476	431	408

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	1,765	1,759	1,831	1,881	1,949	1,969	1,908	2,012	2,117	2,013	1,900	1,826
20%	1,588	1,587	1,601	1,626	1,782	1,794	1,752	1,844	1,816	1,740	1,631	1,571
30%	1,468	1,459	1,490	1,544	1,630	1,672	1,679	1,693	1,721	1,633	1,531	1,489
40%	1,249	1,252	1,347	1,437	1,522	1,573	1,512	1,494	1,505	1,405	1,297	1,242
50%	1,040	1,058	1,142	1,227	1,437	1,455	1,393	1,357	1,289	1,190	1,100	1,074
60%	976	997	1,023	1,072	1,134	1,161	1,159	1,246	1,218	1,130	1,032	983
70%	766	802	855	907	938	973	1,006	978	991	900	821	783
80%	554	553	620	621	623	697	651	721	761	686	617	587
90%	285	298	299	377	429	449	386	452	492	423	349	308
Long Term												
Full Simulation Period[b]	1,063	1,073	1,112	1,169	1,239	1,284	1,265	1,287	1,299	1,221	1,134	1,086
Water Year Types[c]												
Wet (32%)	1,309	1,321	1,388	1,496	1,602	1,668	1,704	1,812	1,906	1,833	1,722	1,653
Above Normal (16%)	983	1,014	1,079	1,168	1,271	1,361	1,363	1,413	1,396	1,302	1,207	1,162
Below Normal (13%)	1,210	1,220	1,242	1,267	1,329	1,354	1,298	1,276	1,254	1,163	1,071	1,028
Dry (24%)	1,018	1,018	1,030	1,045	1,081	1,114	1,066	1,031	990	903	823	781
Critical (15%)	558	559	570	578	597	591	506	449	433	391	355	336

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	-1	0	8	1	18	-11	-37	-40	42	35	31	21
20%	-24	-44	-46	-61	13	-5	-82	-56	-60	-58	-60	-62
30%	-65	-75	-65	-54	-56	-57	-7	-52	-64	-73	-74	-67
40%	-22	-22	-85	-77	-72	-45	-81	-39	-34	-28	-36	-31
50%	-81	-69	-11	-80	1	-80	-68	-87	-104	-93	-89	-82
60%	-48	-46	-57	-74	-65	-112	-119	-89	-59	-69	-70	-71
70%	-116	-109	-131	-108	-100	-84	-74	-112	-96	-94	-90	-85
80%	-92	-105	-64	-63	-112	-112	-184	-157	-111	-122	-116	-106
90%	-145	-137	-141	-111	-112	-120	-188	-134	-138	-144	-158	-164
Long Term												
Full Simulation Period[b]	-69	-69	-68	-68	-67	-64	-73	-86	-82	-79	-75	-73
Water Year Types[c]												
Wet (32%)	-70	-69	-65	-66	-64	-56	-54	-65	-62	-57	-51	-49
Above Normal (16%)	-46	-46	-46	-46	-46	-46	-51	-71	-71	-70	-70	-70
Below Normal (13%)	-84	-84	-84	-84	-84	-84	-93	-107	-106	-105	-105	-104
Dry (24%)	-77	-76	-76	-76	-75	-74	-88	-100	-97	-94	-91	-89
Critical (15%)	-66	-64	-68	-66	-64	-65	-95	-105	-93	-84	-76	-73

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-4. New Melones Reservoir, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,801	1,782	1,827	1,875	1,952	2,030	2,017	2,134	2,071	1,977	1,869	1,805
20%	1,657	1,655	1,665	1,690	1,847	1,928	1,884	1,963	1,884	1,830	1,719	1,663
30%	1,575	1,582	1,614	1,627	1,697	1,743	1,751	1,836	1,836	1,743	1,635	1,577
40%	1,366	1,372	1,472	1,556	1,621	1,675	1,649	1,601	1,619	1,510	1,415	1,362
50%	1,200	1,211	1,248	1,348	1,472	1,541	1,484	1,511	1,467	1,357	1,258	1,200
60%	1,089	1,093	1,124	1,209	1,259	1,341	1,373	1,379	1,317	1,224	1,134	1,089
70%	956	989	1,040	1,084	1,099	1,099	1,146	1,179	1,147	1,064	982	940
80%	711	712	730	753	825	932	914	945	903	837	758	712
90%	508	517	515	555	666	664	608	619	697	619	547	507
Long Term												
Full Simulation Period[b]	1,192	1,194	1,226	1,279	1,345	1,397	1,402	1,433	1,420	1,336	1,245	1,194
Water Year Types[c]												
Wet (32%)	1,443	1,446	1,502	1,606	1,709	1,794	1,833	1,962	1,994	1,917	1,803	1,731
Above Normal (16%)	1,092	1,116	1,175	1,261	1,360	1,455	1,481	1,543	1,516	1,419	1,321	1,274
Below Normal (13%)	1,364	1,366	1,378	1,397	1,453	1,479	1,461	1,447	1,415	1,322	1,228	1,183
Dry (24%)	1,149	1,143	1,149	1,161	1,191	1,221	1,210	1,176	1,131	1,039	956	912
Critical (15%)	667	663	674	680	696	690	646	585	557	498	449	426

No Action Alternative

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,765	1,759	1,823	1,880	1,931	1,980	1,945	2,052	2,075	1,978	1,869	1,805
20%	1,612	1,631	1,647	1,687	1,768	1,799	1,834	1,901	1,876	1,798	1,691	1,633
30%	1,533	1,534	1,556	1,598	1,686	1,729	1,686	1,745	1,786	1,707	1,605	1,556
40%	1,271	1,274	1,432	1,514	1,594	1,618	1,592	1,533	1,539	1,433	1,333	1,273
50%	1,121	1,127	1,154	1,307	1,436	1,535	1,461	1,444	1,392	1,283	1,190	1,156
60%	1,024	1,043	1,080	1,146	1,199	1,273	1,278	1,335	1,277	1,199	1,102	1,054
70%	882	911	986	1,015	1,038	1,057	1,080	1,090	1,087	994	910	868
80%	646	658	684	684	735	808	835	878	872	808	733	693
90%	430	435	440	488	541	569	574	586	630	566	507	473
Long Term												
Full Simulation Period[b]	1,132	1,142	1,180	1,237	1,305	1,348	1,337	1,373	1,381	1,300	1,208	1,159
Water Year Types[c]												
Wet (32%)	1,379	1,390	1,454	1,562	1,666	1,724	1,758	1,878	1,968	1,890	1,773	1,703
Above Normal (16%)	1,029	1,060	1,125	1,214	1,317	1,406	1,413	1,484	1,467	1,372	1,277	1,232
Below Normal (13%)	1,294	1,305	1,326	1,351	1,413	1,438	1,390	1,383	1,359	1,268	1,175	1,133
Dry (24%)	1,094	1,094	1,106	1,121	1,156	1,188	1,154	1,132	1,087	997	914	871
Critical (15%)	624	623	638	645	661	656	602	554	526	476	431	408

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-35	-22	-4	5	-21	-50	-71	-81	4	2	0	1
20%	-45	-24	-19	-4	-79	-129	-50	-62	-7	-33	-28	-30
30%	-42	-48	-59	-29	-11	-15	-65	-92	-51	-36	-31	-21
40%	-94	-98	-40	-42	-27	-58	-56	-68	-80	-77	-82	-89
50%	-79	-84	-95	-40	-36	-7	-23	-66	-75	-74	-68	-45
60%	-64	-51	-44	-63	-60	-68	-95	-44	-41	-25	-32	-35
70%	-75	-77	-54	-69	-61	-42	-66	-89	-59	-69	-72	-71
80%	-66	-54	-46	-69	-91	-124	-79	-66	-31	-28	-25	-19
90%	-77	-82	-76	-67	-126	-94	-34	-33	-67	-53	-40	-35
Long Term												
Full Simulation Period[b]	-59	-53	-46	-42	-40	-48	-64	-60	-38	-37	-36	-35
Water Year Types[c]												
Wet (32%)	-64	-56	-49	-44	-43	-70	-75	-84	-25	-27	-30	-28
Above Normal (16%)	-62	-56	-50	-46	-43	-48	-68	-59	-49	-46	-44	-42
Below Normal (13%)	-69	-61	-52	-46	-40	-41	-71	-63	-55	-54	-52	-51
Dry (24%)	-55	-49	-43	-40	-35	-33	-56	-45	-44	-43	-42	-42
Critical (15%)	-44	-40	-37	-36	-35	-34	-45	-31	-31	-23	-18	-18

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-5. New Melones Reservoir, End of Month Storage

Second Basis of Comparison

	End of Month Storage (TAF)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	1,801	1,782	1,827	1,875	1,952	2,030	2,017	2,134	2,071	1,977	1,869	1,805
20%	1,657	1,655	1,665	1,690	1,847	1,928	1,884	1,963	1,884	1,830	1,719	1,663
30%	1,575	1,582	1,614	1,627	1,697	1,743	1,751	1,836	1,836	1,743	1,635	1,577
40%	1,366	1,372	1,472	1,556	1,621	1,675	1,649	1,601	1,619	1,510	1,415	1,362
50%	1,200	1,211	1,248	1,348	1,472	1,541	1,484	1,511	1,467	1,357	1,258	1,200
60%	1,089	1,093	1,124	1,209	1,259	1,341	1,373	1,379	1,317	1,224	1,134	1,089
70%	956	989	1,040	1,084	1,099	1,099	1,146	1,179	1,147	1,064	982	940
80%	711	712	730	753	825	932	914	945	903	837	758	712
90%	508	517	515	555	666	664	608	619	697	619	547	507
Long Term												
Full Simulation Period[b]	1,192	1,194	1,226	1,279	1,345	1,397	1,402	1,433	1,420	1,336	1,245	1,194
Water Year Types[c]												
Wet (32%)	1,443	1,446	1,502	1,606	1,709	1,794	1,833	1,962	1,994	1,917	1,803	1,731
Above Normal (16%)	1,092	1,116	1,175	1,261	1,360	1,455	1,481	1,543	1,516	1,419	1,321	1,274
Below Normal (13%)	1,364	1,366	1,378	1,397	1,453	1,479	1,461	1,447	1,415	1,322	1,228	1,183
Dry (24%)	1,149	1,143	1,149	1,161	1,191	1,221	1,210	1,176	1,131	1,039	956	912
Critical (15%)	667	663	674	680	696	690	646	585	557	498	449	426

Alternative 3

	End of Month Storage (TAF)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	1,967	1,954	1,970	1,970	1,970	2,030	2,062	2,198	2,284	2,209	2,103	2,000
20%	1,901	1,905	1,913	1,911	1,970	2,026	1,988	2,021	2,154	2,055	1,955	1,902
30%	1,729	1,727	1,790	1,857	1,925	1,975	1,910	1,972	1,983	1,877	1,785	1,736
40%	1,582	1,596	1,668	1,775	1,851	1,884	1,838	1,826	1,796	1,697	1,601	1,546
50%	1,427	1,416	1,439	1,556	1,660	1,719	1,674	1,721	1,675	1,561	1,460	1,409
60%	1,308	1,316	1,318	1,366	1,426	1,494	1,488	1,529	1,525	1,432	1,335	1,289
70%	1,049	1,073	1,187	1,210	1,289	1,269	1,265	1,343	1,276	1,180	1,092	1,043
80%	875	862	919	957	1,020	1,099	1,056	1,121	1,071	1,001	938	907
90%	635	646	646	681	779	803	734	731	835	756	682	639
Long Term												
Full Simulation Period[b]	1,347	1,351	1,382	1,436	1,491	1,541	1,534	1,580	1,595	1,506	1,408	1,353
Water Year Types[c]												
Wet (32%)	1,562	1,567	1,618	1,720	1,792	1,871	1,906	2,049	2,146	2,057	1,934	1,855
Above Normal (16%)	1,269	1,295	1,356	1,442	1,530	1,620	1,634	1,713	1,720	1,627	1,529	1,481
Below Normal (13%)	1,530	1,536	1,550	1,570	1,620	1,650	1,614	1,617	1,599	1,501	1,403	1,357
Dry (24%)	1,327	1,320	1,326	1,342	1,378	1,409	1,380	1,360	1,319	1,224	1,137	1,091
Critical (15%)	828	824	836	846	866	860	803	751	719	653	593	563

Alternative 3 minus Second Basis of Comparison

	End of Month Storage (TAF)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	167	172	143	95	18	0	45	65	213	233	234	195
20%	244	251	247	220	123	98	105	59	270	224	236	239
30%	154	144	175	229	228	232	159	135	147	134	149	159
40%	217	224	196	219	230	209	189	225	176	187	186	184
50%	227	205	191	208	188	178	190	210	208	205	202	209
60%	220	223	194	157	168	153	115	150	208	209	201	200
70%	92	85	147	126	190	170	119	164	129	116	110	104
80%	164	150	190	205	194	167	142	176	168	165	180	195
90%	127	130	131	126	113	139	126	112	138	137	134	132
Long Term												
Full Simulation Period[b]	155	156	155	156	146	144	132	146	175	169	163	159
Water Year Types[c]												
Wet (32%)	119	121	116	114	83	77	73	88	153	141	131	124
Above Normal (16%)	177	179	181	181	170	165	153	170	204	208	207	208
Below Normal (13%)	167	170	172	173	167	170	153	170	184	179	175	174
Dry (24%)	177	177	177	181	187	188	170	183	188	185	181	179
Critical (15%)	161	161	162	165	170	170	157	166	162	155	144	137

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-6. New Melones Reservoir, End of Month Storage

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	1,801	1,782	1,827	1,875	1,952	2,030	2,017	2,134	2,071	1,977	1,869	1,805
20%	1,657	1,655	1,665	1,690	1,847	1,928	1,884	1,963	1,884	1,830	1,719	1,663
30%	1,575	1,582	1,614	1,627	1,697	1,743	1,751	1,836	1,836	1,743	1,635	1,577
40%	1,366	1,372	1,472	1,556	1,621	1,675	1,649	1,601	1,619	1,510	1,415	1,362
50%	1,200	1,211	1,248	1,348	1,472	1,541	1,484	1,511	1,467	1,357	1,258	1,200
60%	1,089	1,093	1,124	1,209	1,259	1,341	1,373	1,379	1,317	1,224	1,134	1,089
70%	956	989	1,040	1,084	1,099	1,099	1,146	1,179	1,147	1,064	982	940
80%	711	712	730	753	825	932	914	945	903	837	758	712
90%	508	517	515	555	666	664	608	619	697	619	547	507
Long Term												
Full Simulation Period[b]	1,192	1,194	1,226	1,279	1,345	1,397	1,402	1,433	1,420	1,336	1,245	1,194
Water Year Types[c]												
Wet (32%)	1,443	1,446	1,502	1,606	1,709	1,794	1,833	1,962	1,994	1,917	1,803	1,731
Above Normal (16%)	1,092	1,116	1,175	1,261	1,360	1,455	1,481	1,543	1,516	1,419	1,321	1,274
Below Normal (13%)	1,364	1,366	1,378	1,397	1,453	1,479	1,461	1,447	1,415	1,322	1,228	1,183
Dry (24%)	1,149	1,143	1,149	1,161	1,191	1,221	1,210	1,176	1,131	1,039	956	912
Critical (15%)	667	663	674	680	696	690	646	585	557	498	449	426

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	1,765	1,759	1,831	1,881	1,949	1,969	1,908	2,012	2,117	2,013	1,900	1,826
20%	1,588	1,587	1,601	1,626	1,782	1,794	1,752	1,844	1,816	1,740	1,631	1,571
30%	1,468	1,459	1,490	1,544	1,630	1,672	1,679	1,693	1,721	1,633	1,531	1,489
40%	1,249	1,252	1,347	1,437	1,522	1,573	1,512	1,494	1,505	1,405	1,297	1,242
50%	1,040	1,058	1,142	1,227	1,437	1,455	1,393	1,357	1,289	1,190	1,100	1,074
60%	976	997	1,023	1,072	1,134	1,161	1,159	1,246	1,218	1,130	1,032	983
70%	766	802	855	907	938	973	1,006	978	991	900	821	783
80%	554	553	620	621	623	697	651	721	761	686	617	587
90%	285	298	299	377	429	449	386	452	492	423	349	308
Long Term												
Full Simulation Period[b]	1,063	1,073	1,112	1,169	1,239	1,284	1,265	1,287	1,299	1,221	1,134	1,086
Water Year Types[c]												
Wet (32%)	1,309	1,321	1,388	1,496	1,602	1,668	1,704	1,812	1,906	1,833	1,722	1,653
Above Normal (16%)	983	1,014	1,079	1,168	1,271	1,361	1,363	1,413	1,396	1,302	1,207	1,162
Below Normal (13%)	1,210	1,220	1,242	1,267	1,329	1,354	1,298	1,276	1,254	1,163	1,071	1,028
Dry (24%)	1,018	1,018	1,030	1,045	1,081	1,114	1,066	1,031	990	903	823	781
Critical (15%)	558	559	570	578	597	591	506	449	433	391	355	336

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	-36	-22	4	6	-3	-61	-108	-122	46	37	31	21
20%	-69	-67	-65	-65	-66	-134	-132	-118	-68	-90	-88	-92
30%	-107	-123	-124	-83	-67	-72	-71	-143	-115	-109	-104	-88
40%	-116	-120	-126	-119	-99	-103	-137	-108	-114	-105	-118	-120
50%	-161	-153	-106	-121	-35	-86	-90	-154	-178	-167	-158	-127
60%	-112	-97	-102	-137	-125	-180	-214	-133	-100	-94	-102	-106
70%	-190	-187	-185	-177	-161	-126	-140	-201	-156	-163	-162	-156
80%	-157	-159	-109	-132	-203	-235	-263	-224	-142	-150	-141	-125
90%	-222	-219	-216	-178	-238	-215	-221	-167	-206	-196	-198	-199
Long Term												
Full Simulation Period[b]	-128	-121	-114	-110	-106	-112	-137	-146	-121	-115	-111	-108
Water Year Types[c]												
Wet (32%)	-134	-125	-114	-110	-108	-126	-129	-149	-88	-84	-81	-77
Above Normal (16%)	-108	-102	-96	-92	-89	-94	-118	-130	-120	-117	-114	-112
Below Normal (13%)	-154	-145	-137	-130	-124	-125	-164	-170	-161	-159	-157	-155
Dry (24%)	-132	-125	-119	-116	-110	-107	-144	-145	-141	-136	-133	-131
Critical (15%)	-109	-104	-104	-102	-99	-99	-140	-136	-123	-107	-95	-90

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

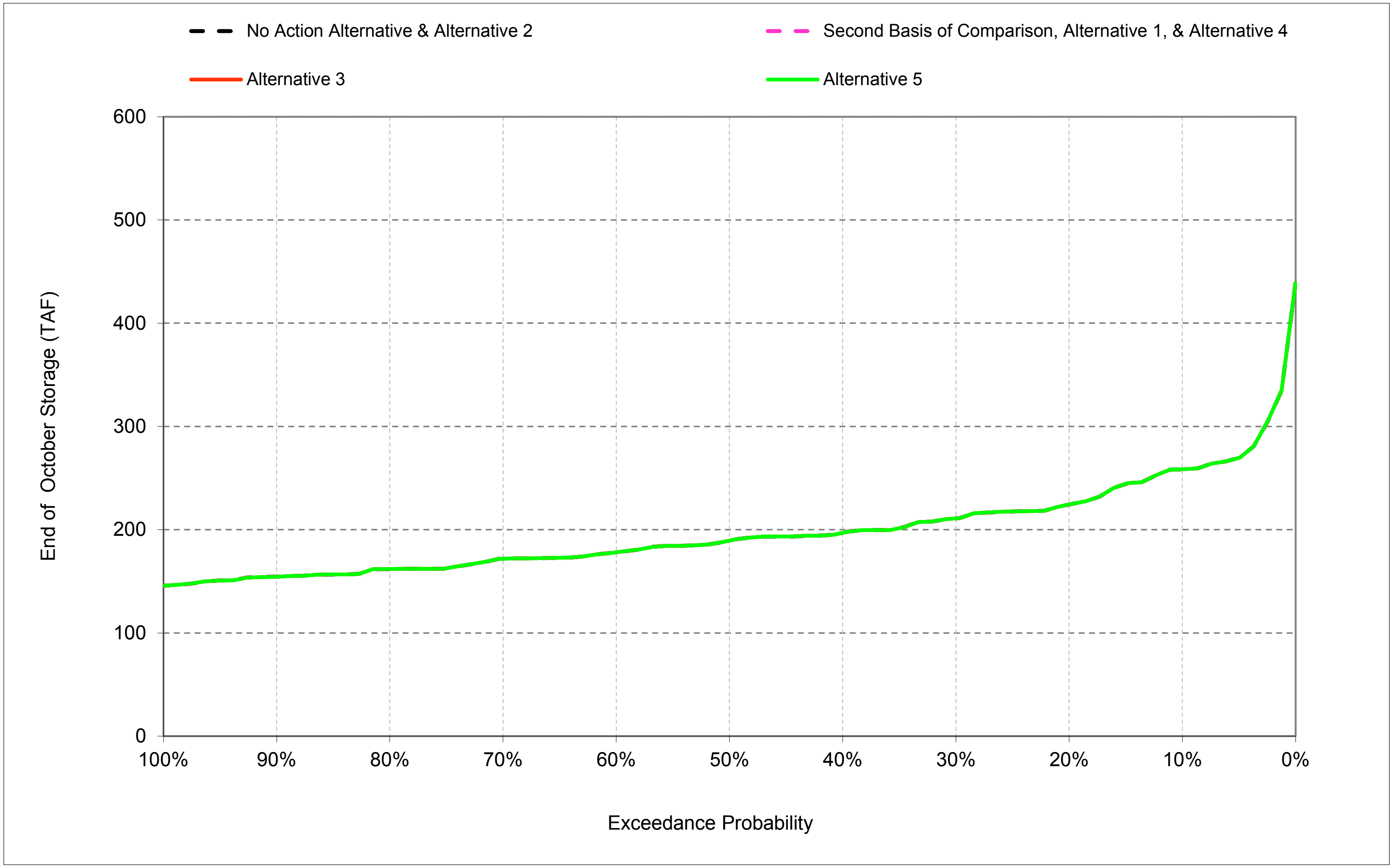
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

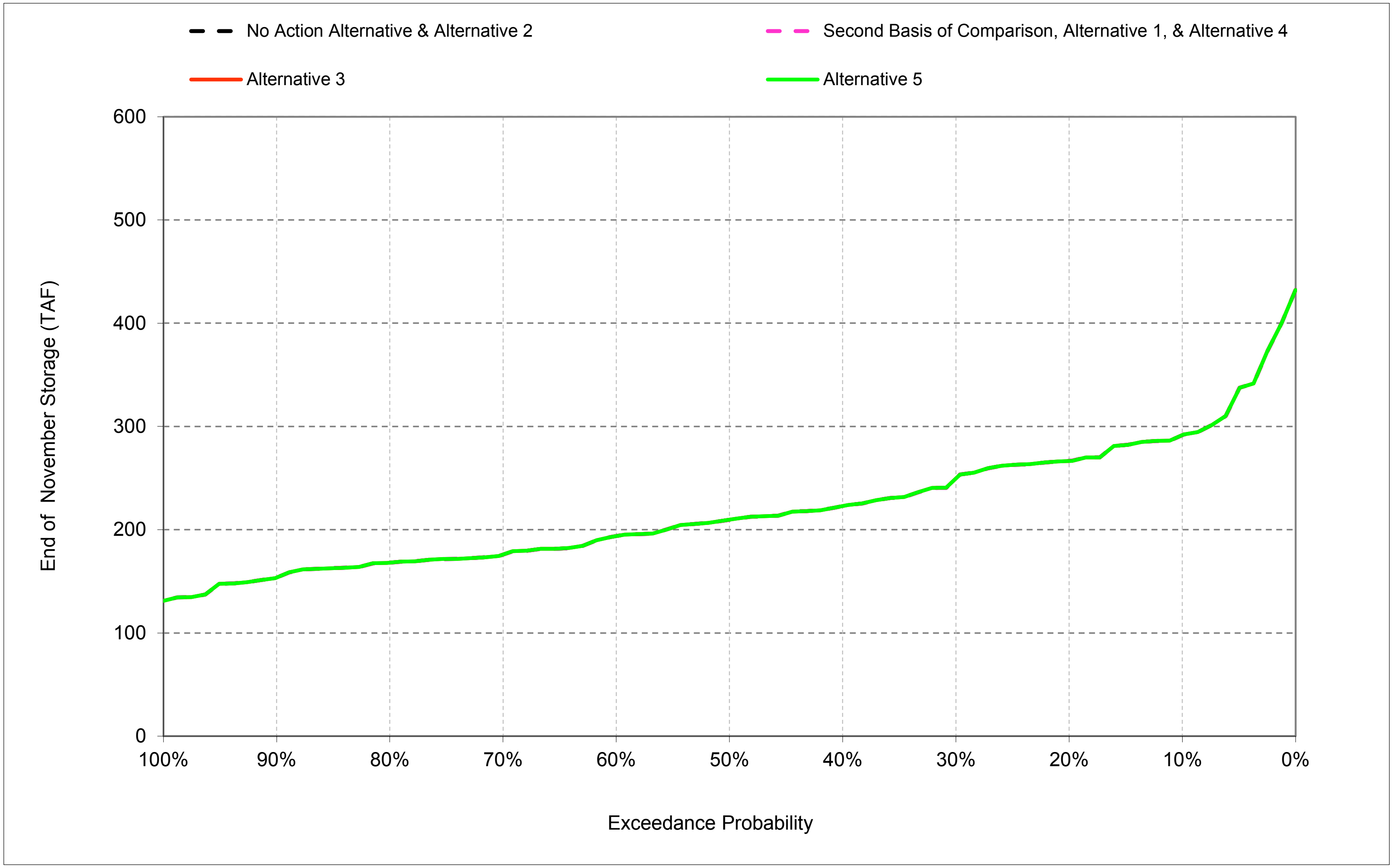
C.7. Millerton Storage

Figure C-7-1. Millerton Lake, End of October Storage



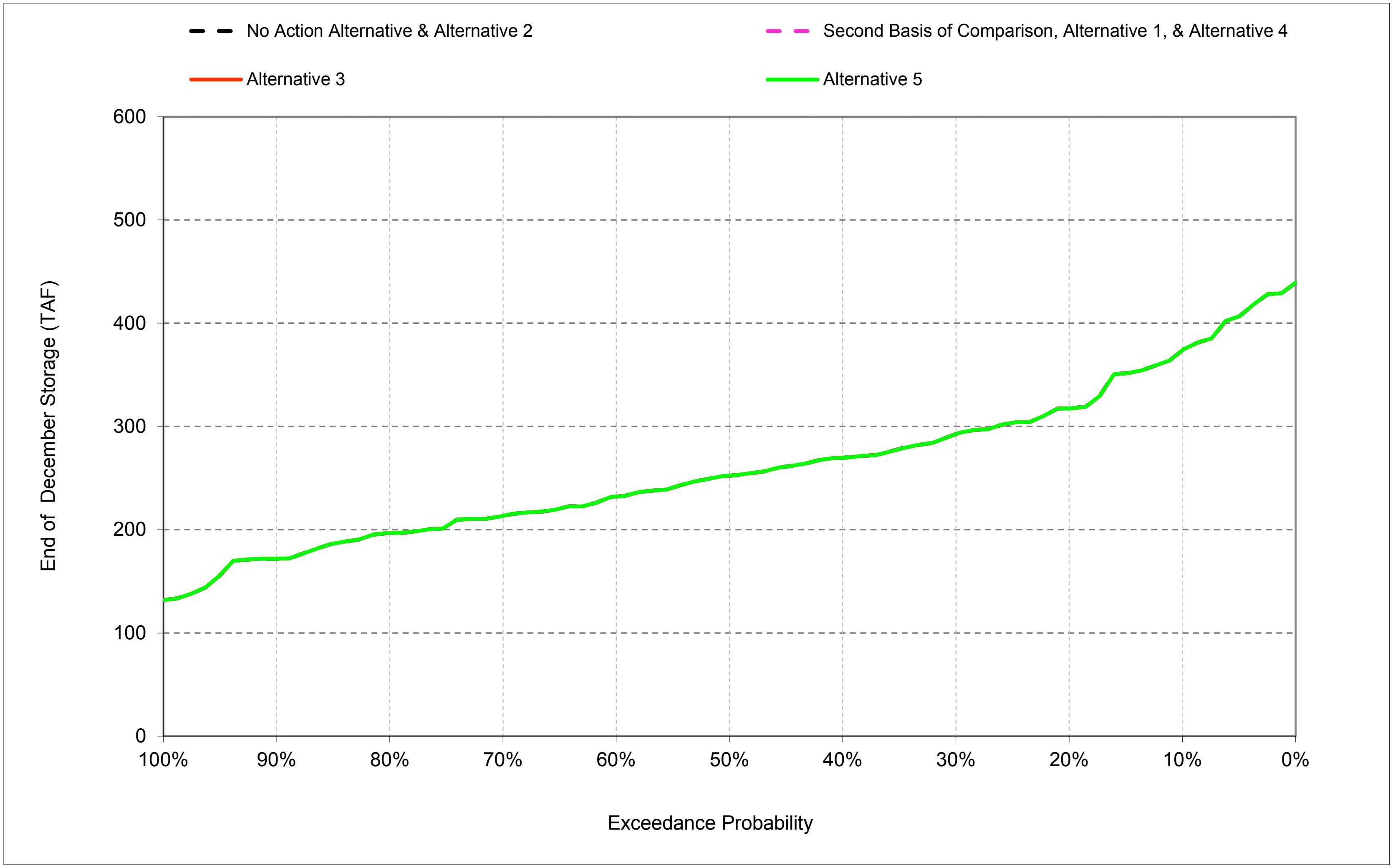
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-2. Millerton Lake, End of November Storage



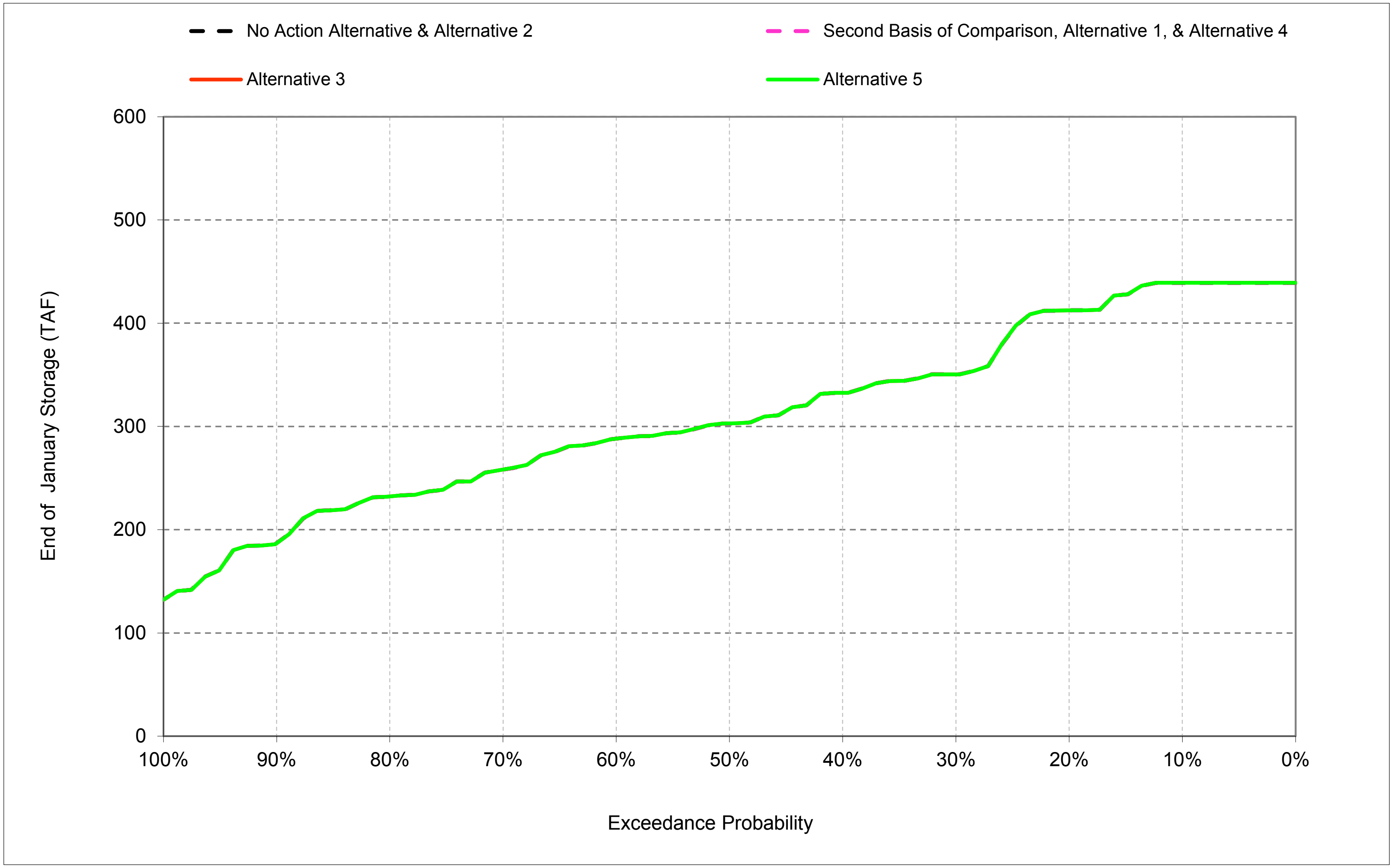
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-3. Millerton Lake, End of December Storage



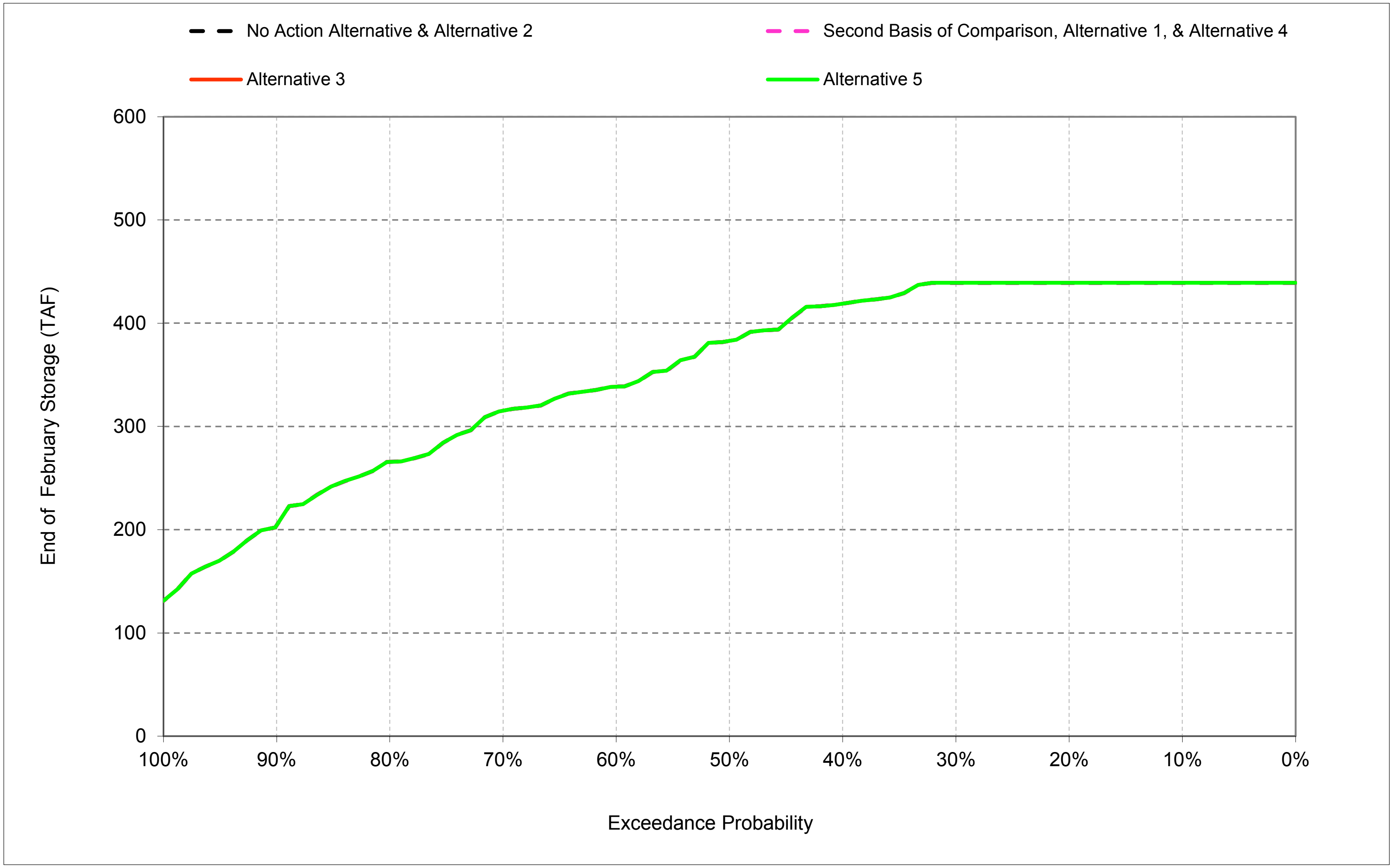
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-4. Millerton Lake, End of January Storage



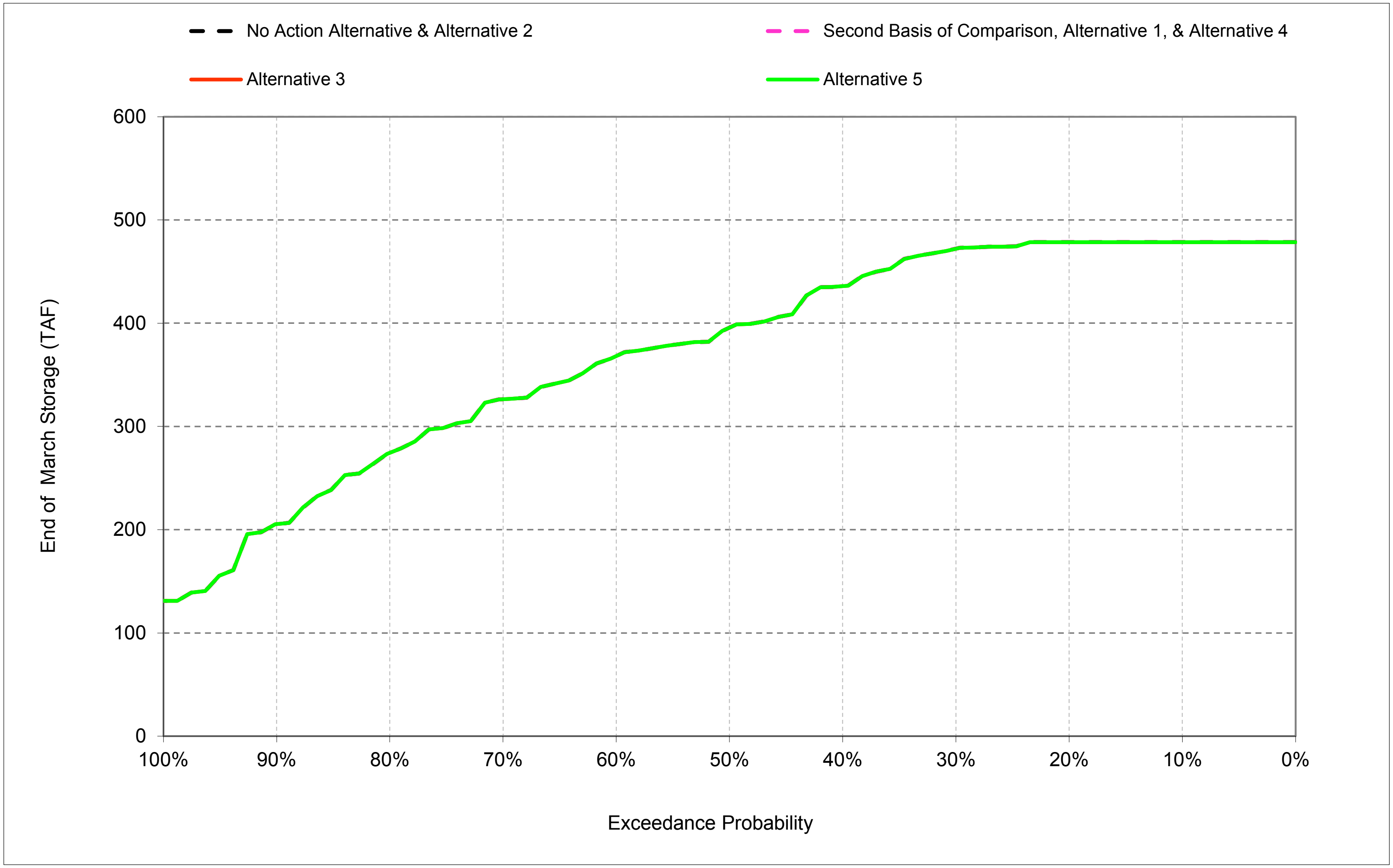
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-5. Millerton Lake, End of February Storage



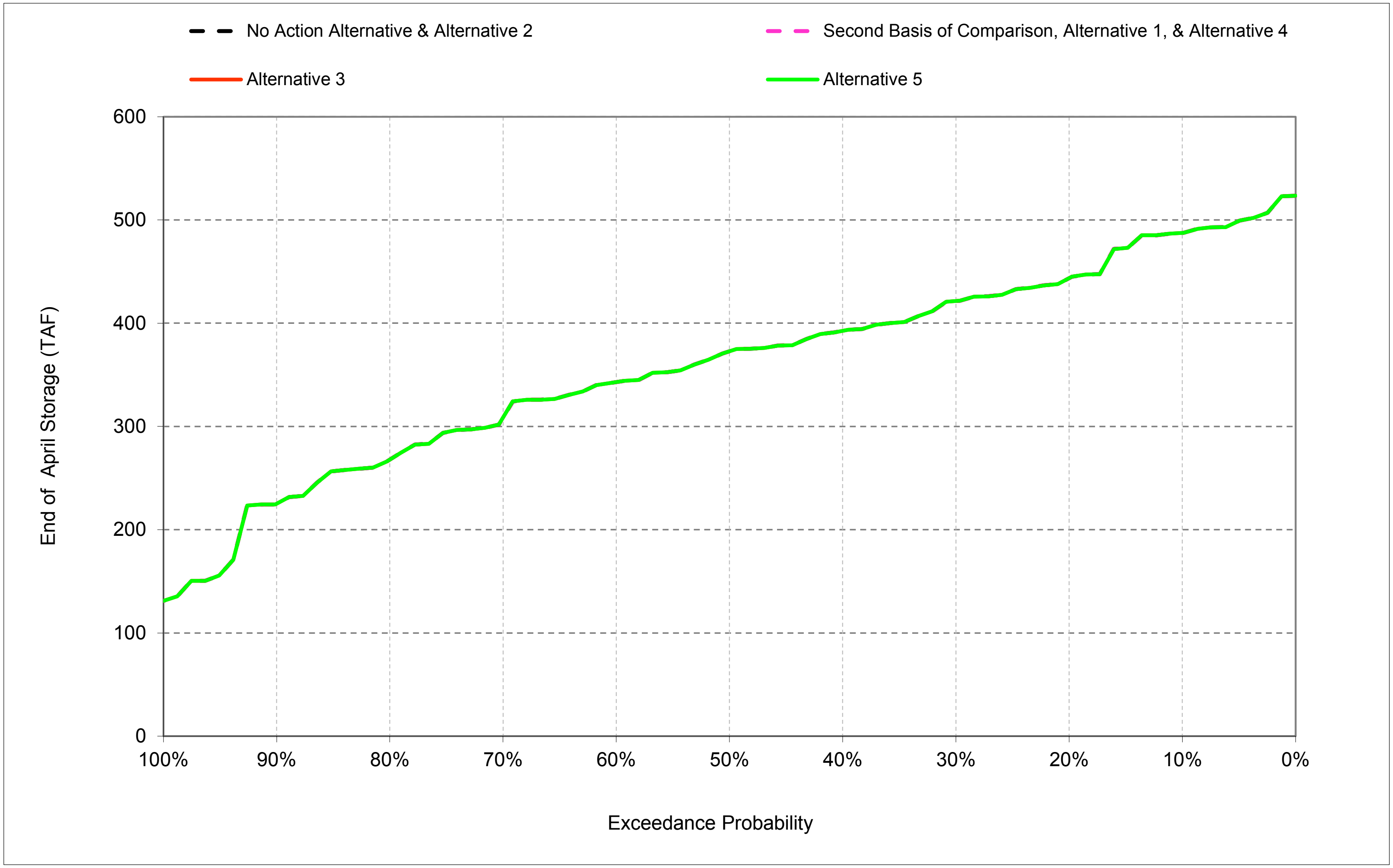
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-6. Millerton Lake, End of March Storage



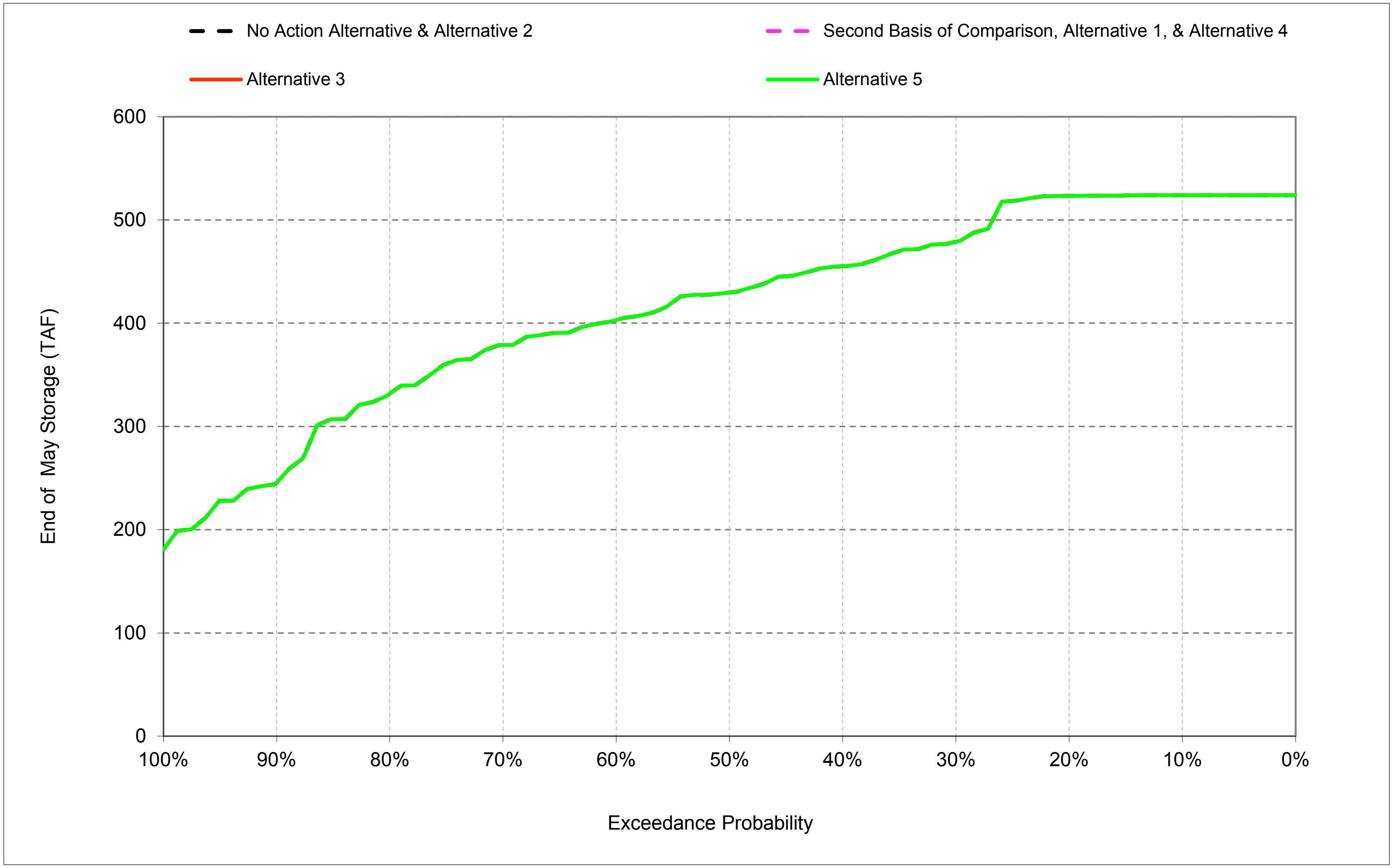
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-7. Millerton Lake, End of April Storage



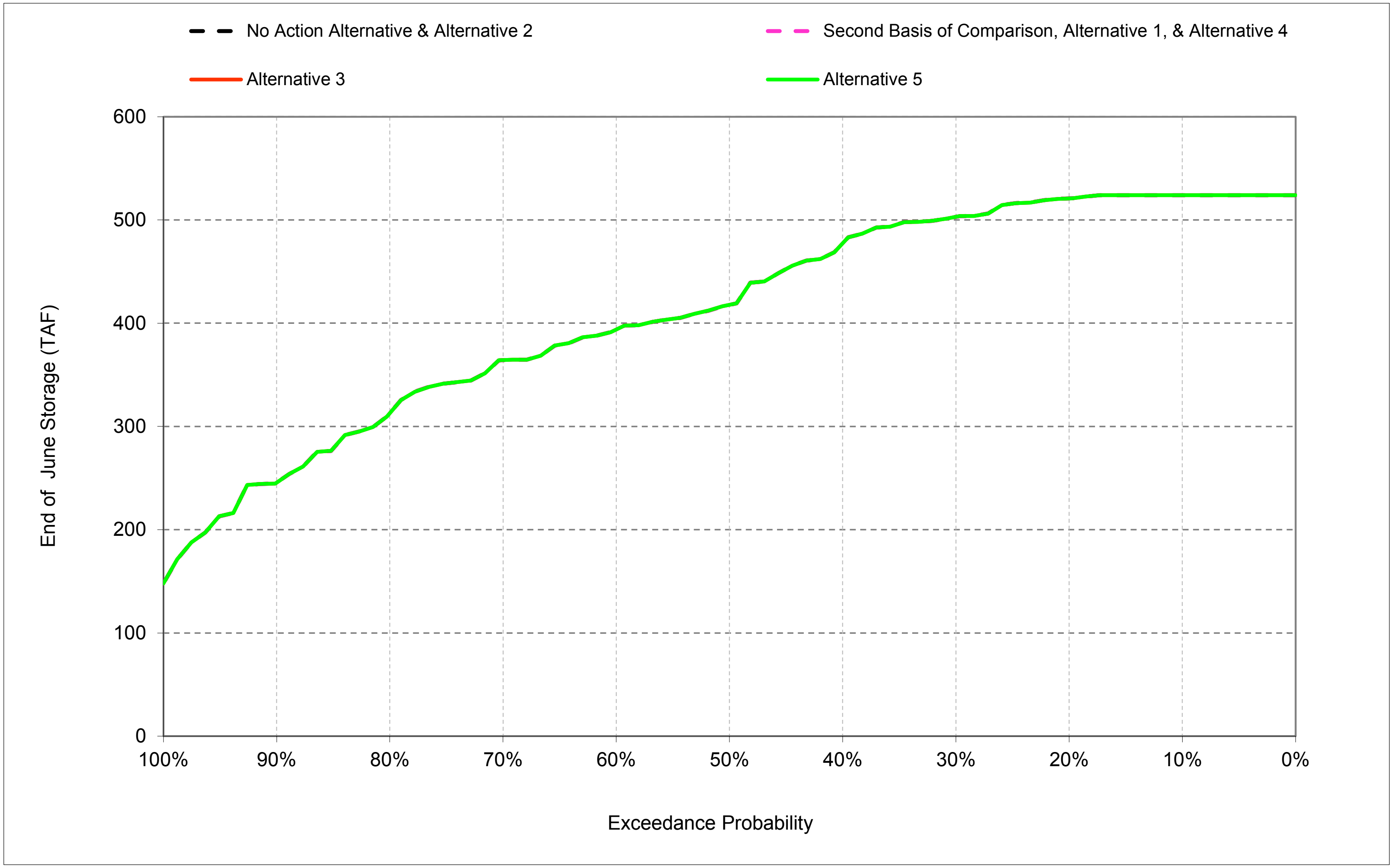
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-8. Millerton Lake, End of May Storage



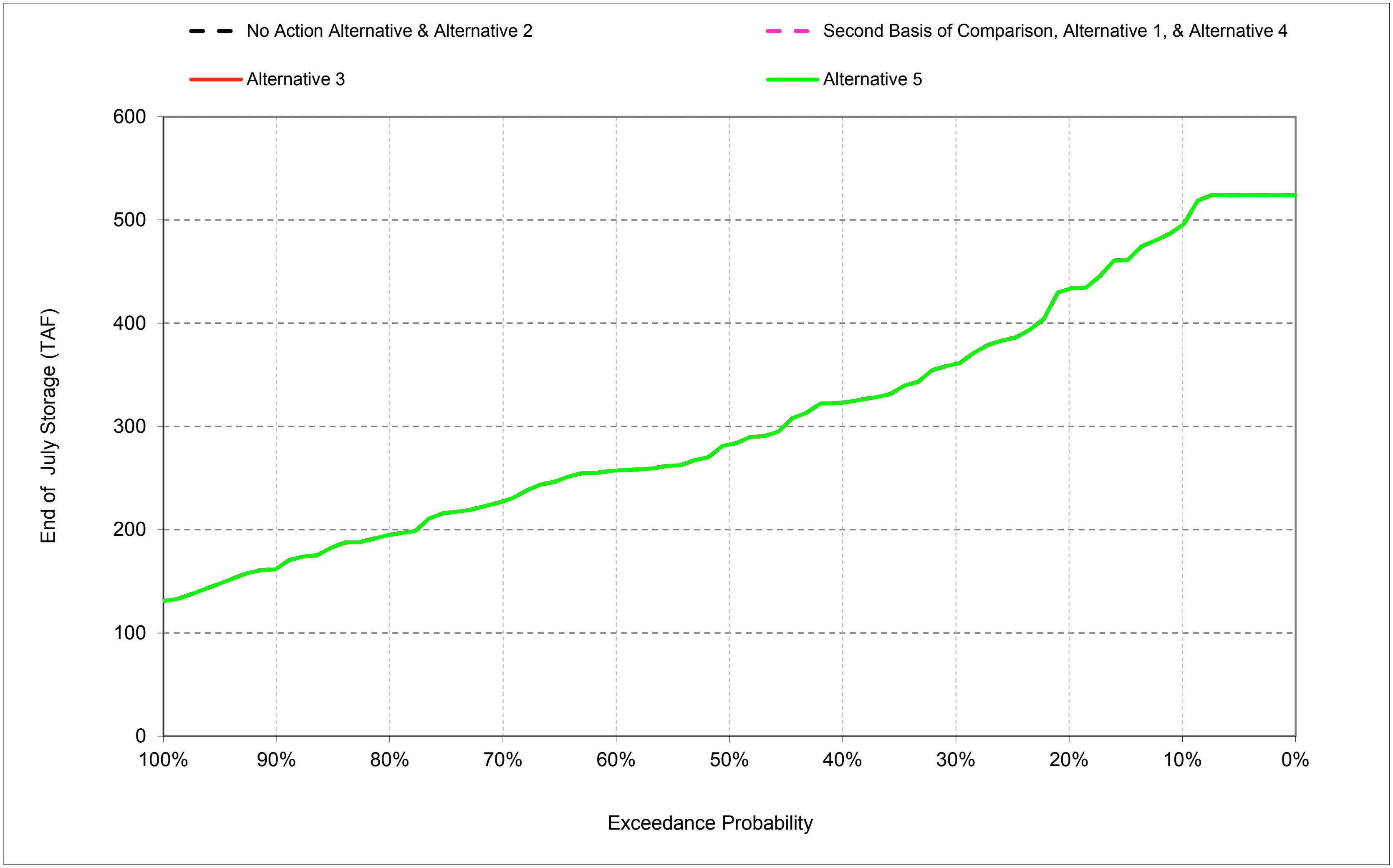
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-9. Millerton Lake, End of June Storage



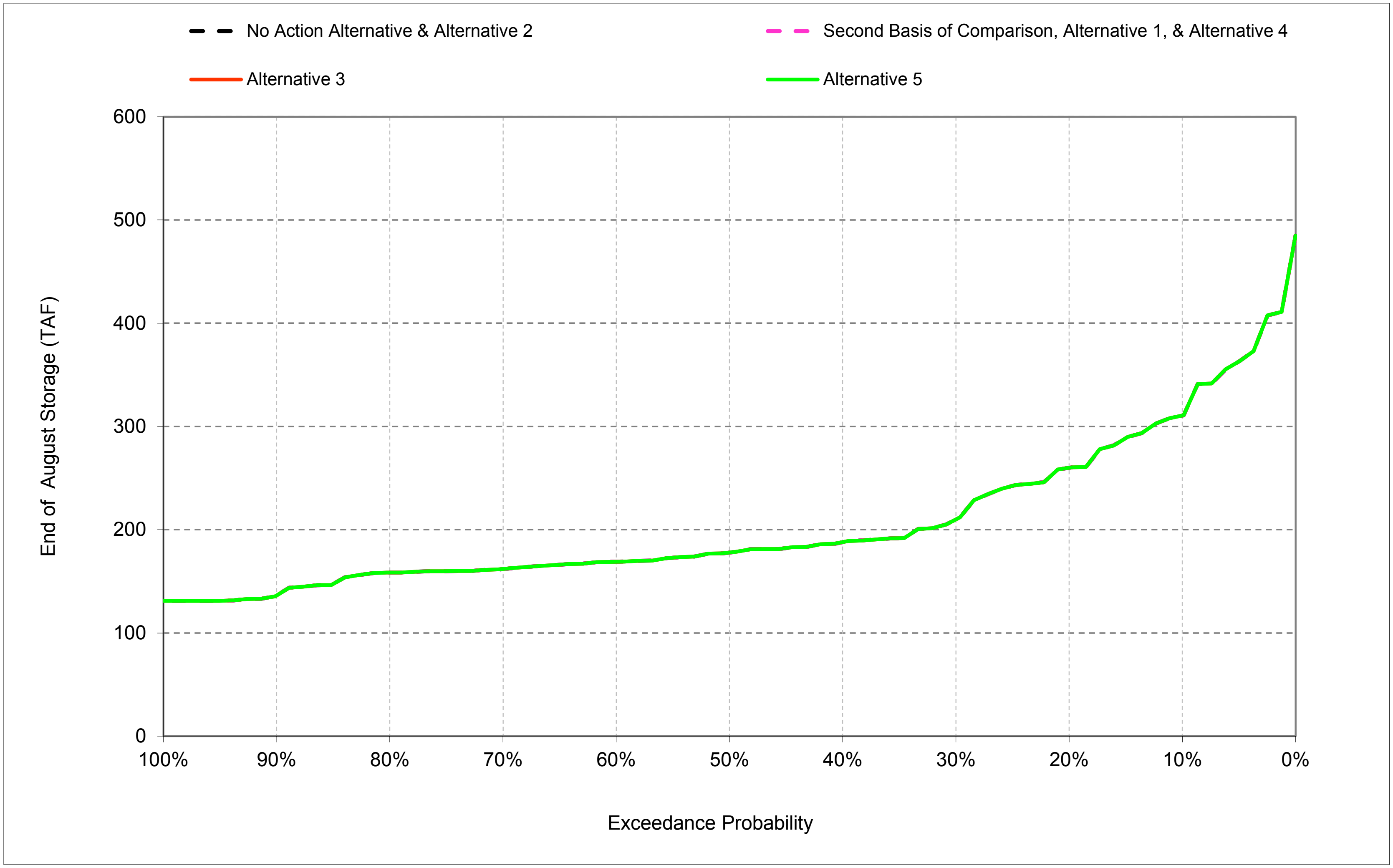
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-10. Millerton Lake, End of July Storage



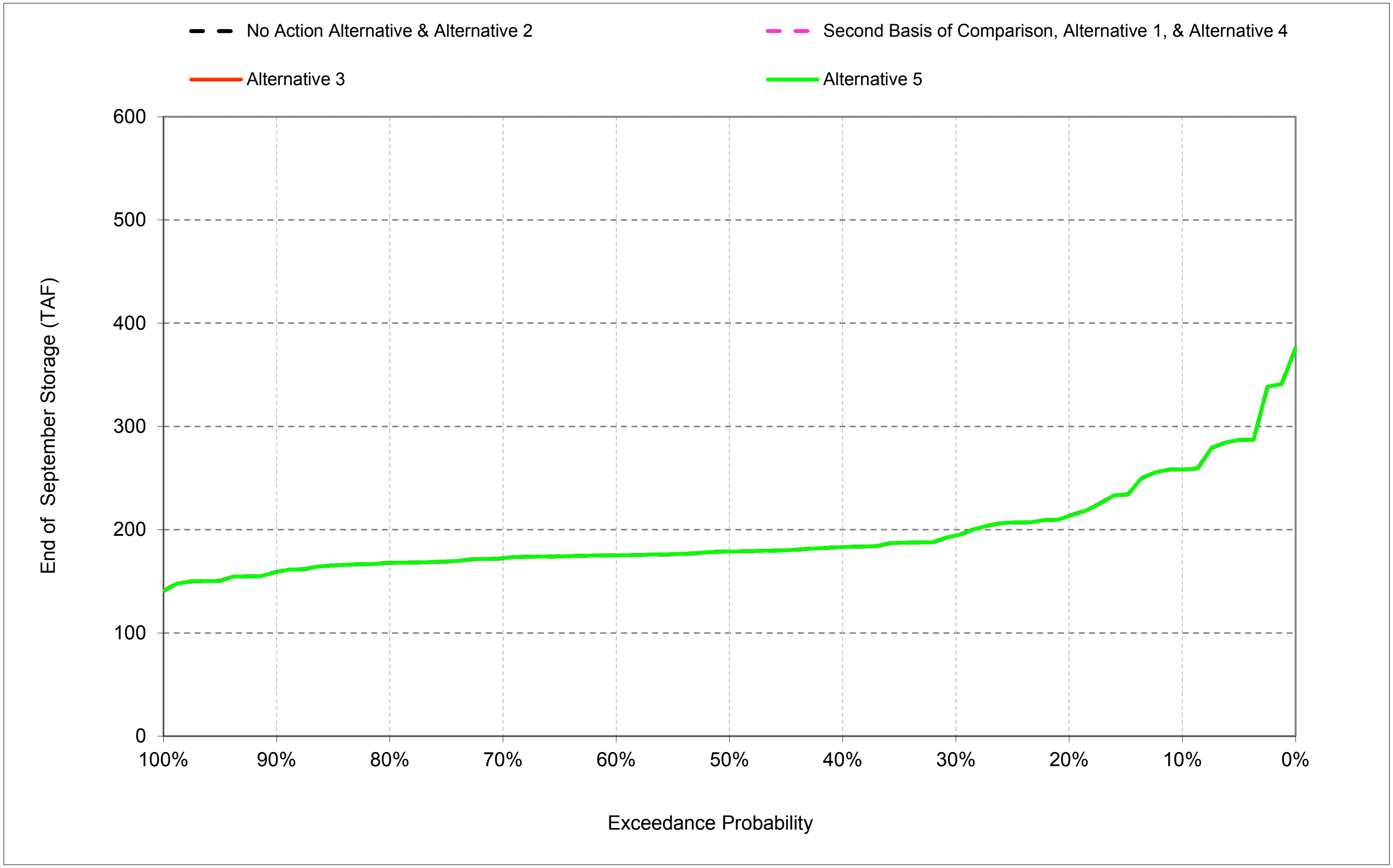
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-11. Millerton Lake, End of August Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-7-12. Millerton Lake, End of September Storage



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-1. Millerton Lake, End of Month Storage

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 1

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 1 minus No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-2. Millerton Lake, End of Month Storage

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1/0/1900

No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 5

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 5 minus No Action Alternative

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-4. Millerton Lake, End of Month Storage

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Storage (TAF)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-5. Millerton Lake, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 3

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-6. Millerton Lake, End of Month Storage

Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 5

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	258	292	374	439	439	479	488	524	524	495	311	258
20%	224	267	318	412	439	479	444	523	521	433	260	213
30%	211	250	293	351	439	472	421	479	503	361	210	194
40%	197	223	270	333	419	436	393	455	477	323	188	183
50%	189	210	252	303	383	396	373	430	418	283	178	179
60%	178	194	232	288	339	368	343	403	394	257	169	175
70%	172	176	213	258	315	326	308	379	364	228	162	172
80%	162	168	197	232	266	274	268	332	313	195	158	168
90%	155	154	172	187	204	205	225	245	246	163	136	159
Long Term												
Full Simulation Period[b]	199	220	261	310	353	372	358	415	411	307	207	195
Water Year Types[c]												
Wet (23%)	205	228	306	382	426	448	356	426	509	464	312	256
Above Normal (24%)	202	226	270	340	417	447	403	491	496	355	210	184
Below Normal (10%)	192	227	253	297	354	360	348	401	393	283	185	180
Dry (16%)	213	238	266	302	327	343	386	426	372	231	162	181
Critical (27%)	185	194	212	231	247	260	306	334	278	182	148	168

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Storage (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

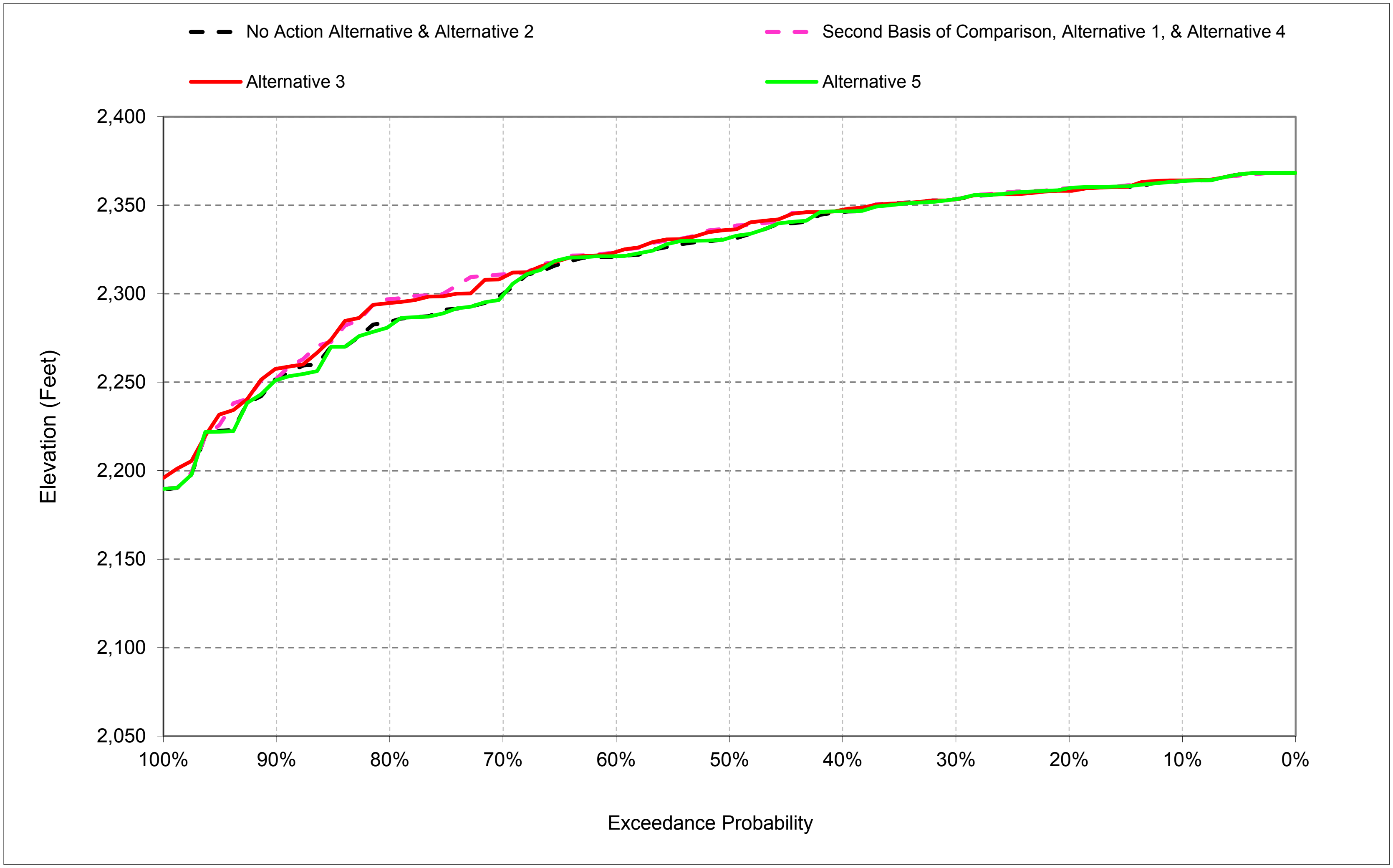
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

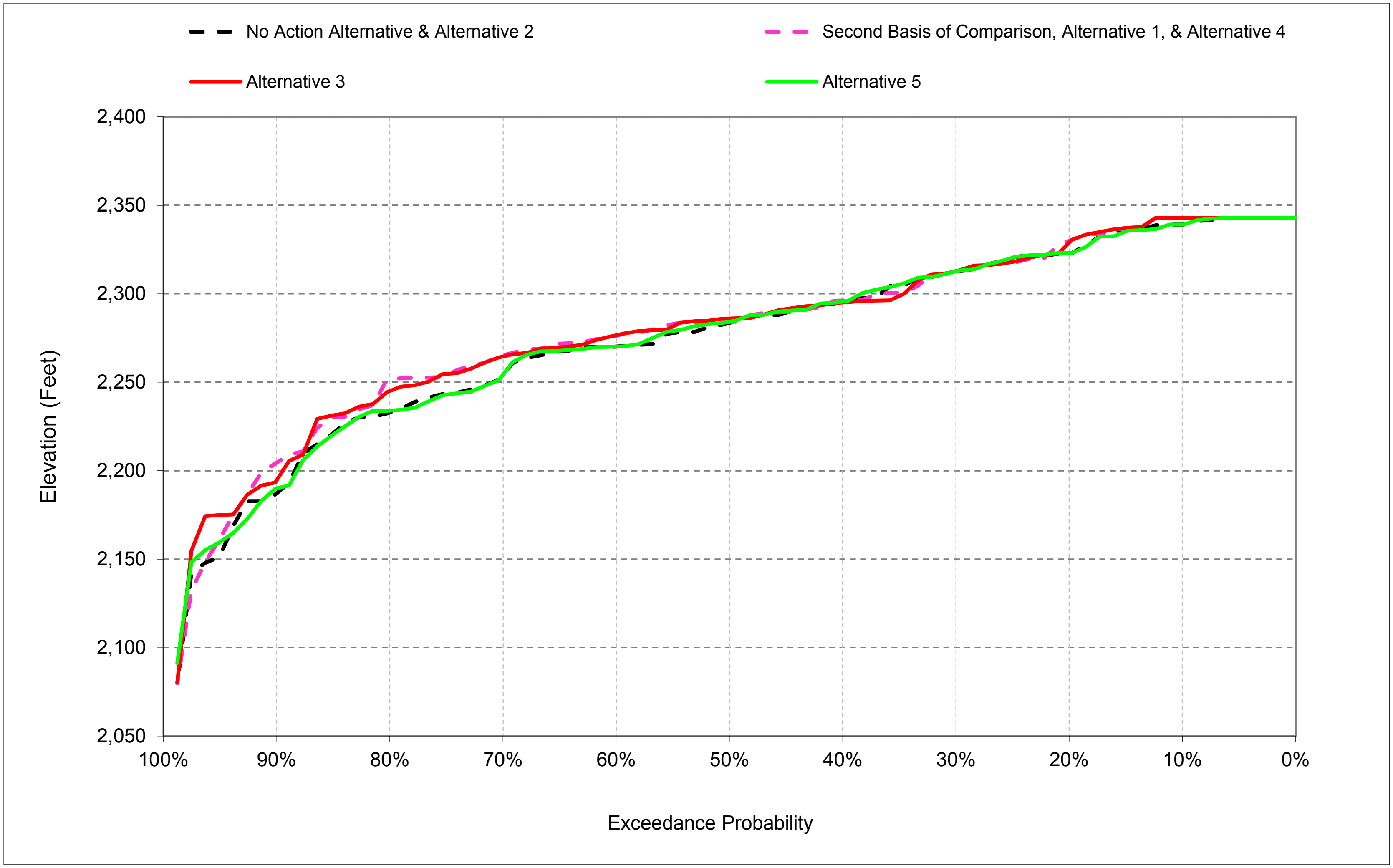
C.8. Trinity Lake Elevation

Figure C-8-1. Trinity Lake, Reservoir Pool Elevation, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-8-2. Trinity Lake, Reservoir Pool Elevation, September



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-1. Trinity Lake, End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,332	2,331	2,332	2,337	2,345	2,350	2,360	2,364	2,361	2,359	2,353	2,339
20%	2,325	2,322	2,328	2,336	2,345	2,350	2,358	2,359	2,356	2,348	2,337	2,324
30%	2,306	2,309	2,318	2,326	2,341	2,349	2,357	2,353	2,348	2,338	2,326	2,314
40%	2,293	2,292	2,307	2,317	2,325	2,343	2,351	2,346	2,338	2,326	2,310	2,297
50%	2,278	2,280	2,291	2,303	2,317	2,325	2,337	2,331	2,320	2,308	2,295	2,286
60%	2,268	2,271	2,280	2,284	2,302	2,317	2,327	2,321	2,313	2,296	2,282	2,271
70%	2,259	2,258	2,266	2,271	2,281	2,291	2,301	2,300	2,294	2,284	2,271	2,262
80%	2,235	2,238	2,241	2,252	2,259	2,270	2,287	2,284	2,278	2,262	2,246	2,236
90%	2,192	2,201	2,205	2,206	2,221	2,246	2,254	2,252	2,245	2,229	2,202	2,195
Long Term												
Full Simulation Period[b]	2,270	2,271	2,278	2,286	2,298	2,310	2,321	2,319	2,314	2,302	2,288	2,276
Water Year Types[c]												
Wet (32%)	2,300	2,303	2,313	2,324	2,338	2,347	2,357	2,358	2,355	2,347	2,338	2,327
Above Normal (16%)	2,261	2,264	2,276	2,294	2,314	2,330	2,343	2,341	2,335	2,325	2,313	2,302
Below Normal (13%)	2,289	2,289	2,291	2,299	2,307	2,315	2,327	2,321	2,313	2,299	2,283	2,272
Dry (24%)	2,263	2,265	2,268	2,269	2,279	2,292	2,305	2,301	2,294	2,279	2,264	2,254
Critical (15%)	2,210	2,207	2,210	2,213	2,220	2,235	2,242	2,238	2,235	2,220	2,196	2,182

Alternative 1

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,332	2,332	2,332	2,337	2,345	2,350	2,361	2,364	2,361	2,358	2,353	2,343
20%	2,328	2,331	2,332	2,337	2,345	2,350	2,359	2,360	2,355	2,348	2,338	2,330
30%	2,309	2,310	2,323	2,329	2,343	2,350	2,357	2,353	2,349	2,339	2,327	2,315
40%	2,293	2,298	2,308	2,320	2,333	2,346	2,352	2,347	2,338	2,325	2,309	2,296
50%	2,283	2,283	2,294	2,308	2,318	2,330	2,346	2,338	2,326	2,311	2,296	2,286
60%	2,273	2,276	2,279	2,289	2,306	2,320	2,326	2,324	2,318	2,302	2,288	2,278
70%	2,267	2,266	2,274	2,278	2,291	2,301	2,315	2,311	2,306	2,294	2,279	2,267
80%	2,249	2,250	2,253	2,261	2,269	2,283	2,299	2,297	2,289	2,273	2,261	2,252
90%	2,207	2,208	2,212	2,220	2,232	2,246	2,261	2,252	2,245	2,230	2,215	2,209
Long Term												
Full Simulation Period[b]	2,275	2,277	2,283	2,291	2,303	2,314	2,325	2,322	2,317	2,305	2,291	2,280
Water Year Types[c]												
Wet (32%)	2,301	2,305	2,314	2,325	2,339	2,347	2,357	2,358	2,355	2,347	2,338	2,328
Above Normal (16%)	2,270	2,273	2,286	2,303	2,320	2,335	2,347	2,346	2,339	2,329	2,315	2,304
Below Normal (13%)	2,295	2,296	2,298	2,305	2,313	2,320	2,331	2,326	2,318	2,303	2,287	2,274
Dry (24%)	2,266	2,269	2,272	2,274	2,284	2,296	2,309	2,304	2,298	2,284	2,269	2,259
Critical (15%)	2,218	2,216	2,217	2,222	2,229	2,243	2,250	2,246	2,243	2,227	2,204	2,191

Alternative 1 minus No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	1	0	0	0	0	1	0	0	0	0	4
20%	3	9	5	1	0	0	0	0	-1	0	1	6
30%	3	1	5	4	3	1	0	0	1	1	1	1
40%	1	6	1	3	7	2	1	0	0	-1	0	-1
50%	5	2	2	6	2	4	8	6	6	3	0	0
60%	5	5	-1	5	3	3	-1	3	4	6	6	7
70%	8	8	8	6	10	10	13	11	12	10	7	5
80%	14	12	12	9	10	14	12	13	11	11	15	16
90%	15	8	7	14	11	0	7	0	0	2	13	14
Long Term												
Full Simulation Period[b]	5	5	5	5	4	4	3	4	4	3	3	4
Water Year Types[c]												
Wet (32%)	1	2	1	1	1	0	0	0	0	0	0	2
Above Normal (16%)	8	10	10	9	7	5	4	4	4	4	2	2
Below Normal (13%)	6	7	7	6	6	6	4	5	5	4	3	3
Dry (24%)	3	4	4	5	5	4	4	4	5	5	5	5
Critical (15%)	8	8	8	9	8	8	8	8	7	8	8	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-2. Trinity Lake, End of Month Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	2,332	2,331	2,332	2,337	2,345	2,350	2,360	2,364	2,361	2,359	2,353	2,339
20%	2,325	2,322	2,328	2,336	2,345	2,350	2,358	2,359	2,356	2,348	2,337	2,324
30%	2,306	2,309	2,318	2,326	2,341	2,349	2,357	2,353	2,348	2,338	2,326	2,314
40%	2,293	2,292	2,307	2,317	2,325	2,343	2,351	2,346	2,338	2,326	2,310	2,297
50%	2,278	2,280	2,291	2,303	2,317	2,325	2,337	2,331	2,320	2,308	2,295	2,286
60%	2,268	2,271	2,280	2,284	2,302	2,317	2,327	2,321	2,313	2,296	2,282	2,271
70%	2,259	2,258	2,266	2,271	2,281	2,291	2,301	2,300	2,294	2,284	2,271	2,262
80%	2,235	2,238	2,241	2,252	2,259	2,270	2,287	2,284	2,278	2,262	2,246	2,236
90%	2,192	2,201	2,205	2,206	2,221	2,246	2,254	2,252	2,245	2,229	2,202	2,195
Long Term												
Full Simulation Period[b]	2,270	2,271	2,278	2,286	2,298	2,310	2,321	2,319	2,314	2,302	2,288	2,276
Water Year Types[c]												
Wet (32%)	2,300	2,303	2,313	2,324	2,338	2,347	2,357	2,358	2,355	2,347	2,338	2,327
Above Normal (16%)	2,261	2,264	2,276	2,294	2,314	2,330	2,343	2,341	2,335	2,325	2,313	2,302
Below Normal (13%)	2,289	2,289	2,291	2,299	2,307	2,315	2,327	2,321	2,313	2,299	2,283	2,272
Dry (24%)	2,263	2,265	2,268	2,269	2,279	2,292	2,305	2,301	2,294	2,279	2,264	2,254
Critical (15%)	2,210	2,207	2,210	2,213	2,220	2,235	2,242	2,238	2,235	2,220	2,196	2,182

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	2,332	2,332	2,332	2,337	2,345	2,350	2,361	2,364	2,361	2,356	2,350	2,343
20%	2,329	2,331	2,332	2,337	2,345	2,350	2,359	2,358	2,356	2,348	2,337	2,330
30%	2,310	2,312	2,321	2,328	2,342	2,349	2,357	2,353	2,348	2,339	2,327	2,315
40%	2,291	2,294	2,309	2,317	2,333	2,345	2,351	2,347	2,340	2,324	2,309	2,296
50%	2,282	2,282	2,296	2,310	2,320	2,330	2,344	2,336	2,327	2,311	2,296	2,286
60%	2,273	2,276	2,279	2,287	2,306	2,321	2,327	2,324	2,317	2,302	2,289	2,278
70%	2,266	2,266	2,275	2,276	2,289	2,300	2,313	2,309	2,305	2,293	2,278	2,266
80%	2,245	2,250	2,251	2,260	2,272	2,281	2,297	2,295	2,288	2,272	2,257	2,248
90%	2,206	2,206	2,205	2,213	2,229	2,246	2,262	2,258	2,251	2,236	2,215	2,206
Long Term												
Full Simulation Period[b]	2,275	2,277	2,283	2,291	2,303	2,314	2,324	2,322	2,317	2,305	2,291	2,281
Water Year Types[c]												
Wet (32%)	2,301	2,305	2,314	2,325	2,339	2,347	2,357	2,358	2,355	2,347	2,338	2,328
Above Normal (16%)	2,268	2,271	2,284	2,301	2,319	2,334	2,347	2,345	2,339	2,328	2,315	2,304
Below Normal (13%)	2,293	2,295	2,297	2,304	2,312	2,319	2,330	2,325	2,317	2,302	2,286	2,274
Dry (24%)	2,265	2,268	2,271	2,273	2,283	2,296	2,309	2,305	2,299	2,284	2,269	2,260
Critical (15%)	2,226	2,220	2,222	2,225	2,231	2,244	2,252	2,248	2,244	2,229	2,204	2,193

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	0	1	0	0	0	0	1	0	0	-3	-2	4
20%	4	8	4	1	0	0	0	-1	0	0	0	6
30%	3	3	3	2	1	-1	0	0	0	1	2	2
40%	-2	3	1	0	8	1	-1	1	2	-1	0	-1
50%	4	2	4	7	3	5	7	5	6	3	0	0
60%	5	5	0	4	3	4	0	2	4	6	6	7
70%	7	8	8	5	8	9	12	9	11	9	7	4
80%	10	12	10	8	13	11	10	11	9	10	11	12
90%	14	6	0	7	8	0	9	6	6	7	13	11
Long Term												
Full Simulation Period[b]	5	5	5	5	4	4	3	4	4	3	3	4
Water Year Types[c]												
Wet (32%)	1	2	1	1	1	0	0	0	0	0	0	2
Above Normal (16%)	7	8	8	7	5	4	4	4	4	3	2	2
Below Normal (13%)	4	5	6	5	5	5	3	4	4	3	3	2
Dry (24%)	3	3	3	4	4	4	4	4	5	5	5	6
Critical (15%)	16	13	13	12	11	10	9	9	9	9	8	11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-3. Trinity Lake, End of Month Elevation

No Action Alternative

	End of Month Elevation (Feet)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,332	2,331	2,332	2,337	2,345	2,350	2,360	2,364	2,361	2,359	2,353	2,339
20%	2,325	2,322	2,328	2,336	2,345	2,350	2,358	2,359	2,356	2,348	2,337	2,324
30%	2,306	2,309	2,318	2,326	2,341	2,349	2,357	2,353	2,348	2,338	2,326	2,314
40%	2,293	2,292	2,307	2,317	2,325	2,343	2,351	2,346	2,338	2,326	2,310	2,297
50%	2,278	2,280	2,291	2,303	2,317	2,325	2,337	2,331	2,320	2,308	2,295	2,286
60%	2,268	2,271	2,280	2,284	2,302	2,317	2,327	2,321	2,313	2,296	2,282	2,271
70%	2,259	2,258	2,266	2,271	2,281	2,291	2,301	2,300	2,294	2,284	2,271	2,262
80%	2,235	2,238	2,241	2,252	2,259	2,270	2,287	2,284	2,278	2,262	2,246	2,236
90%	2,192	2,201	2,205	2,206	2,221	2,246	2,254	2,252	2,245	2,229	2,202	2,195
Long Term												
Full Simulation Period[b]	2,270	2,271	2,278	2,286	2,298	2,310	2,321	2,319	2,314	2,302	2,288	2,276
Water Year Types[c]												
Wet (32%)	2,300	2,303	2,313	2,324	2,338	2,347	2,357	2,358	2,355	2,347	2,338	2,327
Above Normal (16%)	2,261	2,264	2,276	2,294	2,314	2,330	2,343	2,341	2,335	2,325	2,313	2,302
Below Normal (13%)	2,289	2,289	2,291	2,299	2,307	2,315	2,327	2,321	2,313	2,299	2,283	2,272
Dry (24%)	2,263	2,265	2,268	2,269	2,279	2,292	2,305	2,301	2,294	2,279	2,264	2,254
Critical (15%)	2,210	2,207	2,210	2,213	2,220	2,235	2,242	2,238	2,235	2,220	2,196	2,182

Alternative 5

	End of Month Elevation (Feet)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,332	2,330	2,332	2,337	2,345	2,350	2,360	2,364	2,361	2,359	2,353	2,339
20%	2,325	2,322	2,328	2,336	2,345	2,350	2,358	2,360	2,356	2,348	2,336	2,323
30%	2,306	2,309	2,319	2,326	2,341	2,349	2,357	2,353	2,348	2,338	2,326	2,314
40%	2,296	2,292	2,308	2,318	2,325	2,344	2,352	2,347	2,338	2,326	2,311	2,299
50%	2,279	2,281	2,292	2,304	2,317	2,326	2,336	2,332	2,322	2,308	2,296	2,286
60%	2,269	2,273	2,281	2,284	2,302	2,317	2,328	2,321	2,314	2,301	2,283	2,271
70%	2,261	2,259	2,266	2,271	2,281	2,292	2,301	2,299	2,293	2,283	2,270	2,263
80%	2,235	2,238	2,241	2,252	2,259	2,270	2,288	2,282	2,277	2,262	2,248	2,235
90%	2,190	2,200	2,201	2,206	2,221	2,245	2,253	2,251	2,246	2,232	2,203	2,193
Long Term												
Full Simulation Period[b]	2,270	2,271	2,278	2,286	2,299	2,310	2,321	2,319	2,314	2,302	2,289	2,277
Water Year Types[c]												
Wet (32%)	2,300	2,303	2,313	2,325	2,338	2,347	2,357	2,358	2,355	2,347	2,338	2,326
Above Normal (16%)	2,259	2,262	2,276	2,294	2,314	2,330	2,343	2,342	2,335	2,326	2,313	2,303
Below Normal (13%)	2,289	2,290	2,292	2,299	2,308	2,315	2,326	2,321	2,313	2,299	2,284	2,272
Dry (24%)	2,263	2,265	2,268	2,269	2,279	2,292	2,305	2,301	2,294	2,279	2,265	2,254
Critical (15%)	2,209	2,206	2,209	2,212	2,220	2,234	2,241	2,237	2,235	2,221	2,199	2,183

Alternative 5 minus No Action Alternative

	End of Month Elevation (Feet)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	1	0	0	0	0	0	0	0	-1	-1
30%	0	0	1	0	0	0	0	0	0	0	0	0
40%	4	0	0	1	0	1	1	0	0	0	1	2
50%	1	1	1	1	1	0	-1	0	2	0	1	1
60%	1	2	1	0	0	0	0	0	0	5	1	0
70%	2	2	-1	-1	0	1	0	-1	0	-1	-1	1
80%	0	-1	0	0	0	0	1	-2	-1	1	2	-1
90%	-2	0	-4	0	0	-1	-1	-1	1	3	1	-2
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	1	1	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (16%)	-2	-2	0	0	0	0	0	0	0	0	1	1
Below Normal (13%)	1	1	1	1	1	0	0	0	0	0	1	0
Dry (24%)	1	0	0	0	0	0	0	0	0	0	1	1
Critical (15%)	0	-1	-1	-1	-1	-1	-1	-1	-1	2	3	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-4. Trinity Lake, End of Month Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	2,332	2,332	2,332	2,337	2,345	2,350	2,361	2,364	2,361	2,358	2,353	2,343
20%	2,328	2,331	2,332	2,337	2,345	2,350	2,359	2,360	2,355	2,348	2,338	2,330
30%	2,309	2,310	2,323	2,329	2,343	2,350	2,357	2,353	2,349	2,339	2,327	2,315
40%	2,293	2,298	2,308	2,320	2,333	2,346	2,352	2,347	2,338	2,325	2,309	2,296
50%	2,283	2,283	2,294	2,308	2,318	2,330	2,346	2,338	2,326	2,311	2,296	2,286
60%	2,273	2,276	2,279	2,289	2,306	2,320	2,326	2,324	2,318	2,302	2,288	2,278
70%	2,267	2,266	2,274	2,278	2,291	2,301	2,315	2,311	2,306	2,294	2,279	2,267
80%	2,249	2,250	2,253	2,261	2,269	2,283	2,299	2,297	2,289	2,273	2,261	2,252
90%	2,207	2,208	2,212	2,220	2,232	2,246	2,261	2,252	2,245	2,230	2,215	2,209
Long Term												
Full Simulation Period[b]	2,275	2,277	2,283	2,291	2,303	2,314	2,325	2,322	2,317	2,305	2,291	2,280
Water Year Types[c]												
Wet (32%)	2,301	2,305	2,314	2,325	2,339	2,347	2,357	2,358	2,355	2,347	2,338	2,328
Above Normal (16%)	2,270	2,273	2,286	2,303	2,320	2,335	2,347	2,346	2,339	2,329	2,315	2,304
Below Normal (13%)	2,295	2,296	2,298	2,305	2,313	2,320	2,331	2,326	2,318	2,303	2,287	2,274
Dry (24%)	2,266	2,269	2,272	2,274	2,284	2,296	2,309	2,304	2,298	2,284	2,269	2,259
Critical (15%)	2,218	2,216	2,217	2,222	2,229	2,243	2,250	2,246	2,243	2,227	2,204	2,191

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	2,332	2,331	2,332	2,337	2,345	2,350	2,360	2,364	2,361	2,359	2,353	2,339
20%	2,325	2,322	2,328	2,336	2,345	2,350	2,358	2,359	2,356	2,348	2,337	2,324
30%	2,306	2,309	2,318	2,326	2,341	2,349	2,357	2,353	2,348	2,338	2,326	2,314
40%	2,293	2,292	2,307	2,317	2,325	2,343	2,351	2,346	2,338	2,326	2,310	2,297
50%	2,278	2,280	2,291	2,303	2,317	2,325	2,337	2,331	2,320	2,308	2,295	2,286
60%	2,268	2,271	2,280	2,284	2,302	2,317	2,327	2,321	2,313	2,296	2,282	2,271
70%	2,259	2,258	2,266	2,271	2,281	2,291	2,301	2,300	2,294	2,284	2,271	2,262
80%	2,235	2,238	2,241	2,252	2,259	2,270	2,287	2,284	2,278	2,262	2,246	2,236
90%	2,192	2,201	2,205	2,206	2,221	2,246	2,254	2,252	2,245	2,229	2,202	2,195
Long Term												
Full Simulation Period[b]	2,270	2,271	2,278	2,286	2,298	2,310	2,321	2,319	2,314	2,302	2,288	2,276
Water Year Types[c]												
Wet (32%)	2,300	2,303	2,313	2,324	2,338	2,347	2,357	2,358	2,355	2,347	2,338	2,327
Above Normal (16%)	2,261	2,264	2,276	2,294	2,314	2,330	2,343	2,341	2,335	2,325	2,313	2,302
Below Normal (13%)	2,289	2,289	2,291	2,299	2,307	2,315	2,327	2,321	2,313	2,299	2,283	2,272
Dry (24%)	2,263	2,265	2,268	2,269	2,279	2,292	2,305	2,301	2,294	2,279	2,264	2,254
Critical (15%)	2,210	2,207	2,210	2,213	2,220	2,235	2,242	2,238	2,235	2,220	2,196	2,182

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	0	-1	0	0	0	0	-1	0	0	0	0	-4
20%	-3	-9	-5	-1	0	0	0	0	1	0	-1	-6
30%	-3	-1	-5	-4	-3	-1	0	0	-1	-1	-1	-1
40%	-1	-6	-1	-3	-7	-2	-1	0	0	1	0	1
50%	-5	-2	-2	-6	-2	-4	-8	-6	-6	-3	0	0
60%	-5	-5	1	-5	-3	-3	1	-3	-4	-6	-6	-7
70%	-8	-8	-8	-6	-10	-10	-13	-11	-12	-10	-7	-5
80%	-14	-12	-12	-9	-10	-14	-12	-13	-11	-11	-15	-16
90%	-15	-8	-7	-14	-11	0	-7	0	0	-2	-13	-14
Long Term												
Full Simulation Period[b]	-5	-5	-5	-5	-4	-4	-3	-4	-4	-3	-3	-4
Water Year Types[c]												
Wet (32%)	-1	-2	-1	-1	-1	0	0	0	0	0	0	-2
Above Normal (16%)	-8	-10	-10	-9	-7	-5	-4	-4	-4	-4	-2	-2
Below Normal (13%)	-6	-7	-7	-6	-6	-6	-4	-5	-5	-4	-3	-3
Dry (24%)	-3	-4	-4	-5	-5	-4	-4	-4	-5	-5	-5	-5
Critical (15%)	-8	-8	-8	-9	-8	-8	-8	-8	-7	-8	-8	-9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-5. Trinity Lake, End of Month Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	2,332	2,332	2,332	2,337	2,345	2,350	2,361	2,364	2,361	2,358	2,353	2,343
20%	2,328	2,331	2,332	2,337	2,345	2,350	2,359	2,360	2,355	2,348	2,338	2,330
30%	2,309	2,310	2,323	2,329	2,343	2,350	2,357	2,353	2,349	2,339	2,327	2,315
40%	2,293	2,298	2,308	2,320	2,333	2,346	2,352	2,347	2,338	2,325	2,309	2,296
50%	2,283	2,283	2,294	2,308	2,318	2,330	2,346	2,338	2,326	2,311	2,296	2,286
60%	2,273	2,276	2,279	2,289	2,306	2,320	2,326	2,324	2,318	2,302	2,288	2,278
70%	2,267	2,266	2,274	2,278	2,291	2,301	2,315	2,311	2,306	2,294	2,279	2,267
80%	2,249	2,250	2,253	2,261	2,269	2,283	2,299	2,297	2,289	2,273	2,261	2,252
90%	2,207	2,208	2,212	2,220	2,232	2,246	2,261	2,252	2,245	2,230	2,215	2,209
Long Term												
Full Simulation Period[b]	2,275	2,277	2,283	2,291	2,303	2,314	2,325	2,322	2,317	2,305	2,291	2,280
Water Year Types[c]												
Wet (32%)	2,301	2,305	2,314	2,325	2,339	2,347	2,357	2,358	2,355	2,347	2,338	2,328
Above Normal (16%)	2,270	2,273	2,286	2,303	2,320	2,335	2,347	2,346	2,339	2,329	2,315	2,304
Below Normal (13%)	2,295	2,296	2,298	2,305	2,313	2,320	2,331	2,326	2,318	2,303	2,287	2,274
Dry (24%)	2,266	2,269	2,272	2,274	2,284	2,296	2,309	2,304	2,298	2,284	2,269	2,259
Critical (15%)	2,218	2,216	2,217	2,222	2,229	2,243	2,250	2,246	2,243	2,227	2,204	2,191

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	2,332	2,332	2,332	2,337	2,345	2,350	2,361	2,364	2,361	2,356	2,350	2,343
20%	2,329	2,331	2,332	2,337	2,345	2,350	2,359	2,358	2,356	2,348	2,337	2,330
30%	2,310	2,312	2,321	2,328	2,342	2,349	2,357	2,353	2,348	2,339	2,327	2,315
40%	2,291	2,294	2,309	2,317	2,333	2,345	2,351	2,347	2,340	2,324	2,309	2,296
50%	2,282	2,282	2,296	2,310	2,320	2,330	2,344	2,336	2,327	2,311	2,296	2,286
60%	2,273	2,276	2,279	2,287	2,306	2,321	2,327	2,324	2,317	2,302	2,289	2,278
70%	2,266	2,266	2,275	2,276	2,289	2,300	2,313	2,309	2,305	2,293	2,278	2,266
80%	2,245	2,250	2,251	2,260	2,272	2,281	2,297	2,295	2,288	2,272	2,257	2,248
90%	2,206	2,206	2,205	2,213	2,229	2,246	2,262	2,258	2,251	2,236	2,215	2,206
Long Term												
Full Simulation Period[b]	2,275	2,277	2,283	2,291	2,303	2,314	2,324	2,322	2,317	2,305	2,291	2,281
Water Year Types[c]												
Wet (32%)	2,301	2,305	2,314	2,325	2,339	2,347	2,357	2,358	2,355	2,347	2,338	2,328
Above Normal (16%)	2,268	2,271	2,284	2,301	2,319	2,334	2,347	2,345	2,339	2,328	2,315	2,304
Below Normal (13%)	2,293	2,295	2,297	2,304	2,312	2,319	2,330	2,325	2,317	2,302	2,286	2,274
Dry (24%)	2,265	2,268	2,271	2,273	2,283	2,296	2,309	2,305	2,299	2,284	2,269	2,260
Critical (15%)	2,226	2,220	2,222	2,225	2,231	2,244	2,252	2,248	2,244	2,229	2,204	2,193

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	-2	-2	0
20%	1	-1	0	0	0	0	0	-2	1	0	-1	0
30%	1	2	-2	-1	-1	-1	0	0	-1	0	0	0
40%	-2	-4	0	-3	0	-1	-1	1	2	-1	0	-1
50%	-1	-1	2	2	1	0	-2	-1	1	0	0	0
60%	-1	0	0	-1	0	1	1	0	0	0	0	0
70%	-1	0	1	-2	-2	-1	-1	-2	-1	-1	0	-1
80%	-4	0	-2	-1	2	-2	-2	-2	-1	-1	-4	-5
90%	-1	-2	-7	-6	-3	0	2	5	6	6	0	-3
Long Term												
Full Simulation Period[b]	1	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (16%)	-2	-2	-2	-2	-1	-1	-1	-1	0	-1	0	0
Below Normal (13%)	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	0	-1
Dry (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	8	5	5	4	3	2	1	2	2	1	0	2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-6. Trinity Lake, End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,332	2,332	2,332	2,337	2,345	2,350	2,361	2,364	2,361	2,358	2,353	2,343
20%	2,328	2,331	2,332	2,337	2,345	2,350	2,359	2,360	2,355	2,348	2,338	2,330
30%	2,309	2,310	2,323	2,329	2,343	2,350	2,357	2,353	2,349	2,339	2,327	2,315
40%	2,293	2,298	2,308	2,320	2,333	2,346	2,352	2,347	2,338	2,325	2,309	2,296
50%	2,283	2,283	2,294	2,308	2,318	2,330	2,346	2,338	2,326	2,311	2,296	2,286
60%	2,273	2,276	2,279	2,289	2,306	2,320	2,326	2,324	2,318	2,302	2,288	2,278
70%	2,267	2,266	2,274	2,278	2,291	2,301	2,315	2,311	2,306	2,294	2,279	2,267
80%	2,249	2,250	2,253	2,261	2,269	2,283	2,299	2,297	2,289	2,273	2,261	2,252
90%	2,207	2,208	2,212	2,220	2,232	2,246	2,261	2,252	2,245	2,230	2,215	2,209
Long Term												
Full Simulation Period[b]	2,275	2,277	2,283	2,291	2,303	2,314	2,325	2,322	2,317	2,305	2,291	2,280
Water Year Types[c]												
Wet (32%)	2,301	2,305	2,314	2,325	2,339	2,347	2,357	2,358	2,355	2,347	2,338	2,328
Above Normal (16%)	2,270	2,273	2,286	2,303	2,320	2,335	2,347	2,346	2,339	2,329	2,315	2,304
Below Normal (13%)	2,295	2,296	2,298	2,305	2,313	2,320	2,331	2,326	2,318	2,303	2,287	2,274
Dry (24%)	2,266	2,269	2,272	2,274	2,284	2,296	2,309	2,304	2,298	2,284	2,269	2,259
Critical (15%)	2,218	2,216	2,217	2,222	2,229	2,243	2,250	2,246	2,243	2,227	2,204	2,191

Alternative 5

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,332	2,330	2,332	2,337	2,345	2,350	2,360	2,364	2,361	2,359	2,353	2,339
20%	2,325	2,322	2,328	2,336	2,345	2,350	2,358	2,360	2,356	2,348	2,336	2,323
30%	2,306	2,309	2,319	2,326	2,341	2,349	2,357	2,353	2,348	2,338	2,326	2,314
40%	2,296	2,292	2,308	2,318	2,325	2,344	2,352	2,347	2,338	2,326	2,311	2,299
50%	2,279	2,281	2,292	2,304	2,317	2,326	2,336	2,332	2,322	2,308	2,296	2,286
60%	2,269	2,273	2,281	2,284	2,302	2,317	2,328	2,321	2,314	2,301	2,283	2,271
70%	2,261	2,259	2,266	2,271	2,281	2,292	2,301	2,299	2,293	2,283	2,270	2,263
80%	2,235	2,238	2,241	2,252	2,259	2,270	2,288	2,282	2,277	2,262	2,248	2,235
90%	2,190	2,200	2,201	2,206	2,221	2,245	2,253	2,251	2,246	2,232	2,203	2,193
Long Term												
Full Simulation Period[b]	2,270	2,271	2,278	2,286	2,299	2,310	2,321	2,319	2,314	2,302	2,289	2,277
Water Year Types[c]												
Wet (32%)	2,300	2,303	2,313	2,325	2,338	2,347	2,357	2,358	2,355	2,347	2,338	2,326
Above Normal (16%)	2,259	2,262	2,276	2,294	2,314	2,330	2,343	2,342	2,335	2,326	2,313	2,303
Below Normal (13%)	2,289	2,290	2,292	2,299	2,308	2,315	2,326	2,321	2,313	2,299	2,284	2,272
Dry (24%)	2,263	2,265	2,268	2,269	2,279	2,292	2,305	2,301	2,294	2,279	2,265	2,254
Critical (15%)	2,209	2,206	2,209	2,212	2,220	2,234	2,241	2,237	2,235	2,221	2,199	2,183

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	-2	0	0	0	0	-1	0	0	1	0	-4
20%	-3	-9	-4	-1	0	0	0	0	1	0	-2	-7
30%	-3	-1	-4	-3	-2	0	0	0	-1	-1	-1	-1
40%	3	-6	-1	-2	-7	-1	0	0	0	1	2	2
50%	-4	-1	-2	-4	-1	-4	-10	-6	-4	-3	0	0
60%	-5	-3	2	-5	-4	-3	2	-2	-4	-2	-5	-7
70%	-6	-7	-8	-7	-10	-9	-14	-12	-12	-11	-9	-5
80%	-14	-12	-12	-9	-10	-13	-11	-15	-12	-10	-13	-18
90%	-17	-8	-11	-14	-11	-1	-8	-1	1	2	-12	-16
Long Term												
Full Simulation Period[b]	-5	-5	-5	-5	-4	-4	-4	-4	-4	-3	-2	-3
Water Year Types[c]												
Wet (32%)	-1	-2	-1	-1	0	0	0	0	0	0	0	-2
Above Normal (16%)	-10	-11	-11	-9	-7	-5	-4	-4	-4	-3	-2	-1
Below Normal (13%)	-5	-6	-6	-5	-5	-5	-5	-5	-5	-3	-3	-2
Dry (24%)	-2	-3	-3	-5	-4	-4	-4	-4	-4	-4	-5	-5
Critical (15%)	-9	-9	-8	-9	-9	-9	-9	-9	-8	-6	-5	-8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

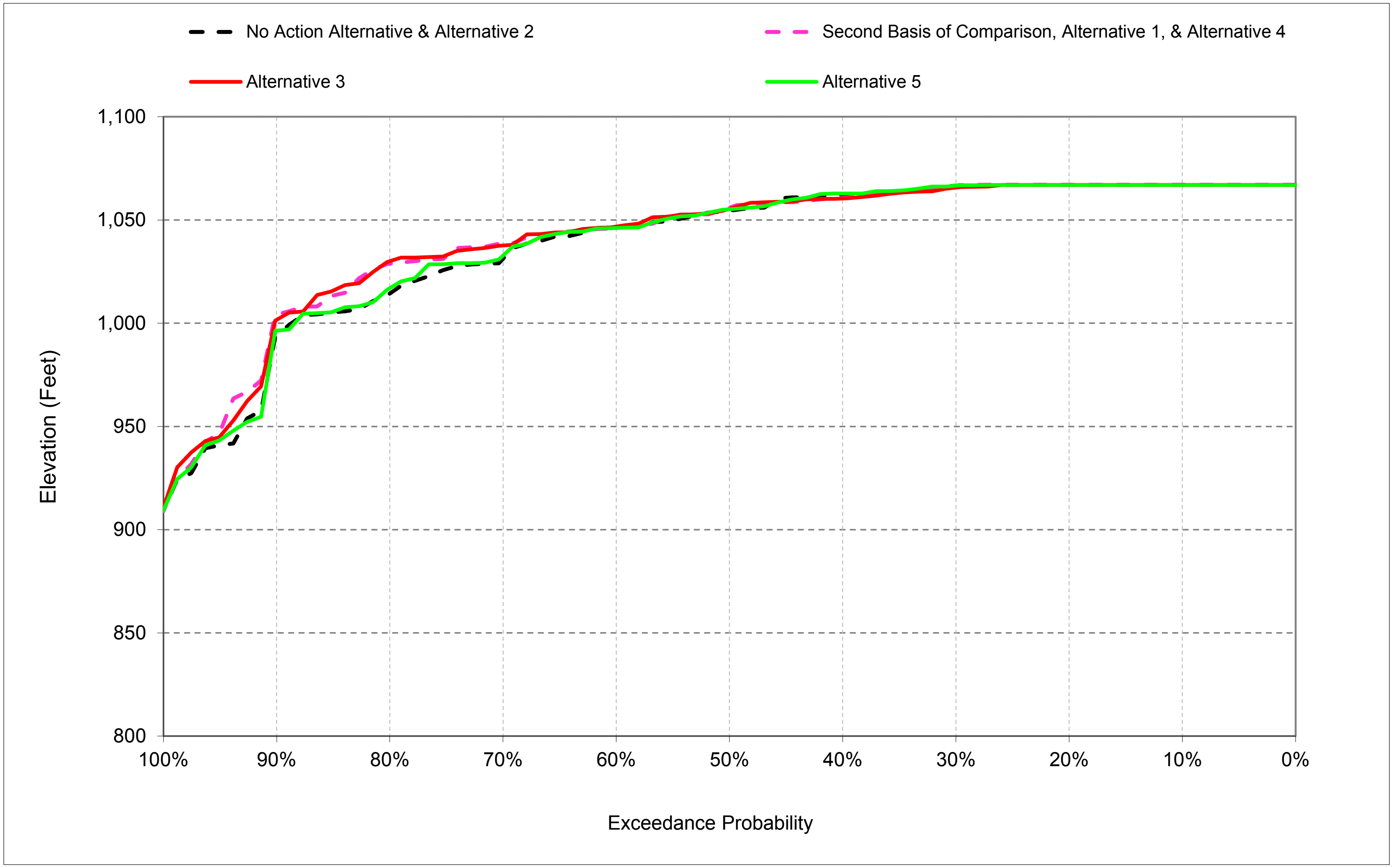
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

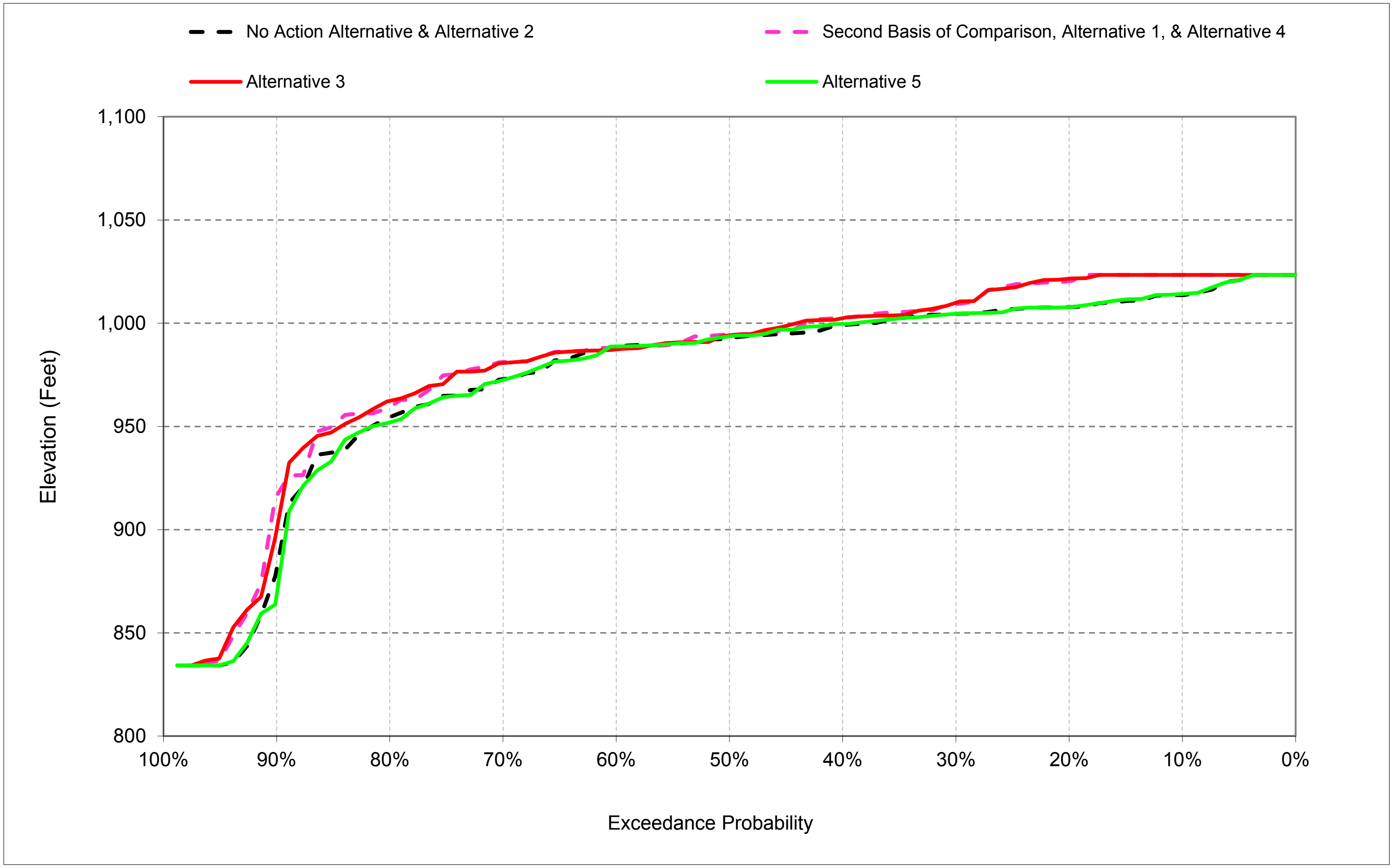
C.9. Shasta Lake Elevation

Figure C-9-1. Shasta Lake, Reservoir Pool Elevation, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-9-2. Shasta Lake, Reservoir Pool Elevation, September



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-1. Shasta Lake, End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,015	1,015	1,020	1,033	1,041	1,055	1,064	1,067	1,063	1,044	1,031	1,014
20%	1,005	1,003	1,019	1,029	1,036	1,051	1,063	1,067	1,057	1,039	1,027	1,008
30%	1,000	996	1,017	1,022	1,033	1,047	1,061	1,067	1,054	1,031	1,016	1,005
40%	994	992	1,007	1,017	1,027	1,045	1,057	1,062	1,048	1,020	1,007	1,000
50%	988	986	996	1,013	1,023	1,039	1,052	1,054	1,039	1,014	999	994
60%	984	981	986	1,004	1,018	1,031	1,047	1,046	1,030	1,006	994	989
70%	969	970	975	990	1,012	1,024	1,038	1,031	1,019	993	984	974
80%	953	953	964	981	996	1,012	1,025	1,014	998	974	961	957
90%	907	905	912	954	967	987	993	994	976	943	917	914
Long Term												
Full Simulation Period[b]	972	971	982	998	1,012	1,028	1,038	1,038	1,024	1,000	985	976
Water Year Types[c]												
Wet (32%)	991	992	1,008	1,023	1,031	1,041	1,058	1,064	1,056	1,037	1,024	1,005
Above Normal (16%)	967	968	982	1,012	1,025	1,048	1,062	1,063	1,049	1,024	1,009	999
Below Normal (13%)	986	985	991	1,009	1,025	1,040	1,048	1,045	1,031	1,006	989	987
Dry (24%)	969	967	975	986	1,006	1,027	1,037	1,034	1,018	995	982	980
Critical (15%)	927	923	929	939	951	968	965	958	935	899	876	872

Alternative 1

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,017	1,017	1,022	1,033	1,044	1,055	1,065	1,067	1,063	1,044	1,030	1,023
20%	1,017	1,017	1,020	1,030	1,039	1,051	1,063	1,067	1,057	1,039	1,023	1,020
30%	1,012	1,015	1,019	1,028	1,035	1,048	1,061	1,066	1,053	1,030	1,014	1,010
40%	1,003	1,007	1,017	1,023	1,031	1,046	1,058	1,061	1,044	1,019	1,005	1,003
50%	993	995	1,012	1,020	1,027	1,044	1,054	1,056	1,037	1,012	997	995
60%	985	988	1,003	1,013	1,021	1,037	1,050	1,046	1,027	1,004	990	988
70%	975	982	991	1,001	1,017	1,028	1,043	1,039	1,020	997	986	982
80%	961	964	966	989	1,005	1,024	1,034	1,029	1,004	979	963	963
90%	918	913	926	959	978	996	994	1,004	989	955	931	926
Long Term												
Full Simulation Period[b]	979	981	990	1,004	1,016	1,031	1,042	1,041	1,026	1,002	986	983
Water Year Types[c]												
Wet (32%)	997	1,002	1,012	1,024	1,032	1,041	1,058	1,063	1,055	1,037	1,022	1,017
Above Normal (16%)	974	978	992	1,019	1,028	1,048	1,062	1,062	1,046	1,021	1,005	1,003
Below Normal (13%)	997	998	1,004	1,019	1,034	1,046	1,053	1,049	1,031	1,006	987	986
Dry (24%)	972	974	982	992	1,012	1,032	1,041	1,038	1,020	997	984	982
Critical (15%)	938	935	941	950	961	977	974	967	943	910	889	884

Alternative 1 minus No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2	2	2	1	4	0	1	0	-1	0	-1	10
20%	11	14	2	1	3	0	1	0	0	-1	-4	13
30%	12	19	2	6	2	1	0	0	-1	-1	-2	5
40%	9	15	10	5	3	1	1	-2	-3	-1	-2	4
50%	4	10	16	7	4	5	1	2	-2	-2	-3	1
60%	1	7	16	9	3	6	2	0	-3	-2	-3	-1
70%	6	12	15	12	5	4	5	7	1	4	2	7
80%	9	11	2	8	9	12	9	15	6	5	2	6
90%	11	8	14	5	11	9	1	10	13	12	13	13
Long Term												
Full Simulation Period[b]	7	10	8	6	5	4	3	3	1	2	1	7
Water Year Types[c]												
Wet (32%)	6	10	4	1	0	0	0	0	-1	0	-2	12
Above Normal (16%)	7	10	10	7	3	1	0	0	-2	-3	-4	4
Below Normal (13%)	11	14	13	10	9	6	5	4	1	1	-2	-1
Dry (24%)	3	7	7	6	6	6	5	4	2	2	3	2
Critical (15%)	11	12	12	11	10	9	9	9	8	11	13	12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-2. Shasta Lake, End of Month Elevation

No Action Alternative

	End of Month Elevation (Feet)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,015	1,015	1,020	1,033	1,041	1,055	1,064	1,067	1,063	1,044	1,031	1,014
20%	1,005	1,003	1,019	1,029	1,036	1,051	1,063	1,067	1,057	1,039	1,027	1,008
30%	1,000	996	1,017	1,022	1,033	1,047	1,061	1,067	1,054	1,031	1,016	1,005
40%	994	992	1,007	1,017	1,027	1,045	1,057	1,062	1,048	1,020	1,007	1,000
50%	988	986	996	1,013	1,023	1,039	1,052	1,054	1,039	1,014	999	994
60%	984	981	986	1,004	1,018	1,031	1,047	1,046	1,030	1,006	994	989
70%	969	970	975	990	1,012	1,024	1,038	1,031	1,019	993	984	974
80%	953	953	964	981	996	1,012	1,025	1,014	998	974	961	957
90%	907	905	912	954	967	987	993	994	976	943	917	914
Long Term												
Full Simulation Period[b]	972	971	982	998	1,012	1,028	1,038	1,038	1,024	1,000	985	976
Water Year Types[c]												
Wet (32%)	991	992	1,008	1,023	1,031	1,041	1,058	1,064	1,056	1,037	1,024	1,005
Above Normal (16%)	967	968	982	1,012	1,025	1,048	1,062	1,063	1,049	1,024	1,009	999
Below Normal (13%)	986	985	991	1,009	1,025	1,040	1,048	1,045	1,031	1,006	989	987
Dry (24%)	969	967	975	986	1,006	1,027	1,037	1,034	1,018	995	982	980
Critical (15%)	927	923	929	939	951	968	965	958	935	899	876	872

Alternative 3

	End of Month Elevation (Feet)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,017	1,017	1,021	1,034	1,044	1,055	1,064	1,067	1,063	1,043	1,031	1,023
20%	1,015	1,017	1,020	1,030	1,039	1,052	1,063	1,067	1,057	1,039	1,024	1,022
30%	1,010	1,013	1,019	1,028	1,035	1,048	1,061	1,066	1,053	1,029	1,013	1,011
40%	1,003	1,009	1,017	1,022	1,032	1,046	1,057	1,060	1,044	1,019	1,006	1,003
50%	992	996	1,010	1,018	1,027	1,042	1,054	1,055	1,038	1,012	996	995
60%	983	988	1,003	1,014	1,020	1,038	1,050	1,047	1,028	1,006	992	988
70%	977	979	990	1,001	1,017	1,028	1,044	1,038	1,022	997	986	981
80%	962	962	969	989	1,005	1,023	1,034	1,030	1,006	983	966	964
90%	926	925	930	962	977	998	993	1,002	990	961	942	933
Long Term												
Full Simulation Period[b]	978	981	990	1,004	1,016	1,031	1,042	1,041	1,026	1,002	987	982
Water Year Types[c]												
Wet (32%)	997	1,002	1,012	1,024	1,032	1,041	1,058	1,063	1,055	1,036	1,022	1,017
Above Normal (16%)	973	976	990	1,018	1,028	1,048	1,062	1,062	1,046	1,021	1,006	1,004
Below Normal (13%)	997	998	1,004	1,019	1,034	1,046	1,054	1,049	1,032	1,008	991	986
Dry (24%)	974	976	983	993	1,013	1,033	1,042	1,039	1,021	998	985	983
Critical (15%)	935	933	939	948	960	975	972	966	941	910	888	882

Alternative 3 minus No Action Alternative

	End of Month Elevation (Feet)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2	2	1	1	3	0	0	0	-1	-1	0	10
20%	9	14	1	1	3	0	0	0	0	-1	-3	14
30%	10	17	2	6	3	1	0	-1	-1	-2	-2	6
40%	9	17	10	5	5	1	0	-2	-3	-1	-1	3
50%	4	11	14	5	4	4	1	1	-1	-1	-3	1
60%	-1	7	16	9	2	7	3	0	-2	0	-2	-2
70%	8	9	15	11	5	4	6	6	3	4	3	7
80%	9	9	5	8	9	11	9	16	8	8	5	7
90%	20	20	18	8	10	11	0	8	14	17	25	20
Long Term												
Full Simulation Period[b]	7	10	8	6	5	4	3	3	1	2	2	6
Water Year Types[c]												
Wet (32%)	6	10	4	1	0	0	0	0	-1	-1	-2	12
Above Normal (16%)	5	8	8	6	2	0	0	-1	-2	-2	-3	5
Below Normal (13%)	11	14	13	10	9	6	6	4	2	2	2	-2
Dry (24%)	5	9	8	7	7	6	6	5	3	3	3	2
Critical (15%)	8	10	10	9	8	7	8	8	7	11	11	11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-3. Shasta Lake, End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,015	1,015	1,020	1,033	1,041	1,055	1,064	1,067	1,063	1,044	1,031	1,014
20%	1,005	1,003	1,019	1,029	1,036	1,051	1,063	1,067	1,057	1,039	1,027	1,008
30%	1,000	996	1,017	1,022	1,033	1,047	1,061	1,067	1,054	1,031	1,016	1,005
40%	994	992	1,007	1,017	1,027	1,045	1,057	1,062	1,048	1,020	1,007	1,000
50%	988	986	996	1,013	1,023	1,039	1,052	1,054	1,039	1,014	999	994
60%	984	981	986	1,004	1,018	1,031	1,047	1,046	1,030	1,006	994	989
70%	969	970	975	990	1,012	1,024	1,038	1,031	1,019	993	984	974
80%	953	953	964	981	996	1,012	1,025	1,014	998	974	961	957
90%	907	905	912	954	967	987	993	994	976	943	917	914
Long Term												
Full Simulation Period[b]	972	971	982	998	1,012	1,028	1,038	1,038	1,024	1,000	985	976
Water Year Types[c]												
Wet (32%)	991	992	1,008	1,023	1,031	1,041	1,058	1,064	1,056	1,037	1,024	1,005
Above Normal (16%)	967	968	982	1,012	1,025	1,048	1,062	1,063	1,049	1,024	1,009	999
Below Normal (13%)	986	985	991	1,009	1,025	1,040	1,048	1,045	1,031	1,006	989	987
Dry (24%)	969	967	975	986	1,006	1,027	1,037	1,034	1,018	995	982	980
Critical (15%)	927	923	929	939	951	968	965	958	935	899	876	872

Alternative 5

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,015	1,017	1,020	1,033	1,041	1,055	1,065	1,067	1,063	1,044	1,031	1,014
20%	1,007	1,002	1,019	1,029	1,037	1,051	1,063	1,067	1,057	1,039	1,026	1,008
30%	1,001	996	1,017	1,022	1,033	1,047	1,061	1,067	1,054	1,031	1,016	1,005
40%	995	992	1,008	1,018	1,028	1,045	1,057	1,063	1,046	1,020	1,007	1,000
50%	989	986	996	1,014	1,023	1,039	1,052	1,055	1,040	1,015	1,000	994
60%	984	981	986	1,005	1,018	1,032	1,047	1,046	1,032	1,007	995	989
70%	970	970	976	990	1,013	1,024	1,038	1,033	1,019	994	984	974
80%	951	953	964	981	996	1,013	1,027	1,017	1,000	976	959	955
90%	904	902	908	952	970	987	992	996	980	944	913	910
Long Term												
Full Simulation Period[b]	972	971	982	998	1,012	1,028	1,038	1,039	1,025	1,001	985	976
Water Year Types[c]												
Wet (32%)	991	992	1,008	1,023	1,031	1,041	1,058	1,064	1,056	1,037	1,024	1,005
Above Normal (16%)	967	968	982	1,012	1,025	1,048	1,062	1,063	1,049	1,024	1,009	999
Below Normal (13%)	987	985	992	1,009	1,025	1,040	1,048	1,045	1,031	1,006	990	988
Dry (24%)	969	967	975	986	1,006	1,027	1,037	1,035	1,019	996	982	980
Critical (15%)	925	921	928	938	950	967	965	959	937	899	874	869

Alternative 5 minus No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	1	0	0	0	0	0	0	0	0	0	1
20%	1	-1	0	0	0	0	0	0	0	-1	0	0
30%	1	0	0	0	0	0	0	0	0	0	1	0
40%	1	0	1	0	0	0	0	0	-1	0	0	1
50%	1	0	1	1	0	0	0	1	0	1	1	0
60%	0	0	0	0	0	1	0	0	2	1	1	0
70%	1	0	1	1	1	0	1	2	0	1	0	0
80%	-2	0	0	0	0	1	2	3	2	2	-3	-3
90%	-3	-3	-4	-2	3	1	-1	2	4	1	-4	-3
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	1	1	0	0	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (13%)	1	1	1	1	0	0	1	1	1	0	1	1
Dry (24%)	0	0	0	0	0	0	0	1	1	1	0	0
Critical (15%)	-2	-2	-1	-1	-1	-1	0	1	3	-1	-2	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-4. Shasta Lake, End of Month Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	1,017	1,017	1,022	1,033	1,044	1,055	1,065	1,067	1,063	1,044	1,030	1,023
20%	1,017	1,017	1,020	1,030	1,039	1,051	1,063	1,067	1,057	1,039	1,023	1,020
30%	1,012	1,015	1,019	1,028	1,035	1,048	1,061	1,066	1,053	1,030	1,014	1,010
40%	1,003	1,007	1,017	1,023	1,031	1,046	1,058	1,061	1,044	1,019	1,005	1,003
50%	993	995	1,012	1,020	1,027	1,044	1,054	1,056	1,037	1,012	997	995
60%	985	988	1,003	1,013	1,021	1,037	1,050	1,046	1,027	1,004	990	988
70%	975	982	991	1,001	1,017	1,028	1,043	1,039	1,020	997	986	982
80%	961	964	966	989	1,005	1,024	1,034	1,029	1,004	979	963	963
90%	918	913	926	959	978	996	994	1,004	989	955	931	926
Long Term												
Full Simulation Period[b]	979	981	990	1,004	1,016	1,031	1,042	1,041	1,026	1,002	986	983
Water Year Types[c]												
Wet (32%)	997	1,002	1,012	1,024	1,032	1,041	1,058	1,063	1,055	1,037	1,022	1,017
Above Normal (16%)	974	978	992	1,019	1,028	1,048	1,062	1,062	1,046	1,021	1,005	1,003
Below Normal (13%)	997	998	1,004	1,019	1,034	1,046	1,053	1,049	1,031	1,006	987	986
Dry (24%)	972	974	982	992	1,012	1,032	1,041	1,038	1,020	997	984	982
Critical (15%)	938	935	941	950	961	977	974	967	943	910	889	884

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	1,015	1,015	1,020	1,033	1,041	1,055	1,064	1,067	1,063	1,044	1,031	1,014
20%	1,005	1,003	1,019	1,029	1,036	1,051	1,063	1,067	1,057	1,039	1,027	1,008
30%	1,000	996	1,017	1,022	1,033	1,047	1,061	1,067	1,054	1,031	1,016	1,005
40%	994	992	1,007	1,017	1,027	1,045	1,057	1,062	1,048	1,020	1,007	1,000
50%	988	986	996	1,013	1,023	1,039	1,052	1,054	1,039	1,014	999	994
60%	984	981	986	1,004	1,018	1,031	1,047	1,046	1,030	1,006	994	989
70%	969	970	975	990	1,012	1,024	1,038	1,031	1,019	993	984	974
80%	953	953	964	981	996	1,012	1,025	1,014	998	974	961	957
90%	907	905	912	954	967	987	993	994	976	943	917	914
Long Term												
Full Simulation Period[b]	972	971	982	998	1,012	1,028	1,038	1,038	1,024	1,000	985	976
Water Year Types[c]												
Wet (32%)	991	992	1,008	1,023	1,031	1,041	1,058	1,064	1,056	1,037	1,024	1,005
Above Normal (16%)	967	968	982	1,012	1,025	1,048	1,062	1,063	1,049	1,024	1,009	999
Below Normal (13%)	986	985	991	1,009	1,025	1,040	1,048	1,045	1,031	1,006	989	987
Dry (24%)	969	967	975	986	1,006	1,027	1,037	1,034	1,018	995	982	980
Critical (15%)	927	923	929	939	951	968	965	958	935	899	876	872

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	-2	-2	-2	-1	-4	0	-1	0	1	0	1	-10
20%	-11	-14	-2	-1	-3	0	-1	0	0	1	4	-13
30%	-12	-19	-2	-6	-2	-1	0	0	1	1	2	-5
40%	-9	-15	-10	-5	-3	-1	-1	2	3	1	2	-4
50%	-4	-10	-16	-7	-4	-5	-1	-2	2	2	3	-1
60%	-1	-7	-16	-9	-3	-6	-2	0	3	2	3	1
70%	-6	-12	-15	-12	-5	-4	-5	-7	-1	-4	-2	-7
80%	-9	-11	-2	-8	-9	-12	-9	-15	-6	-5	-2	-6
90%	-11	-8	-14	-5	-11	-9	-1	-10	-13	-12	-13	-13
Long Term												
Full Simulation Period[b]	-7	-10	-8	-6	-5	-4	-3	-3	-1	-2	-1	-7
Water Year Types[c]												
Wet (32%)	-6	-10	-4	-1	0	0	0	0	1	0	2	-12
Above Normal (16%)	-7	-10	-10	-7	-3	-1	0	0	2	3	4	-4
Below Normal (13%)	-11	-14	-13	-10	-9	-6	-5	-4	-1	-1	2	1
Dry (24%)	-3	-7	-7	-6	-6	-6	-5	-4	-2	-2	-3	-2
Critical (15%)	-11	-12	-12	-11	-10	-9	-9	-9	-8	-11	-13	-12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-5. Shasta Lake, End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,017	1,017	1,022	1,033	1,044	1,055	1,065	1,067	1,063	1,044	1,030	1,023
20%	1,017	1,017	1,020	1,030	1,039	1,051	1,063	1,067	1,057	1,039	1,023	1,020
30%	1,012	1,015	1,019	1,028	1,035	1,048	1,061	1,066	1,053	1,030	1,014	1,010
40%	1,003	1,007	1,017	1,023	1,031	1,046	1,058	1,061	1,044	1,019	1,005	1,003
50%	993	995	1,012	1,020	1,027	1,044	1,054	1,056	1,037	1,012	997	995
60%	985	988	1,003	1,013	1,021	1,037	1,050	1,046	1,027	1,004	990	988
70%	975	982	991	1,001	1,017	1,028	1,043	1,039	1,020	997	986	982
80%	961	964	966	989	1,005	1,024	1,034	1,029	1,004	979	963	963
90%	918	913	926	959	978	996	994	1,004	989	955	931	926
Long Term												
Full Simulation Period[b]	979	981	990	1,004	1,016	1,031	1,042	1,041	1,026	1,002	986	983
Water Year Types[c]												
Wet (32%)	997	1,002	1,012	1,024	1,032	1,041	1,058	1,063	1,055	1,037	1,022	1,017
Above Normal (16%)	974	978	992	1,019	1,028	1,048	1,062	1,062	1,046	1,021	1,005	1,003
Below Normal (13%)	997	998	1,004	1,019	1,034	1,046	1,053	1,049	1,031	1,006	987	986
Dry (24%)	972	974	982	992	1,012	1,032	1,041	1,038	1,020	997	984	982
Critical (15%)	938	935	941	950	961	977	974	967	943	910	889	884

Alternative 3

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,017	1,017	1,021	1,034	1,044	1,055	1,064	1,067	1,063	1,043	1,031	1,023
20%	1,015	1,017	1,020	1,030	1,039	1,052	1,063	1,067	1,057	1,039	1,024	1,022
30%	1,010	1,013	1,019	1,028	1,035	1,048	1,061	1,066	1,053	1,029	1,013	1,011
40%	1,003	1,009	1,017	1,022	1,032	1,046	1,057	1,060	1,044	1,019	1,006	1,003
50%	992	996	1,010	1,018	1,027	1,042	1,054	1,055	1,038	1,012	996	995
60%	983	988	1,003	1,014	1,020	1,038	1,050	1,047	1,028	1,006	992	988
70%	977	979	990	1,001	1,017	1,028	1,044	1,038	1,022	997	986	981
80%	962	962	969	989	1,005	1,023	1,034	1,030	1,006	983	966	964
90%	926	925	930	962	977	998	993	1,002	990	961	942	933
Long Term												
Full Simulation Period[b]	978	981	990	1,004	1,016	1,031	1,042	1,041	1,026	1,002	987	982
Water Year Types[c]												
Wet (32%)	997	1,002	1,012	1,024	1,032	1,041	1,058	1,063	1,055	1,036	1,022	1,017
Above Normal (16%)	973	976	990	1,018	1,028	1,048	1,062	1,062	1,046	1,021	1,006	1,004
Below Normal (13%)	997	998	1,004	1,019	1,034	1,046	1,054	1,049	1,032	1,008	991	986
Dry (24%)	974	976	983	993	1,013	1,033	1,042	1,039	1,021	998	985	983
Critical (15%)	935	933	939	948	960	975	972	966	941	910	888	882

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	-1	0	0	-1	1	0
20%	-2	0	0	0	0	0	0	0	0	0	2	1
30%	-1	-2	0	0	0	0	0	-1	0	-1	0	0
40%	0	2	0	-1	1	0	0	0	0	0	1	0
50%	0	1	-2	-2	0	-2	0	-1	1	0	-1	0
60%	-3	0	0	0	-1	1	0	1	0	2	1	-1
70%	2	-3	0	0	0	0	0	-1	2	1	1	0
80%	0	-2	3	0	0	-1	0	1	2	4	3	1
90%	8	12	4	3	-1	2	-1	-3	1	6	11	7
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	1	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	-1	0	0
Above Normal (16%)	-2	-2	-2	-1	0	-1	0	-1	0	0	1	1
Below Normal (13%)	0	0	0	0	0	0	0	1	1	1	4	0
Dry (24%)	2	2	1	1	1	1	1	1	1	1	0	0
Critical (15%)	-3	-2	-2	-2	-2	-2	-1	-1	-1	0	-1	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-6. Shasta Lake, End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,017	1,017	1,022	1,033	1,044	1,055	1,065	1,067	1,063	1,044	1,030	1,023
20%	1,017	1,017	1,020	1,030	1,039	1,051	1,063	1,067	1,057	1,039	1,023	1,020
30%	1,012	1,015	1,019	1,028	1,035	1,048	1,061	1,066	1,053	1,030	1,014	1,010
40%	1,003	1,007	1,017	1,023	1,031	1,046	1,058	1,061	1,044	1,019	1,005	1,003
50%	993	995	1,012	1,020	1,027	1,044	1,054	1,056	1,037	1,012	997	995
60%	985	988	1,003	1,013	1,021	1,037	1,050	1,046	1,027	1,004	990	988
70%	975	982	991	1,001	1,017	1,028	1,043	1,039	1,020	997	986	982
80%	961	964	966	989	1,005	1,024	1,034	1,029	1,004	979	963	963
90%	918	913	926	959	978	996	994	1,004	989	955	931	926
Long Term												
Full Simulation Period[b]	979	981	990	1,004	1,016	1,031	1,042	1,041	1,026	1,002	986	983
Water Year Types[c]												
Wet (32%)	997	1,002	1,012	1,024	1,032	1,041	1,058	1,063	1,055	1,037	1,022	1,017
Above Normal (16%)	974	978	992	1,019	1,028	1,048	1,062	1,062	1,046	1,021	1,005	1,003
Below Normal (13%)	997	998	1,004	1,019	1,034	1,046	1,053	1,049	1,031	1,006	987	986
Dry (24%)	972	974	982	992	1,012	1,032	1,041	1,038	1,020	997	984	982
Critical (15%)	938	935	941	950	961	977	974	967	943	910	889	884

Alternative 5

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,015	1,017	1,020	1,033	1,041	1,055	1,065	1,067	1,063	1,044	1,031	1,014
20%	1,007	1,002	1,019	1,029	1,037	1,051	1,063	1,067	1,057	1,039	1,026	1,008
30%	1,001	996	1,017	1,022	1,033	1,047	1,061	1,067	1,054	1,031	1,016	1,005
40%	995	992	1,008	1,018	1,028	1,045	1,057	1,063	1,046	1,020	1,007	1,000
50%	989	986	996	1,014	1,023	1,039	1,052	1,055	1,040	1,015	1,000	994
60%	984	981	986	1,005	1,018	1,032	1,047	1,046	1,032	1,007	995	989
70%	970	970	976	990	1,013	1,024	1,038	1,033	1,019	994	984	974
80%	951	953	964	981	996	1,013	1,027	1,017	1,000	976	959	955
90%	904	902	908	952	970	987	992	996	980	944	913	910
Long Term												
Full Simulation Period[b]	972	971	982	998	1,012	1,028	1,038	1,039	1,025	1,001	985	976
Water Year Types[c]												
Wet (32%)	991	992	1,008	1,023	1,031	1,041	1,058	1,064	1,056	1,037	1,024	1,005
Above Normal (16%)	967	968	982	1,012	1,025	1,048	1,062	1,063	1,049	1,024	1,009	999
Below Normal (13%)	987	985	992	1,009	1,025	1,040	1,048	1,045	1,031	1,006	990	988
Dry (24%)	969	967	975	986	1,006	1,027	1,037	1,035	1,019	996	982	980
Critical (15%)	925	921	928	938	950	967	965	959	937	899	874	869

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-2	0	-2	-1	-4	0	0	0	1	0	1	-9
20%	-10	-15	-2	-1	-2	0	-1	0	0	0	4	-13
30%	-11	-19	-2	-6	-2	-1	0	0	1	1	3	-5
40%	-8	-15	-9	-5	-3	-1	-1	2	2	1	2	-3
50%	-3	-9	-16	-5	-4	-6	-1	-1	3	2	3	-1
60%	-1	-7	-17	-9	-3	-6	-3	0	4	3	4	1
70%	-6	-12	-15	-11	-4	-4	-5	-6	-2	-3	-2	-7
80%	-11	-11	-2	-8	-9	-11	-7	-12	-4	-3	-4	-8
90%	-15	-11	-18	-7	-8	-8	-2	-8	-9	-11	-18	-16
Long Term												
Full Simulation Period[b]	-7	-10	-8	-6	-5	-4	-3	-2	0	-1	-1	-7
Water Year Types[c]												
Wet (32%)	-6	-10	-4	-1	0	0	0	0	1	0	2	-12
Above Normal (16%)	-7	-10	-10	-7	-3	-1	-1	0	2	3	4	-4
Below Normal (13%)	-10	-13	-12	-10	-8	-6	-5	-3	0	0	3	2
Dry (24%)	-3	-7	-7	-6	-6	-5	-4	-3	-1	-1	-3	-2
Critical (15%)	-13	-14	-14	-12	-11	-10	-9	-8	-5	-11	-15	-14

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

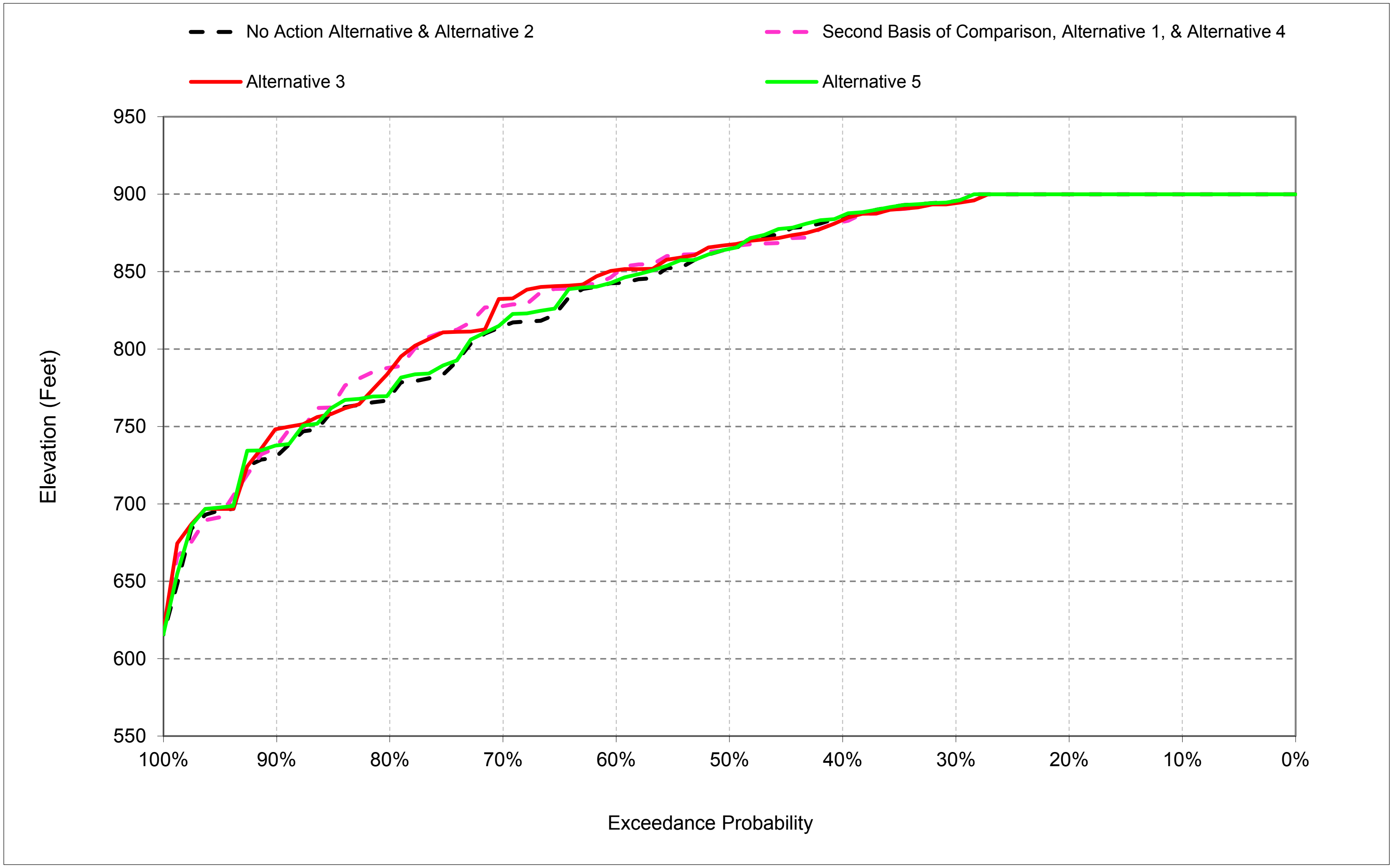
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

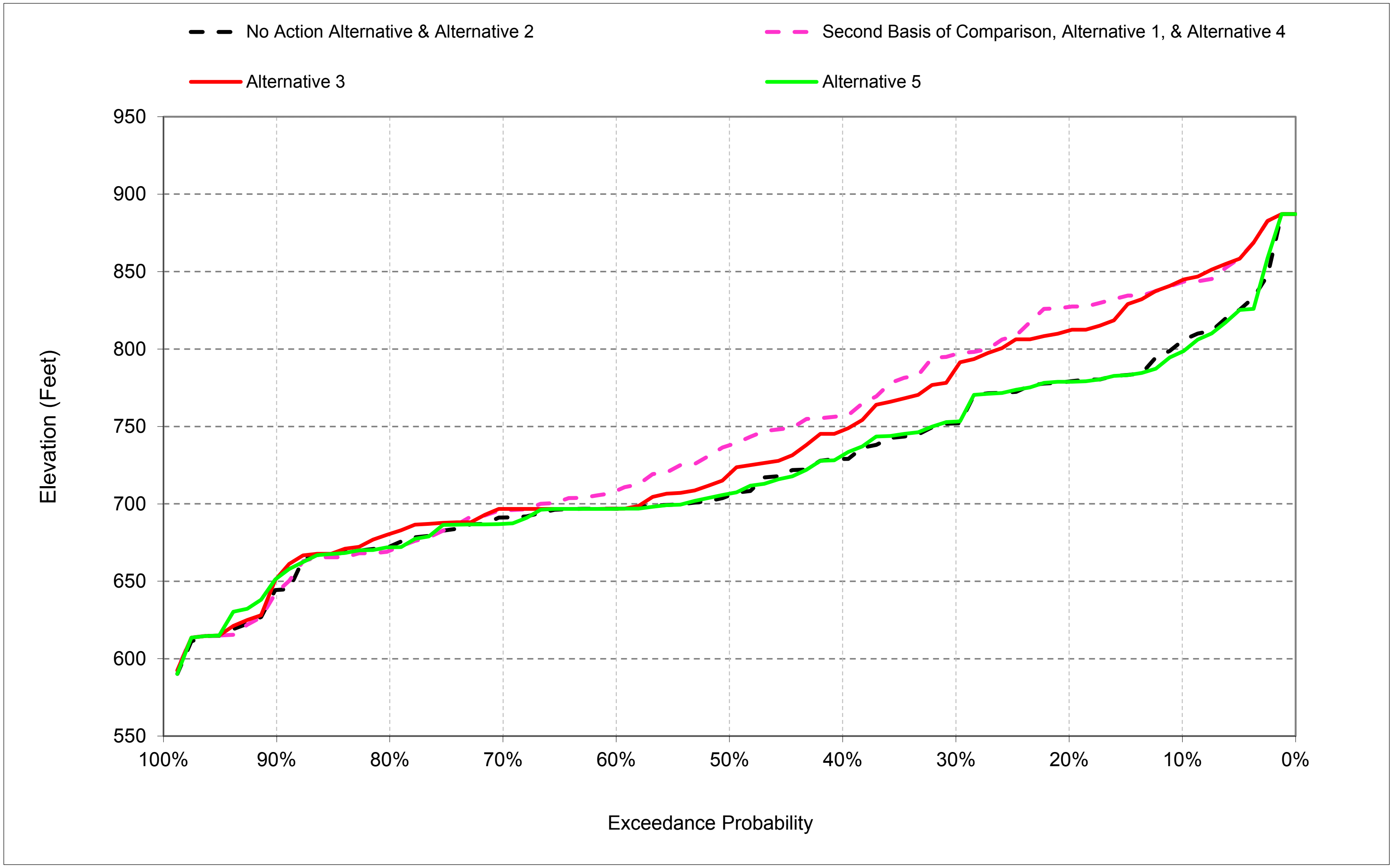
C.10. Oroville Lake Elevation

Figure C-10-1. Lake Oroville, Reservoir Pool Elevation, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-10-2. Lake Oroville, Reservoir Pool Elevation, September



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-1. Lake Oroville, End of Month Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	788	795	844	849	858	866	887	900	900	866	847	805
20%	760	762	786	837	849	861	884	900	900	860	829	779
30%	742	748	762	813	849	856	882	896	888	846	815	765
40%	716	717	739	776	833	849	877	885	871	827	779	733
50%	697	697	715	751	800	839	858	865	852	804	755	708
60%	687	682	698	740	773	810	836	843	826	765	729	697
70%	679	669	679	704	749	786	805	815	783	723	698	691
80%	668	658	665	685	719	751	773	769	750	696	683	676
90%	650	648	648	668	696	727	749	731	699	679	664	647
Long Term												
Full Simulation Period[b]	711	710	728	758	789	811	831	838	824	783	755	724
Water Year Types[c]												
Wet (32%)	743	748	794	829	852	859	884	897	894	861	836	790
Above Normal (16%)	698	703	722	776	828	856	880	890	879	835	794	746
Below Normal (13%)	730	725	726	751	793	818	838	842	828	773	729	704
Dry (24%)	688	683	686	704	737	775	798	800	775	724	702	684
Critical (15%)	674	667	664	678	693	712	715	712	693	663	648	640

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	837	832	849	850	860	867	887	900	900	866	853	843
20%	811	814	827	849	852	863	884	900	900	861	835	827
30%	776	786	800	833	849	859	882	896	883	848	823	797
40%	752	761	785	820	849	852	877	882	862	820	783	762
50%	719	721	754	802	834	849	868	865	840	798	762	741
60%	685	679	716	754	797	839	856	849	825	774	740	712
70%	672	667	677	704	770	807	831	828	789	758	719	696
80%	666	662	666	680	733	763	782	788	759	720	695	673
90%	651	644	647	667	691	725	736	737	707	683	666	652
Long Term												
Full Simulation Period[b]	730	729	746	771	799	818	838	842	823	788	762	744
Water Year Types[c]												
Wet (32%)	768	773	810	837	854	859	884	896	891	861	844	831
Above Normal (16%)	717	723	745	796	838	859	882	888	869	826	790	763
Below Normal (13%)	757	752	757	779	812	834	854	852	823	775	743	719
Dry (24%)	706	701	705	721	755	791	814	813	784	748	718	698
Critical (15%)	677	668	668	680	694	715	716	714	691	664	647	636

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	49	38	5	1	2	1	0	0	0	0	7	38
20%	51	52	40	12	3	2	0	0	0	1	6	48
30%	34	39	37	20	0	3	0	0	-5	2	8	32
40%	36	44	46	44	16	4	0	-3	-9	-7	4	28
50%	22	24	39	51	34	10	10	1	-12	-6	7	34
60%	-2	-2	18	14	24	29	20	6	-1	9	11	14
70%	-7	-2	-2	0	20	20	26	13	6	34	20	5
80%	-2	4	1	-4	15	12	9	19	9	24	12	-3
90%	1	-3	-2	-1	-5	-2	-13	6	8	4	2	5
Long Term												
Full Simulation Period[b]	19	19	18	14	10	7	6	4	-1	5	8	21
Water Year Types[c]												
Wet (32%)	24	25	16	8	3	0	0	-1	-3	0	8	41
Above Normal (16%)	19	21	24	20	10	3	2	-3	-10	-10	-4	18
Below Normal (13%)	27	27	31	28	20	17	16	9	-5	1	14	14
Dry (24%)	18	18	18	17	18	16	15	14	9	24	17	15
Critical (15%)	3	1	3	3	1	3	2	2	-2	0	-1	-4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-2. Lake Oroville, End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	788	795	844	849	858	866	887	900	900	866	847	805
20%	760	762	786	837	849	861	884	900	900	860	829	779
30%	742	748	762	813	849	856	882	896	888	846	815	765
40%	716	717	739	776	833	849	877	885	871	827	779	733
50%	697	697	715	751	800	839	858	865	852	804	755	708
60%	687	682	698	740	773	810	836	843	826	765	729	697
70%	679	669	679	704	749	786	805	815	783	723	698	691
80%	668	658	665	685	719	751	773	769	750	696	683	676
90%	650	648	648	668	696	727	749	731	699	679	664	647
Long Term												
Full Simulation Period[b]	711	710	728	758	789	811	831	838	824	783	755	724
Water Year Types[c]												
Wet (32%)	743	748	794	829	852	859	884	897	894	861	836	790
Above Normal (16%)	698	703	722	776	828	856	880	890	879	835	794	746
Below Normal (13%)	730	725	726	751	793	818	838	842	828	773	729	704
Dry (24%)	688	683	686	704	737	775	798	800	775	724	702	684
Critical (15%)	674	667	664	678	693	712	715	712	693	663	648	640

Alternative 3

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	839	832	849	850	859	867	887	900	900	866	849	845
20%	793	799	829	849	850	862	884	900	899	856	830	812
30%	773	771	791	826	849	859	882	894	875	833	811	787
40%	745	751	768	811	844	852	877	883	860	815	781	752
50%	699	703	746	794	834	849	869	867	846	794	753	724
60%	691	682	713	750	796	839	855	851	826	769	719	698
70%	680	674	680	710	765	801	831	832	802	741	705	697
80%	670	660	666	686	723	756	786	786	757	709	697	684
90%	652	650	650	669	696	723	748	748	703	687	673	662
Long Term												
Full Simulation Period[b]	727	726	744	770	798	818	838	842	824	783	755	739
Water Year Types[c]												
Wet (32%)	763	767	805	834	853	859	884	895	889	856	836	825
Above Normal (16%)	711	717	738	791	836	859	882	889	872	827	786	758
Below Normal (13%)	758	754	759	781	813	835	854	855	836	780	730	710
Dry (24%)	702	697	703	720	752	789	811	810	779	733	709	691
Critical (15%)	679	671	671	684	699	718	719	718	693	665	648	640

Alternative 3 minus No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	50	38	5	1	2	1	0	0	0	1	2	39
20%	33	37	43	12	1	1	0	0	-1	-4	1	33
30%	31	24	28	13	0	3	0	-1	-13	-13	-4	23
40%	29	34	29	36	11	3	0	-2	-11	-12	2	19
50%	2	6	31	43	33	10	11	3	-6	-10	-2	17
60%	4	1	15	10	23	29	19	8	-1	4	-10	0
70%	1	5	2	6	16	15	26	18	19	18	6	5
80%	1	2	1	2	4	5	13	17	6	13	14	8
90%	1	2	2	1	0	-4	-1	18	4	8	10	15
Long Term												
Full Simulation Period[b]	16	16	15	13	9	7	6	4	-1	0	1	16
Water Year Types[c]												
Wet (32%)	19	19	11	5	2	0	0	-1	-5	-5	0	35
Above Normal (16%)	13	14	16	15	9	4	2	-2	-7	-9	-9	13
Below Normal (13%)	28	29	32	30	21	17	16	13	8	6	1	6
Dry (24%)	14	14	16	16	15	13	13	10	3	8	7	7
Critical (15%)	5	5	7	7	6	6	5	6	0	2	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-3. Lake Oroville, End of Month Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	788	795	844	849	858	866	887	900	900	866	847	805
20%	760	762	786	837	849	861	884	900	900	860	829	779
30%	742	748	762	813	849	856	882	896	888	846	815	765
40%	716	717	739	776	833	849	877	885	871	827	779	733
50%	697	697	715	751	800	839	858	865	852	804	755	708
60%	687	682	698	740	773	810	836	843	826	765	729	697
70%	679	669	679	704	749	786	805	815	783	723	698	691
80%	668	658	665	685	719	751	773	769	750	696	683	676
90%	650	648	648	668	696	727	749	731	699	679	664	647
Long Term												
Full Simulation Period[b]	711	710	728	758	789	811	831	838	824	783	755	724
Water Year Types[c]												
Wet (32%)	743	748	794	829	852	859	884	897	894	861	836	790
Above Normal (16%)	698	703	722	776	828	856	880	890	879	835	794	746
Below Normal (13%)	730	725	726	751	793	818	838	842	828	773	729	704
Dry (24%)	688	683	686	704	737	775	798	800	775	724	702	684
Critical (15%)	674	667	664	678	693	712	715	712	693	663	648	640

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	788	795	847	849	858	866	887	900	900	864	843	798
20%	760	762	787	840	849	861	884	900	900	860	830	779
30%	742	747	763	810	849	856	882	896	888	847	815	765
40%	716	712	735	776	833	849	877	886	872	829	783	736
50%	697	698	720	753	801	839	858	865	853	805	757	710
60%	688	685	698	740	777	812	836	844	830	769	720	697
70%	679	673	679	705	751	787	806	817	788	725	697	689
80%	668	662	667	687	721	753	774	772	754	696	684	673
90%	648	648	649	671	698	727	748	738	704	687	673	658
Long Term												
Full Simulation Period[b]	711	710	729	758	789	812	832	839	826	785	755	724
Water Year Types[c]												
Wet (32%)	742	746	793	829	852	859	884	897	894	860	835	789
Above Normal (16%)	698	701	720	775	827	856	880	891	880	836	795	747
Below Normal (13%)	731	726	728	752	794	818	839	845	831	777	730	704
Dry (24%)	691	685	688	706	738	777	799	804	779	727	703	685
Critical (15%)	676	668	665	679	694	712	716	715	696	667	650	642

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	-1	0	3	0	0	0	0	0	0	-1	-4	-7
20%	0	0	0	3	0	0	0	0	0	0	0	0
30%	0	-1	1	-2	0	0	0	0	0	1	1	1
40%	0	-4	-4	0	0	0	0	1	1	1	4	2
50%	0	1	5	2	1	0	0	0	1	2	2	2
60%	1	3	0	0	4	1	1	2	4	4	-9	0
70%	1	4	0	0	2	1	1	3	5	2	-2	-3
80%	0	4	2	3	2	2	0	3	3	0	1	-3
90%	-3	0	1	3	1	0	-1	7	6	8	10	12
Long Term												
Full Simulation Period[b]	1	0	0	1	1	0	1	2	2	2	1	0
Water Year Types[c]												
Wet (32%)	-1	-1	-1	0	0	0	0	0	0	0	-1	-1
Above Normal (16%)	0	-1	-2	-1	-1	0	0	1	1	1	1	1
Below Normal (13%)	1	1	2	1	1	1	1	2	3	4	1	0
Dry (24%)	3	2	2	2	1	1	1	4	4	3	1	1
Critical (15%)	2	1	1	1	1	0	1	2	3	4	2	2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-4. Lake Oroville, End of Month Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	837	832	849	850	860	867	887	900	900	866	853	843
20%	811	814	827	849	852	863	884	900	900	861	835	827
30%	776	786	800	833	849	859	882	896	883	848	823	797
40%	752	761	785	820	849	852	877	882	862	820	783	762
50%	719	721	754	802	834	849	868	865	840	798	762	741
60%	685	679	716	754	797	839	856	849	825	774	740	712
70%	672	667	677	704	770	807	831	828	789	758	719	696
80%	666	662	666	680	733	763	782	788	759	720	695	673
90%	651	644	647	667	691	725	736	737	707	683	666	652
Long Term												
Full Simulation Period[b]	730	729	746	771	799	818	838	842	823	788	762	744
Water Year Types[c]												
Wet (32%)	768	773	810	837	854	859	884	896	891	861	844	831
Above Normal (16%)	717	723	745	796	838	859	882	888	869	826	790	763
Below Normal (13%)	757	752	757	779	812	834	854	852	823	775	743	719
Dry (24%)	706	701	705	721	755	791	814	813	784	748	718	698
Critical (15%)	677	668	668	680	694	715	716	714	691	664	647	636

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	788	795	844	849	858	866	887	900	900	866	847	805
20%	760	762	786	837	849	861	884	900	900	860	829	779
30%	742	748	762	813	849	856	882	896	888	846	815	765
40%	716	717	739	776	833	849	877	885	871	827	779	733
50%	697	697	715	751	800	839	858	865	852	804	755	708
60%	687	682	698	740	773	810	836	843	826	765	729	697
70%	679	669	679	704	749	786	805	815	783	723	698	691
80%	668	658	665	685	719	751	773	769	750	696	683	676
90%	650	648	648	668	696	727	749	731	699	679	664	647
Long Term												
Full Simulation Period[b]	711	710	728	758	789	811	831	838	824	783	755	724
Water Year Types[c]												
Wet (32%)	743	748	794	829	852	859	884	897	894	861	836	790
Above Normal (16%)	698	703	722	776	828	856	880	890	879	835	794	746
Below Normal (13%)	730	725	726	751	793	818	838	842	828	773	729	704
Dry (24%)	688	683	686	704	737	775	798	800	775	724	702	684
Critical (15%)	674	667	664	678	693	712	715	712	693	663	648	640

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	-49	-38	-5	-1	-2	-1	0	0	0	0	-7	-38
20%	-51	-52	-40	-12	-3	-2	0	0	0	-1	-6	-48
30%	-34	-39	-37	-20	0	-3	0	0	5	-2	-8	-32
40%	-36	-44	-46	-44	-16	-4	0	3	9	7	-4	-28
50%	-22	-24	-39	-51	-34	-10	-10	-1	12	6	-7	-34
60%	2	2	-18	-14	-24	-29	-20	-6	1	-9	-11	-14
70%	7	2	2	0	-20	-20	-26	-13	-6	-34	-20	-5
80%	2	-4	-1	4	-15	-12	-9	-19	-9	-24	-12	3
90%	-1	3	2	1	5	2	13	-6	-8	-4	-2	-5
Long Term												
Full Simulation Period[b]	-19	-19	-18	-14	-10	-7	-6	-4	1	-5	-8	-21
Water Year Types[c]												
Wet (32%)	-24	-25	-16	-8	-3	0	0	1	3	0	-8	-41
Above Normal (16%)	-19	-21	-24	-20	-10	-3	-2	3	10	10	4	-18
Below Normal (13%)	-27	-27	-31	-28	-20	-17	-16	-9	5	-1	-14	-14
Dry (24%)	-18	-18	-18	-17	-18	-16	-15	-14	-9	-24	-17	-15
Critical (15%)	-3	-1	-3	-3	-1	-3	-2	-2	2	0	1	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-5. Lake Oroville, End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	837	832	849	850	860	867	887	900	900	866	853	843
20%	811	814	827	849	852	863	884	900	900	861	835	827
30%	776	786	800	833	849	859	882	896	883	848	823	797
40%	752	761	785	820	849	852	877	882	862	820	783	762
50%	719	721	754	802	834	849	868	865	840	798	762	741
60%	685	679	716	754	797	839	856	849	825	774	740	712
70%	672	667	677	704	770	807	831	828	789	758	719	696
80%	666	662	666	680	733	763	782	788	759	720	695	673
90%	651	644	647	667	691	725	736	737	707	683	666	652
Long Term												
Full Simulation Period[b]	730	729	746	771	799	818	838	842	823	788	762	744
Water Year Types[c]												
Wet (32%)	768	773	810	837	854	859	884	896	891	861	844	831
Above Normal (16%)	717	723	745	796	838	859	882	888	869	826	790	763
Below Normal (13%)	757	752	757	779	812	834	854	852	823	775	743	719
Dry (24%)	706	701	705	721	755	791	814	813	784	748	718	698
Critical (15%)	677	668	668	680	694	715	716	714	691	664	647	636

Alternative 3

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	839	832	849	850	859	867	887	900	900	866	849	845
20%	793	799	829	849	850	862	884	900	899	856	830	812
30%	773	771	791	826	849	859	882	894	875	833	811	787
40%	745	751	768	811	844	852	877	883	860	815	781	752
50%	699	703	746	794	834	849	869	867	846	794	753	724
60%	691	682	713	750	796	839	855	851	826	769	719	698
70%	680	674	680	710	765	801	831	832	802	741	705	697
80%	670	660	666	686	723	756	786	786	757	709	697	684
90%	652	650	650	669	696	723	748	748	703	687	673	662
Long Term												
Full Simulation Period[b]	727	726	744	770	798	818	838	842	824	783	755	739
Water Year Types[c]												
Wet (32%)	763	767	805	834	853	859	884	895	889	856	836	825
Above Normal (16%)	711	717	738	791	836	859	882	889	872	827	786	758
Below Normal (13%)	758	754	759	781	813	835	854	855	836	780	730	710
Dry (24%)	702	697	703	720	752	789	811	810	779	733	709	691
Critical (15%)	679	671	671	684	699	718	719	718	693	665	648	640

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2	0	0	0	0	0	0	0	0	1	-4	1
20%	-18	-15	2	0	-2	0	0	0	-1	-5	-5	-15
30%	-3	-15	-9	-7	0	0	0	-1	-7	-14	-12	-9
40%	-7	-10	-17	-9	-4	0	0	1	-2	-5	-2	-10
50%	-20	-19	-8	-8	-1	0	1	2	6	-4	-9	-17
60%	6	3	-3	-5	-1	0	0	2	1	-5	-21	-14
70%	8	7	4	6	-4	-5	0	5	12	-17	-14	1
80%	4	-2	0	6	-10	-7	4	-2	-3	-11	1	10
90%	1	5	3	2	5	-1	12	11	-4	4	8	10
Long Term												
Full Simulation Period[b]	-3	-3	-2	-1	-1	0	0	0	1	-4	-7	-5
Water Year Types[c]												
Wet (32%)	-5	-6	-4	-2	-1	0	0	0	-2	-5	-8	-6
Above Normal (16%)	-6	-7	-8	-5	-2	1	1	1	3	1	-5	-5
Below Normal (13%)	1	2	2	2	1	1	0	3	13	5	-13	-8
Dry (24%)	-4	-4	-2	-2	-3	-3	-3	-4	-6	-16	-10	-7
Critical (15%)	2	3	3	4	5	3	3	4	2	1	1	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-6. Lake Oroville, End of Month Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	837	832	849	850	860	867	887	900	900	866	853	843
20%	811	814	827	849	852	863	884	900	900	861	835	827
30%	776	786	800	833	849	859	882	896	883	848	823	797
40%	752	761	785	820	849	852	877	882	862	820	783	762
50%	719	721	754	802	834	849	868	865	840	798	762	741
60%	685	679	716	754	797	839	856	849	825	774	740	712
70%	672	667	677	704	770	807	831	828	789	758	719	696
80%	666	662	666	680	733	763	782	788	759	720	695	673
90%	651	644	647	667	691	725	736	737	707	683	666	652
Long Term												
Full Simulation Period[b]	730	729	746	771	799	818	838	842	823	788	762	744
Water Year Types[c]												
Wet (32%)	768	773	810	837	854	859	884	896	891	861	844	831
Above Normal (16%)	717	723	745	796	838	859	882	888	869	826	790	763
Below Normal (13%)	757	752	757	779	812	834	854	852	823	775	743	719
Dry (24%)	706	701	705	721	755	791	814	813	784	748	718	698
Critical (15%)	677	668	668	680	694	715	716	714	691	664	647	636

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	788	795	847	849	858	866	887	900	900	864	843	798
20%	760	762	787	840	849	861	884	900	900	860	830	779
30%	742	747	763	810	849	856	882	896	888	847	815	765
40%	716	712	735	776	833	849	877	886	872	829	783	736
50%	697	698	720	753	801	839	858	865	853	805	757	710
60%	688	685	698	740	777	812	836	844	830	769	720	697
70%	679	673	679	705	751	787	806	817	788	725	697	689
80%	668	662	667	687	721	753	774	772	754	696	684	673
90%	648	648	649	671	698	727	748	738	704	687	673	658
Long Term												
Full Simulation Period[b]	711	710	729	758	789	812	832	839	826	785	755	724
Water Year Types[c]												
Wet (32%)	742	746	793	829	852	859	884	897	894	860	835	789
Above Normal (16%)	698	701	720	775	827	856	880	891	880	836	795	747
Below Normal (13%)	731	726	728	752	794	818	839	845	831	777	730	704
Dry (24%)	691	685	688	706	738	777	799	804	779	727	703	685
Critical (15%)	676	668	665	679	694	712	716	715	696	667	650	642

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	-49	-38	-2	-1	-2	-1	0	0	0	-1	-10	-45
20%	-51	-52	-40	-9	-3	-2	0	0	0	-1	-6	-48
30%	-34	-40	-37	-23	0	-3	0	0	6	-1	-8	-31
40%	-36	-48	-50	-44	-16	-4	0	4	10	9	1	-26
50%	-22	-24	-34	-49	-33	-10	-10	-1	13	7	-4	-32
60%	3	5	-18	-15	-21	-27	-19	-5	5	-5	-20	-15
70%	8	6	2	0	-18	-19	-25	-11	-2	-32	-22	-8
80%	2	0	1	7	-13	-10	-9	-16	-5	-24	-12	0
90%	-3	3	2	4	6	2	12	0	-2	4	8	7
Long Term												
Full Simulation Period[b]	-18	-19	-17	-13	-9	-7	-6	-2	3	-3	-7	-20
Water Year Types[c]												
Wet (32%)	-26	-26	-16	-7	-3	0	0	1	3	-1	-9	-42
Above Normal (16%)	-19	-22	-25	-21	-11	-3	-2	3	11	10	5	-17
Below Normal (13%)	-26	-26	-29	-27	-19	-16	-15	-7	8	2	-13	-14
Dry (24%)	-15	-16	-16	-16	-17	-15	-14	-9	-5	-22	-15	-13
Critical (15%)	-1	0	-2	-1	-1	-3	-1	1	5	4	3	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

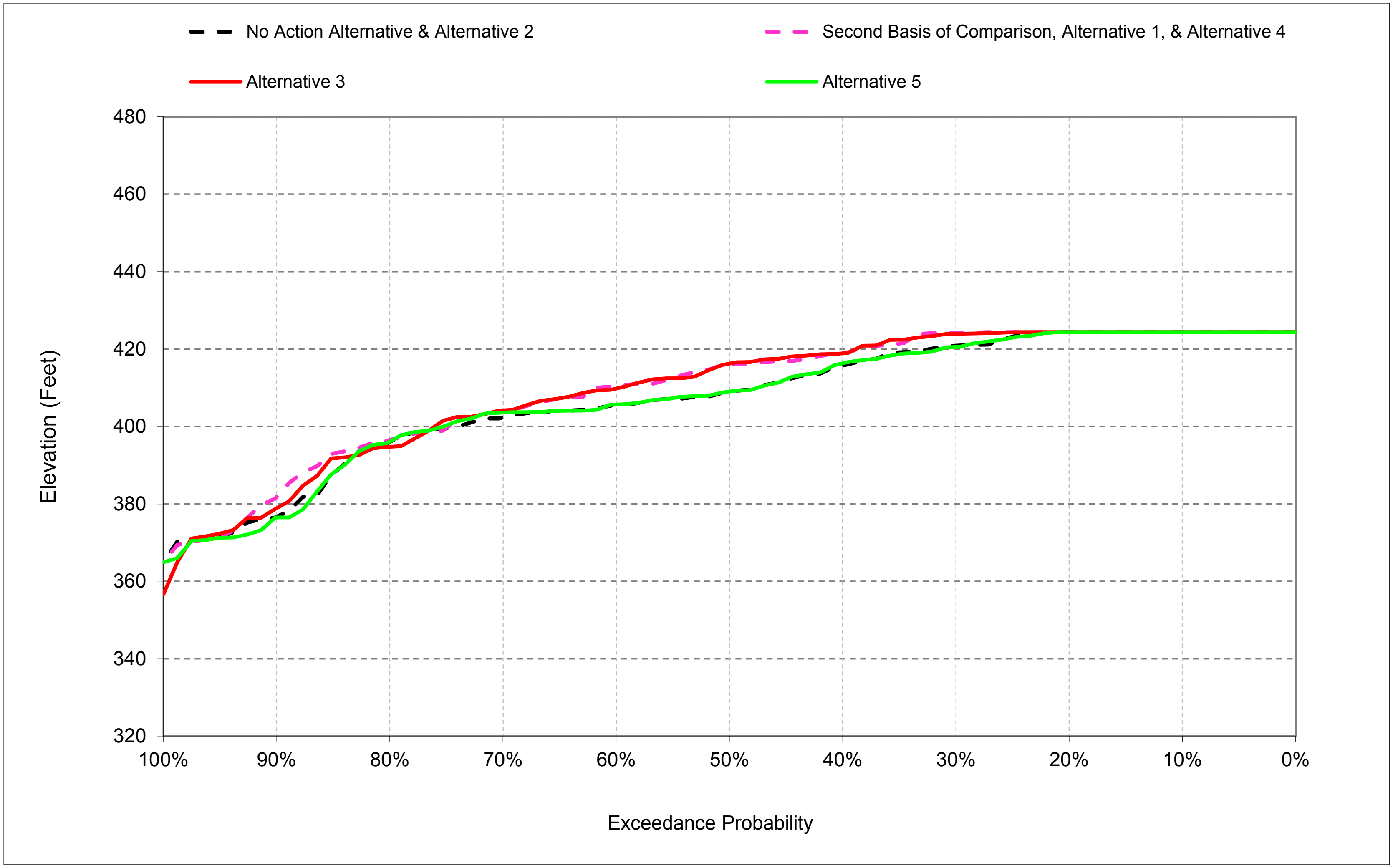
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

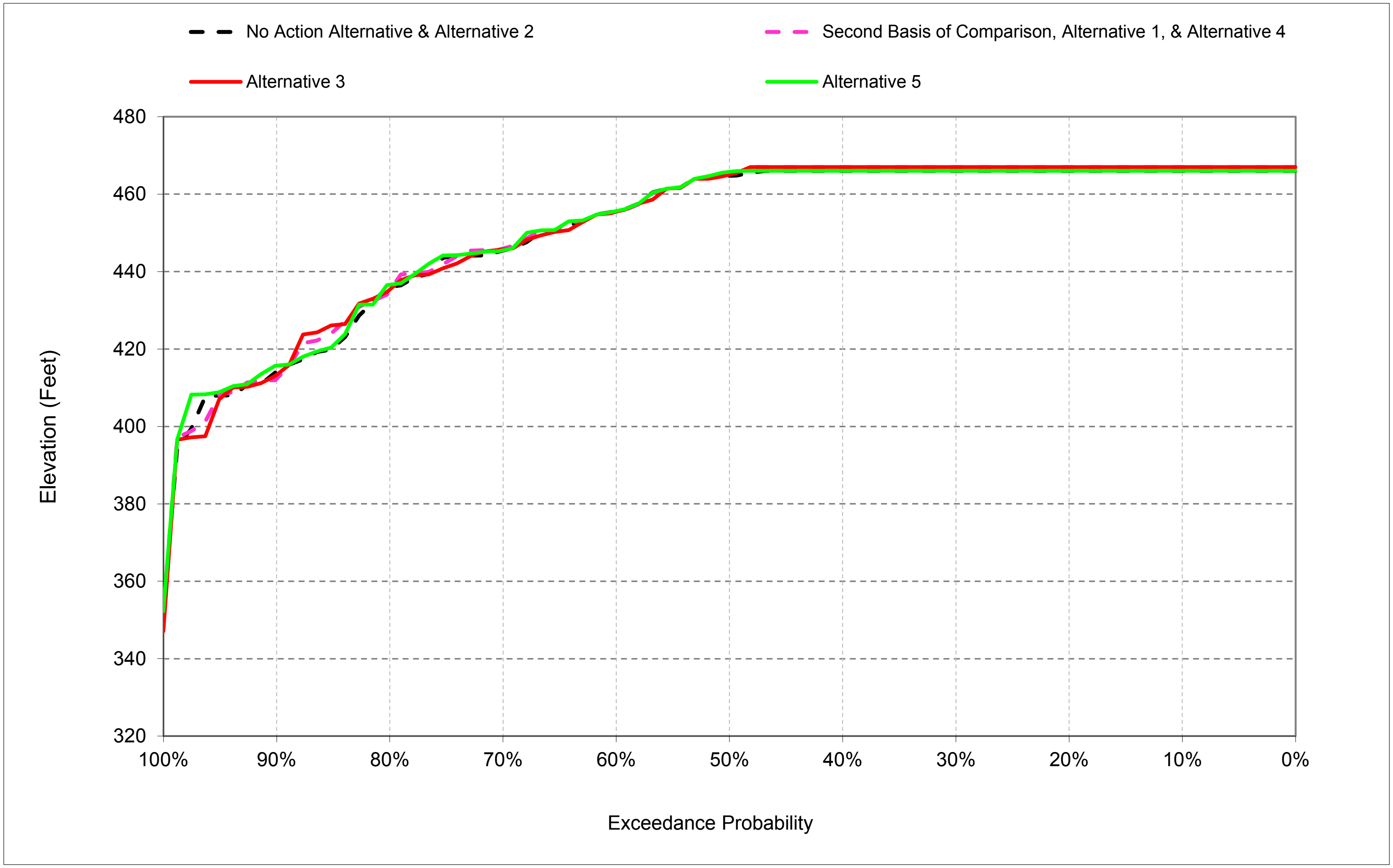
C.11. Folsom Lake Elevation

Figure C-11-1 . Folsom Lake, Reservoir Pool Elevation, December



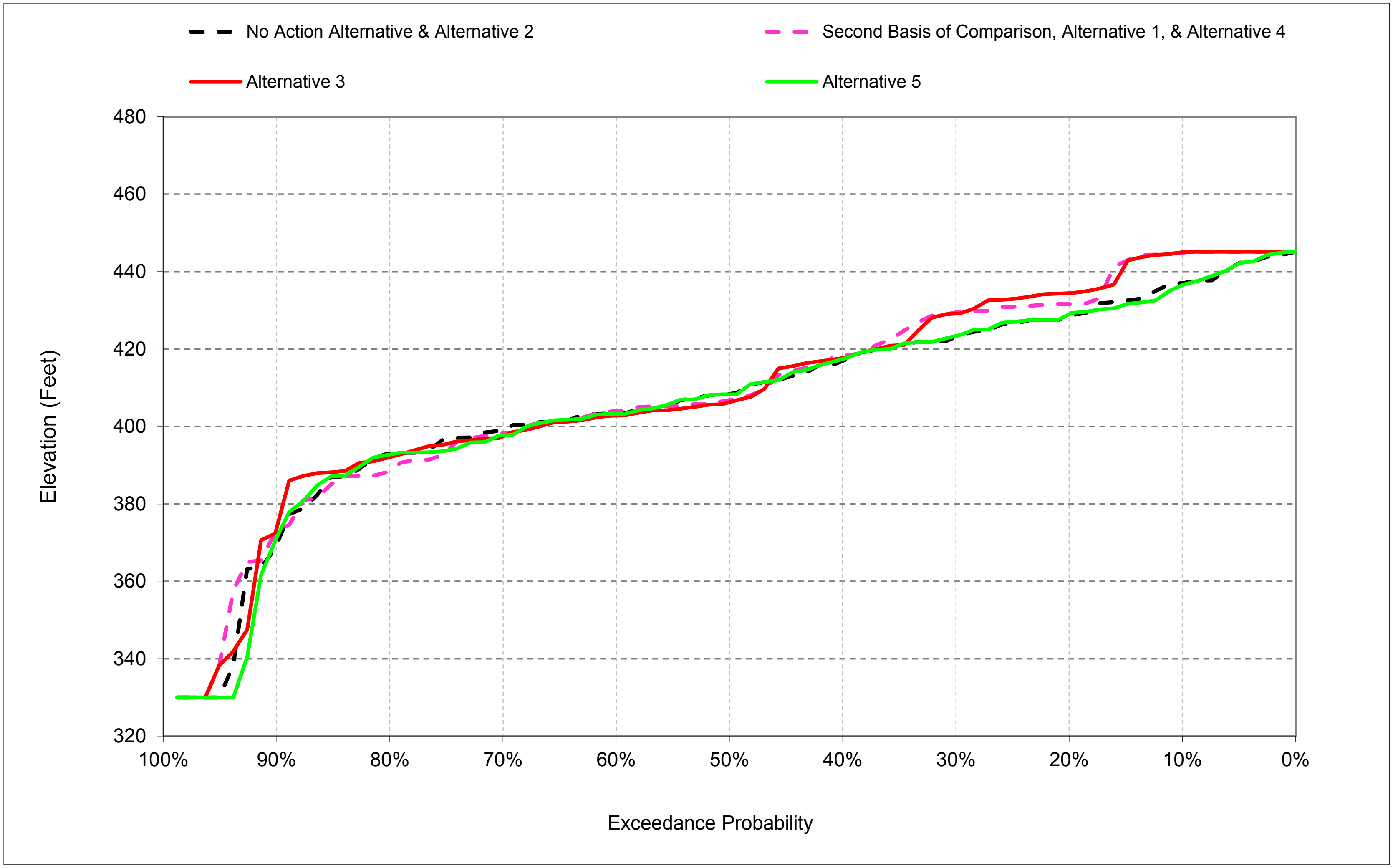
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-11-2. Folsom Lake, Reservoir Pool Elevation, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-11-3. Folsom Lake, Reservoir Pool Elevation, September



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-1. Folsom Lake, End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	427	420	424	424	424	436	449	466	466	460	449	437
20%	421	415	424	424	424	435	449	466	466	453	443	428
30%	416	411	421	423	423	435	449	466	466	444	438	423
40%	410	407	416	421	423	434	449	466	463	436	429	419
50%	405	404	409	413	420	433	449	465	457	427	418	410
60%	397	403	405	409	415	431	449	456	446	419	410	404
70%	393	397	402	407	411	428	443	445	438	407	401	400
80%	387	389	396	399	405	421	432	436	422	401	397	393
90%	373	378	377	388	402	407	413	414	407	392	385	378
Long Term												
Full Simulation Period[b]	401	400	407	410	414	427	440	450	444	424	416	407
Water Year Types[c]												
Wet (32%)	409	407	418	418	418	432	448	464	464	449	440	425
Above Normal (16%)	394	395	405	418	420	433	449	464	458	430	422	413
Below Normal (13%)	408	406	411	414	420	431	445	454	447	418	411	409
Dry (24%)	400	399	403	405	413	426	438	445	434	414	408	405
Critical (15%)	386	384	389	390	396	406	411	412	401	386	374	366

Alternative 1

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	439	424	424	424	424	436	449	467	467	460	449	445
20%	426	424	424	424	424	436	449	467	467	451	439	432
30%	423	419	424	424	423	435	449	467	467	443	433	429
40%	412	416	419	423	423	434	449	467	460	434	425	419
50%	404	407	416	419	421	433	449	465	450	422	412	408
60%	396	402	410	412	416	431	449	455	444	417	409	405
70%	394	397	404	407	411	429	443	446	432	408	402	399
80%	386	393	396	402	408	424	433	435	422	400	392	391
90%	379	380	382	390	403	410	415	412	407	389	377	375
Long Term												
Full Simulation Period[b]	404	404	410	412	415	427	440	451	444	423	413	409
Water Year Types[c]												
Wet (32%)	412	412	419	419	418	432	448	465	464	449	438	433
Above Normal (16%)	397	400	410	421	421	433	448	465	456	427	419	414
Below Normal (13%)	415	414	416	417	421	432	446	455	443	410	401	398
Dry (24%)	401	401	405	407	414	427	439	446	435	413	406	403
Critical (15%)	389	386	390	391	397	406	410	411	404	391	378	372

Alternative 1 minus No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	12	5	0	0	0	0	0	1	1	0	0	8
20%	6	8	0	0	0	0	0	1	1	-1	-5	3
30%	7	8	3	1	0	0	0	1	1	-1	-5	6
40%	2	9	3	2	0	0	0	1	-2	-3	-5	0
50%	-2	3	7	6	1	0	0	1	-7	-6	-6	-2
60%	0	0	5	3	0	0	0	0	-2	-2	-2	1
70%	1	0	2	1	0	1	0	1	-6	1	1	-2
80%	-1	4	0	3	3	3	1	-1	-1	-1	-5	-2
90%	6	2	5	2	1	3	1	-2	-1	-3	-7	-2
Long Term												
Full Simulation Period[b]	3	4	2	2	1	0	0	1	0	-1	-3	2
Water Year Types[c]												
Wet (32%)	4	5	1	1	0	0	0	1	0	-1	-3	8
Above Normal (16%)	2	5	5	3	1	0	0	1	-3	-4	-4	1
Below Normal (13%)	7	7	4	4	1	1	1	1	-4	-8	-10	-10
Dry (24%)	1	2	2	2	1	1	1	1	1	-1	-1	-1
Critical (15%)	3	2	2	1	0	0	-1	0	2	5	4	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-2. Folsom Lake, End of Month Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	427	420	424	424	424	436	449	466	466	460	449	437
20%	421	415	424	424	424	435	449	466	466	453	443	428
30%	416	411	421	423	423	435	449	466	466	444	438	423
40%	410	407	416	421	423	434	449	466	463	436	429	419
50%	405	404	409	413	420	433	449	465	457	427	418	410
60%	397	403	405	409	415	431	449	456	446	419	410	404
70%	393	397	402	407	411	428	443	445	438	407	401	400
80%	387	389	396	399	405	421	432	436	422	401	397	393
90%	373	378	377	388	402	407	413	414	407	392	385	378
Long Term												
Full Simulation Period[b]	401	400	407	410	414	427	440	450	444	424	416	407
Water Year Types[c]												
Wet (32%)	409	407	418	418	418	432	448	464	464	449	440	425
Above Normal (16%)	394	395	405	418	420	433	449	464	458	430	422	413
Below Normal (13%)	408	406	411	414	420	431	445	454	447	418	411	409
Dry (24%)	400	399	403	405	413	426	438	445	434	414	408	405
Critical (15%)	386	384	389	390	396	406	411	412	401	386	374	366

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	439	424	424	424	424	436	449	467	467	462	449	445
20%	427	424	424	424	424	435	449	467	467	451	441	434
30%	422	421	424	424	423	435	449	467	465	443	434	429
40%	414	415	419	423	423	434	449	467	459	433	424	419
50%	403	408	416	418	422	433	449	465	449	422	412	407
60%	396	402	410	412	416	431	449	455	445	414	408	403
70%	393	397	404	407	411	429	443	446	435	407	401	399
80%	389	393	395	402	408	424	435	435	422	403	395	393
90%	380	381	379	387	402	409	414	413	407	390	385	386
Long Term												
Full Simulation Period[b]	404	404	409	412	415	427	440	451	444	423	414	409
Water Year Types[c]												
Wet (32%)	413	412	419	419	418	432	448	465	463	448	438	433
Above Normal (16%)	395	397	408	421	421	433	448	465	455	425	418	413
Below Normal (13%)	416	415	416	417	421	432	446	454	446	415	404	401
Dry (24%)	401	401	405	407	414	426	438	445	434	414	407	404
Critical (15%)	388	386	390	390	396	406	411	411	403	389	379	372

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	11	5	0	0	0	0	0	1	1	1	0	8
20%	7	9	0	0	0	0	0	1	1	-1	-2	6
30%	6	9	3	1	0	0	0	1	-1	-1	-4	6
40%	4	9	3	2	0	0	0	1	-3	-4	-5	0
50%	-2	3	7	6	2	0	0	0	-8	-6	-6	-2
60%	-1	-1	4	3	0	0	0	0	-1	-4	-3	-1
70%	0	1	2	1	0	1	0	0	-2	1	0	-2
80%	1	4	-1	4	3	3	2	-1	0	1	-2	0
90%	7	2	2	0	0	2	1	-1	0	-3	0	9
Long Term												
Full Simulation Period[b]	3	4	2	2	0	0	0	1	-1	-1	-2	2
Water Year Types[c]												
Wet (32%)	4	5	1	1	0	0	0	1	-1	-1	-3	8
Above Normal (16%)	0	2	3	3	1	0	0	1	-3	-5	-4	0
Below Normal (13%)	8	8	5	4	1	1	1	1	-1	-3	-7	-8
Dry (24%)	1	2	1	1	0	0	0	0	0	-1	-1	-1
Critical (15%)	2	2	1	1	0	0	0	0	2	3	5	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-3. Folsom Lake, End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	427	420	424	424	424	436	449	466	466	460	449	437
20%	421	415	424	424	424	435	449	466	466	453	443	428
30%	416	411	421	423	423	435	449	466	466	444	438	423
40%	410	407	416	421	423	434	449	466	463	436	429	419
50%	405	404	409	413	420	433	449	465	457	427	418	410
60%	397	403	405	409	415	431	449	456	446	419	410	404
70%	393	397	402	407	411	428	443	445	438	407	401	400
80%	387	389	396	399	405	421	432	436	422	401	397	393
90%	373	378	377	388	402	407	413	414	407	392	385	378
Long Term												
Full Simulation Period[b]	401	400	407	410	414	427	440	450	444	424	416	407
Water Year Types[c]												
Wet (32%)	409	407	418	418	418	432	448	464	464	449	440	425
Above Normal (16%)	394	395	405	418	420	433	449	464	458	430	422	413
Below Normal (13%)	408	406	411	414	420	431	445	454	447	418	411	409
Dry (24%)	400	399	403	405	413	426	438	445	434	414	408	405
Critical (15%)	386	384	389	390	396	406	411	412	401	386	374	366

Alternative 5

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	427	420	424	424	424	436	449	466	466	457	449	437
20%	421	415	424	424	424	435	449	466	466	452	443	429
30%	416	411	421	423	423	435	449	466	466	444	436	423
40%	410	407	416	421	423	434	449	466	463	437	429	419
50%	405	405	409	413	420	433	449	466	457	428	418	410
60%	397	403	406	410	415	431	449	456	447	419	411	404
70%	393	397	404	406	410	428	444	446	438	408	402	398
80%	387	390	396	399	405	421	432	437	423	401	396	393
90%	374	378	376	388	401	407	414	416	407	393	385	378
Long Term												
Full Simulation Period[b]	401	400	407	410	414	427	440	451	444	424	415	407
Water Year Types[c]												
Wet (32%)	409	407	418	418	418	432	448	465	464	449	440	425
Above Normal (16%)	394	395	405	418	420	433	449	464	458	431	423	413
Below Normal (13%)	406	405	410	413	420	431	445	454	447	417	411	408
Dry (24%)	400	400	404	406	413	426	438	446	435	413	406	403
Critical (15%)	386	384	389	390	396	406	412	414	400	385	370	365

Alternative 5 minus No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	-4	0	-1
20%	0	0	0	0	0	0	0	0	0	-1	0	0
30%	1	0	0	0	0	0	0	0	0	0	-2	0
40%	0	0	1	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	1	0	0	0	0
60%	0	0	0	1	0	0	0	0	1	0	1	0
70%	0	0	1	0	-1	0	0	0	0	1	1	-2
80%	0	1	0	1	0	0	-1	1	0	0	-1	0
90%	0	0	0	0	0	0	1	2	0	0	1	1
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	-1	-1	-1
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	-1	0	0
Above Normal (16%)	-1	0	0	0	0	0	0	0	0	0	0	0
Below Normal (13%)	-2	-2	-1	0	0	0	0	0	0	-1	0	0
Dry (24%)	0	0	0	0	0	0	0	1	1	-1	-2	-2
Critical (15%)	0	0	0	0	0	0	1	2	-1	-2	-3	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-4. Folsom Lake, End of Month Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	439	424	424	424	424	436	449	467	467	460	449	445
20%	426	424	424	424	424	436	449	467	467	451	439	432
30%	423	419	424	424	423	435	449	467	467	443	433	429
40%	412	416	419	423	423	434	449	467	460	434	425	419
50%	404	407	416	419	421	433	449	465	450	422	412	408
60%	396	402	410	412	416	431	449	455	444	417	409	405
70%	394	397	404	407	411	429	443	446	432	408	402	399
80%	386	393	396	402	408	424	433	435	422	400	392	391
90%	379	380	382	390	403	410	415	412	407	389	377	375
Long Term												
Full Simulation Period[b]	404	404	410	412	415	427	440	451	444	423	413	409
Water Year Types[c]												
Wet (32%)	412	412	419	419	418	432	448	465	464	449	438	433
Above Normal (16%)	397	400	410	421	421	433	448	465	456	427	419	414
Below Normal (13%)	415	414	416	417	421	432	446	455	443	410	401	398
Dry (24%)	401	401	405	407	414	427	439	446	435	413	406	403
Critical (15%)	389	386	390	391	397	406	410	411	404	391	378	372

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	427	420	424	424	424	436	449	466	466	460	449	437
20%	421	415	424	424	424	435	449	466	466	453	443	428
30%	416	411	421	423	423	435	449	466	466	444	438	423
40%	410	407	416	421	423	434	449	466	463	436	429	419
50%	405	404	409	413	420	433	449	465	457	427	418	410
60%	397	403	405	409	415	431	449	456	446	419	410	404
70%	393	397	402	407	411	428	443	445	438	407	401	400
80%	387	389	396	399	405	421	432	436	422	401	397	393
90%	373	378	377	388	402	407	413	414	407	392	385	378
Long Term												
Full Simulation Period[b]	401	400	407	410	414	427	440	450	444	424	416	407
Water Year Types[c]												
Wet (32%)	409	407	418	418	418	432	448	464	464	449	440	425
Above Normal (16%)	394	395	405	418	420	433	449	464	458	430	422	413
Below Normal (13%)	408	406	411	414	420	431	445	454	447	418	411	409
Dry (24%)	400	399	403	405	413	426	438	445	434	414	408	405
Critical (15%)	386	384	389	390	396	406	411	412	401	386	374	366

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	-12	-5	0	0	0	0	0	-1	-1	0	0	-8
20%	-6	-8	0	0	0	0	0	-1	-1	1	5	-3
30%	-7	-8	-3	-1	0	0	0	-1	-1	1	5	-6
40%	-2	-9	-3	-2	0	0	0	-1	2	3	5	0
50%	2	-3	-7	-6	-1	0	0	-1	7	6	6	2
60%	0	0	-5	-3	0	0	0	0	2	2	2	-1
70%	-1	0	-2	-1	0	-1	0	-1	6	-1	-1	2
80%	1	-4	0	-3	-3	-3	-1	1	1	1	5	2
90%	-6	-2	-5	-2	-1	-3	-1	2	1	3	7	2
Long Term												
Full Simulation Period[b]	-3	-4	-2	-2	-1	0	0	-1	0	1	3	-2
Water Year Types[c]												
Wet (32%)	-4	-5	-1	-1	0	0	0	-1	0	1	3	-8
Above Normal (16%)	-2	-5	-5	-3	-1	0	0	-1	3	4	4	-1
Below Normal (13%)	-7	-7	-4	-4	-1	-1	-1	-1	4	8	10	10
Dry (24%)	-1	-2	-2	-2	-1	-1	-1	-1	-1	1	1	1
Critical (15%)	-3	-2	-2	-1	0	0	1	0	-2	-5	-4	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-5. Folsom Lake, End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	439	424	424	424	424	436	449	467	467	460	449	445
20%	426	424	424	424	424	436	449	467	467	451	439	432
30%	423	419	424	424	423	435	449	467	467	443	433	429
40%	412	416	419	423	423	434	449	467	460	434	425	419
50%	404	407	416	419	421	433	449	465	450	422	412	408
60%	396	402	410	412	416	431	449	455	444	417	409	405
70%	394	397	404	407	411	429	443	446	432	408	402	399
80%	386	393	396	402	408	424	433	435	422	400	392	391
90%	379	380	382	390	403	410	415	412	407	389	377	375
Long Term												
Full Simulation Period[b]	404	404	410	412	415	427	440	451	444	423	413	409
Water Year Types[c]												
Wet (32%)	412	412	419	419	418	432	448	465	464	449	438	433
Above Normal (16%)	397	400	410	421	421	433	448	465	456	427	419	414
Below Normal (13%)	415	414	416	417	421	432	446	455	443	410	401	398
Dry (24%)	401	401	405	407	414	427	439	446	435	413	406	403
Critical (15%)	389	386	390	391	397	406	410	411	404	391	378	372

Alternative 3

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	439	424	424	424	424	436	449	467	467	462	449	445
20%	427	424	424	424	424	435	449	467	467	451	441	434
30%	422	421	424	424	423	435	449	467	465	443	434	429
40%	414	415	419	423	423	434	449	467	459	433	424	419
50%	403	408	416	418	422	433	449	465	449	422	412	407
60%	396	402	410	412	416	431	449	455	445	414	408	403
70%	393	397	404	407	411	429	443	446	435	407	401	399
80%	389	393	395	402	408	424	435	435	422	403	395	393
90%	380	381	379	387	402	409	414	413	407	390	385	386
Long Term												
Full Simulation Period[b]	404	404	409	412	415	427	440	451	444	423	414	409
Water Year Types[c]												
Wet (32%)	413	412	419	419	418	432	448	465	463	448	438	433
Above Normal (16%)	395	397	408	421	421	433	448	465	455	425	418	413
Below Normal (13%)	416	415	416	417	421	432	446	454	446	415	404	401
Dry (24%)	401	401	405	407	414	426	438	445	434	414	407	404
Critical (15%)	388	386	390	390	396	406	411	411	403	389	379	372

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	1	0	0
20%	1	0	0	0	0	0	0	0	0	0	2	3
30%	-1	1	0	0	0	0	0	0	-1	0	1	0
40%	2	-1	0	0	0	0	0	0	-1	-1	0	0
50%	-1	0	0	0	1	0	0	0	-1	0	0	0
60%	-1	0	-1	0	0	0	0	0	0	-2	-1	-1
70%	-1	0	0	0	0	0	0	0	3	0	-1	0
80%	2	-1	-2	0	0	0	2	0	0	3	4	2
90%	1	0	-3	-2	-1	-1	-1	1	0	1	8	11
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	1	0
Water Year Types[c]												
Wet (32%)	1	1	0	0	0	0	0	0	-1	0	0	0
Above Normal (16%)	-2	-3	-3	0	0	0	0	0	-1	-1	-1	-1
Below Normal (13%)	1	1	0	0	0	0	0	0	3	5	3	3
Dry (24%)	0	0	0	0	-1	-1	-1	-1	-1	1	0	0
Critical (15%)	-1	0	0	0	0	0	0	0	0	-2	1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-6. Folsom Lake, End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	439	424	424	424	424	436	449	467	467	460	449	445
20%	426	424	424	424	424	436	449	467	467	451	439	432
30%	423	419	424	424	423	435	449	467	467	443	433	429
40%	412	416	419	423	423	434	449	467	460	434	425	419
50%	404	407	416	419	421	433	449	465	450	422	412	408
60%	396	402	410	412	416	431	449	455	444	417	409	405
70%	394	397	404	407	411	429	443	446	432	408	402	399
80%	386	393	396	402	408	424	433	435	422	400	392	391
90%	379	380	382	390	403	410	415	412	407	389	377	375
Long Term												
Full Simulation Period[b]	404	404	410	412	415	427	440	451	444	423	413	409
Water Year Types[c]												
Wet (32%)	412	412	419	419	418	432	448	465	464	449	438	433
Above Normal (16%)	397	400	410	421	421	433	448	465	456	427	419	414
Below Normal (13%)	415	414	416	417	421	432	446	455	443	410	401	398
Dry (24%)	401	401	405	407	414	427	439	446	435	413	406	403
Critical (15%)	389	386	390	391	397	406	410	411	404	391	378	372

Alternative 5

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	427	420	424	424	424	436	449	466	466	457	449	437
20%	421	415	424	424	424	435	449	466	466	452	443	429
30%	416	411	421	423	423	435	449	466	466	444	436	423
40%	410	407	416	421	423	434	449	466	463	437	429	419
50%	405	405	409	413	420	433	449	466	457	428	418	410
60%	397	403	406	410	415	431	449	456	447	419	411	404
70%	393	397	404	406	410	428	444	446	438	408	402	398
80%	387	390	396	399	405	421	432	437	423	401	396	393
90%	374	378	376	388	401	407	414	416	407	393	385	378
Long Term												
Full Simulation Period[b]	401	400	407	410	414	427	440	451	444	424	415	407
Water Year Types[c]												
Wet (32%)	409	407	418	418	418	432	448	465	464	449	440	425
Above Normal (16%)	394	395	405	418	420	433	449	464	458	431	423	413
Below Normal (13%)	406	405	410	413	420	431	445	454	447	417	411	408
Dry (24%)	400	400	404	406	413	426	438	446	435	413	406	403
Critical (15%)	386	384	389	390	396	406	412	414	400	385	370	365

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-12	-4	0	0	0	0	0	-1	-1	-4	0	-8
20%	-6	-9	0	0	0	0	0	-1	-1	0	5	-3
30%	-6	-8	-4	-1	0	0	0	-1	-1	1	3	-6
40%	-2	-9	-3	-2	0	0	0	-1	2	3	5	0
50%	2	-3	-7	-5	-1	0	0	1	7	6	6	2
60%	0	0	-5	-3	0	0	0	0	3	2	2	-1
70%	-1	-1	-1	-1	-1	-1	0	0	6	0	0	0
80%	0	-3	0	-3	-3	-3	-1	2	1	2	4	2
90%	-5	-2	-5	-2	-1	-3	-1	3	1	4	8	3
Long Term												
Full Simulation Period[b]	-3	-4	-3	-2	0	0	0	0	0	1	1	-2
Water Year Types[c]												
Wet (32%)	-4	-5	-1	-1	0	0	0	-1	0	0	3	-8
Above Normal (16%)	-3	-6	-5	-3	-1	0	0	-1	3	4	4	-1
Below Normal (13%)	-9	-9	-6	-4	-1	-1	0	-1	5	7	10	10
Dry (24%)	-1	-1	-1	-2	-1	-1	-1	-1	0	0	0	0
Critical (15%)	-3	-3	-2	-1	0	0	2	2	-3	-6	-8	-7

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

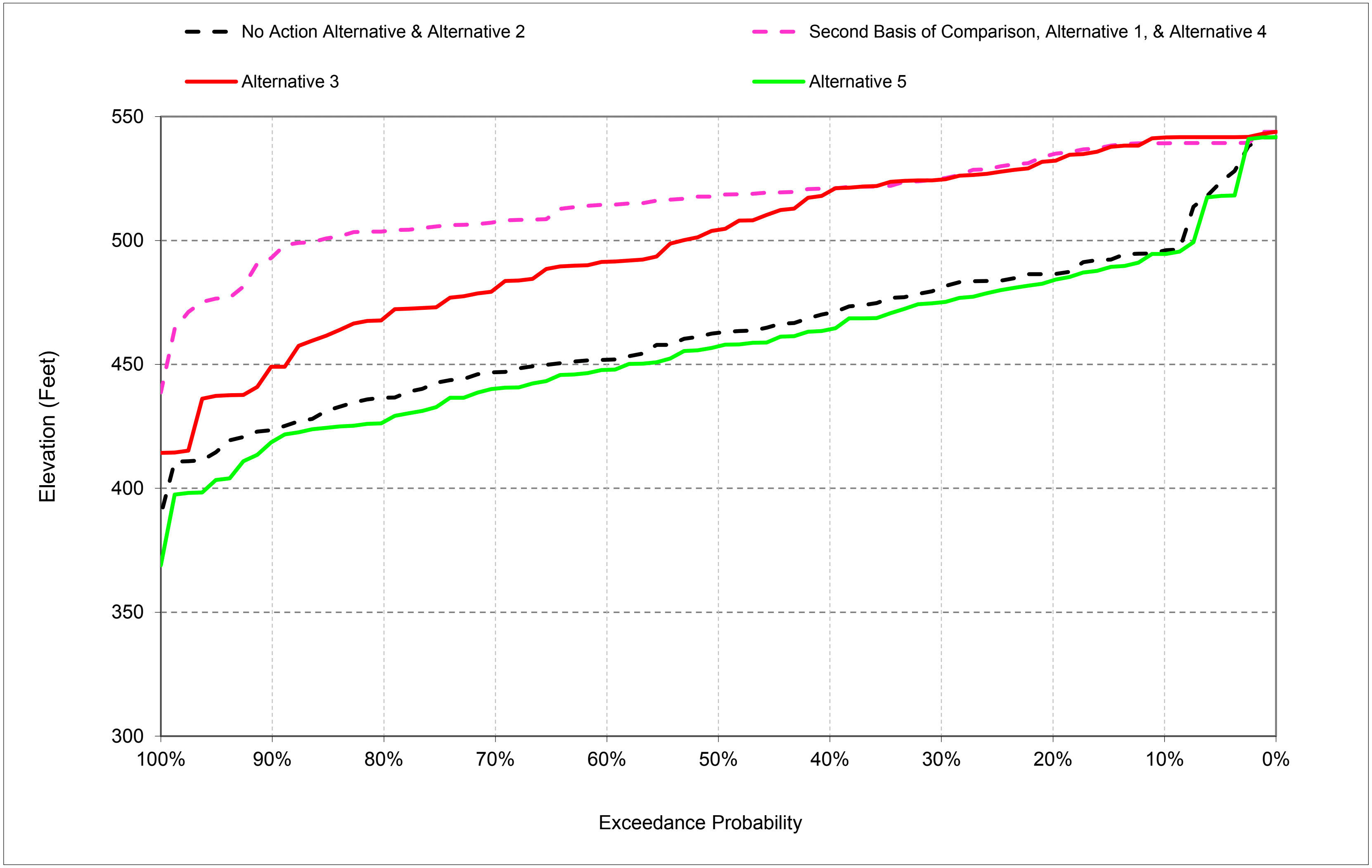
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

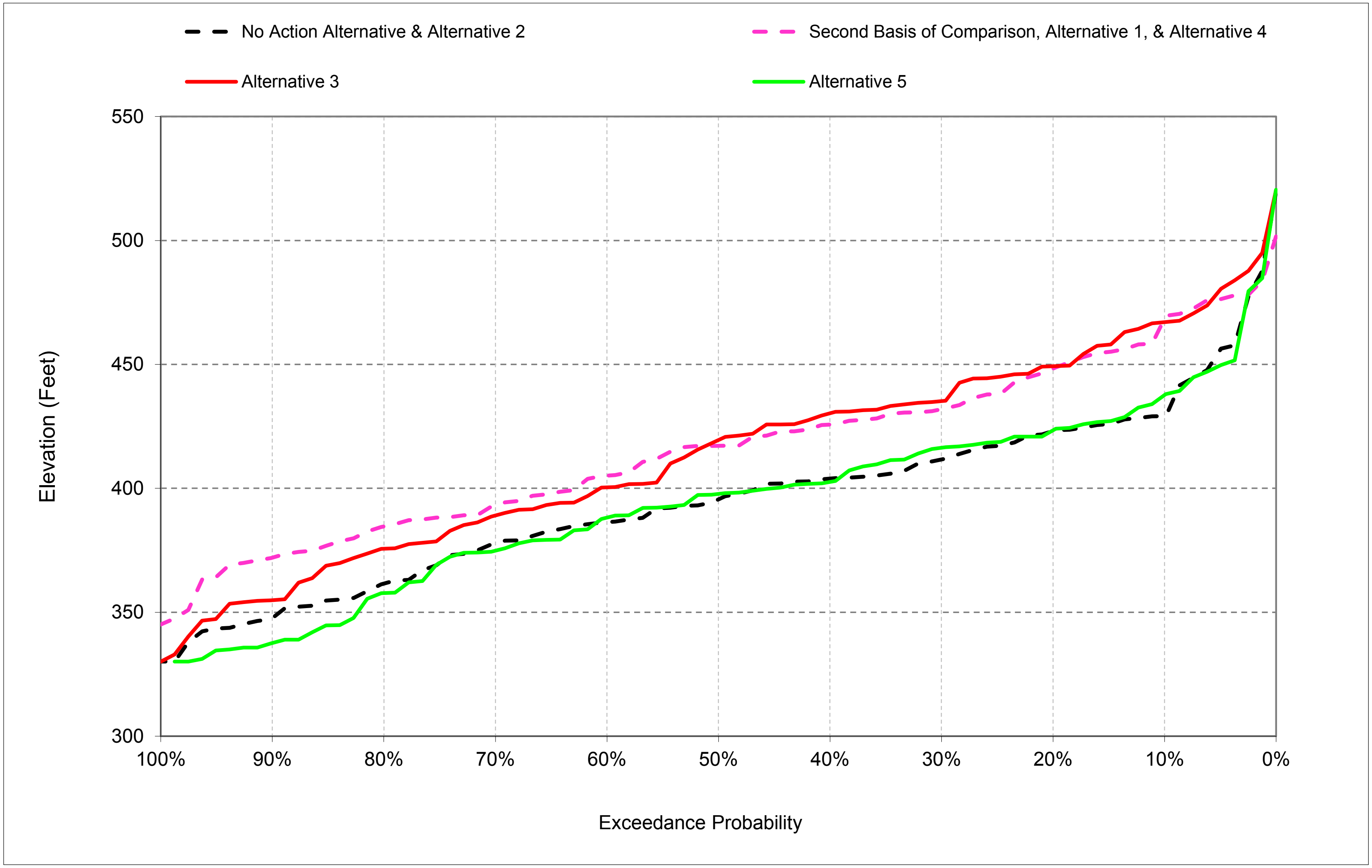
C.12. San Luis Lake Elevation

Figure C-12-1. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-12-2. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, September



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-1. San Luis Reservoir (SWP and CVP), End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	439	456	483	519	543	544	528	496	469	450	435	429
20%	424	437	468	489	511	533	520	487	455	439	417	423
30%	405	425	460	484	506	525	510	481	444	430	405	412
40%	397	416	451	478	499	518	503	471	432	417	398	404
50%	393	407	434	466	491	510	495	463	422	404	388	396
60%	386	395	426	454	478	500	487	452	417	395	381	386
70%	374	386	421	450	467	482	473	447	410	388	369	378
80%	364	377	409	433	457	478	464	437	397	377	357	362
90%	351	369	392	427	447	461	455	424	380	370	347	348
Long Term												
Full Simulation Period[b]	394	409	439	467	488	504	492	464	428	410	391	395
Water Year Types[c]												
Wet (32%)	399	414	443	473	500	523	507	475	444	422	409	416
Above Normal (16%)	391	411	445	472	492	512	493	456	415	389	386	398
Below Normal (13%)	397	410	442	465	481	496	481	448	400	393	383	389
Dry (24%)	391	406	437	466	484	498	490	468	434	426	390	389
Critical (15%)	390	400	423	454	470	475	469	453	422	399	369	366

Alternative 1

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	469	494	519	543	544	544	544	539	520	487	462	468
20%	452	470	503	532	544	544	544	535	504	473	445	448
30%	439	459	491	528	544	544	544	525	497	465	429	432
40%	433	454	478	515	540	544	544	521	486	455	419	426
50%	423	441	467	509	536	544	543	518	481	447	413	417
60%	408	427	459	501	531	544	537	514	476	442	408	405
70%	391	416	450	496	525	539	531	507	473	437	404	393
80%	377	404	438	482	514	530	527	504	468	433	399	385
90%	363	378	416	469	500	518	520	493	459	427	388	372
Long Term												
Full Simulation Period[b]	418	439	468	505	526	536	533	516	484	451	419	416
Water Year Types[c]												
Wet (32%)	426	451	485	520	538	543	543	529	497	468	440	443
Above Normal (16%)	412	437	470	513	534	541	540	518	477	437	409	411
Below Normal (13%)	435	457	483	519	533	539	533	510	476	448	412	406
Dry (24%)	407	425	450	492	518	535	530	513	484	453	415	406
Critical (15%)	409	419	441	475	502	512	509	494	468	432	400	389

Alternative 1 minus No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	30	38	36	24	1	0	16	43	51	38	27	39
20%	28	33	36	42	32	11	24	48	49	34	29	25
30%	34	34	31	44	37	19	34	44	53	35	24	20
40%	36	38	28	37	41	26	41	50	54	38	21	22
50%	30	35	33	43	44	34	47	55	59	42	25	22
60%	22	32	33	46	53	44	50	63	60	47	27	19
70%	18	30	29	47	58	56	58	61	63	50	35	15
80%	12	27	29	49	57	52	63	67	72	57	42	23
90%	12	9	24	43	53	57	65	70	79	57	41	24
Long Term												
Full Simulation Period[b]	24	30	29	38	38	31	41	52	56	41	28	21
Water Year Types[c]												
Wet (32%)	26	37	42	46	38	20	36	53	53	46	30	27
Above Normal (16%)	21	26	25	41	41	29	47	61	62	48	23	14
Below Normal (13%)	38	47	42	54	52	43	52	62	76	56	30	17
Dry (24%)	17	19	12	25	34	37	40	45	51	27	25	18
Critical (15%)	19	20	18	21	32	38	40	41	45	32	32	24

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-2. San Luis Reservoir (SWP and CVP), End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	439	456	483	519	543	544	528	496	469	450	435	429
20%	424	437	468	489	511	533	520	487	455	439	417	423
30%	405	425	460	484	506	525	510	481	444	430	405	412
40%	397	416	451	478	499	518	503	471	432	417	398	404
50%	393	407	434	466	491	510	495	463	422	404	388	396
60%	386	395	426	454	478	500	487	452	417	395	381	386
70%	374	386	421	450	467	482	473	447	410	388	369	378
80%	364	377	409	433	457	478	464	437	397	377	357	362
90%	351	369	392	427	447	461	455	424	380	370	347	348
Long Term												
Full Simulation Period[b]	394	409	439	467	488	504	492	464	428	410	391	395
Water Year Types[c]												
Wet (32%)	399	414	443	473	500	523	507	475	444	422	409	416
Above Normal (16%)	391	411	445	472	492	512	493	456	415	389	386	398
Below Normal (13%)	397	410	442	465	481	496	481	448	400	393	383	389
Dry (24%)	391	406	437	466	484	498	490	468	434	426	390	389
Critical (15%)	390	400	423	454	470	475	469	453	422	399	369	366

Alternative 3

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	475	494	514	532	544	544	544	542	515	493	465	467
20%	451	475	494	517	537	544	544	532	503	477	450	449
30%	442	459	483	506	527	543	541	525	491	465	440	435
40%	432	451	477	498	516	533	538	520	484	451	423	430
50%	423	439	465	489	509	526	522	504	468	444	418	419
60%	402	428	455	482	499	517	514	491	457	432	408	400
70%	380	417	445	473	494	508	503	481	449	421	393	389
80%	372	396	429	459	479	491	490	469	436	408	382	376
90%	356	377	410	439	453	469	471	449	411	392	366	355
Long Term												
Full Simulation Period[b]	416	437	463	487	504	516	515	499	469	443	416	414
Water Year Types[c]												
Wet (32%)	427	452	477	503	525	537	539	529	502	473	447	449
Above Normal (16%)	406	431	459	482	504	520	521	505	467	433	417	420
Below Normal (13%)	431	454	480	497	509	519	512	484	440	423	405	401
Dry (24%)	410	430	456	480	494	508	506	490	464	444	405	397
Critical (15%)	399	409	430	458	472	475	473	457	434	403	375	371

Alternative 3 minus No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	36	38	31	13	1	0	16	46	46	43	30	38
20%	27	38	27	28	26	11	24	46	48	38	34	26
30%	38	34	23	22	20	19	32	44	47	36	35	24
40%	35	34	26	20	17	15	35	49	52	34	25	26
50%	30	32	31	23	17	16	27	42	46	40	30	24
60%	16	34	30	28	21	17	27	40	40	37	27	14
70%	6	31	24	23	26	25	30	34	39	34	24	11
80%	7	19	20	26	22	13	26	32	39	31	24	14
90%	5	8	18	13	7	8	16	25	31	22	19	7
Long Term												
Full Simulation Period[b]	22	28	24	19	16	11	23	36	41	32	25	19
Water Year Types[c]												
Wet (32%)	28	38	34	29	24	14	32	53	58	52	38	33
Above Normal (16%)	14	21	15	11	11	8	28	49	51	44	31	23
Below Normal (13%)	33	44	39	32	28	23	30	36	40	30	23	12
Dry (24%)	19	24	18	14	10	10	16	23	30	18	15	9
Critical (15%)	9	10	6	4	2	1	4	4	12	4	6	5

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-3. San Luis Reservoir (SWP and CVP), End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	439	456	483	519	543	544	528	496	469	450	435	429
20%	424	437	468	489	511	533	520	487	455	439	417	423
30%	405	425	460	484	506	525	510	481	444	430	405	412
40%	397	416	451	478	499	518	503	471	432	417	398	404
50%	393	407	434	466	491	510	495	463	422	404	388	396
60%	386	395	426	454	478	500	487	452	417	395	381	386
70%	374	386	421	450	467	482	473	447	410	388	369	378
80%	364	377	409	433	457	478	464	437	397	377	357	362
90%	351	369	392	427	447	461	455	424	380	370	347	348
Long Term												
Full Simulation Period[b]	394	409	439	467	488	504	492	464	428	410	391	395
Water Year Types[c]												
Wet (32%)	399	414	443	473	500	523	507	475	444	422	409	416
Above Normal (16%)	391	411	445	472	492	512	493	456	415	389	386	398
Below Normal (13%)	397	410	442	465	481	496	481	448	400	393	383	389
Dry (24%)	391	406	437	466	484	498	490	468	434	426	390	389
Critical (15%)	390	400	423	454	470	475	469	453	422	399	369	366

Alternative 5

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	436	451	482	507	541	544	526	495	473	450	433	438
20%	422	440	466	491	513	534	519	484	454	440	424	423
30%	410	425	457	484	507	527	509	475	440	427	408	416
40%	402	416	452	475	499	518	500	464	423	411	395	403
50%	395	408	440	466	490	509	492	457	419	402	386	398
60%	385	398	426	457	480	498	481	448	412	390	379	388
70%	371	386	421	450	469	489	472	440	400	383	368	375
80%	363	376	408	435	459	479	464	427	389	371	353	358
90%	348	361	391	428	446	457	445	419	377	363	340	338
Long Term												
Full Simulation Period[b]	394	408	438	467	488	504	489	457	422	406	390	394
Water Year Types[c]												
Wet (32%)	402	417	446	475	501	525	509	478	448	427	416	422
Above Normal (16%)	391	408	443	471	492	512	494	456	416	390	386	398
Below Normal (13%)	399	411	443	467	483	498	481	444	397	390	381	388
Dry (24%)	389	404	436	465	483	497	482	451	417	413	381	381
Critical (15%)	383	393	417	450	467	471	460	437	405	383	359	357

Alternative 5 minus No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-3	-5	-1	-11	-2	0	-1	-1	5	0	-2	8
20%	-2	3	-2	1	1	2	-1	-3	-1	1	7	0
30%	6	0	-3	1	1	2	-1	-6	-4	-3	2	5
40%	5	-1	1	-3	-1	1	-3	-7	-9	-7	-3	-1
50%	2	1	7	0	-1	-1	-4	-5	-3	-2	-2	2
60%	0	4	0	3	2	-1	-5	-4	-5	-5	-2	2
70%	-3	0	1	1	2	6	-1	-7	-10	-5	-1	-3
80%	-2	-1	-1	3	2	1	0	-10	-7	-6	-4	-4
90%	-3	-7	-1	1	-1	-4	-10	-5	-3	-7	-6	-10
Long Term												
Full Simulation Period[b]	0	-1	0	0	0	0	-3	-6	-6	-4	-2	-1
Water Year Types[c]												
Wet (32%)	3	3	3	1	1	1	2	3	4	5	6	6
Above Normal (16%)	0	-3	-2	-1	0	0	0	0	1	1	1	1
Below Normal (13%)	2	1	2	2	2	2	-1	-4	-3	-3	-2	-1
Dry (24%)	-2	-2	-1	-1	-1	-1	-8	-16	-17	-13	-9	-7
Critical (15%)	-7	-7	-6	-4	-3	-3	-9	-16	-18	-16	-10	-9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-4. San Luis Reservoir (SWP and CVP), End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	469	494	519	543	544	544	544	539	520	487	462	468
20%	452	470	503	532	544	544	544	535	504	473	445	448
30%	439	459	491	528	544	544	544	525	497	465	429	432
40%	433	454	478	515	540	544	544	521	486	455	419	426
50%	423	441	467	509	536	544	543	518	481	447	413	417
60%	408	427	459	501	531	544	537	514	476	442	408	405
70%	391	416	450	496	525	539	531	507	473	437	404	393
80%	377	404	438	482	514	530	527	504	468	433	399	385
90%	363	378	416	469	500	518	520	493	459	427	388	372
Long Term												
Full Simulation Period[b]	418	439	468	505	526	536	533	516	484	451	419	416
Water Year Types[c]												
Wet (32%)	426	451	485	520	538	543	543	529	497	468	440	443
Above Normal (16%)	412	437	470	513	534	541	540	518	477	437	409	411
Below Normal (13%)	435	457	483	519	533	539	533	510	476	448	412	406
Dry (24%)	407	425	450	492	518	535	530	513	484	453	415	406
Critical (15%)	409	419	441	475	502	512	509	494	468	432	400	389

No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	439	456	483	519	543	544	528	496	469	450	435	429
20%	424	437	468	489	511	533	520	487	455	439	417	423
30%	405	425	460	484	506	525	510	481	444	430	405	412
40%	397	416	451	478	499	518	503	471	432	417	398	404
50%	393	407	434	466	491	510	495	463	422	404	388	396
60%	386	395	426	454	478	500	487	452	417	395	381	386
70%	374	386	421	450	467	482	473	447	410	388	369	378
80%	364	377	409	433	457	478	464	437	397	377	357	362
90%	351	369	392	427	447	461	455	424	380	370	347	348
Long Term												
Full Simulation Period[b]	394	409	439	467	488	504	492	464	428	410	391	395
Water Year Types[c]												
Wet (32%)	399	414	443	473	500	523	507	475	444	422	409	416
Above Normal (16%)	391	411	445	472	492	512	493	456	415	389	386	398
Below Normal (13%)	397	410	442	465	481	496	481	448	400	393	383	389
Dry (24%)	391	406	437	466	484	498	490	468	434	426	390	389
Critical (15%)	390	400	423	454	470	475	469	453	422	399	369	366

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-30	-38	-36	-24	-1	0	-16	-43	-51	-38	-27	-39
20%	-28	-33	-36	-42	-32	-11	-24	-48	-49	-34	-29	-25
30%	-34	-34	-31	-44	-37	-19	-34	-44	-53	-35	-24	-20
40%	-36	-38	-28	-37	-41	-26	-41	-50	-54	-38	-21	-22
50%	-30	-35	-33	-43	-44	-34	-47	-55	-59	-42	-25	-22
60%	-22	-32	-33	-46	-53	-44	-50	-63	-60	-47	-27	-19
70%	-18	-30	-29	-47	-58	-56	-58	-61	-63	-50	-35	-15
80%	-12	-27	-29	-49	-57	-52	-63	-67	-72	-57	-42	-23
90%	-12	-9	-24	-43	-53	-57	-65	-70	-79	-57	-41	-24
Long Term												
Full Simulation Period[b]	-24	-30	-29	-38	-38	-31	-41	-52	-56	-41	-28	-21
Water Year Types[c]												
Wet (32%)	-26	-37	-42	-46	-38	-20	-36	-53	-53	-46	-30	-27
Above Normal (16%)	-21	-26	-25	-41	-41	-29	-47	-61	-62	-48	-23	-14
Below Normal (13%)	-38	-47	-42	-54	-52	-43	-52	-62	-76	-56	-30	-17
Dry (24%)	-17	-19	-12	-25	-34	-37	-40	-45	-51	-27	-25	-18
Critical (15%)	-19	-20	-18	-21	-32	-38	-40	-41	-45	-32	-32	-24

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-5. San Luis Reservoir (SWP and CVP), End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	469	494	519	543	544	544	544	539	520	487	462	468
20%	452	470	503	532	544	544	544	535	504	473	445	448
30%	439	459	491	528	544	544	544	525	497	465	429	432
40%	433	454	478	515	540	544	544	521	486	455	419	426
50%	423	441	467	509	536	544	543	518	481	447	413	417
60%	408	427	459	501	531	544	537	514	476	442	408	405
70%	391	416	450	496	525	539	531	507	473	437	404	393
80%	377	404	438	482	514	530	527	504	468	433	399	385
90%	363	378	416	469	500	518	520	493	459	427	388	372
Long Term												
Full Simulation Period[b]	418	439	468	505	526	536	533	516	484	451	419	416
Water Year Types[c]												
Wet (32%)	426	451	485	520	538	543	543	529	497	468	440	443
Above Normal (16%)	412	437	470	513	534	541	540	518	477	437	409	411
Below Normal (13%)	435	457	483	519	533	539	533	510	476	448	412	406
Dry (24%)	407	425	450	492	518	535	530	513	484	453	415	406
Critical (15%)	409	419	441	475	502	512	509	494	468	432	400	389

Alternative 3

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	475	494	514	532	544	544	544	542	515	493	465	467
20%	451	475	494	517	537	544	544	532	503	477	450	449
30%	442	459	483	506	527	543	541	525	491	465	440	435
40%	432	451	477	498	516	533	538	520	484	451	423	430
50%	423	439	465	489	509	526	522	504	468	444	418	419
60%	402	428	455	482	499	517	514	491	457	432	408	400
70%	380	417	445	473	494	508	503	481	449	421	393	389
80%	372	396	429	459	479	491	490	469	436	408	382	376
90%	356	377	410	439	453	469	471	449	411	392	366	355
Long Term												
Full Simulation Period[b]	416	437	463	487	504	516	515	499	469	443	416	414
Water Year Types[c]												
Wet (32%)	427	452	477	503	525	537	539	529	502	473	447	449
Above Normal (16%)	406	431	459	482	504	520	521	505	467	433	417	420
Below Normal (13%)	431	454	480	497	509	519	512	484	440	423	405	401
Dry (24%)	410	430	456	480	494	508	506	490	464	444	405	397
Critical (15%)	399	409	430	458	472	475	473	457	434	403	375	371

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	6	0	-4	-11	0	0	0	2	-5	5	3	-1
20%	-1	5	-9	-14	-7	0	0	-3	-1	4	5	1
30%	4	0	-8	-22	-17	0	-3	0	-6	1	11	3
40%	-1	-3	-2	-17	-24	-11	-6	-1	-2	-4	4	5
50%	1	-2	-3	-20	-27	-18	-20	-14	-13	-2	5	2
60%	-6	2	-4	-18	-32	-27	-23	-23	-20	-10	0	-5
70%	-12	1	-5	-24	-31	-31	-28	-27	-24	-16	-11	-4
80%	-5	-8	-9	-23	-35	-39	-37	-35	-33	-26	-18	-9
90%	-7	-1	-6	-30	-47	-49	-49	-44	-48	-35	-22	-17
Long Term												
Full Simulation Period[b]	-2	-1	-5	-18	-22	-20	-19	-17	-15	-9	-3	-2
Water Year Types[c]												
Wet (32%)	1	1	-8	-17	-13	-6	-5	0	5	6	8	6
Above Normal (16%)	-7	-6	-11	-31	-30	-21	-20	-13	-11	-4	8	9
Below Normal (13%)	-4	-3	-3	-22	-24	-20	-22	-26	-36	-26	-7	-4
Dry (24%)	3	5	6	-11	-24	-27	-24	-23	-21	-9	-9	-9
Critical (15%)	-10	-10	-12	-17	-30	-37	-36	-36	-34	-28	-25	-19

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-6. San Luis Reservoir (SWP and CVP), End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	469	494	519	543	544	544	544	539	520	487	462	468
20%	452	470	503	532	544	544	544	535	504	473	445	448
30%	439	459	491	528	544	544	544	525	497	465	429	432
40%	433	454	478	515	540	544	544	521	486	455	419	426
50%	423	441	467	509	536	544	543	518	481	447	413	417
60%	408	427	459	501	531	544	537	514	476	442	408	405
70%	391	416	450	496	525	539	531	507	473	437	404	393
80%	377	404	438	482	514	530	527	504	468	433	399	385
90%	363	378	416	469	500	518	520	493	459	427	388	372
Long Term												
Full Simulation Period[b]	418	439	468	505	526	536	533	516	484	451	419	416
Water Year Types[c]												
Wet (32%)	426	451	485	520	538	543	543	529	497	468	440	443
Above Normal (16%)	412	437	470	513	534	541	540	518	477	437	409	411
Below Normal (13%)	435	457	483	519	533	539	533	510	476	448	412	406
Dry (24%)	407	425	450	492	518	535	530	513	484	453	415	406
Critical (15%)	409	419	441	475	502	512	509	494	468	432	400	389

Alternative 5

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	436	451	482	507	541	544	526	495	473	450	433	438
20%	422	440	466	491	513	534	519	484	454	440	424	423
30%	410	425	457	484	507	527	509	475	440	427	408	416
40%	402	416	452	475	499	518	500	464	423	411	395	403
50%	395	408	440	466	490	509	492	457	419	402	386	398
60%	385	398	426	457	480	498	481	448	412	390	379	388
70%	371	386	421	450	469	489	472	440	400	383	368	375
80%	363	376	408	435	459	479	464	427	389	371	353	358
90%	348	361	391	428	446	457	445	419	377	363	340	338
Long Term												
Full Simulation Period[b]	394	408	438	467	488	504	489	457	422	406	390	394
Water Year Types[c]												
Wet (32%)	402	417	446	475	501	525	509	478	448	427	416	422
Above Normal (16%)	391	408	443	471	492	512	494	456	416	390	386	398
Below Normal (13%)	399	411	443	467	483	498	481	444	397	390	381	388
Dry (24%)	389	404	436	465	483	497	482	451	417	413	381	381
Critical (15%)	383	393	417	450	467	471	460	437	405	383	359	357

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-34	-43	-37	-36	-3	0	-17	-45	-46	-37	-30	-31
20%	-30	-30	-37	-41	-31	-9	-25	-51	-50	-33	-21	-25
30%	-28	-34	-34	-43	-36	-17	-35	-50	-57	-38	-22	-16
40%	-31	-38	-26	-40	-42	-26	-44	-57	-63	-45	-24	-23
50%	-28	-33	-27	-43	-45	-35	-51	-61	-62	-44	-27	-19
60%	-22	-28	-33	-44	-51	-46	-56	-67	-65	-52	-29	-17
70%	-20	-30	-28	-46	-56	-50	-59	-67	-73	-54	-36	-18
80%	-14	-28	-30	-47	-55	-51	-63	-77	-79	-63	-46	-27
90%	-15	-17	-25	-42	-54	-61	-75	-75	-82	-64	-47	-35
Long Term												
Full Simulation Period[b]	-24	-30	-29	-38	-39	-31	-44	-58	-62	-45	-30	-22
Water Year Types[c]												
Wet (32%)	-24	-34	-40	-45	-36	-19	-34	-51	-49	-41	-24	-22
Above Normal (16%)	-21	-29	-28	-42	-41	-29	-47	-62	-61	-47	-23	-13
Below Normal (13%)	-36	-46	-40	-53	-50	-41	-53	-66	-80	-58	-31	-17
Dry (24%)	-18	-21	-14	-26	-35	-38	-48	-62	-68	-39	-34	-25
Critical (15%)	-26	-26	-24	-26	-36	-41	-49	-57	-63	-48	-42	-33

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

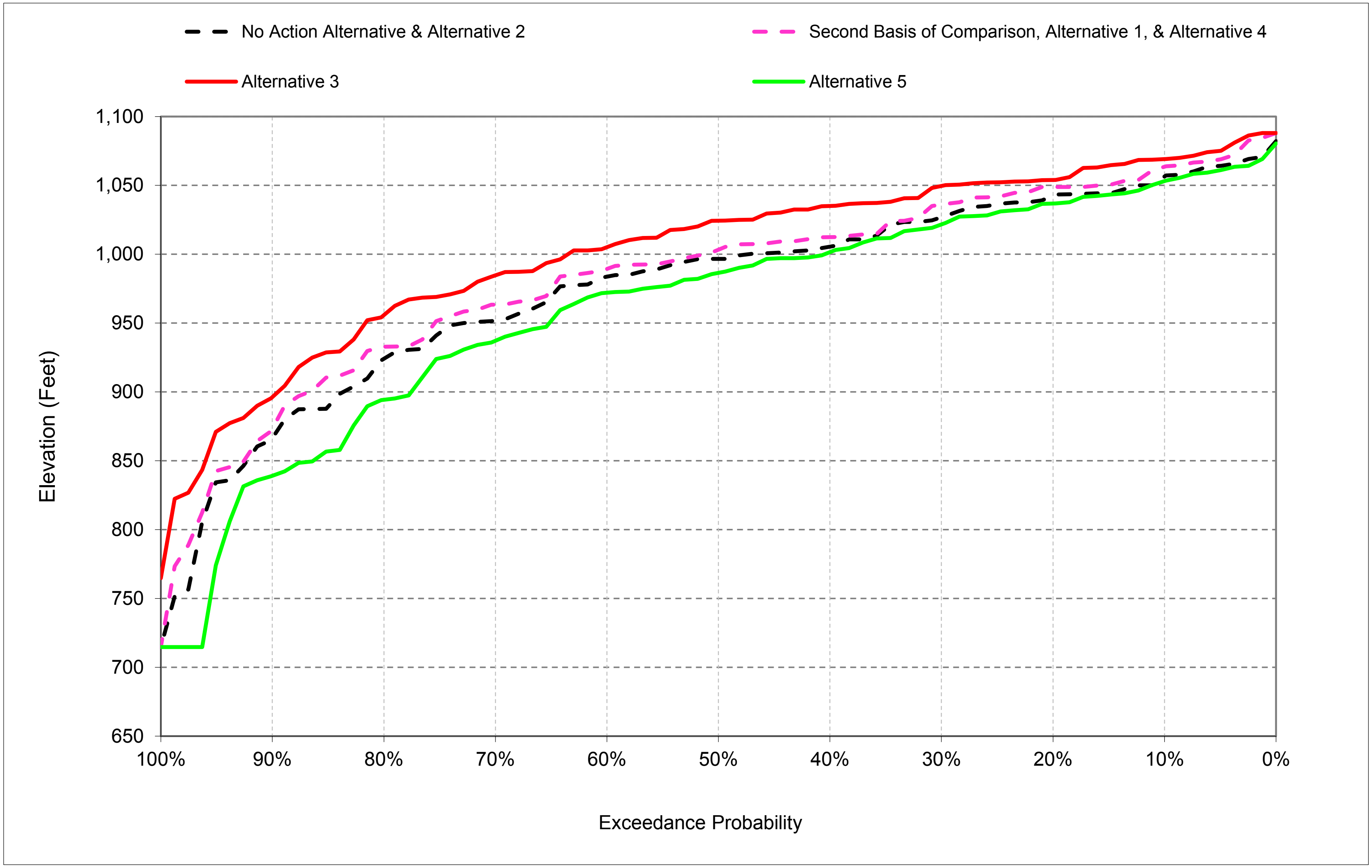
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

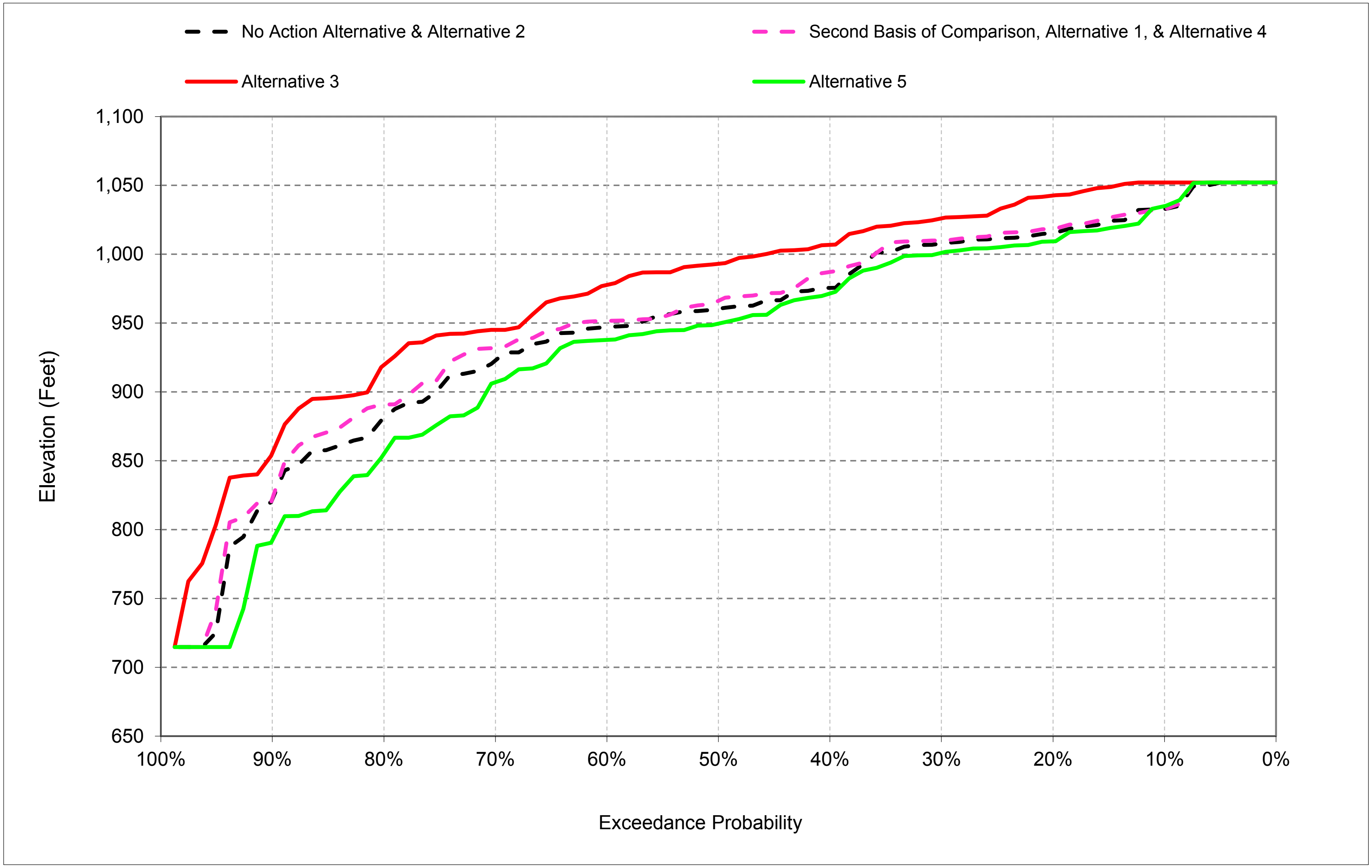
C.13. New Melones Lake Elevation

Figure C-13-1. New Melones Reservoir, Reservoir Pool Elevation, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-13-2. New Melones Reservoir, Reservoir Pool Elevation, September



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-1. New Melones Reservoir, End of Month Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	1,029	1,028	1,035	1,040	1,046	1,050	1,047	1,057	1,059	1,050	1,039	1,033
20%	1,013	1,015	1,017	1,021	1,029	1,032	1,036	1,043	1,040	1,032	1,021	1,016
30%	1,006	1,006	1,008	1,012	1,021	1,025	1,021	1,027	1,031	1,023	1,013	1,008
40%	975	976	995	1,004	1,012	1,014	1,011	1,006	1,006	995	983	976
50%	956	957	960	980	996	1,006	998	997	991	977	965	961
60%	943	946	950	959	966	976	976	984	976	966	953	947
70%	925	928	938	942	945	947	950	952	951	939	928	929
80%	879	881	887	887	897	912	918	924	923	912	897	888
90%	835	836	837	847	857	863	864	867	876	863	850	843
Long Term												
Full Simulation Period[b]	944	945	951	958	968	974	973	976	976	965	954	948
Water Year Types[c]												
Wet (32%)	980	982	990	1,004	1,016	1,023	1,026	1,039	1,047	1,040	1,029	1,022
Above Normal (16%)	932	937	945	960	974	986	988	997	996	985	973	897
Below Normal (13%)	968	969	972	975	985	988	985	985	983	972	960	955
Dry (24%)	943	943	944	947	951	957	955	953	948	934	922	915
Critical (15%)	856	856	862	864	870	871	860	848	840	828	818	812

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	1,032	1,031	1,035	1,040	1,048	1,055	1,054	1,064	1,058	1,050	1,039	1,033
20%	1,018	1,018	1,019	1,021	1,037	1,045	1,041	1,049	1,041	1,035	1,024	1,019
30%	1,010	1,010	1,014	1,015	1,022	1,027	1,027	1,036	1,036	1,027	1,016	1,010
40%	988	988	999	1,008	1,014	1,020	1,017	1,012	1,014	1,003	994	988
50%	966	968	972	985	999	1,006	1,001	1,003	999	986	974	968
60%	952	952	956	967	974	984	989	989	981	969	957	952
70%	934	939	945	951	953	953	959	963	959	948	938	933
80%	892	892	896	901	915	931	929	933	927	918	902	891
90%	851	852	852	860	883	883	871	873	889	873	859	849
Long Term												
Full Simulation Period[b]	952	953	957	965	974	981	981	984	982	971	959	953
Water Year Types[c]												
Wet (32%)	989	990	997	1,009	1,021	1,030	1,034	1,047	1,050	1,043	1,032	1,025
Above Normal (16%)	941	944	951	966	979	992	995	1,003	1,001	990	978	901
Below Normal (13%)	977	977	979	982	991	994	994	993	991	980	968	962
Dry (24%)	951	950	950	953	957	962	963	960	954	941	929	922
Critical (15%)	866	866	870	872	878	879	871	856	850	835	823	817

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	4	2	0	-1	2	4	6	7	0	0	0	0
20%	5	2	2	0	8	13	5	6	1	3	3	3
30%	4	5	6	3	1	1	7	9	5	4	3	2
40%	12	13	5	4	3	6	6	7	8	8	10	12
50%	10	11	12	5	4	1	2	7	8	10	9	7
60%	8	7	6	8	8	9	12	6	5	3	4	4
70%	10	10	7	9	8	6	9	12	8	9	9	4
80%	13	11	9	14	18	19	11	9	4	6	5	3
90%	16	17	15	14	26	19	7	7	14	11	8	6
Long Term												
Full Simulation Period[b]	9	8	7	6	6	6	9	8	6	5	5	5
Water Year Types[c]												
Wet (32%)	9	8	7	6	5	8	8	8	3	3	3	3
Above Normal (16%)	9	7	6	6	6	6	8	7	5	5	5	5
Below Normal (13%)	9	8	7	7	6	6	9	8	7	8	8	8
Dry (24%)	8	7	6	6	5	5	8	7	7	7	7	7
Critical (15%)	10	10	9	8	8	8	11	8	10	6	5	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-2. New Melones Reservoir, End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,029	1,028	1,035	1,040	1,046	1,050	1,047	1,057	1,059	1,050	1,039	1,033
20%	1,013	1,015	1,017	1,021	1,029	1,032	1,036	1,043	1,040	1,032	1,021	1,016
30%	1,006	1,006	1,008	1,012	1,021	1,025	1,021	1,027	1,031	1,023	1,013	1,008
40%	975	976	995	1,004	1,012	1,014	1,011	1,006	1,006	995	983	976
50%	956	957	960	980	996	1,006	998	997	991	977	965	961
60%	943	946	950	959	966	976	976	984	976	966	953	947
70%	925	928	938	942	945	947	950	952	951	939	928	929
80%	879	881	887	887	897	912	918	924	923	912	897	888
90%	835	836	837	847	857	863	864	867	876	863	850	843
Long Term												
Full Simulation Period[b]	944	945	951	958	968	974	973	976	976	965	954	948
Water Year Types[c]												
Wet (32%)	980	982	990	1,004	1,016	1,023	1,026	1,039	1,047	1,040	1,029	1,022
Above Normal (16%)	932	937	945	960	974	986	988	997	996	985	973	897
Below Normal (13%)	968	969	972	975	985	988	985	985	983	972	960	955
Dry (24%)	943	943	944	947	951	957	955	953	948	934	922	915
Critical (15%)	856	856	862	864	870	871	860	848	840	828	818	812

Alternative 3

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,049	1,048	1,050	1,050	1,050	1,055	1,057	1,069	1,076	1,070	1,061	1,052
20%	1,043	1,043	1,044	1,044	1,050	1,054	1,051	1,054	1,065	1,057	1,048	1,043
30%	1,025	1,025	1,031	1,038	1,045	1,050	1,044	1,050	1,051	1,040	1,031	1,027
40%	1,011	1,012	1,019	1,030	1,038	1,041	1,036	1,035	1,032	1,022	1,012	1,007
50%	995	994	996	1,008	1,018	1,024	1,020	1,024	1,020	1,008	998	994
60%	980	981	982	988	995	1,002	1,001	1,005	1,005	995	984	979
70%	946	950	964	967	978	975	974	985	976	963	952	945
80%	924	922	930	934	943	953	947	956	949	940	932	926
90%	877	879	879	886	906	911	897	896	918	901	886	876
Long Term												
Full Simulation Period[b]	974	974	978	985	993	999	998	1,002	1,003	992	981	975
Water Year Types[c]												
Wet (32%)	1,003	1,004	1,010	1,022	1,030	1,038	1,042	1,055	1,064	1,056	1,045	1,037
Above Normal (16%)	964	967	974	987	999	1,009	1,012	1,021	1,022	1,013	1,002	924
Below Normal (13%)	998	998	1,000	1,002	1,011	1,014	1,011	1,012	1,010	1,000	989	983
Dry (24%)	974	973	974	977	981	985	983	982	978	966	954	948
Critical (15%)	899	899	902	904	909	909	899	889	883	870	858	852

Alternative 3 minus No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	20	20	15	9	4	4	10	12	18	20	21	19
20%	29	28	27	23	20	22	15	11	25	25	27	27
30%	20	19	24	26	24	25	23	23	20	17	18	18
40%	35	36	24	26	26	27	25	30	26	27	29	31
50%	39	37	36	28	23	19	21	28	29	32	33	33
60%	37	36	31	29	29	26	25	21	29	29	30	32
70%	22	21	26	25	33	28	24	33	25	24	24	16
80%	45	41	43	48	45	41	30	32	26	28	35	38
90%	42	43	42	39	49	48	33	30	42	39	36	33
Long Term												
Full Simulation Period[b]	30	29	28	27	25	25	25	26	27	27	27	27
Water Year Types[c]												
Wet (32%)	23	22	20	18	14	16	15	16	17	16	16	16
Above Normal (16%)	32	30	29	28	25	23	24	24	27	28	29	27
Below Normal (13%)	30	29	28	27	26	26	26	27	27	28	28	28
Dry (24%)	32	31	30	30	30	29	29	29	31	31	32	33
Critical (15%)	43	43	40	40	38	38	39	41	43	41	40	40

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-3. New Melones Reservoir, End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,029	1,028	1,035	1,040	1,046	1,050	1,047	1,057	1,059	1,050	1,039	1,033
20%	1,013	1,015	1,017	1,021	1,029	1,032	1,036	1,043	1,040	1,032	1,021	1,016
30%	1,006	1,006	1,008	1,012	1,021	1,025	1,021	1,027	1,031	1,023	1,013	1,008
40%	975	976	995	1,004	1,012	1,014	1,011	1,006	1,006	995	983	976
50%	956	957	960	980	996	1,006	998	997	991	977	965	961
60%	943	946	950	959	966	976	976	984	976	966	953	947
70%	925	928	938	942	945	947	950	952	951	939	928	929
80%	879	881	887	887	897	912	918	924	923	912	897	888
90%	835	836	837	847	857	863	864	867	876	863	850	843
Long Term												
Full Simulation Period[b]	944	945	951	958	968	974	973	976	976	965	954	948
Water Year Types[c]												
Wet (32%)	980	982	990	1,004	1,016	1,023	1,026	1,039	1,047	1,040	1,029	1,022
Above Normal (16%)	932	937	945	960	974	986	988	997	996	985	973	897
Below Normal (13%)	968	969	972	975	985	988	985	985	983	972	960	955
Dry (24%)	943	943	944	947	951	957	955	953	948	934	922	915
Critical (15%)	856	856	862	864	870	871	860	848	840	828	818	812

Alternative 5

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,029	1,028	1,036	1,041	1,047	1,049	1,043	1,053	1,062	1,053	1,043	1,035
20%	1,011	1,011	1,012	1,015	1,031	1,032	1,028	1,037	1,034	1,026	1,015	1,009
30%	999	998	1,001	1,007	1,015	1,019	1,020	1,022	1,024	1,016	1,005	1,002
40%	973	973	985	996	1,004	1,010	1,003	1,002	1,003	992	979	973
50%	945	948	959	970	996	998	991	987	978	965	953	951
60%	937	940	943	949	957	961	961	972	968	957	944	938
70%	904	911	921	928	932	936	941	937	939	927	915	909
80%	860	860	874	874	874	889	880	894	902	887	873	867
90%	803	807	808	824	834	838	826	839	847	833	818	810
Long Term												
Full Simulation Period[b]	931	933	939	947	957	964	961	962	963	952	941	935
Water Year Types[c]												
Wet (32%)	969	971	980	995	1,007	1,016	1,020	1,031	1,040	1,033	1,022	1,015
Above Normal (16%)	924	930	939	954	968	980	982	988	987	975	963	890
Below Normal (13%)	954	956	959	962	973	977	972	970	968	957	944	938
Dry (24%)	930	930	932	934	939	945	940	936	931	918	905	898
Critical (15%)	837	838	842	845	853	855	834	818	815	804	796	791

Alternative 5 minus No Action Alternative

Statistic	End of Month Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	1	0	2	-1	-4	-3	4	3	3	2
20%	-2	-4	-5	-6	1	0	-8	-6	-6	-6	-6	-6
30%	-7	-8	-7	-5	-6	-6	-1	-5	-6	-7	-7	-6
40%	-3	-3	-9	-8	-7	-5	-8	-4	-3	-3	-5	-3
50%	-11	-9	-1	-10	0	-8	-7	-10	-13	-12	-12	-10
60%	-6	-6	-7	-10	-8	-15	-16	-12	-8	-9	-9	-9
70%	-21	-18	-17	-14	-13	-11	-10	-15	-13	-12	-14	-19
80%	-19	-21	-13	-13	-23	-22	-38	-30	-21	-25	-24	-21
90%	-32	-28	-29	-23	-23	-25	-38	-27	-28	-29	-32	-33
Long Term												
Full Simulation Period[b]	-12	-12	-12	-11	-11	-10	-12	-14	-13	-13	-13	-13
Water Year Types[c]												
Wet (32%)	-11	-11	-10	-9	-8	-7	-7	-7	-7	-7	-6	-6
Above Normal (16%)	-8	-7	-6	-6	-6	-6	-6	-8	-8	-9	-10	-7
Below Normal (13%)	-13	-13	-13	-13	-12	-12	-13	-15	-15	-15	-16	-16
Dry (24%)	-13	-13	-12	-13	-12	-12	-15	-17	-17	-17	-17	-17
Critical (15%)	-19	-18	-20	-19	-17	-16	-26	-30	-25	-24	-22	-21

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-4. New Melones Reservoir, End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,032	1,031	1,035	1,040	1,048	1,055	1,054	1,064	1,058	1,050	1,039	1,033
20%	1,018	1,018	1,019	1,021	1,037	1,045	1,041	1,049	1,041	1,035	1,024	1,019
30%	1,010	1,010	1,014	1,015	1,022	1,027	1,027	1,036	1,036	1,027	1,016	1,010
40%	988	988	999	1,008	1,014	1,020	1,017	1,012	1,014	1,003	994	988
50%	966	968	972	985	999	1,006	1,001	1,003	999	986	974	968
60%	952	952	956	967	974	984	989	989	981	969	957	952
70%	934	939	945	951	953	953	959	963	959	948	938	933
80%	892	892	896	901	915	931	929	933	927	918	902	891
90%	851	852	852	860	883	883	871	873	889	873	859	849
Long Term												
Full Simulation Period[b]	952	953	957	965	974	981	981	984	982	971	959	953
Water Year Types[c]												
Wet (32%)	989	990	997	1,009	1,021	1,030	1,034	1,047	1,050	1,043	1,032	1,025
Above Normal (16%)	941	944	951	966	979	992	995	1,003	1,001	990	978	901
Below Normal (13%)	977	977	979	982	991	994	994	993	991	980	968	962
Dry (24%)	951	950	950	953	957	962	963	960	954	941	929	922
Critical (15%)	866	866	870	872	878	879	871	856	850	835	823	817

No Action Alternative

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,029	1,028	1,035	1,040	1,046	1,050	1,047	1,057	1,059	1,050	1,039	1,033
20%	1,013	1,015	1,017	1,021	1,029	1,032	1,036	1,043	1,040	1,032	1,021	1,016
30%	1,006	1,006	1,008	1,012	1,021	1,025	1,021	1,027	1,031	1,023	1,013	1,008
40%	975	976	995	1,004	1,012	1,014	1,011	1,006	1,006	995	983	976
50%	956	957	960	980	996	1,006	998	997	991	977	965	961
60%	943	946	950	959	966	976	976	984	976	966	953	947
70%	925	928	938	942	945	947	950	952	951	939	928	929
80%	879	881	887	887	897	912	918	924	923	912	897	888
90%	835	836	837	847	857	863	864	867	876	863	850	843
Long Term												
Full Simulation Period[b]	944	945	951	958	968	974	973	976	976	965	954	948
Water Year Types[c]												
Wet (32%)	980	982	990	1,004	1,016	1,023	1,026	1,039	1,047	1,040	1,029	1,022
Above Normal (16%)	932	937	945	960	974	986	988	997	996	985	973	897
Below Normal (13%)	968	969	972	975	985	988	985	985	983	972	960	955
Dry (24%)	943	943	944	947	951	957	955	953	948	934	922	915
Critical (15%)	856	856	862	864	870	871	860	848	840	828	818	812

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-4	-2	0	1	-2	-4	-6	-7	0	0	0	0
20%	-5	-2	-2	0	-8	-13	-5	-6	-1	-3	-3	-3
30%	-4	-5	-6	-3	-1	-1	-7	-9	-5	-4	-3	-2
40%	-12	-13	-5	-4	-3	-6	-6	-7	-8	-8	-10	-12
50%	-10	-11	-12	-5	-4	-1	-2	-7	-8	-10	-9	-7
60%	-8	-7	-6	-8	-8	-9	-12	-6	-5	-3	-4	-4
70%	-10	-10	-7	-9	-8	-6	-9	-12	-8	-9	-9	-4
80%	-13	-11	-9	-14	-18	-19	-11	-9	-4	-6	-5	-3
90%	-16	-17	-15	-14	-26	-19	-7	-7	-14	-11	-8	-6
Long Term												
Full Simulation Period[b]	-9	-8	-7	-6	-6	-6	-9	-8	-6	-5	-5	-5
Water Year Types[c]												
Wet (32%)	-9	-8	-7	-6	-5	-8	-8	-8	-3	-3	-3	-3
Above Normal (16%)	-9	-7	-6	-6	-6	-6	-8	-7	-5	-5	-5	-5
Below Normal (13%)	-9	-8	-7	-7	-6	-6	-9	-8	-7	-8	-8	-8
Dry (24%)	-8	-7	-6	-6	-5	-5	-8	-7	-7	-7	-7	-7
Critical (15%)	-10	-10	-9	-8	-8	-8	-11	-8	-10	-6	-5	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-5. New Melones Reservoir, End of Month Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	1,032	1,031	1,035	1,040	1,048	1,055	1,054	1,064	1,058	1,050	1,039	1,033
20%	1,018	1,018	1,019	1,021	1,037	1,045	1,041	1,049	1,041	1,035	1,024	1,019
30%	1,010	1,010	1,014	1,015	1,022	1,027	1,027	1,036	1,036	1,027	1,016	1,010
40%	988	988	999	1,008	1,014	1,020	1,017	1,012	1,014	1,003	994	988
50%	966	968	972	985	999	1,006	1,001	1,003	999	986	974	968
60%	952	952	956	967	974	984	989	989	981	969	957	952
70%	934	939	945	951	953	953	959	963	959	948	938	933
80%	892	892	896	901	915	931	929	933	927	918	902	891
90%	851	852	852	860	883	883	871	873	889	873	859	849
Long Term												
Full Simulation Period[b]	952	953	957	965	974	981	981	984	982	971	959	953
Water Year Types[c]												
Wet (32%)	989	990	997	1,009	1,021	1,030	1,034	1,047	1,050	1,043	1,032	1,025
Above Normal (16%)	941	944	951	966	979	992	995	1,003	1,001	990	978	901
Below Normal (13%)	977	977	979	982	991	994	994	993	991	980	968	962
Dry (24%)	951	950	950	953	957	962	963	960	954	941	929	922
Critical (15%)	866	866	870	872	878	879	871	856	850	835	823	817

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	1,049	1,048	1,050	1,050	1,050	1,055	1,057	1,069	1,076	1,070	1,061	1,052
20%	1,043	1,043	1,044	1,044	1,050	1,054	1,051	1,054	1,065	1,057	1,048	1,043
30%	1,025	1,025	1,031	1,038	1,045	1,050	1,044	1,050	1,051	1,040	1,031	1,027
40%	1,011	1,012	1,019	1,030	1,038	1,041	1,036	1,035	1,032	1,022	1,012	1,007
50%	995	994	996	1,008	1,018	1,024	1,020	1,024	1,020	1,008	998	994
60%	980	981	982	988	995	1,002	1,001	1,005	1,005	995	984	979
70%	946	950	964	967	978	975	974	985	976	963	952	945
80%	924	922	930	934	943	953	947	956	949	940	932	926
90%	877	879	879	886	906	911	897	896	918	901	886	876
Long Term												
Full Simulation Period[b]	974	974	978	985	993	999	998	1,002	1,003	992	981	975
Water Year Types[c]												
Wet (32%)	1,003	1,004	1,010	1,022	1,030	1,038	1,042	1,055	1,064	1,056	1,045	1,037
Above Normal (16%)	964	967	974	987	999	1,009	1,012	1,021	1,022	1,013	1,002	924
Below Normal (13%)	998	998	1,000	1,002	1,011	1,014	1,011	1,012	1,010	1,000	989	983
Dry (24%)	974	973	974	977	981	985	983	982	978	966	954	948
Critical (15%)	899	899	902	904	909	909	899	889	883	870	858	852

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (Feet)											
Probability of Exceedance[a]												
10%	17	17	14	10	2	0	4	6	18	20	22	19
20%	25	25	25	22	12	9	10	5	24	21	24	24
30%	16	15	18	23	23	23	16	14	15	14	15	17
40%	23	24	20	22	23	21	19	23	18	19	19	19
50%	29	26	24	22	19	18	19	21	21	22	25	25
60%	29	29	25	21	21	17	12	16	23	26	26	27
70%	12	11	19	16	25	22	15	21	17	15	14	12
80%	31	30	33	34	28	22	19	23	22	22	30	35
90%	26	27	27	26	23	29	26	23	28	28	28	27
Long Term												
Full Simulation Period[b]	21	21	21	21	19	18	16	18	21	22	22	22
Water Year Types[c]												
Wet (32%)	14	14	13	12	9	8	7	8	14	13	13	12
Above Normal (16%)	23	23	23	21	19	18	16	18	21	23	24	23
Below Normal (13%)	20	21	21	21	20	20	17	19	20	20	21	21
Dry (24%)	24	24	24	24	25	23	20	23	24	24	25	26
Critical (15%)	33	33	31	32	31	30	28	33	33	35	35	34

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-6. New Melones Reservoir, End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,032	1,031	1,035	1,040	1,048	1,055	1,054	1,064	1,058	1,050	1,039	1,033
20%	1,018	1,018	1,019	1,021	1,037	1,045	1,041	1,049	1,041	1,035	1,024	1,019
30%	1,010	1,010	1,014	1,015	1,022	1,027	1,027	1,036	1,036	1,027	1,016	1,010
40%	988	988	999	1,008	1,014	1,020	1,017	1,012	1,014	1,003	994	988
50%	966	968	972	985	999	1,006	1,001	1,003	999	986	974	968
60%	952	952	956	967	974	984	989	989	981	969	957	952
70%	934	939	945	951	953	953	959	963	959	948	938	933
80%	892	892	896	901	915	931	929	933	927	918	902	891
90%	851	852	852	860	883	883	871	873	889	873	859	849
Long Term												
Full Simulation Period[b]	952	953	957	965	974	981	981	984	982	971	959	953
Water Year Types[c]												
Wet (32%)	989	990	997	1,009	1,021	1,030	1,034	1,047	1,050	1,043	1,032	1,025
Above Normal (16%)	941	944	951	966	979	992	995	1,003	1,001	990	978	901
Below Normal (13%)	977	977	979	982	991	994	994	993	991	980	968	962
Dry (24%)	951	950	950	953	957	962	963	960	954	941	929	922
Critical (15%)	866	866	870	872	878	879	871	856	850	835	823	817

Alternative 5

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,029	1,028	1,036	1,041	1,047	1,049	1,043	1,053	1,062	1,053	1,043	1,035
20%	1,011	1,011	1,012	1,015	1,031	1,032	1,028	1,037	1,034	1,026	1,015	1,009
30%	999	998	1,001	1,007	1,015	1,019	1,020	1,022	1,024	1,016	1,005	1,002
40%	973	973	985	996	1,004	1,010	1,003	1,002	1,003	992	979	973
50%	945	948	959	970	996	998	991	987	978	965	953	951
60%	937	940	943	949	957	961	961	972	968	957	944	938
70%	904	911	921	928	932	936	941	937	939	927	915	909
80%	860	860	874	874	874	889	880	894	902	887	873	867
90%	803	807	808	824	834	838	826	839	847	833	818	810
Long Term												
Full Simulation Period[b]	931	933	939	947	957	964	961	962	963	952	941	935
Water Year Types[c]												
Wet (32%)	969	971	980	995	1,007	1,016	1,020	1,031	1,040	1,033	1,022	1,015
Above Normal (16%)	924	930	939	954	968	980	982	988	987	975	963	890
Below Normal (13%)	954	956	959	962	973	977	972	970	968	957	944	938
Dry (24%)	930	930	932	934	939	945	940	936	931	918	905	898
Critical (15%)	837	838	842	845	853	855	834	818	815	804	796	791

Alternative 5 minus Second Basis of Comparison

Statistic	End of Month Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-4	-2	0	1	0	-5	-10	-10	4	3	3	2
20%	-7	-7	-7	-7	-7	-14	-13	-12	-7	-9	-9	-9
30%	-11	-12	-12	-8	-7	-7	-7	-14	-12	-11	-11	-8
40%	-15	-15	-14	-12	-10	-10	-14	-11	-11	-11	-15	-15
50%	-21	-20	-14	-16	-4	-9	-9	-17	-21	-22	-21	-18
60%	-15	-13	-13	-18	-16	-23	-28	-17	-13	-12	-13	-14
70%	-31	-28	-24	-23	-21	-16	-18	-26	-20	-21	-23	-24
80%	-32	-33	-22	-27	-41	-42	-49	-39	-25	-31	-29	-24
90%	-47	-45	-44	-36	-49	-44	-45	-34	-42	-40	-41	-40
Long Term												
Full Simulation Period[b]	-21	-20	-19	-18	-17	-17	-21	-22	-19	-19	-18	-18
Water Year Types[c]												
Wet (32%)	-20	-19	-17	-15	-14	-15	-15	-16	-10	-10	-10	-9
Above Normal (16%)	-17	-14	-12	-12	-12	-11	-14	-15	-14	-15	-15	-11
Below Normal (13%)	-23	-22	-20	-20	-18	-18	-22	-23	-22	-23	-24	-24
Dry (24%)	-21	-20	-19	-19	-18	-17	-23	-24	-23	-24	-24	-25
Critical (15%)	-29	-28	-29	-27	-25	-24	-37	-38	-35	-31	-27	-27

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

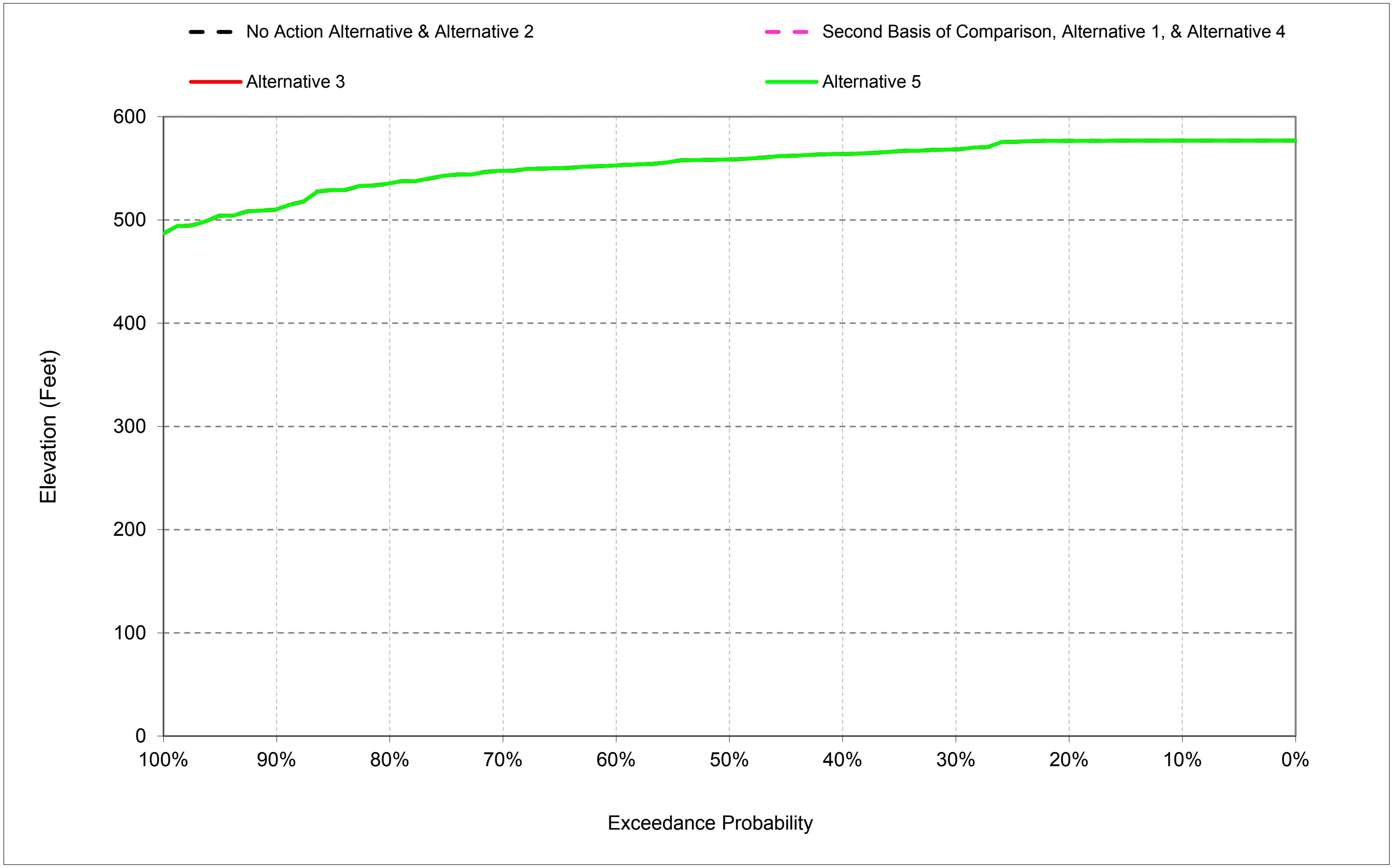
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

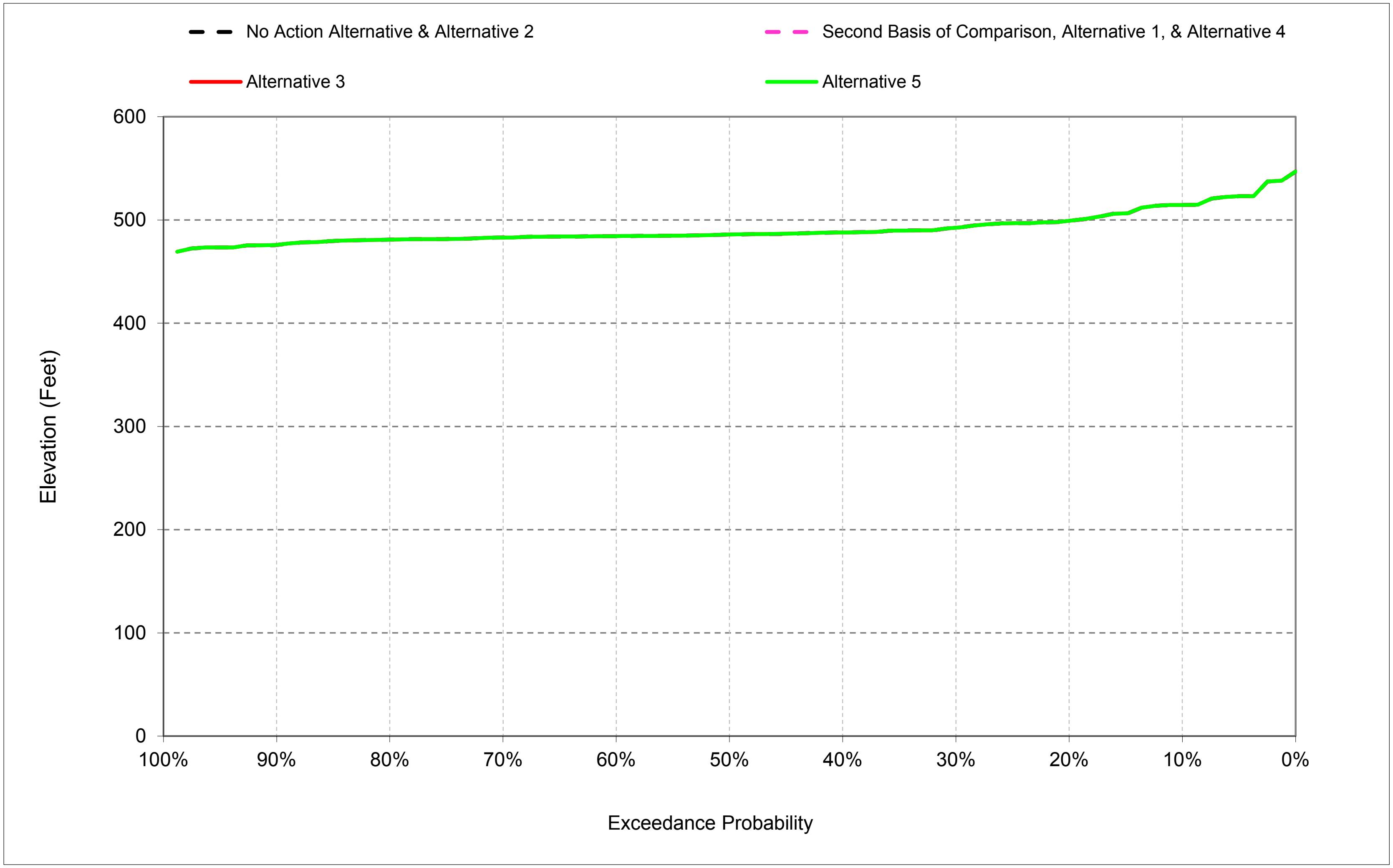
C.14. Millerton Lake Elevation

Figure C-14-1. Millerton Lake, Reservoir Pool Elevation, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-14-2. Millerton Lake, Reservoir Pool Elevation, September



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-1. Millerton Lake, End of Month Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-2. Millerton Lake, End of Month Elevation

No Action Alternative

Statistic	End of Month Elevation (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 3

Statistic	End of Month Elevation (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 3 minus No Action Alternative

Statistic	End of Month Elevation (TAF) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-3. Millerton Lake, End of Month Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-4. Millerton Lake, End of Month Elevation

Second Basis of Comparison

Statistic	End of Month Elevation (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

No Action Alternative

Statistic	End of Month Elevation (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Elevation (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-5. Millerton Lake, End of Month Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-6. Millerton Lake, End of Month Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	515	524	546	561	561	568	570	577	577	571	530	515
20%	503	517	532	555	561	568	562	577	576	559	515	499
30%	498	512	525	540	561	567	557	568	573	543	498	493
40%	493	502	518	536	556	560	551	564	568	533	490	488
50%	491	498	513	528	549	551	546	559	556	522	486	486
60%	486	492	506	523	537	545	538	553	551	514	482	484
70%	483	485	499	514	531	534	529	548	544	504	479	483
80%	479	481	493	506	517	519	517	536	531	493	477	481
90%	475	475	483	490	496	496	503	510	510	479	467	477
Long Term												
Full Simulation Period[b]	493	500	513	527	538	542	539	553	552	524	494	491
Water Year Types[c]												
Wet (23%)	494	502	527	547	558	562	538	556	574	565	528	512
Above Normal (24%)	494	502	516	536	555	562	551	570	572	541	497	487
Below Normal (10%)	490	502	511	524	540	542	539	552	550	521	488	487
Dry (16%)	498	507	516	526	533	535	546	556	545	505	479	487
Critical (27%)	488	490	497	503	508	511	526	533	518	486	472	482

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	End of Month Elevation (TAF)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

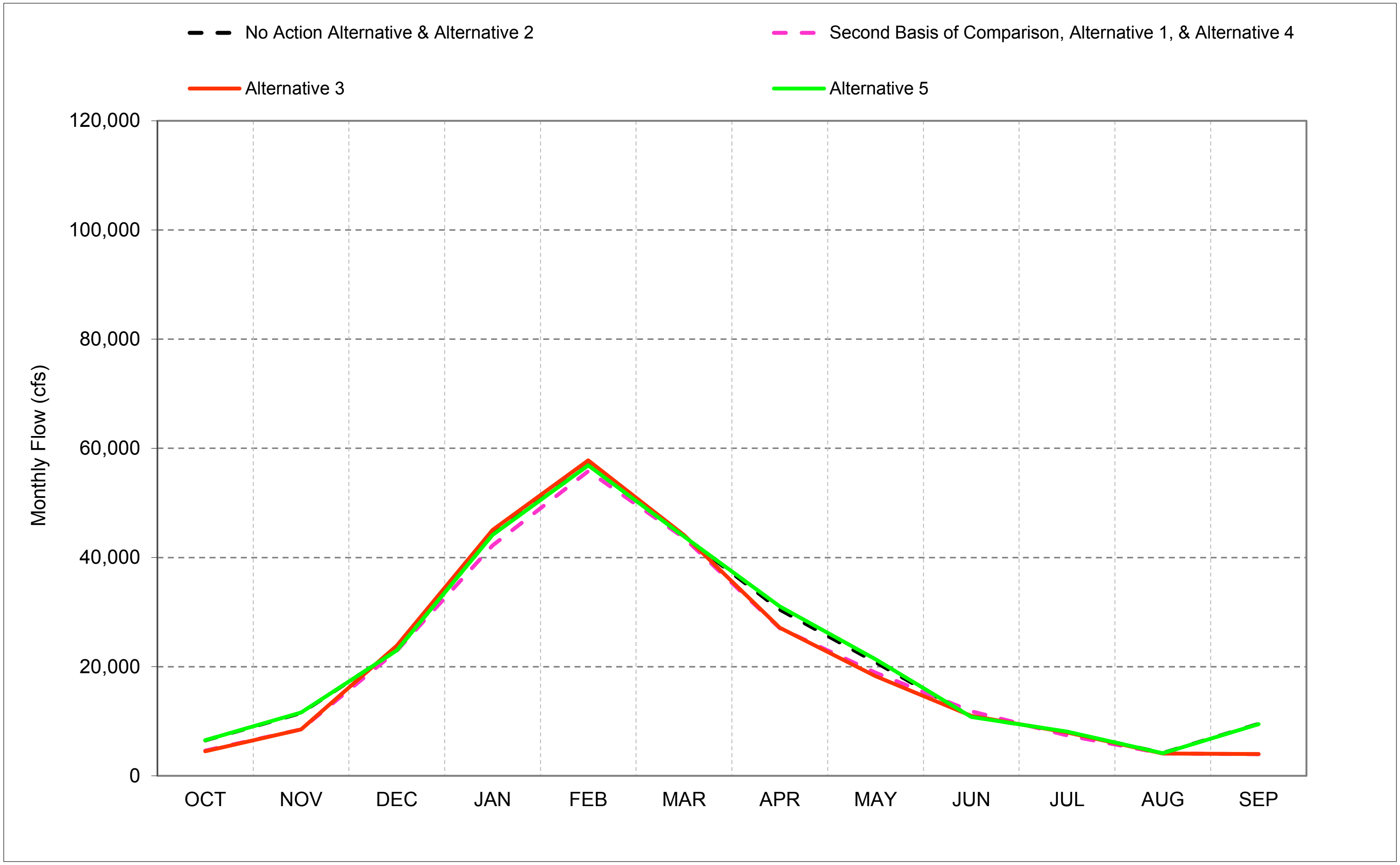
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.15. Delta Outflow

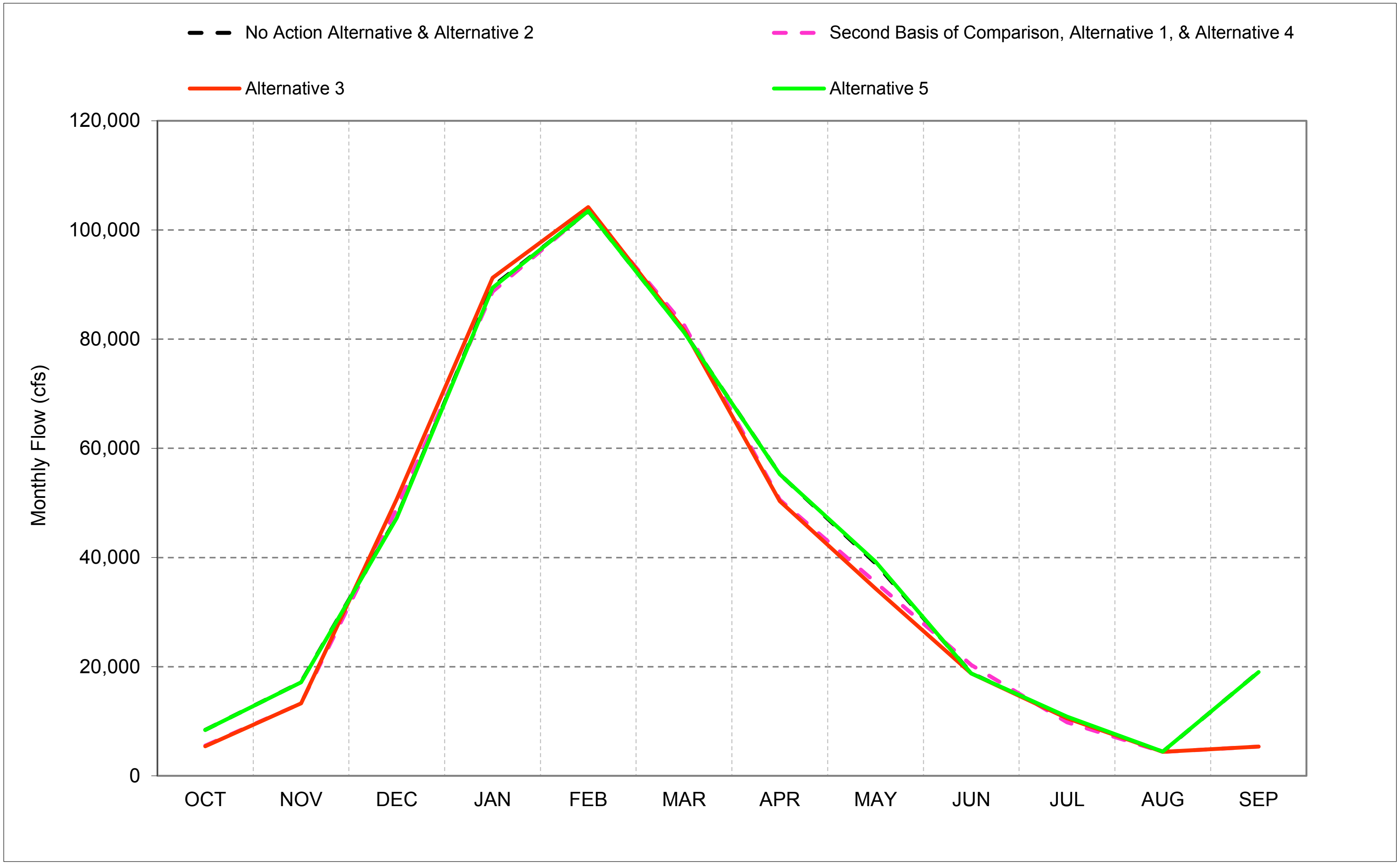
Figure C-15-1-1. Sacramento/San Joaquin River Delta Outflow, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-1-2. Sacramento/San Joaquin River Delta Outflow, Wet Year* Long-Term Average Flow**

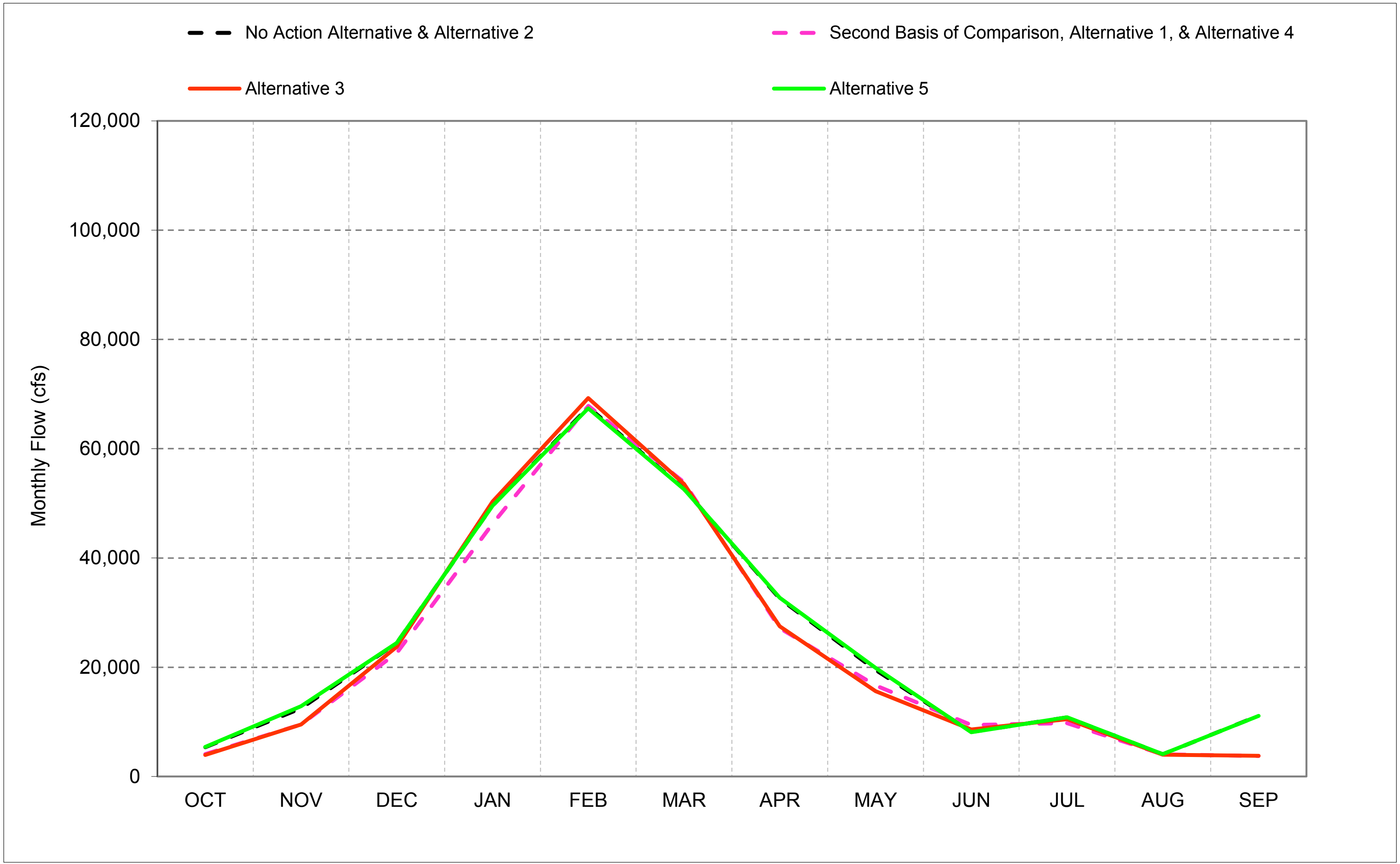


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-1-3. Sacramento/San Joaquin River Delta Outflow, Above Normal Year* Long-Term Average Flow**

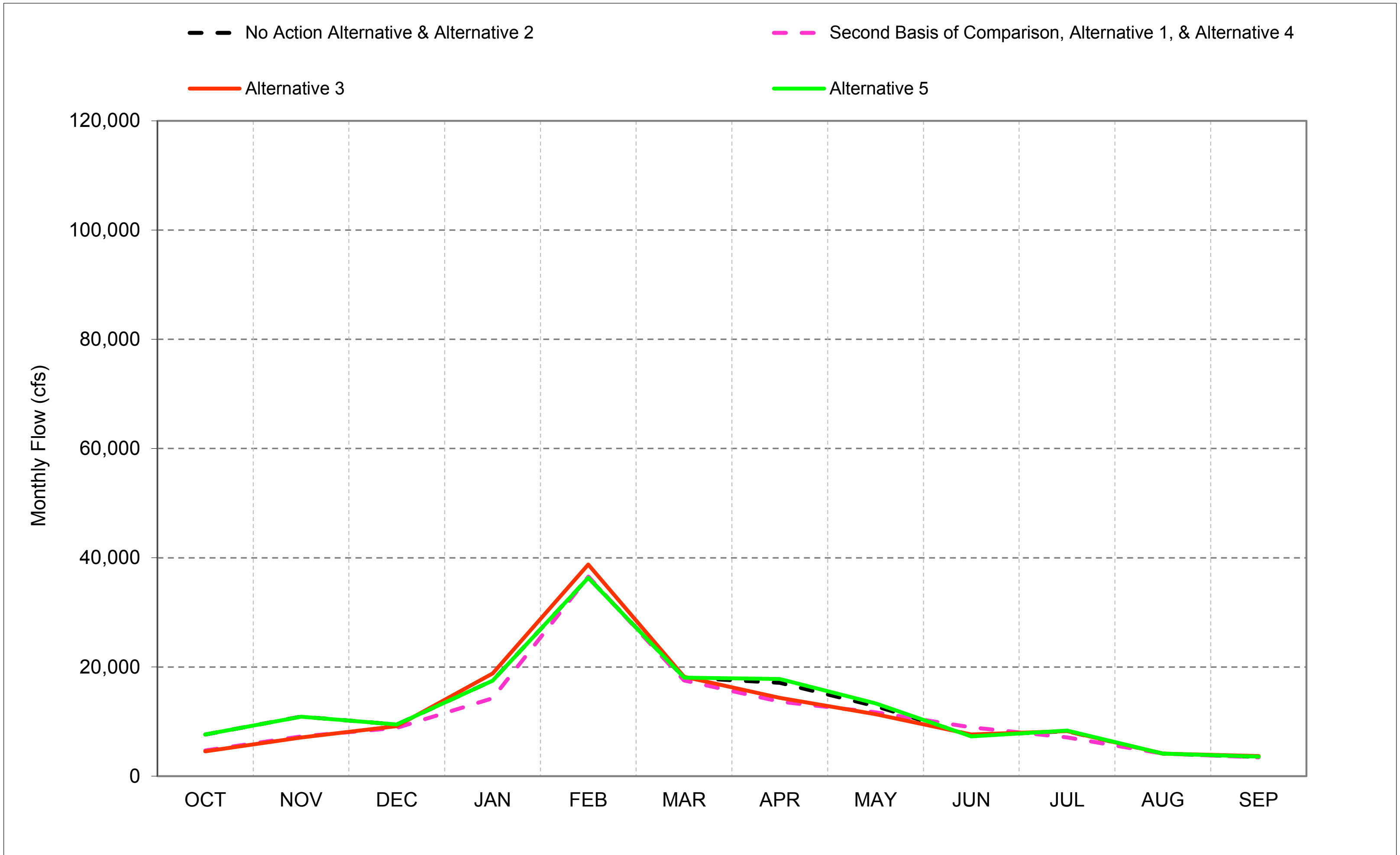


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-1-4. Sacramento/San Joaquin River Delta Outflow, Below Normal Year* Long-Term Average Flow**

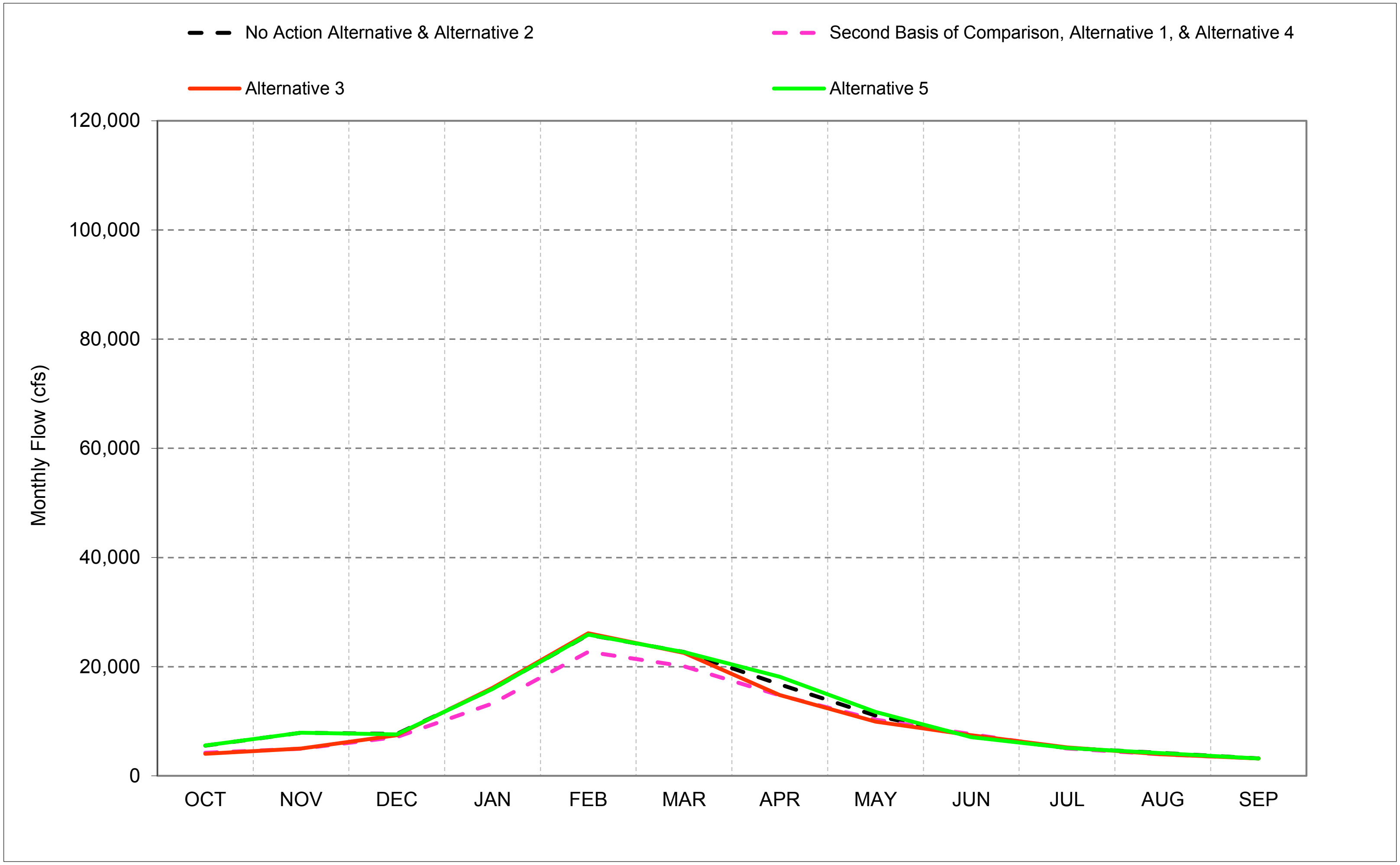


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-1-5. Sacramento/San Joaquin River Delta Outflow, Dry Year* Long-Term Average Flow**

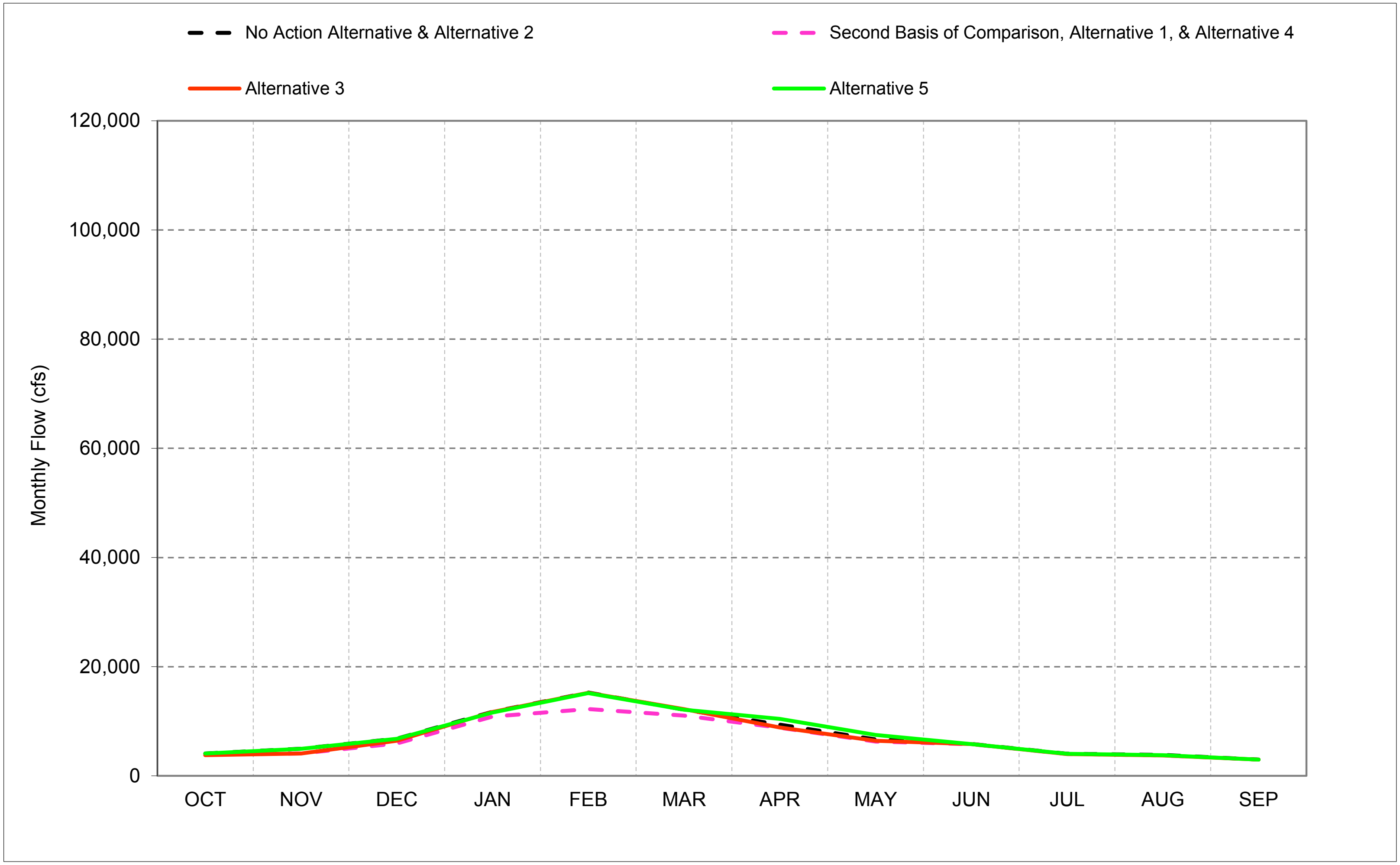


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-1-6. Sacramento/San Joaquin River Delta Outflow, Critical Year* Long-Term Average Flow**

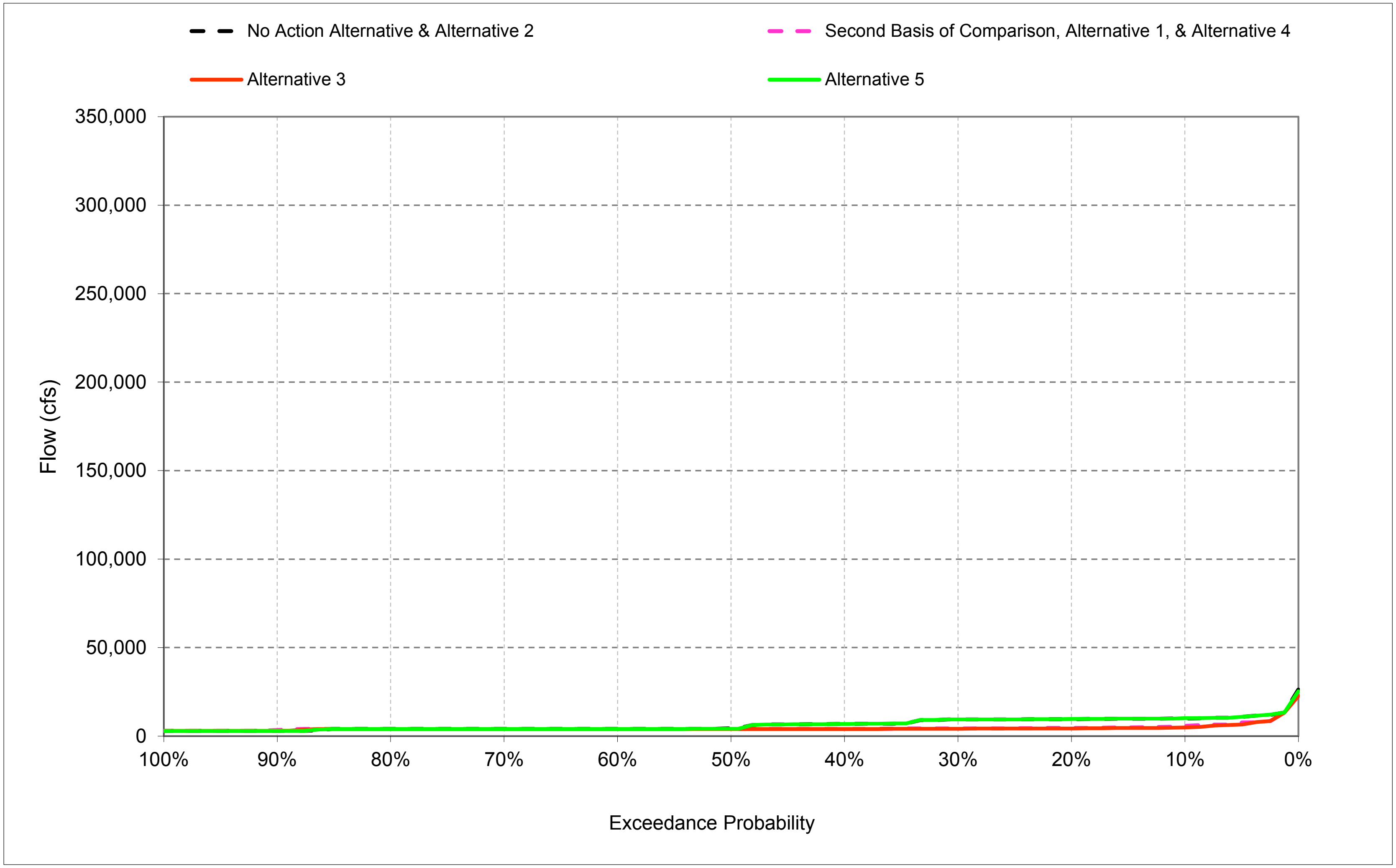


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

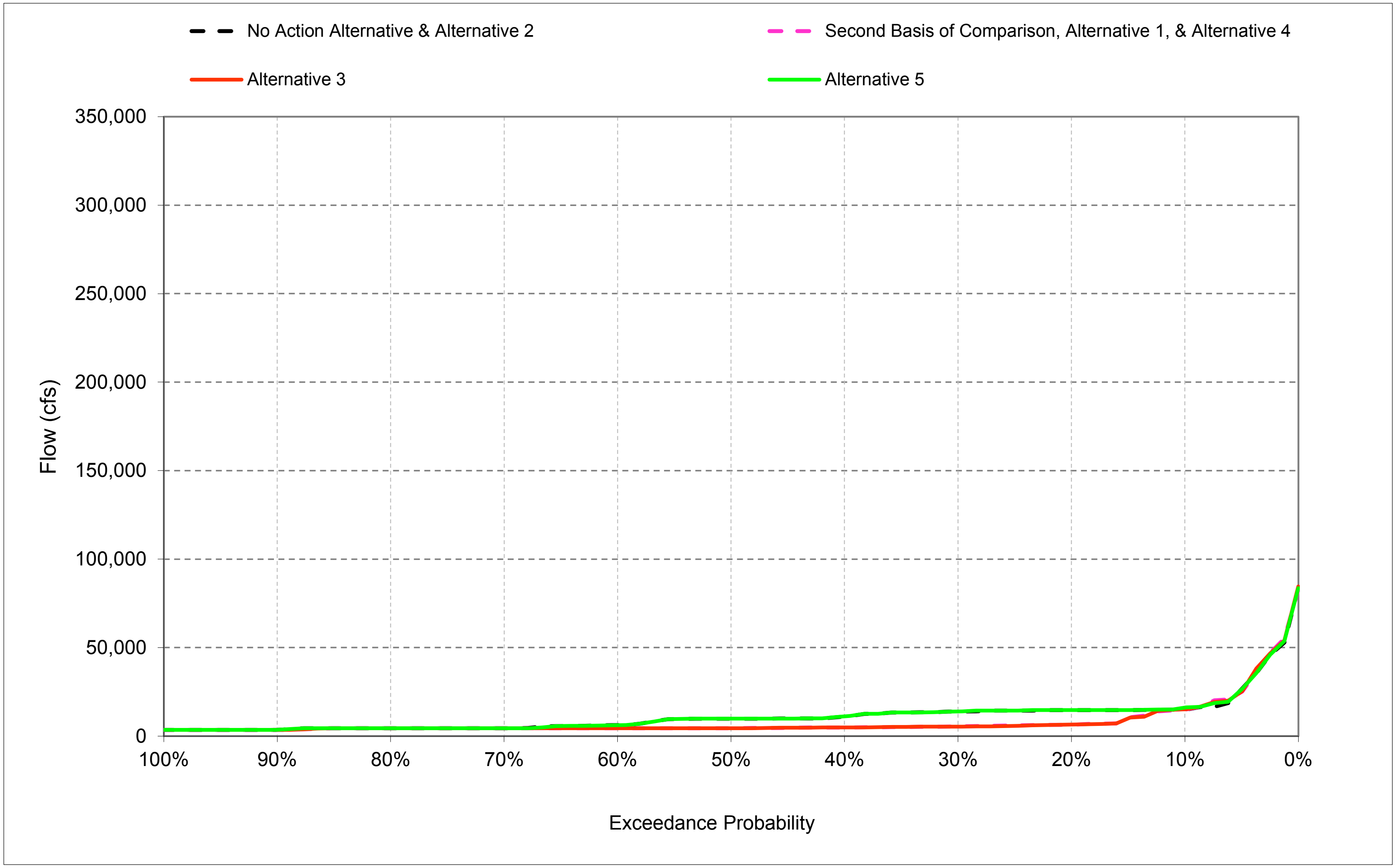
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-1. Sacramento/San Joaquin River Delta Outflow, October



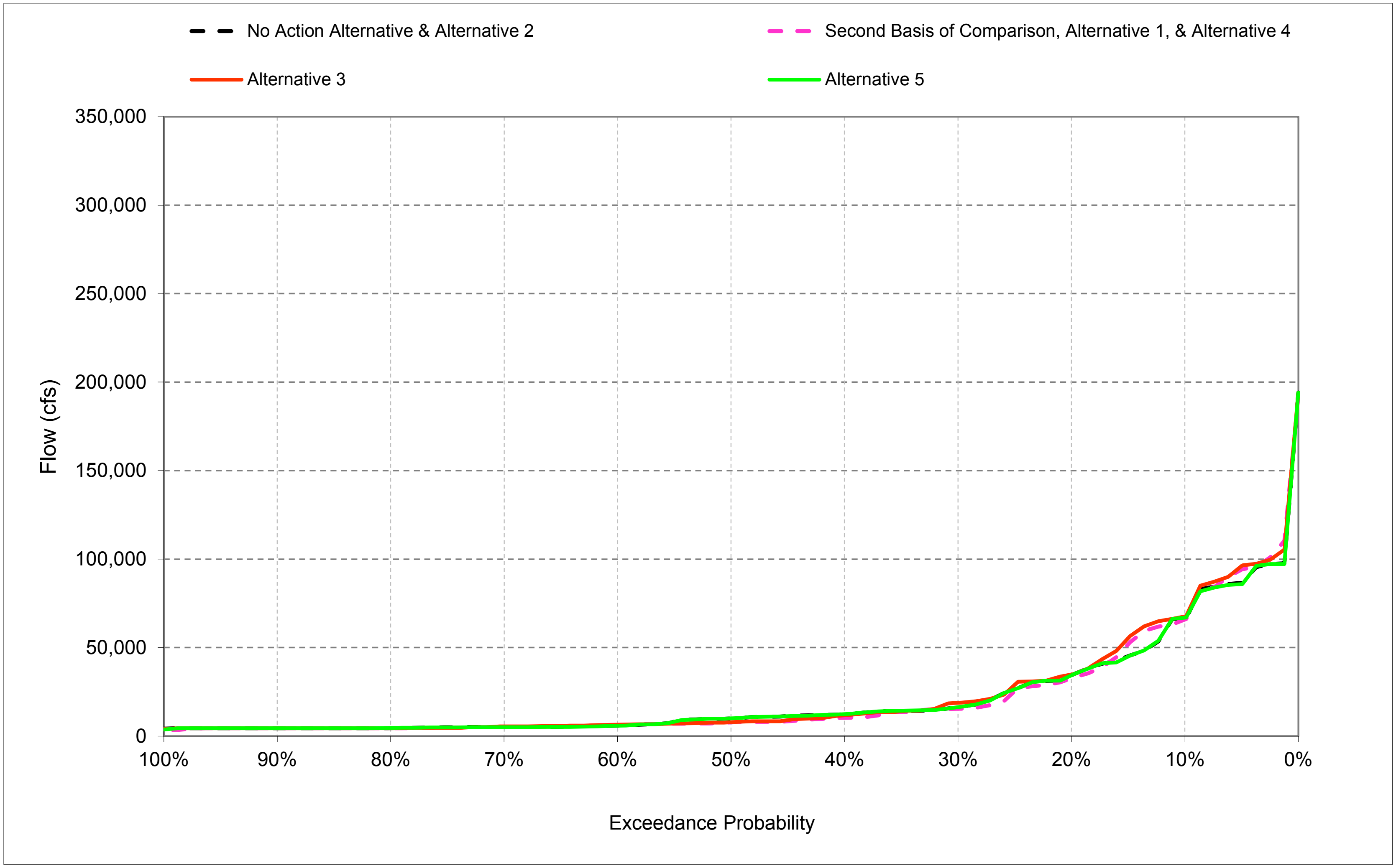
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-2. Sacramento/San Joaquin River Delta Outflow, November



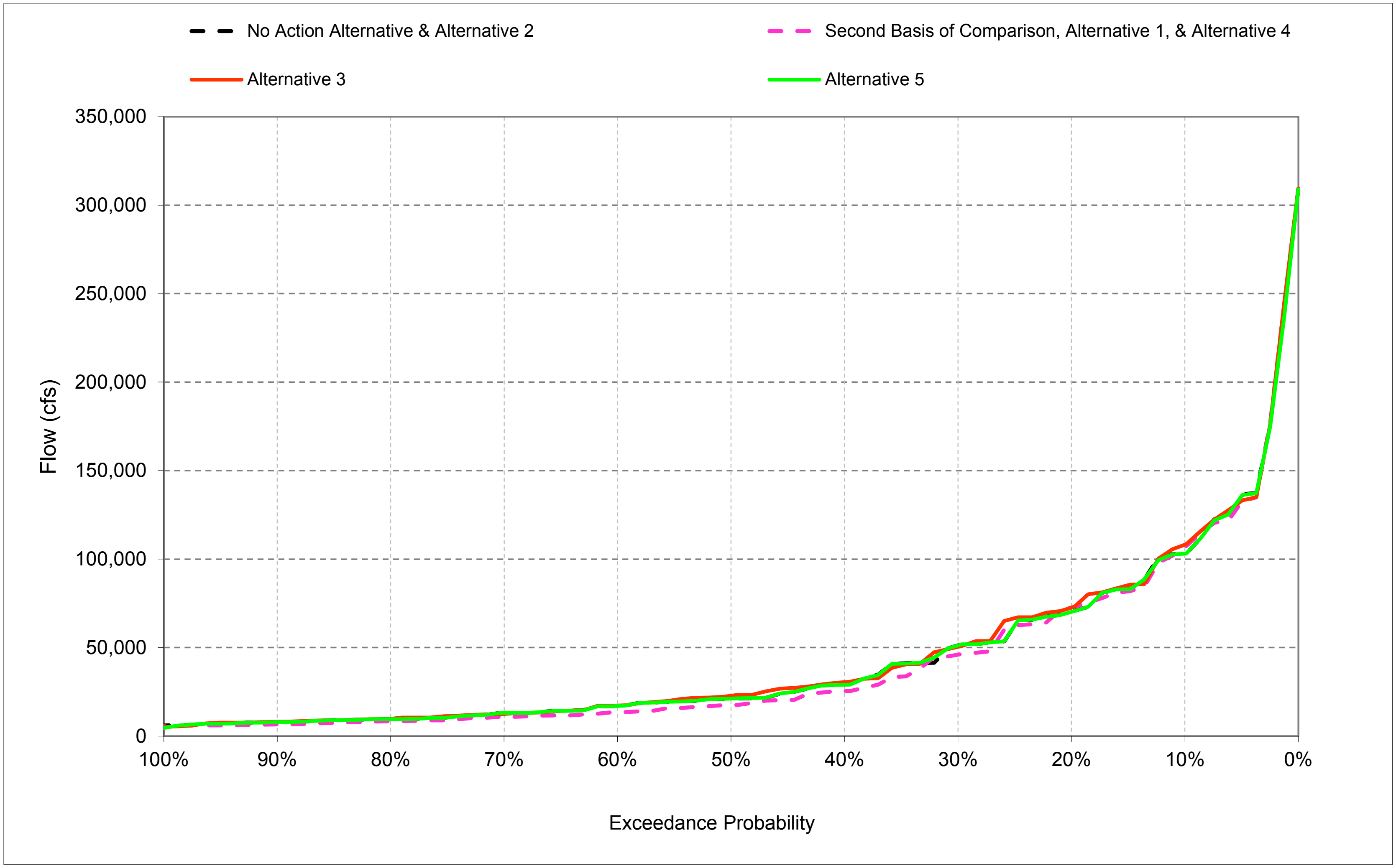
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-3. Sacramento/San Joaquin River Delta Outflow, December



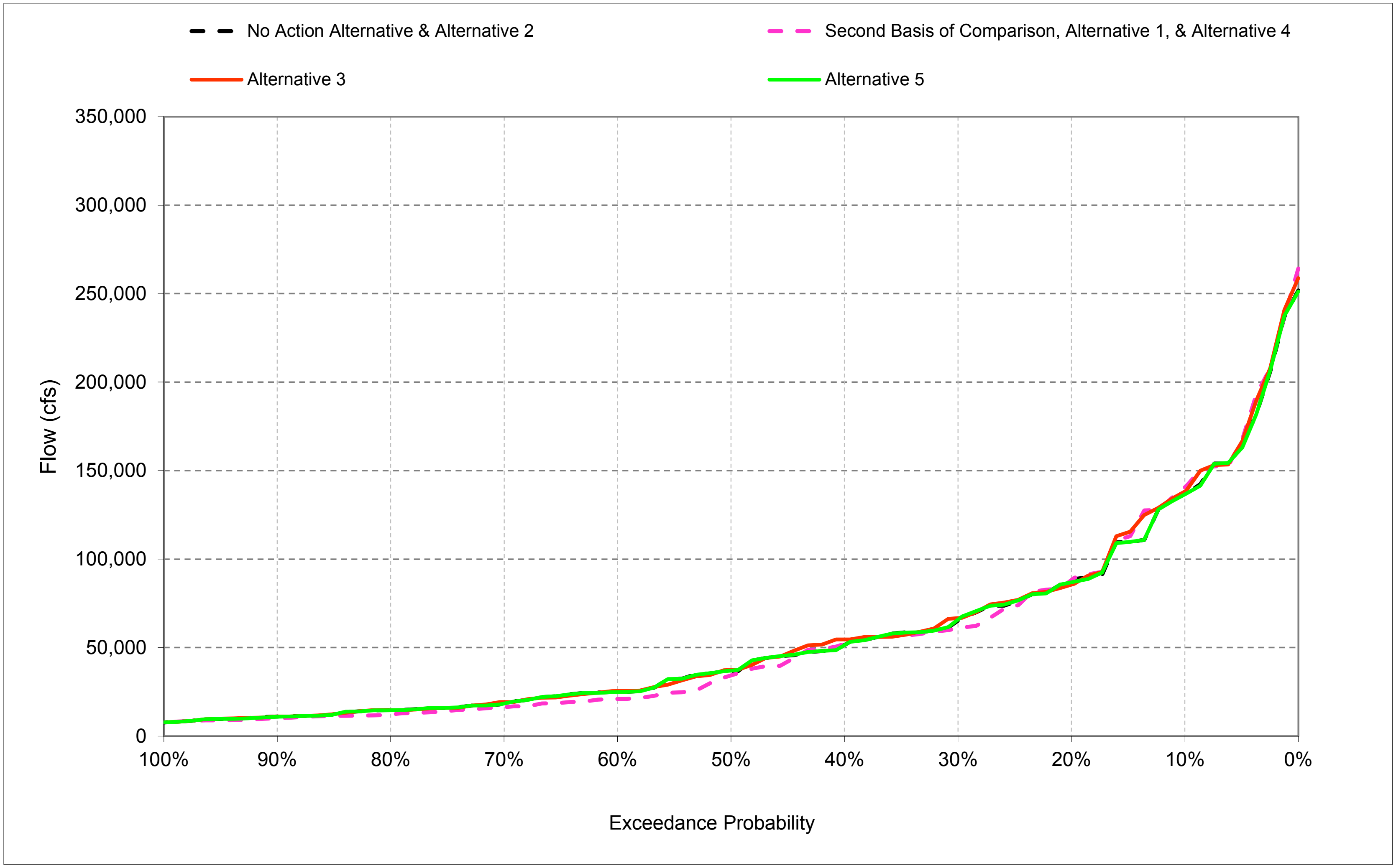
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-4. Sacramento/San Joaquin River Delta Outflow, January



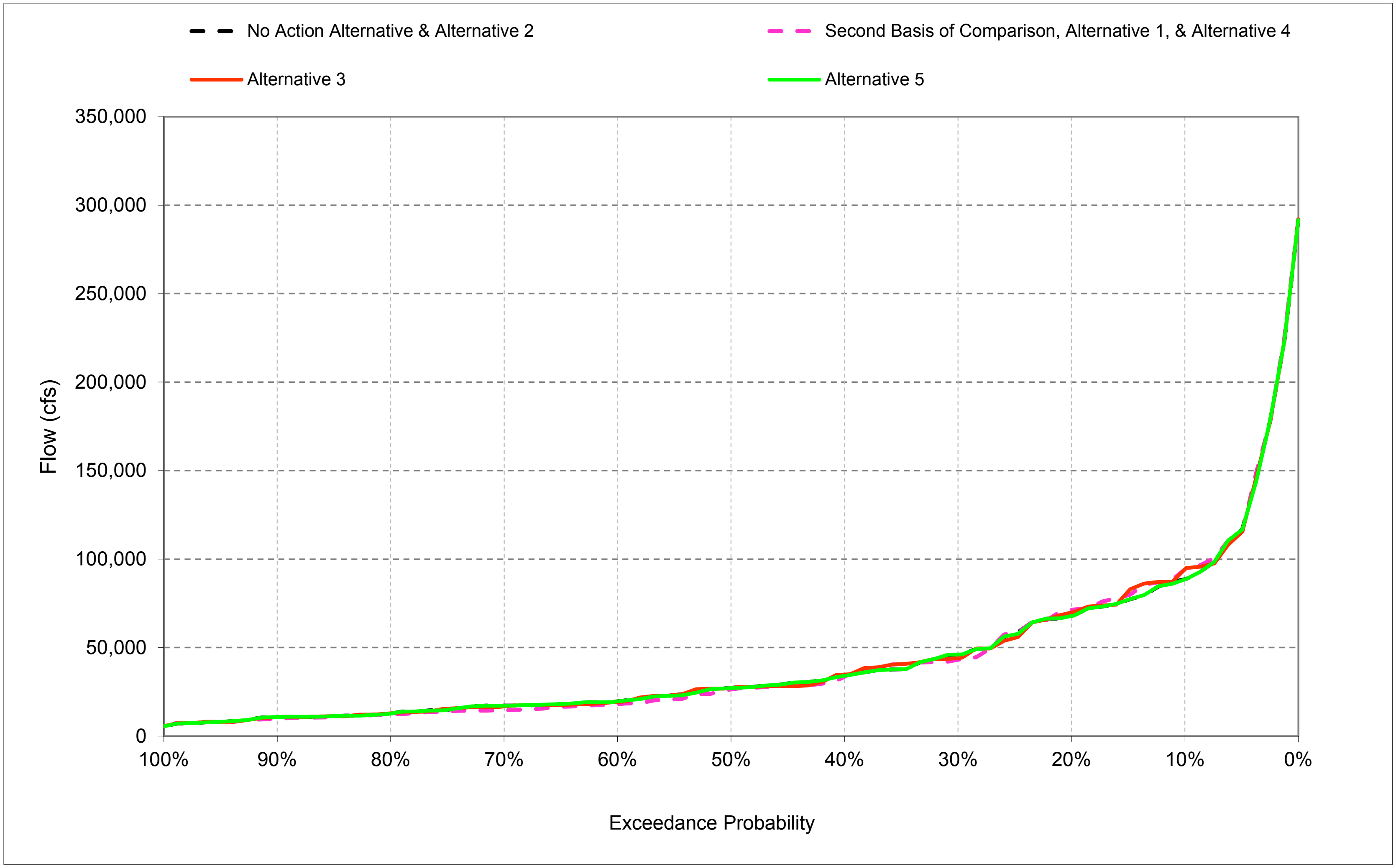
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-5. Sacramento/San Joaquin River Delta Outflow, February



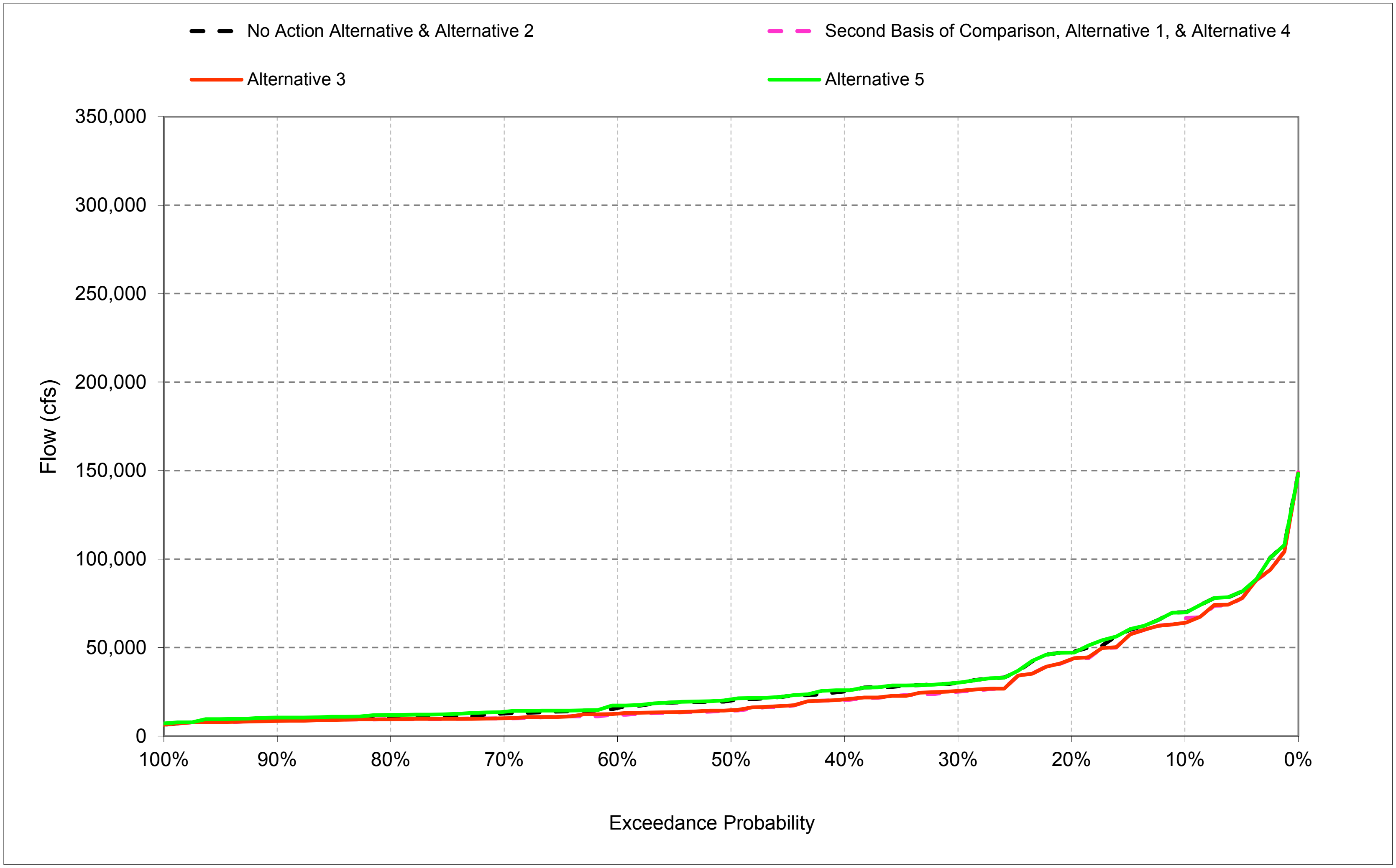
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-6. Sacramento/San Joaquin River Delta Outflow, March



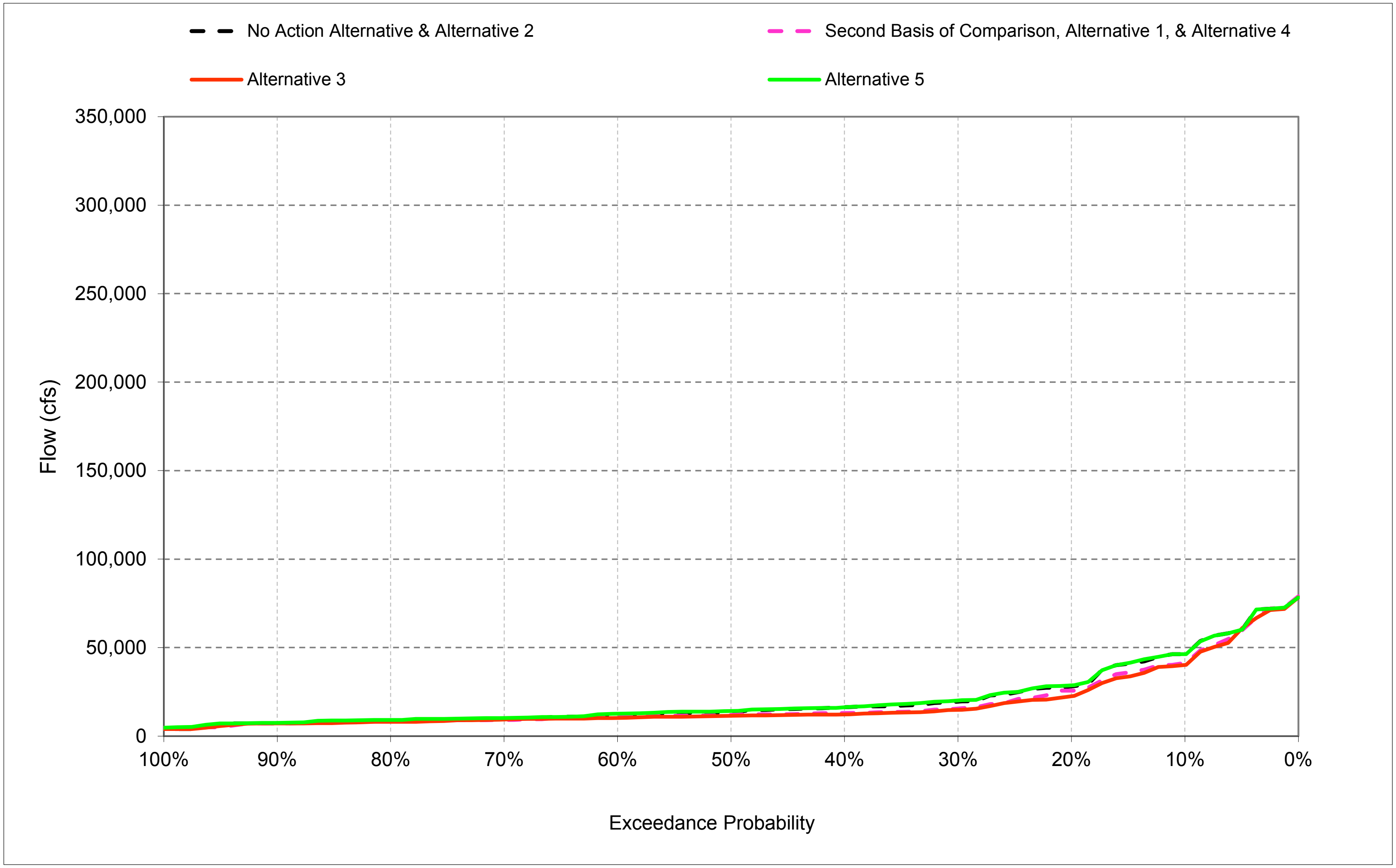
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-7. Sacramento/San Joaquin River Delta Outflow, April



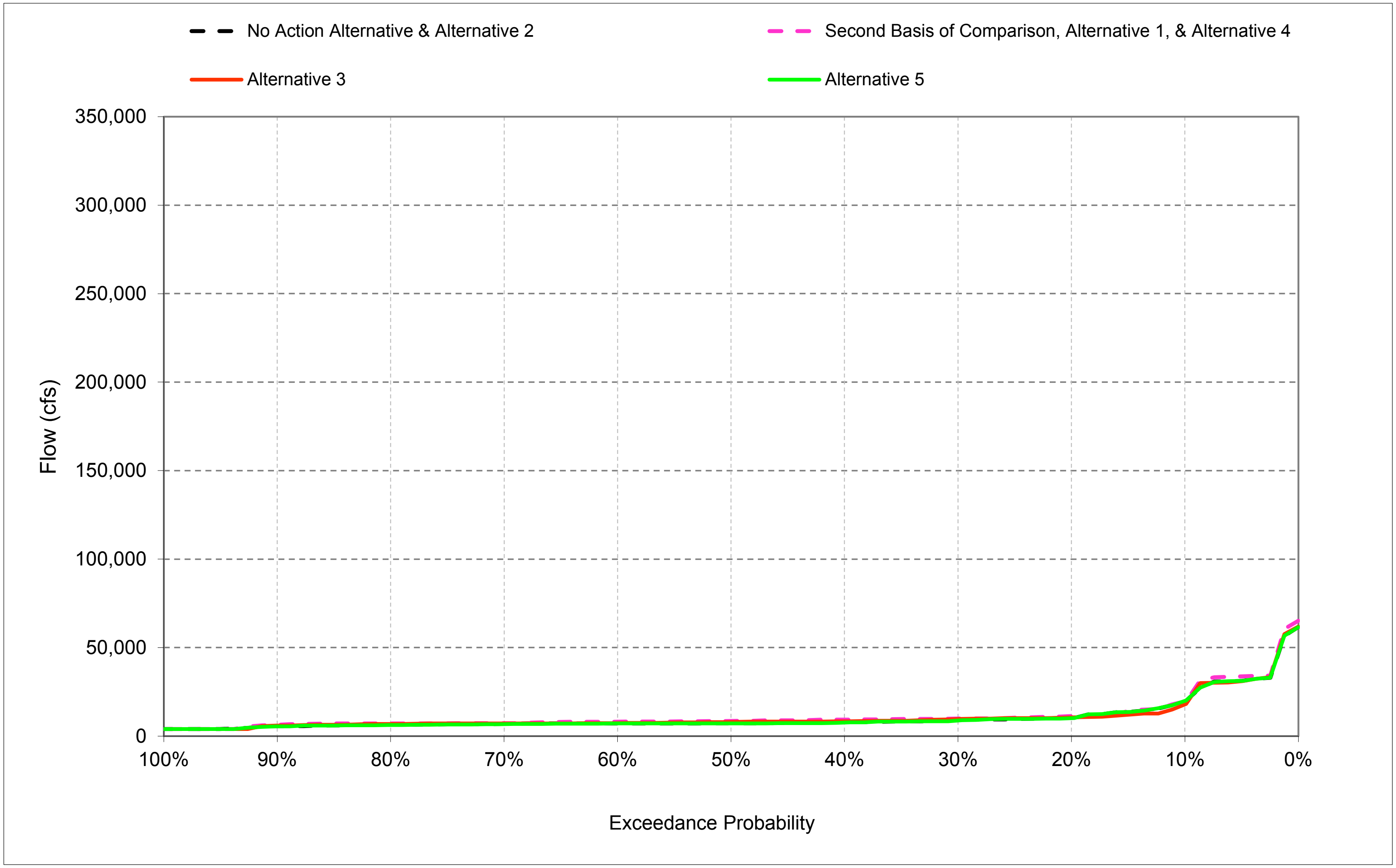
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-8. Sacramento/San Joaquin River Delta Outflow, May



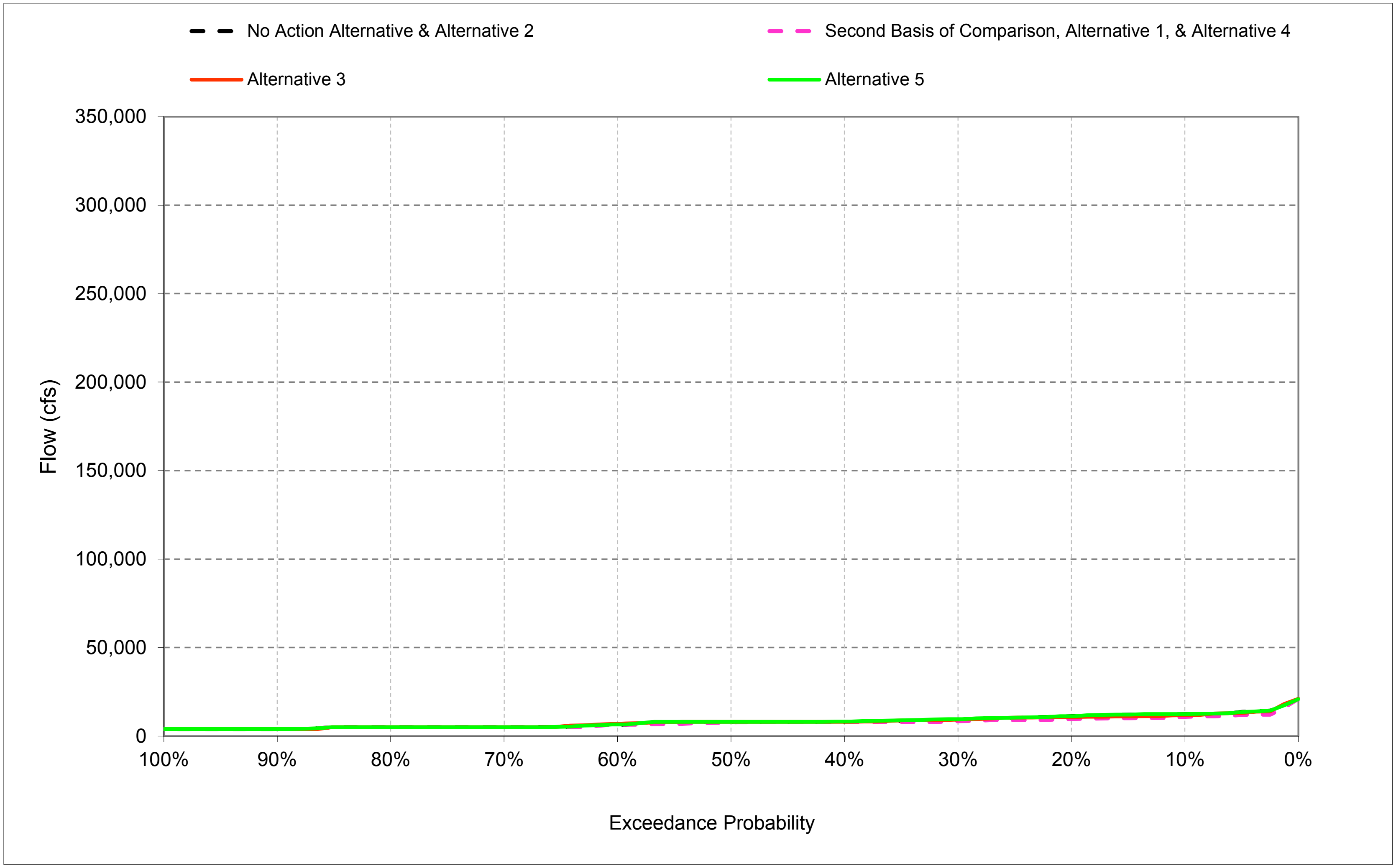
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-9. Sacramento/San Joaquin River Delta Outflow, June



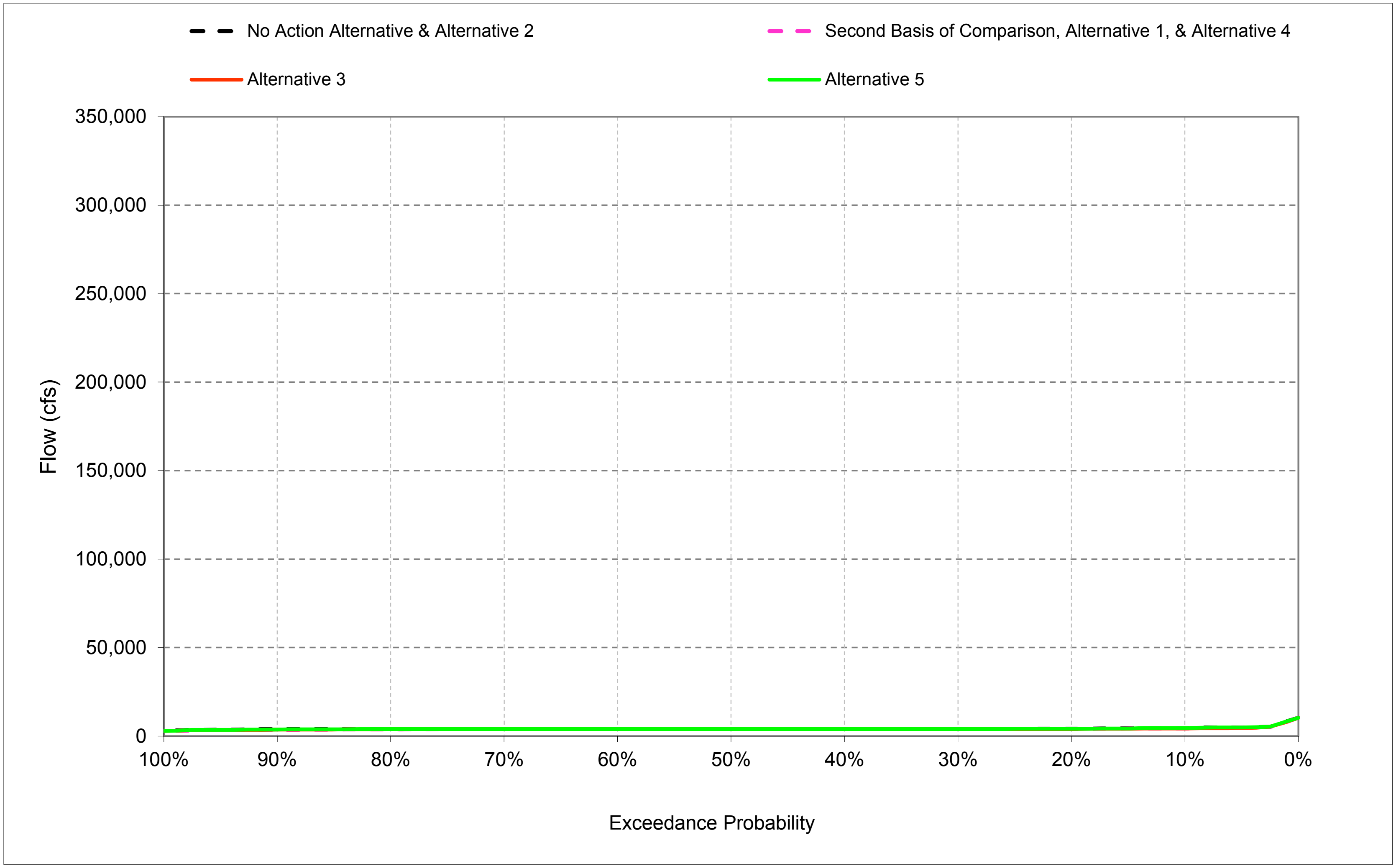
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-10. Sacramento/San Joaquin River Delta Outflow, July



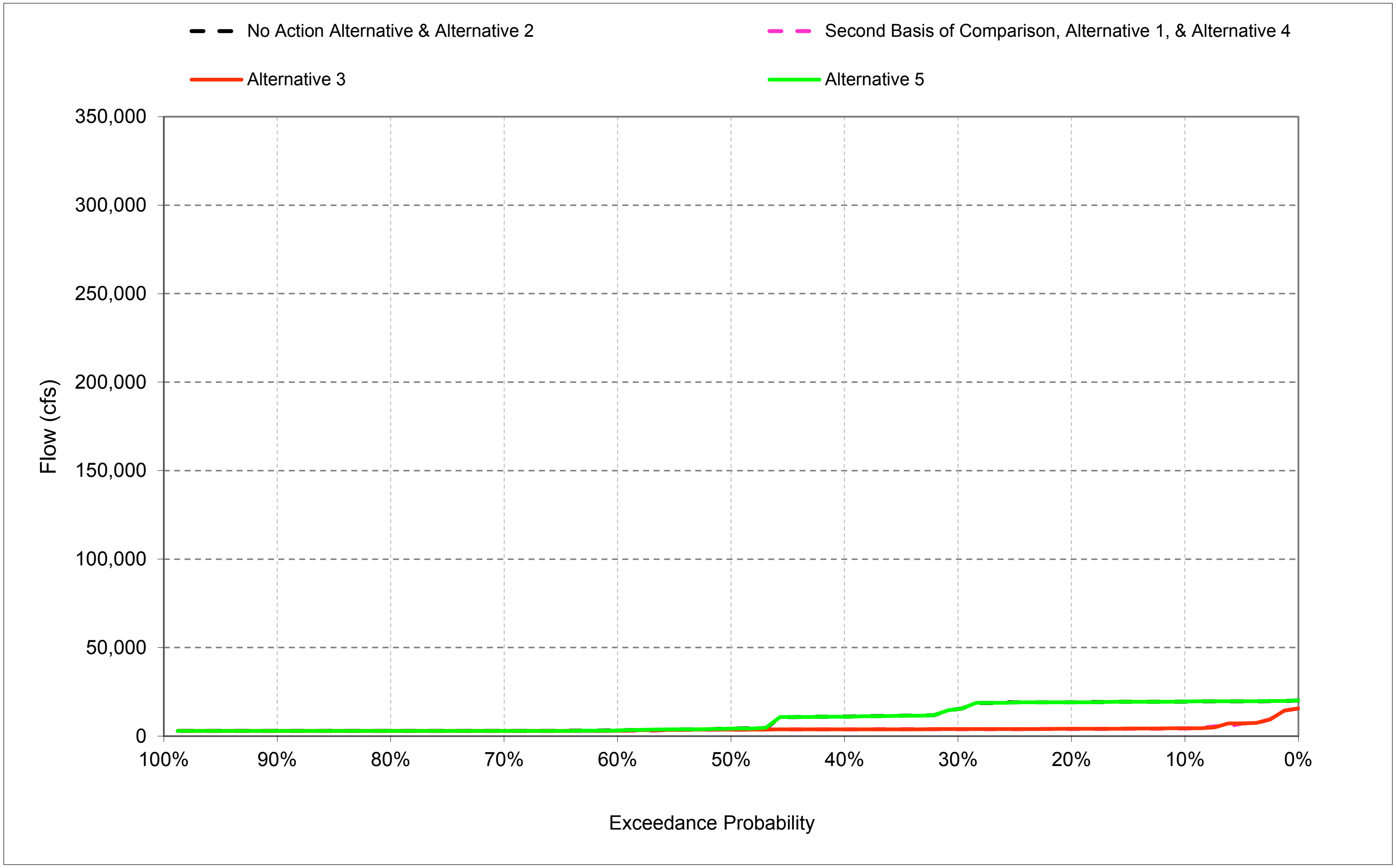
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-11. Sacramento/San Joaquin River Delta Outflow, August



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-15-2-12. Sacramento/San Joaquin River Delta Outflow, September



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-1-1. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Rate

No Action Alternative

Statistic	Monthly Outflow Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,992	15,000	66,586	102,991	136,665	88,553	69,913	46,324	19,838	12,406	4,507	19,516
20%	9,531	14,688	34,349	70,303	88,107	67,957	47,628	28,079	10,238	11,185	4,216	19,063
30%	9,375	13,860	16,305	51,208	65,254	46,096	30,159	19,514	9,204	9,315	4,000	15,282
40%	6,875	11,037	12,381	29,158	51,473	34,027	25,272	16,321	7,814	8,085	4,000	11,031
50%	4,392	9,844	9,938	21,131	36,676	27,251	20,111	13,711	7,243	8,000	4,000	4,385
60%	4,000	6,183	5,835	17,085	24,952	19,582	15,896	11,883	7,100	6,500	4,000	3,376
70%	4,000	4,500	5,118	13,018	18,411	17,261	12,735	9,629	6,864	5,000	4,000	3,000
80%	4,000	4,500	4,522	9,524	14,648	12,732	10,054	8,460	6,435	5,000	4,000	3,000
90%	3,000	3,537	4,500	7,899	11,020	10,766	9,479	7,246	5,606	4,002	3,899	3,000
Long Term												
Full Simulation Period[b]	6,518	11,533	23,026	44,232	56,916	43,869	30,448	20,838	10,885	8,050	4,189	9,501
Water Year Types[c]												
Wet (32%)	8,450	17,141	47,372	89,598	103,413	81,313	55,257	38,940	18,827	10,658	4,436	19,044
Above Normal (16%)	5,392	12,471	24,425	49,593	67,594	52,635	32,571	19,525	8,150	10,846	4,084	11,130
Below Normal (13%)	7,664	10,918	9,460	17,510	36,331	18,095	17,124	12,827	7,473	8,256	4,136	3,549
Dry (24%)	5,547	7,902	7,667	15,952	25,846	22,699	16,782	11,064	7,243	5,131	4,182	3,208
Critical (15%)	4,118	4,980	6,796	11,761	15,260	12,156	9,387	6,671	5,840	4,045	3,829	3,000

Alternative 1

Statistic	Monthly Outflow Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	5,803	15,044	65,929	106,799	140,602	94,253	66,380	41,321	19,611	10,902	4,356	4,374
20%	4,603	6,436	32,639	72,700	88,242	71,240	43,356	25,729	11,405	9,646	4,087	4,037
30%	4,296	5,501	15,458	45,999	60,904	43,140	25,102	15,512	9,888	8,374	4,000	3,937
40%	4,085	4,892	10,325	25,436	52,110	33,538	20,427	13,024	9,349	8,000	4,000	3,819
50%	4,000	4,500	7,764	17,566	34,276	26,362	14,374	11,939	8,527	7,726	4,000	3,682
60%	4,000	4,500	6,206	13,540	21,001	17,962	12,164	10,966	8,142	6,500	4,000	3,034
70%	4,000	4,500	5,105	10,942	16,348	14,661	10,041	9,151	7,269	5,000	4,000	3,000
80%	4,000	4,500	4,500	8,429	12,229	12,229	9,534	8,708	7,100	5,000	3,773	3,000
90%	3,438	3,500	4,500	6,588	10,088	9,776	8,880	7,114	6,340	4,000	3,502	3,000
Long Term												
Full Simulation Period[b]	4,645	8,510	22,907	42,197	55,831	43,614	27,068	18,884	11,853	7,445	4,102	3,983
Water Year Types[c]												
Wet (32%)	5,533	13,286	48,963	88,678	103,568	82,641	50,579	35,425	20,319	9,843	4,400	5,361
Above Normal (16%)	4,112	9,509	22,621	46,272	67,829	53,845	27,145	16,693	9,448	9,777	4,053	3,770
Below Normal (13%)	4,735	7,275	8,857	14,292	36,552	17,538	13,660	11,701	8,957	7,113	4,145	3,456
Dry (24%)	4,234	4,975	7,135	13,254	22,732	20,102	14,775	10,322	7,628	5,038	3,937	3,209
Critical (15%)	3,904	4,104	5,928	10,890	12,243	11,062	8,824	6,276	5,809	4,038	3,749	3,000

Alternative 1 minus No Action Alternative

Statistic	Monthly Outflow Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-4,189	44	-657	3,809	3,937	5,701	-3,533	-5,003	-227	-1,504	-151	-15,141
20%	-4,928	-8,251	-1,710	2,397	135	3,283	-4,273	-2,350	1,167	-1,539	-130	-15,026
30%	-5,079	-8,359	-847	-5,208	-4,350	-2,956	-5,057	-4,002	684	-941	0	-11,345
40%	-2,790	-6,145	-2,056	-3,722	637	-489	-4,845	-3,297	1,535	-85	0	-7,212
50%	-392	-5,344	-2,174	-3,565	-2,400	-889	-5,737	-1,771	1,283	-274	0	-702
60%	0	-1,683	372	-3,544	-3,950	-1,620	-3,732	-917	1,042	0	0	-342
70%	0	0	-12	-2,076	-2,063	-2,600	-2,694	-478	405	0	0	0
80%	0	0	-22	-1,095	-2,419	-503	-521	248	665	0	-227	0
90%	438	-37	0	-1,311	-932	-990	-599	-132	733	-2	-397	0
Long Term												
Full Simulation Period[b]	-1,872	-3,022	-120	-2,035	-1,085	-255	-3,380	-1,953	967	-605	-87	-5,518
Water Year Types[c]												
Wet (32%)	-2,916	-3,855	1,590	-919	155	1,328	-4,679	-3,515	1,492	-815	-36	-13,683
Above Normal (16%)	-1,281	-2,961	-1,804	-3,321	235	1,210	-5,425	-2,832	1,298	-1,069	-31	-7,360
Below Normal (13%)	-2,929	-3,643	-603	-3,218	221	-557	-3,464	-1,126	1,484	-1,143	9	-94
Dry (24%)	-1,313	-2,926	-532	-2,698	-3,114	-2,597	-2,007	-742	385	-93	-245	1
Critical (15%)	-214	-876	-869	-871	-3,016	-1,094	-563	-395	-31	-7	-80	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-1-2. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Rate

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Rate (cfs)											
Probability of Exceedance[a]												
10%	9,992	15,000	66,586	102,991	136,665	88,553	69,913	46,324	19,838	12,406	4,507	19,516
20%	9,531	14,688	34,349	70,303	88,107	67,957	47,628	28,079	10,238	11,185	4,216	19,063
30%	9,375	13,860	16,305	51,208	65,254	46,096	30,159	19,514	9,204	9,315	4,000	15,282
40%	6,875	11,037	12,381	29,158	51,473	34,027	25,272	16,321	7,814	8,085	4,000	11,031
50%	4,392	9,844	9,938	21,131	36,676	27,251	20,111	13,711	7,243	8,000	4,000	4,385
60%	4,000	6,183	5,835	17,085	24,952	19,582	15,896	11,883	7,100	6,500	4,000	3,376
70%	4,000	4,500	5,118	13,018	18,411	17,261	12,735	9,629	6,864	5,000	4,000	3,000
80%	4,000	4,500	4,522	9,524	14,648	12,732	10,054	8,460	6,435	5,000	4,000	3,000
90%	3,000	3,537	4,500	7,899	11,020	10,766	9,479	7,246	5,606	4,002	3,899	3,000
Long Term												
Full Simulation Period[b]	6,518	11,533	23,026	44,232	56,916	43,869	30,448	20,838	10,885	8,050	4,189	9,501
Water Year Types[c]												
Wet (32%)	8,450	17,141	47,372	89,598	103,413	81,313	55,257	38,940	18,827	10,658	4,436	19,044
Above Normal (16%)	5,392	12,471	24,425	49,593	67,594	52,635	32,571	19,525	8,150	10,846	4,084	11,130
Below Normal (13%)	7,664	10,918	9,460	17,510	36,331	18,095	17,124	12,827	7,473	8,256	4,136	3,549
Dry (24%)	5,547	7,902	7,667	15,952	25,846	22,699	16,782	11,064	7,243	5,131	4,182	3,208
Critical (15%)	4,118	4,980	6,796	11,761	15,260	12,156	9,387	6,671	5,840	4,045	3,829	3,000

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Rate (cfs)											
Probability of Exceedance[a]												
10%	4,847	15,154	67,577	108,085	138,218	94,128	64,058	40,190	17,907	11,848	4,317	4,383
20%	4,327	6,536	34,797	72,564	85,533	69,817	43,431	22,486	10,580	10,710	4,000	4,124
30%	4,176	5,360	18,763	50,474	66,669	44,146	25,623	14,849	9,614	9,349	4,000	3,952
40%	4,000	4,875	11,747	30,502	54,582	34,751	20,811	12,202	8,431	8,000	4,000	3,846
50%	4,000	4,500	7,809	22,735	37,427	27,283	14,576	11,448	8,008	8,000	4,000	3,723
60%	4,000	4,500	6,476	17,252	25,450	19,269	12,680	10,242	7,327	6,964	4,000	3,203
70%	4,000	4,500	5,469	12,485	19,194	16,786	10,104	9,418	7,100	5,000	4,000	3,000
80%	4,000	4,500	4,503	9,746	14,731	12,839	9,507	8,024	6,875	5,000	3,920	3,000
90%	3,001	3,500	4,500	8,078	11,090	10,632	8,602	7,100	5,892	4,000	3,615	3,000
Long Term												
Full Simulation Period[b]	4,505	8,498	23,825	45,081	57,802	44,096	27,167	18,245	11,031	7,975	4,104	4,026
Water Year Types[c]												
Wet (32%)	5,423	13,295	50,679	91,224	104,154	81,635	50,352	34,298	18,791	10,556	4,409	5,366
Above Normal (16%)	3,934	9,552	23,767	50,344	69,257	53,533	27,491	15,605	8,638	10,485	4,000	3,825
Below Normal (13%)	4,567	7,085	9,173	18,801	38,748	18,208	14,380	11,370	7,675	8,245	4,137	3,713
Dry (24%)	4,068	5,000	7,431	16,141	26,123	22,516	14,820	9,949	7,478	5,225	3,977	3,204
Critical (15%)	3,807	4,091	6,456	11,729	15,231	12,233	8,880	6,454	5,809	4,000	3,740	3,000

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Rate (cfs)											
Probability of Exceedance[a]												
10%	**-5,145**	154	991	5,095	1,553	5,575	**-5,855**	**-6,135**	**-1,931**	**-558**	**-189**	**-15,132**
20%	**-5,204**	**-8,152**	449	2,261	**-2,574**	1,860	**-4,197**	**-5,593**	342	**-475**	**-216**	**-14,938**
30%	**-5,199**	**-8,500**	2,458	**-734**	1,415	**-1,950**	**-4,536**	**-4,664**	410	34	0	**-11,330**
40%	**-2,875**	**-6,162**	**-634**	1,344	3,109	723	**-4,461**	**-4,119**	617	**-85**	0	**-7,186**
50%	**-392**	**-5,344**	**-2,129**	1,604	751	32	**-5,534**	**-2,263**	765	0	0	**-661**
60%	0	**-1,683**	641	167	498	**-313**	**-3,217**	**-1,641**	227	464	0	**-174**
70%	0	0	352	**-533**	783	**-475**	**-2,631**	**-211**	236	0	0	0
80%	0	0	**-19**	222	84	107	**-548**	**-436**	440	0	**-80**	0
90%	1	**-37**	0	179	70	**-134**	**-877**	**-146**	286	**-2**	**-283**	0
Long Term												
Full Simulation Period[b]	**-2,012**	**-3,034**	798	849	886	226	**-3,281**	**-2,593**	145	**-75**	**-85**	**-5,474**
Water Year Types[c]												
Wet (32%)	**-3,026**	**-3,846**	3,307	1,626	740	322	**-4,905**	**-4,642**	**-37**	**-103**	**-27**	**-13,678**
Above Normal (16%)	**-1,458**	**-2,919**	**-658**	751	1,663	898	**-5,080**	**-3,921**	487	**-361**	**-84**	**-7,305**
Below Normal (13%)	**-3,097**	**-3,834**	**-287**	1,291	2,418	113	**-2,744**	**-1,458**	202	**-11**	1	164
Dry (24%)	**-1,479**	**-2,902**	**-236**	189	277	**-183**	**-1,961**	**-1,115**	235	94	**-205**	**-4**
Critical (15%)	**-311**	**-889**	**-340**	**-32**	**-29**	78	**-507**	**-217**	**-31**	**-44**	**-89**	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-1-3. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Rate

No Action Alternative

	Monthly Outflow Rate (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,992	15,000	66,586	102,991	136,665	88,553	69,913	46,324	19,838	12,406	4,507	19,516
20%	9,531	14,688	34,349	70,303	88,107	67,957	47,628	28,079	10,238	11,185	4,216	19,063
30%	9,375	13,860	16,305	51,208	65,254	46,096	30,159	19,514	9,204	9,315	4,000	15,282
40%	6,875	11,037	12,381	29,158	51,473	34,027	25,272	16,321	7,814	8,085	4,000	11,031
50%	4,392	9,844	9,938	21,131	36,676	27,251	20,111	13,711	7,243	8,000	4,000	4,385
60%	4,000	6,183	5,835	17,085	24,952	19,582	15,896	11,883	7,100	6,500	4,000	3,376
70%	4,000	4,500	5,118	13,018	18,411	17,261	12,735	9,629	6,864	5,000	4,000	3,000
80%	4,000	4,500	4,522	9,524	14,648	12,732	10,054	8,460	6,435	5,000	4,000	3,000
90%	3,000	3,537	4,500	7,899	11,020	10,766	9,479	7,246	5,606	4,002	3,899	3,000
Long Term												
Full Simulation Period[b]	6,518	11,533	23,026	44,232	56,916	43,869	30,448	20,838	10,885	8,050	4,189	9,501
Water Year Types[c]												
Wet (32%)	8,450	17,141	47,372	89,598	103,413	81,313	55,257	38,940	18,827	10,658	4,436	19,044
Above Normal (16%)	5,392	12,471	24,425	49,593	67,594	52,635	32,571	19,525	8,150	10,846	4,084	11,130
Below Normal (13%)	7,664	10,918	9,460	17,510	36,331	18,095	17,124	12,827	7,473	8,256	4,136	3,549
Dry (24%)	5,547	7,902	7,667	15,952	25,846	22,699	16,782	11,064	7,243	5,131	4,182	3,208
Critical (15%)	4,118	4,980	6,796	11,761	15,260	12,156	9,387	6,671	5,840	4,045	3,829	3,000

Alternative 5

	Monthly Outflow Rate (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	10,133	16,136	66,931	103,093	136,599	88,457	69,913	46,327	19,833	12,471	4,626	19,516
20%	9,656	14,688	34,352	70,235	86,928	67,878	47,175	28,669	10,186	11,191	4,165	19,063
30%	9,375	13,956	16,399	51,208	65,777	46,107	30,216	20,119	8,813	9,640	4,000	15,287
40%	6,875	11,099	12,398	29,024	51,418	34,026	25,913	16,298	7,617	8,150	4,000	10,938
50%	4,183	9,844	10,026	21,152	36,972	27,098	20,741	14,190	7,113	8,000	4,000	4,292
60%	4,000	6,200	5,833	17,051	24,932	19,564	17,274	12,619	7,100	6,500	4,000	3,425
70%	4,000	4,500	5,046	13,016	18,412	17,193	13,722	10,228	6,742	5,013	4,000	3,000
80%	4,000	4,500	4,650	9,518	14,601	12,730	11,957	9,116	6,225	5,000	4,000	3,000
90%	3,000	3,543	4,500	7,907	11,015	10,768	10,467	7,519	5,545	4,000	3,742	3,000
Long Term												
Full Simulation Period[b]	6,517	11,601	22,977	44,143	56,887	43,828	31,056	21,333	10,797	8,125	4,179	9,499
Water Year Types[c]												
Wet (32%)	8,415	17,140	47,249	89,426	103,463	81,244	55,257	39,213	18,770	10,842	4,436	19,027
Above Normal (16%)	5,427	12,884	24,469	49,565	67,378	52,557	32,721	19,885	8,108	10,860	4,082	11,106
Below Normal (13%)	7,655	10,920	9,460	17,477	36,320	18,058	17,828	13,354	7,294	8,350	4,137	3,594
Dry (24%)	5,567	7,917	7,596	15,936	25,862	22,697	18,159	11,710	7,102	5,143	4,164	3,216
Critical (15%)	4,127	4,974	6,794	11,614	15,167	12,145	10,437	7,514	5,809	4,043	3,792	3,000

Alternative 5 minus No Action Alternative

	Monthly Outflow Rate (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	141	1,136	345	102	-66	-96	0	3	-5	65	119	0
20%	125	0	3	-68	-1,179	-79	-454	590	-52	6	-51	0
30%	0	97	94	0	523	11	57	605	-391	325	0	5
40%	0	62	17	-134	-55	-2	641	-23	-197	65	0	-94
50%	-209	0	88	21	296	-153	630	479	-131	0	0	-93
60%	0	17	-2	-34	-20	-18	1,378	737	0	0	0	48
70%	0	0	-72	-2	1	-68	987	598	-122	13	0	0
80%	0	0	128	-6	-46	-3	1,903	656	-210	0	0	0
90%	0	6	0	8	-5	2	988	273	-62	-2	-156	0
Long Term												
Full Simulation Period[b]	0	68	-50	-89	-29	-41	608	495	-88	76	-10	-1
Water Year Types[c]												
Wet (32%)	-34	-1	-123	-172	50	-68	-1	273	-58	183	0	-18
Above Normal (16%)	35	413	44	-28	-216	-78	151	360	-43	14	-2	-24
Below Normal (13%)	-9	1	0	-33	-11	-37	703	526	-179	94	0	45
Dry (24%)	21	15	-71	-16	16	-2	1,377	646	-141	12	-18	8
Critical (15%)	9	-7	-2	-146	-93	-11	1,049	843	-31	-2	-38	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-1-4. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Rate

Second Basis of Comparison

Statistic	Monthly Outflow Rate (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	5,803	15,044	65,929	106,799	140,602	94,253	66,380	41,321	19,611	10,902	4,356	4,374
20%	4,603	6,436	32,639	72,700	88,242	71,240	43,356	25,729	11,405	9,646	4,087	4,037
30%	4,296	5,501	15,458	45,999	60,904	43,140	25,102	15,512	9,888	8,374	4,000	3,937
40%	4,085	4,892	10,325	25,436	52,110	33,538	20,427	13,024	9,349	8,000	4,000	3,819
50%	4,000	4,500	7,764	17,566	34,276	26,362	14,374	11,939	8,527	7,726	4,000	3,682
60%	4,000	4,500	6,206	13,540	21,001	17,962	12,164	10,966	8,142	6,500	4,000	3,034
70%	4,000	4,500	5,105	10,942	16,348	14,661	10,041	9,151	7,269	5,000	4,000	3,000
80%	4,000	4,500	4,500	8,429	12,229	12,229	9,534	8,708	7,100	5,000	3,773	3,000
90%	3,438	3,500	4,500	6,588	10,088	9,776	8,880	7,114	6,340	4,000	3,502	3,000
Long Term												
Full Simulation Period[b]	4,645	8,510	22,907	42,197	55,831	43,614	27,068	18,884	11,853	7,445	4,102	3,983
Water Year Types[c]												
Wet (32%)	5,533	13,286	48,963	88,678	103,568	82,641	50,579	35,425	20,319	9,843	4,400	5,361
Above Normal (16%)	4,112	9,509	22,621	46,272	67,829	53,845	27,145	16,693	9,448	9,777	4,053	3,770
Below Normal (13%)	4,735	7,275	8,857	14,292	36,552	17,538	13,660	11,701	8,957	7,113	4,145	3,456
Dry (24%)	4,234	4,975	7,135	13,254	22,732	20,102	14,775	10,322	7,628	5,038	3,937	3,209
Critical (15%)	3,904	4,104	5,928	10,890	12,243	11,062	8,824	6,276	5,809	4,038	3,749	3,000

No Action Alternative

Statistic	Monthly Outflow Rate (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,992	15,000	66,586	102,991	136,665	88,553	69,913	46,324	19,838	12,406	4,507	19,516
20%	9,531	14,688	34,349	70,303	88,107	67,957	47,628	28,079	10,238	11,185	4,216	19,063
30%	9,375	13,860	16,305	51,208	65,254	46,096	30,159	19,514	9,204	9,315	4,000	15,282
40%	6,875	11,037	12,381	29,158	51,473	34,027	25,272	16,321	7,814	8,085	4,000	11,031
50%	4,392	9,844	9,938	21,131	36,676	27,251	20,111	13,711	7,243	8,000	4,000	4,385
60%	4,000	6,183	5,835	17,085	24,952	19,582	15,896	11,883	7,100	6,500	4,000	3,376
70%	4,000	4,500	5,118	13,018	18,411	17,261	12,735	9,629	6,864	5,000	4,000	3,000
80%	4,000	4,500	4,522	9,524	14,648	12,732	10,054	8,460	6,435	5,000	4,000	3,000
90%	3,000	3,537	4,500	7,899	11,020	10,766	9,479	7,246	5,606	4,002	3,899	3,000
Long Term												
Full Simulation Period[b]	6,518	11,533	23,026	44,232	56,916	43,869	30,448	20,838	10,885	8,050	4,189	9,501
Water Year Types[c]												
Wet (32%)	8,450	17,141	47,372	89,598	103,413	81,313	55,257	38,940	18,827	10,658	4,436	19,044
Above Normal (16%)	5,392	12,471	24,425	49,593	67,594	52,635	32,571	19,525	8,150	10,846	4,084	11,130
Below Normal (13%)	7,664	10,918	9,460	17,510	36,331	18,095	17,124	12,827	7,473	8,256	4,136	3,549
Dry (24%)	5,547	7,902	7,667	15,952	25,846	22,699	16,782	11,064	7,243	5,131	4,182	3,208
Critical (15%)	4,118	4,980	6,796	11,761	15,260	12,156	9,387	6,671	5,840	4,045	3,829	3,000

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Outflow Rate (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,189	-44	657	-3,809	-3,937	-5,701	3,533	5,003	227	1,504	151	15,141
20%	4,928	8,251	1,710	-2,397	-135	-3,283	4,273	2,350	-1,167	1,539	130	15,026
30%	5,079	8,359	847	5,208	4,350	2,956	5,057	4,002	-684	941	0	11,345
40%	2,790	6,145	2,056	3,722	-637	489	4,845	3,297	-1,535	85	0	7,212
50%	392	5,344	2,174	3,565	2,400	889	5,737	1,771	-1,283	274	0	702
60%	0	1,683	-372	3,544	3,950	1,620	3,732	917	-1,042	0	0	342
70%	0	0	12	2,076	2,063	2,600	2,694	478	-405	0	0	0
80%	0	0	22	1,095	2,419	503	521	-248	-665	0	227	0
90%	-438	37	0	1,311	932	990	599	132	-733	2	397	0
Long Term												
Full Simulation Period[b]	1,872	3,022	120	2,035	1,085	255	3,380	1,953	-967	605	87	5,518
Water Year Types[c]												
Wet (32%)	2,916	3,855	-1,590	919	-155	-1,328	4,679	3,515	-1,492	815	36	13,683
Above Normal (16%)	1,281	2,961	1,804	3,321	-235	-1,210	5,425	2,832	-1,298	1,069	31	7,360
Below Normal (13%)	2,929	3,643	603	3,218	-221	557	3,464	1,126	-1,484	1,143	-9	94
Dry (24%)	1,313	2,926	532	2,698	3,114	2,597	2,007	742	-385	93	245	-1
Critical (15%)	214	876	869	871	3,016	1,094	563	395	31	7	80	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-1-5. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Rate

Second Basis of Comparison

	Monthly Outflow Rate (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	5,803	15,044	65,929	106,799	140,602	94,253	66,380	41,321	19,611	10,902	4,356	4,374
20%	4,603	6,436	32,639	72,700	88,242	71,240	43,356	25,729	11,405	9,646	4,087	4,037
30%	4,296	5,501	15,458	45,999	60,904	43,140	25,102	15,512	9,888	8,374	4,000	3,937
40%	4,085	4,892	10,325	25,436	52,110	33,538	20,427	13,024	9,349	8,000	4,000	3,819
50%	4,000	4,500	7,764	17,566	34,276	26,362	14,374	11,939	8,527	7,726	4,000	3,682
60%	4,000	4,500	6,206	13,540	21,001	17,962	12,164	10,966	8,142	6,500	4,000	3,034
70%	4,000	4,500	5,105	10,942	16,348	14,661	10,041	9,151	7,269	5,000	4,000	3,000
80%	4,000	4,500	4,500	8,429	12,229	12,229	9,534	8,708	7,100	5,000	3,773	3,000
90%	3,438	3,500	4,500	6,588	10,088	9,776	8,880	7,114	6,340	4,000	3,502	3,000
Long Term												
Full Simulation Period[b]	4,645	8,510	22,907	42,197	55,831	43,614	27,068	18,884	11,853	7,445	4,102	3,983
Water Year Types[c]												
Wet (32%)	5,533	13,286	48,963	88,678	103,568	82,641	50,579	35,425	20,319	9,843	4,400	5,361
Above Normal (16%)	4,112	9,509	22,621	46,272	67,829	53,845	27,145	16,693	9,448	9,777	4,053	3,770
Below Normal (13%)	4,735	7,275	8,857	14,292	36,552	17,538	13,660	11,701	8,957	7,113	4,145	3,456
Dry (24%)	4,234	4,975	7,135	13,254	22,732	20,102	14,775	10,322	7,628	5,038	3,937	3,209
Critical (15%)	3,904	4,104	5,928	10,890	12,243	11,062	8,824	6,276	5,809	4,038	3,749	3,000

Alternative 3

	Monthly Outflow Rate (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,847	15,154	67,577	108,085	138,218	94,128	64,058	40,190	17,907	11,848	4,317	4,383
20%	4,327	6,536	34,797	72,564	85,533	69,817	43,431	22,486	10,580	10,710	4,000	4,124
30%	4,176	5,360	18,763	50,474	66,669	44,146	25,623	14,849	9,614	9,349	4,000	3,952
40%	4,000	4,875	11,747	30,502	54,582	34,751	20,811	12,202	8,431	8,000	4,000	3,846
50%	4,000	4,500	7,809	22,735	37,427	27,283	14,576	11,448	8,008	8,000	4,000	3,723
60%	4,000	4,500	6,476	17,252	25,450	19,269	12,680	10,242	7,327	6,964	4,000	3,203
70%	4,000	4,500	5,469	12,485	19,194	16,786	10,104	9,418	7,100	5,000	4,000	3,000
80%	4,000	4,500	4,503	9,746	14,731	12,839	9,507	8,024	6,875	5,000	3,920	3,000
90%	3,001	3,500	4,500	8,078	11,090	10,632	8,602	7,100	5,892	4,000	3,615	3,000
Long Term												
Full Simulation Period[b]	4,505	8,498	23,825	45,081	57,802	44,096	27,167	18,245	11,031	7,975	4,104	4,026
Water Year Types[c]												
Wet (32%)	5,423	13,295	50,679	91,224	104,154	81,635	50,352	34,298	18,791	10,556	4,409	5,366
Above Normal (16%)	3,934	9,552	23,767	50,344	69,257	53,533	27,491	15,605	8,638	10,485	4,000	3,825
Below Normal (13%)	4,567	7,085	9,173	18,801	38,748	18,208	14,380	11,370	7,675	8,245	4,137	3,713
Dry (24%)	4,068	5,000	7,431	16,141	26,123	22,516	14,820	9,949	7,478	5,225	3,977	3,204
Critical (15%)	3,807	4,091	6,456	11,729	15,231	12,233	8,880	6,454	5,809	4,000	3,740	3,000

Alternative 3 minus Second Basis of Comparison

	Monthly Outflow Rate (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-956	110	1,648	1,286	-2,383	-126	-2,322	-1,131	-1,704	946	-39	9
20%	-276	99	2,158	-136	-2,709	-1,423	75	-3,243	-824	1,064	-86	88
30%	-121	-141	3,305	4,475	5,765	1,006	521	-663	-274	975	0	15
40%	-85	-17	1,422	5,066	2,471	1,212	384	-822	-918	0	0	27
50%	0	0	45	5,169	3,152	921	203	-491	-519	274	0	41
60%	0	0	269	3,712	4,449	1,308	515	-724	-815	464	0	169
70%	0	0	364	1,543	2,846	2,125	63	267	-169	0	0	0
80%	0	0	3	1,317	2,503	610	-27	-684	-225	0	148	0
90%	-436	0	0	1,489	1,002	856	-278	-14	-448	0	113	0
Long Term												
Full Simulation Period[b]	-140	-12	918	2,885	1,971	482	99	-639	-822	530	2	44
Water Year Types[c]												
Wet (32%)	-110	9	1,717	2,546	586	-1,006	-226	-1,127	-1,529	713	9	5
Above Normal (16%)	-178	42	1,146	4,072	1,427	-311	345	-1,088	-810	709	-53	55
Below Normal (13%)	-167	-191	316	4,509	2,197	670	720	-331	-1,282	1,132	-8	257
Dry (24%)	-166	24	296	2,887	3,391	2,414	46	-373	-150	187	40	-5
Critical (15%)	-97	-13	529	838	2,987	1,172	56	178	0	-37	-9	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-1-6. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Rate

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Rate (cfs)											
Probability of Exceedance[a]												
10%	5,803	15,044	65,929	106,799	140,602	94,253	66,380	41,321	19,611	10,902	4,356	4,374
20%	4,603	6,436	32,639	72,700	88,242	71,240	43,356	25,729	11,405	9,646	4,087	4,037
30%	4,296	5,501	15,458	45,999	60,904	43,140	25,102	15,512	9,888	8,374	4,000	3,937
40%	4,085	4,892	10,325	25,436	52,110	33,538	20,427	13,024	9,349	8,000	4,000	3,819
50%	4,000	4,500	7,764	17,566	34,276	26,362	14,374	11,939	8,527	7,726	4,000	3,682
60%	4,000	4,500	6,206	13,540	21,001	17,962	12,164	10,966	8,142	6,500	4,000	3,034
70%	4,000	4,500	5,105	10,942	16,348	14,661	10,041	9,151	7,269	5,000	4,000	3,000
80%	4,000	4,500	4,500	8,429	12,229	12,229	9,534	8,708	7,100	5,000	3,773	3,000
90%	3,438	3,500	4,500	6,588	10,088	9,776	8,880	7,114	6,340	4,000	3,502	3,000
Long Term												
Full Simulation Period[b]	4,645	8,510	22,907	42,197	55,831	43,614	27,068	18,884	11,853	7,445	4,102	3,983
Water Year Types[c]												
Wet (32%)	5,533	13,286	48,963	88,678	103,568	82,641	50,579	35,425	20,319	9,843	4,400	5,361
Above Normal (16%)	4,112	9,509	22,621	46,272	67,829	53,845	27,145	16,693	9,448	9,777	4,053	3,770
Below Normal (13%)	4,735	7,275	8,857	14,292	36,552	17,538	13,660	11,701	8,957	7,113	4,145	3,456
Dry (24%)	4,234	4,975	7,135	13,254	22,732	20,102	14,775	10,322	7,628	5,038	3,937	3,209
Critical (15%)	3,904	4,104	5,928	10,890	12,243	11,062	8,824	6,276	5,809	4,038	3,749	3,000

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Rate (cfs)											
Probability of Exceedance[a]												
10%	10,133	16,136	66,931	103,093	136,599	88,457	69,913	46,327	19,833	12,471	4,626	19,516
20%	9,656	14,688	34,352	70,235	86,928	67,878	47,175	28,669	10,186	11,191	4,165	19,063
30%	9,375	13,956	16,399	51,208	65,777	46,107	30,216	20,119	8,813	9,640	4,000	15,287
40%	6,875	11,099	12,398	29,024	51,418	34,026	25,913	16,298	7,617	8,150	4,000	10,938
50%	4,183	9,844	10,026	21,152	36,972	27,098	20,741	14,190	7,113	8,000	4,000	4,292
60%	4,000	6,200	5,833	17,051	24,932	19,564	17,274	12,619	7,100	6,500	4,000	3,425
70%	4,000	4,500	5,046	13,016	18,412	17,193	13,722	10,228	6,742	5,013	4,000	3,000
80%	4,000	4,500	4,650	9,518	14,601	12,730	11,957	9,116	6,225	5,000	4,000	3,000
90%	3,000	3,543	4,500	7,907	11,015	10,768	10,467	7,519	5,545	4,000	3,742	3,000
Long Term												
Full Simulation Period[b]	6,517	11,601	22,977	44,143	56,887	43,828	31,056	21,333	10,797	8,125	4,179	9,499
Water Year Types[c]												
Wet (32%)	8,415	17,140	47,249	89,426	103,463	81,244	55,257	39,213	18,770	10,842	4,436	19,027
Above Normal (16%)	5,427	12,884	24,469	49,565	67,378	52,557	32,721	19,885	8,108	10,860	4,082	11,106
Below Normal (13%)	7,655	10,920	9,460	17,477	36,320	18,058	17,828	13,354	7,294	8,350	4,137	3,594
Dry (24%)	5,567	7,917	7,596	15,936	25,862	22,697	18,159	11,710	7,102	5,143	4,164	3,216
Critical (15%)	4,127	4,974	6,794	11,614	15,167	12,145	10,437	7,514	5,809	4,043	3,792	3,000

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Rate (cfs)											
Probability of Exceedance[a]												
10%	4,330	1,092	1,002	**-3,706**	**-4,003**	**-5,796**	3,533	5,006	222	1,569	270	15,141
20%	5,053	8,251	1,713	**-2,465**	**-1,314**	**-3,362**	3,819	2,940	**-1,219**	1,545	79	15,026
30%	5,079	8,456	941	5,209	4,873	2,967	5,114	4,607	**-1,075**	1,266	0	11,350
40%	2,790	6,207	2,073	3,588	**-692**	487	5,487	3,274	**-1,732**	150	0	7,119
50%	183	5,344	2,262	3,586	2,696	736	6,367	2,251	**-1,414**	274	0	610
60%	0	1,700	**-374**	3,511	3,931	1,603	5,110	1,654	**-1,042**	0	0	391
70%	0	0	**-59**	2,074	2,064	2,532	3,681	1,076	**-526**	13	0	0
80%	0	0	150	1,089	2,373	501	2,424	407	**-875**	0	227	0
90%	**-438**	43	0	1,319	928	992	1,587	405	**-795**	0	240	0
Long Term												
Full Simulation Period[b]	1,872	3,091	70	1,946	1,056	214	3,988	2,449	**-1,055**	681	77	5,516
Water Year Types[c]												
Wet (32%)	2,882	3,854	**-1,713**	748	**-105**	**-1,396**	4,678	3,788	**-1,550**	999	36	13,666
Above Normal (16%)	1,316	3,374	1,848	3,293	**-452**	**-1,288**	5,576	3,192	**-1,340**	1,084	29	7,336
Below Normal (13%)	2,920	3,644	603	3,185	**-231**	520	4,168	1,652	**-1,663**	1,237	**-8**	139
Dry (24%)	1,333	2,941	460	2,682	3,130	2,595	3,384	1,388	**-526**	105	227	7
Critical (15%)	223	870	867	724	2,924	1,083	1,613	1,238	0	5	43	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-2-1. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Volume

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	614	893	4,094	6,333	7,834	5,445	4,160	2,848	1,180	763	277	1,161
20%	586	874	2,112	4,323	4,927	4,179	2,834	1,727	609	688	259	1,134
30%	576	825	1,003	3,149	3,624	2,834	1,795	1,200	548	573	246	909
40%	423	657	761	1,793	2,868	2,092	1,504	1,004	465	497	246	656
50%	270	586	611	1,299	2,037	1,676	1,197	843	431	492	246	261
60%	246	368	359	1,050	1,407	1,204	946	731	422	400	246	201
70%	246	268	315	800	1,023	1,061	758	592	408	307	246	179
80%	246	268	278	586	823	783	598	520	383	307	246	179
90%	184	210	277	486	633	662	564	446	334	246	240	179
Long Term												
Full Simulation Period[b]	401	686	1,416	2,720	3,186	2,697	1,812	1,281	648	495	258	565
Water Year Types[c]												
Wet (32%)	520	1,020	2,913	5,509	5,771	5,000	3,288	2,394	1,120	655	273	1,133
Above Normal (16%)	332	742	1,502	3,049	3,807	3,236	1,938	1,201	485	667	251	662
Below Normal (13%)	471	650	582	1,077	2,048	1,113	1,019	789	445	508	254	211
Dry (24%)	341	470	471	981	1,443	1,396	999	680	431	315	257	191
Critical (15%)	253	296	418	723	861	747	559	410	348	249	235	179

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	357	895	4,054	6,567	8,061	5,795	3,950	2,541	1,167	670	268	260
20%	283	383	2,007	4,470	4,927	4,380	2,580	1,582	679	593	251	240
30%	264	327	950	2,828	3,382	2,653	1,494	954	588	515	246	234
40%	251	291	635	1,564	2,894	2,062	1,215	801	556	492	246	227
50%	246	268	477	1,080	1,904	1,621	855	734	507	475	246	219
60%	246	268	382	833	1,179	1,104	724	674	485	400	246	181
70%	246	268	314	673	908	901	597	563	433	307	246	179
80%	246	268	277	518	698	752	567	535	422	307	232	179
90%	211	208	277	405	562	601	528	437	377	246	215	179
Long Term												
Full Simulation Period[b]	286	506	1,408	2,595	3,126	2,682	1,611	1,161	705	458	252	237
Water Year Types[c]												
Wet (32%)	340	791	3,011	5,453	5,779	5,081	3,010	2,178	1,209	605	271	319
Above Normal (16%)	253	566	1,391	2,845	3,822	3,311	1,615	1,026	562	601	249	224
Below Normal (13%)	291	433	545	879	2,062	1,078	813	719	533	437	255	206
Dry (24%)	260	296	439	815	1,269	1,236	879	635	454	310	242	191
Critical (15%)	240	244	364	670	690	680	525	386	346	248	231	179

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	-258	3	-40	234	226	351	-210	-308	-14	-93	-9	-901
20%	-303	-491	-105	147	0	202	-254	-145	69	-95	-8	-894
30%	-312	-497	-52	-320	-242	-182	-301	-246	41	-58	0	-675
40%	-172	-366	-126	-229	26	-30	-288	-203	91	-5	0	-429
50%	-24	-318	-134	-219	-133	-55	-341	-109	76	-17	0	-42
60%	0	-100	23	-218	-228	-100	-222	-56	62	0	0	-20
70%	0	0	-1	-128	-115	-160	-160	-29	24	0	0	0
80%	0	0	-1	-67	-125	-31	-31	15	40	0	-14	0
90%	27	-2	0	-81	-71	-61	-36	-8	44	0	-24	0
Long Term												
Full Simulation Period[b]	-115	-180	-7	-125	-60	-16	-201	-120	58	-37	-5	-328
Water Year Types[c]												
Wet (32%)	-179	-229	98	-57	9	82	-278	-216	89	-50	-2	-814
Above Normal (16%)	-79	-176	-111	-204	15	74	-323	-174	77	-66	-2	-438
Below Normal (13%)	-180	-217	-37	-198	15	-34	-206	-69	88	-70	1	-6
Dry (24%)	-81	-174	-33	-166	-174	-160	-119	-46	23	-6	-15	0
Critical (15%)	-13	-52	-53	-54	-171	-67	-34	-24	-2	0	-5	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-2-2. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Volume

No Action Alternative

Statistic	Monthly Outflow Volume (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	614	893	4,094	6,333	7,834	5,445	4,160	2,848	1,180	763	277	1,161
20%	586	874	2,112	4,323	4,927	4,179	2,834	1,727	609	688	259	1,134
30%	576	825	1,003	3,149	3,624	2,834	1,795	1,200	548	573	246	909
40%	423	657	761	1,793	2,868	2,092	1,504	1,004	465	497	246	656
50%	270	586	611	1,299	2,037	1,676	1,197	843	431	492	246	261
60%	246	368	359	1,050	1,407	1,204	946	731	422	400	246	201
70%	246	268	315	800	1,023	1,061	758	592	408	307	246	179
80%	246	268	278	586	823	783	598	520	383	307	246	179
90%	184	210	277	486	633	662	564	446	334	246	240	179
Long Term												
Full Simulation Period[b]	401	686	1,416	2,720	3,186	2,697	1,812	1,281	648	495	258	565
Water Year Types[c]												
Wet (32%)	520	1,020	2,913	5,509	5,771	5,000	3,288	2,394	1,120	655	273	1,133
Above Normal (16%)	332	742	1,502	3,049	3,807	3,236	1,938	1,201	485	667	251	662
Below Normal (13%)	471	650	582	1,077	2,048	1,113	1,019	789	445	508	254	211
Dry (24%)	341	470	471	981	1,443	1,396	999	680	431	315	257	191
Critical (15%)	253	296	418	723	861	747	559	410	348	249	235	179

Alternative 3

Statistic	Monthly Outflow Volume (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	298	902	4,155	6,646	7,924	5,788	3,812	2,471	1,066	729	265	261
20%	266	389	2,140	4,462	4,802	4,293	2,584	1,383	630	659	246	245
30%	257	319	1,154	3,104	3,795	2,714	1,525	913	572	575	246	235
40%	246	290	722	1,875	3,031	2,137	1,238	750	502	492	246	229
50%	246	268	480	1,398	2,079	1,678	867	704	477	492	246	222
60%	246	268	398	1,061	1,416	1,185	754	630	436	428	246	191
70%	246	268	336	768	1,078	1,032	601	579	422	307	246	179
80%	246	268	277	599	821	789	566	493	409	307	241	179
90%	185	208	277	497	634	654	512	437	351	246	222	179
Long Term												
Full Simulation Period[b]	277	506	1,465	2,772	3,236	2,711	1,617	1,122	656	490	252	240
Water Year Types[c]												
Wet (32%)	333	791	3,116	5,609	5,812	5,020	2,996	2,109	1,118	649	271	319
Above Normal (16%)	242	568	1,461	3,096	3,903	3,292	1,636	960	514	645	246	228
Below Normal (13%)	281	422	564	1,156	2,186	1,120	856	699	457	507	254	221
Dry (24%)	250	297	457	992	1,459	1,384	882	612	445	321	245	191
Critical (15%)	234	243	397	721	859	752	528	397	346	246	230	179

Alternative 3 minus No Action Alternative

Statistic	Monthly Outflow Volume (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-316	9	61	313	89	343	-348	-377	-115	-34	-12	-900
20%	-320	-485	28	139	-125	114	-250	-344	20	-29	-13	-889
30%	-320	-506	151	-45	171	-120	-270	-287	24	2	0	-674
40%	-177	-367	-39	83	163	44	-265	-253	37	-5	0	-428
50%	-24	-318	-131	99	42	2	-329	-139	46	0	0	-39
60%	0	-100	39	10	8	-19	-191	-101	14	29	0	-10
70%	0	0	22	-33	56	-29	-157	-13	14	0	0	0
80%	0	0	-1	14	-3	7	-33	-27	26	0	-5	0
90%	0	-2	0	11	1	-8	-52	-9	17	0	-17	0
Long Term												
Full Simulation Period[b]	-124	-181	49	52	50	14	-195	-159	9	-5	-5	-326
Water Year Types[c]												
Wet (32%)	-186	-229	203	100	41	20	-292	-285	-2	-6	-2	-814
Above Normal (16%)	-90	-174	-40	46	96	55	-302	-241	29	-22	-5	-435
Below Normal (13%)	-190	-228	-18	79	138	7	-163	-90	12	-1	0	10
Dry (24%)	-91	-173	-15	12	15	-11	-117	-69	14	6	-13	0
Critical (15%)	-19	-53	-21	-2	-2	5	-30	-13	-2	-3	-5	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-2-3. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Volume

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	614	893	4,094	6,333	7,834	5,445	4,160	2,848	1,180	763	277	1,161
20%	586	874	2,112	4,323	4,927	4,179	2,834	1,727	609	688	259	1,134
30%	576	825	1,003	3,149	3,624	2,834	1,795	1,200	548	573	246	909
40%	423	657	761	1,793	2,868	2,092	1,504	1,004	465	497	246	656
50%	270	586	611	1,299	2,037	1,676	1,197	843	431	492	246	261
60%	246	368	359	1,050	1,407	1,204	946	731	422	400	246	201
70%	246	268	315	800	1,023	1,061	758	592	408	307	246	179
80%	246	268	278	586	823	783	598	520	383	307	246	179
90%	184	210	277	486	633	662	564	446	334	246	240	179
Long Term												
Full Simulation Period[b]	401	686	1,416	2,720	3,186	2,697	1,812	1,281	648	495	258	565
Water Year Types[c]												
Wet (32%)	520	1,020	2,913	5,509	5,771	5,000	3,288	2,394	1,120	655	273	1,133
Above Normal (16%)	332	742	1,502	3,049	3,807	3,236	1,938	1,201	485	667	251	662
Below Normal (13%)	471	650	582	1,077	2,048	1,113	1,019	789	445	508	254	211
Dry (24%)	341	470	471	981	1,443	1,396	999	680	431	315	257	191
Critical (15%)	253	296	418	723	861	747	559	410	348	249	235	179

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	623	960	4,115	6,339	7,831	5,439	4,160	2,849	1,180	767	284	1,161
20%	594	874	2,112	4,319	4,907	4,174	2,807	1,763	606	688	256	1,134
30%	576	830	1,008	3,149	3,653	2,835	1,798	1,237	524	593	246	910
40%	423	660	762	1,785	2,869	2,092	1,542	1,002	453	501	246	651
50%	257	586	616	1,301	2,053	1,666	1,234	873	423	492	246	255
60%	246	369	359	1,048	1,406	1,203	1,028	776	422	400	246	204
70%	246	268	310	800	1,025	1,057	817	629	401	308	246	179
80%	246	268	286	585	823	783	712	561	370	307	246	179
90%	184	211	277	486	633	662	623	462	330	246	230	179
Long Term												
Full Simulation Period[b]	401	690	1,413	2,714	3,184	2,695	1,848	1,312	642	500	257	565
Water Year Types[c]												
Wet (32%)	517	1,020	2,905	5,499	5,773	4,996	3,288	2,411	1,117	667	273	1,132
Above Normal (16%)	334	767	1,505	3,048	3,795	3,232	1,947	1,223	482	668	251	661
Below Normal (13%)	471	650	582	1,075	2,047	1,110	1,061	821	434	513	254	214
Dry (24%)	342	471	467	980	1,444	1,396	1,081	720	423	316	256	191
Critical (15%)	254	296	418	714	856	747	621	462	346	249	233	179

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	9	68	21	6	-4	-6	0	0	0	4	7	0
20%	8	0	0	-4	-20	-5	-27	36	-3	0	-3	0
30%	0	6	6	0	29	1	3	37	-23	20	0	0
40%	0	4	1	-8	0	0	38	-1	-12	4	0	-6
50%	-13	0	5	1	16	-9	37	29	-8	0	0	-6
60%	0	1	0	-2	-2	-1	82	45	0	0	0	3
70%	0	0	-4	0	2	-4	59	37	-7	1	0	0
80%	0	0	8	0	0	0	113	40	-12	0	0	0
90%	0	0	0	0	0	0	59	17	-4	0	-10	0
Long Term												
Full Simulation Period[b]	0	4	-3	-5	-2	-3	36	30	-5	5	-1	0
Water Year Types[c]												
Wet (32%)	-2	0	-8	-11	3	-4	0	17	-3	11	0	-1
Above Normal (16%)	2	25	3	-2	-12	-5	9	22	-3	1	0	-1
Below Normal (13%)	-1	0	0	-2	-1	-2	42	32	-11	6	0	3
Dry (24%)	1	1	-4	-1	1	0	82	40	-8	1	-1	0
Critical (15%)	1	0	0	-9	-5	-1	62	52	-2	0	-2	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-2-4. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Volume

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	357	895	4,054	6,567	8,061	5,795	3,950	2,541	1,167	670	268	260
20%	283	383	2,007	4,470	4,927	4,380	2,580	1,582	679	593	251	240
30%	264	327	950	2,828	3,382	2,653	1,494	954	588	515	246	234
40%	251	291	635	1,564	2,894	2,062	1,215	801	556	492	246	227
50%	246	268	477	1,080	1,904	1,621	855	734	507	475	246	219
60%	246	268	382	833	1,179	1,104	724	674	485	400	246	181
70%	246	268	314	673	908	901	597	563	433	307	246	179
80%	246	268	277	518	698	752	567	535	422	307	232	179
90%	211	208	277	405	562	601	528	437	377	246	215	179
Long Term												
Full Simulation Period[b]	286	506	1,408	2,595	3,126	2,682	1,611	1,161	705	458	252	237
Water Year Types[c]												
Wet (32%)	340	791	3,011	5,453	5,779	5,081	3,010	2,178	1,209	605	271	319
Above Normal (16%)	253	566	1,391	2,845	3,822	3,311	1,615	1,026	562	601	249	224
Below Normal (13%)	291	433	545	879	2,062	1,078	813	719	533	437	255	206
Dry (24%)	260	296	439	815	1,269	1,236	879	635	454	310	242	191
Critical (15%)	240	244	364	670	690	680	525	386	346	248	231	179

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	614	893	4,094	6,333	7,834	5,445	4,160	2,848	1,180	763	277	1,161
20%	586	874	2,112	4,323	4,927	4,179	2,834	1,727	609	688	259	1,134
30%	576	825	1,003	3,149	3,624	2,834	1,795	1,200	548	573	246	909
40%	423	657	761	1,793	2,868	2,092	1,504	1,004	465	497	246	656
50%	270	586	611	1,299	2,037	1,676	1,197	843	431	492	246	261
60%	246	368	359	1,050	1,407	1,204	946	731	422	400	246	201
70%	246	268	315	800	1,023	1,061	758	592	408	307	246	179
80%	246	268	278	586	823	783	598	520	383	307	246	179
90%	184	210	277	486	633	662	564	446	334	246	240	179
Long Term												
Full Simulation Period[b]	401	686	1,416	2,720	3,186	2,697	1,812	1,281	648	495	258	565
Water Year Types[c]												
Wet (32%)	520	1,020	2,913	5,509	5,771	5,000	3,288	2,394	1,120	655	273	1,133
Above Normal (16%)	332	742	1,502	3,049	3,807	3,236	1,938	1,201	485	667	251	662
Below Normal (13%)	471	650	582	1,077	2,048	1,113	1,019	789	445	508	254	211
Dry (24%)	341	470	471	981	1,443	1,396	999	680	431	315	257	191
Critical (15%)	253	296	418	723	861	747	559	410	348	249	235	179

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	258	-3	40	-234	-226	-351	210	308	14	93	9	901
20%	303	491	105	-147	0	-202	254	145	-69	95	8	894
30%	312	497	52	320	242	182	301	246	-41	58	0	675
40%	172	366	126	229	-26	30	288	203	-91	5	0	429
50%	24	318	134	219	133	55	341	109	-76	17	0	42
60%	0	100	-23	218	228	100	222	56	-62	0	0	20
70%	0	0	1	128	115	160	160	29	-24	0	0	0
80%	0	0	1	67	125	31	31	-15	-40	0	14	0
90%	-27	2	0	81	71	61	36	8	-44	0	24	0
Long Term												
Full Simulation Period[b]	115	180	7	125	60	16	201	120	-58	37	5	328
Water Year Types[c]												
Wet (32%)	179	229	-98	57	-9	-82	278	216	-89	50	2	814
Above Normal (16%)	79	176	111	204	-15	-74	323	174	-77	66	2	438
Below Normal (13%)	180	217	37	198	-15	34	206	69	-88	70	-1	6
Dry (24%)	81	174	33	166	174	160	119	46	-23	6	15	0
Critical (15%)	13	52	53	54	171	67	34	24	2	0	5	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-2-5. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Volume

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	357	895	4,054	6,567	8,061	5,795	3,950	2,541	1,167	670	268	260
20%	283	383	2,007	4,470	4,927	4,380	2,580	1,582	679	593	251	240
30%	264	327	950	2,828	3,382	2,653	1,494	954	588	515	246	234
40%	251	291	635	1,564	2,894	2,062	1,215	801	556	492	246	227
50%	246	268	477	1,080	1,904	1,621	855	734	507	475	246	219
60%	246	268	382	833	1,179	1,104	724	674	485	400	246	181
70%	246	268	314	673	908	901	597	563	433	307	246	179
80%	246	268	277	518	698	752	567	535	422	307	232	179
90%	211	208	277	405	562	601	528	437	377	246	215	179
Long Term												
Full Simulation Period[b]	286	506	1,408	2,595	3,126	2,682	1,611	1,161	705	458	252	237
Water Year Types[c]												
Wet (32%)	340	791	3,011	5,453	5,779	5,081	3,010	2,178	1,209	605	271	319
Above Normal (16%)	253	566	1,391	2,845	3,822	3,311	1,615	1,026	562	601	249	224
Below Normal (13%)	291	433	545	879	2,062	1,078	813	719	533	437	255	206
Dry (24%)	260	296	439	815	1,269	1,236	879	635	454	310	242	191
Critical (15%)	240	244	364	670	690	680	525	386	346	248	231	179

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	298	902	4,155	6,646	7,924	5,788	3,812	2,471	1,066	729	265	261
20%	266	389	2,140	4,462	4,802	4,293	2,584	1,383	630	659	246	245
30%	257	319	1,154	3,104	3,795	2,714	1,525	913	572	575	246	235
40%	246	290	722	1,875	3,031	2,137	1,238	750	502	492	246	229
50%	246	268	480	1,398	2,079	1,678	867	704	477	492	246	222
60%	246	268	398	1,061	1,416	1,185	754	630	436	428	246	191
70%	246	268	336	768	1,078	1,032	601	579	422	307	246	179
80%	246	268	277	599	821	789	566	493	409	307	241	179
90%	185	208	277	497	634	654	512	437	351	246	222	179
Long Term												
Full Simulation Period[b]	277	506	1,465	2,772	3,236	2,711	1,617	1,122	656	490	252	240
Water Year Types[c]												
Wet (32%)	333	791	3,116	5,609	5,812	5,020	2,996	2,109	1,118	649	271	319
Above Normal (16%)	242	568	1,461	3,096	3,903	3,292	1,636	960	514	645	246	228
Below Normal (13%)	281	422	564	1,156	2,186	1,120	856	699	457	507	254	221
Dry (24%)	250	297	457	992	1,459	1,384	882	612	445	321	245	191
Critical (15%)	234	243	397	721	859	752	528	397	346	246	230	179

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	-59	7	101	79	-137	-8	-138	-70	-101	58	-2	1
20%	-17	6	133	-8	-125	-88	4	-199	-49	65	-5	5
30%	-7	-8	203	275	413	62	31	-41	-16	60	0	1
40%	-5	-1	87	311	137	75	23	-51	-55	0	0	2
50%	0	0	3	318	175	57	12	-30	-31	17	0	2
60%	0	0	17	228	236	80	31	-44	-48	29	0	10
70%	0	0	22	95	171	131	4	16	-10	0	0	0
80%	0	0	0	81	122	37	-2	-42	-13	0	9	0
90%	-27	0	0	92	72	53	-17	-1	-27	0	7	0
Long Term												
Full Simulation Period[b]	-9	-1	56	177	111	30	6	-39	-49	33	0	3
Water Year Types[c]												
Wet (32%)	-7	1	106	157	32	-62	-13	-69	-91	44	1	0
Above Normal (16%)	-11	3	70	250	81	-19	21	-67	-48	44	-3	3
Below Normal (13%)	-10	-11	19	277	123	41	43	-20	-76	70	0	15
Dry (24%)	-10	1	18	178	190	148	3	-23	-9	11	2	0
Critical (15%)	-6	-1	33	52	169	72	3	11	0	-2	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-2-6. Sacramento/San Joaquin River Delta Outflow, Monthly Outflow Volume

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	357	895	4,054	6,567	8,061	5,795	3,950	2,541	1,167	670	268	260
20%	283	383	2,007	4,470	4,927	4,380	2,580	1,582	679	593	251	240
30%	264	327	950	2,828	3,382	2,653	1,494	954	588	515	246	234
40%	251	291	635	1,564	2,894	2,062	1,215	801	556	492	246	227
50%	246	268	477	1,080	1,904	1,621	855	734	507	475	246	219
60%	246	268	382	833	1,179	1,104	724	674	485	400	246	181
70%	246	268	314	673	908	901	597	563	433	307	246	179
80%	246	268	277	518	698	752	567	535	422	307	232	179
90%	211	208	277	405	562	601	528	437	377	246	215	179
Long Term												
Full Simulation Period[b]	286	506	1,408	2,595	3,126	2,682	1,611	1,161	705	458	252	237
Water Year Types[c]												
Wet (32%)	340	791	3,011	5,453	5,779	5,081	3,010	2,178	1,209	605	271	319
Above Normal (16%)	253	566	1,391	2,845	3,822	3,311	1,615	1,026	562	601	249	224
Below Normal (13%)	291	433	545	879	2,062	1,078	813	719	533	437	255	206
Dry (24%)	260	296	439	815	1,269	1,236	879	635	454	310	242	191
Critical (15%)	240	244	364	670	690	680	525	386	346	248	231	179

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	623	960	4,115	6,339	7,831	5,439	4,160	2,849	1,180	767	284	1,161
20%	594	874	2,112	4,319	4,907	4,174	2,807	1,763	606	688	256	1,134
30%	576	830	1,008	3,149	3,653	2,835	1,798	1,237	524	593	246	910
40%	423	660	762	1,785	2,869	2,092	1,542	1,002	453	501	246	651
50%	257	586	616	1,301	2,053	1,666	1,234	873	423	492	246	255
60%	246	369	359	1,048	1,406	1,203	1,028	776	422	400	246	204
70%	246	268	310	800	1,025	1,057	817	629	401	308	246	179
80%	246	268	286	585	823	783	712	561	370	307	246	179
90%	184	211	277	486	633	662	623	462	330	246	230	179
Long Term												
Full Simulation Period[b]	401	690	1,413	2,714	3,184	2,695	1,848	1,312	642	500	257	565
Water Year Types[c]												
Wet (32%)	517	1,020	2,905	5,499	5,773	4,996	3,288	2,411	1,117	667	273	1,132
Above Normal (16%)	334	767	1,505	3,048	3,795	3,232	1,947	1,223	482	668	251	661
Below Normal (13%)	471	650	582	1,075	2,047	1,110	1,061	821	434	513	254	214
Dry (24%)	342	471	467	980	1,444	1,396	1,081	720	423	316	256	191
Critical (15%)	254	296	418	714	856	747	621	462	346	249	233	179

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Outflow Volume (TAF)											
Probability of Exceedance[a]												
10%	266	65	62	-228	-230	-356	210	308	13	96	17	901
20%	311	491	105	-152	-20	-207	227	181	-73	95	5	894
30%	312	503	58	320	271	182	304	283	-64	78	0	675
40%	172	369	127	221	-25	30	326	201	-103	9	0	424
50%	11	318	139	220	150	45	379	138	-84	17	0	36
60%	0	101	-23	216	226	99	304	102	-62	0	0	23
70%	0	0	-4	128	117	156	219	66	-31	1	0	0
80%	0	0	9	67	125	31	144	25	-52	0	14	0
90%	-27	3	0	81	71	61	94	25	-47	0	15	0
Long Term												
Full Simulation Period[b]	115	184	4	120	59	13	237	151	-63	42	5	328
Water Year Types[c]												
Wet (32%)	177	229	-105	46	-6	-86	278	233	-92	61	2	813
Above Normal (16%)	81	201	114	202	-27	-79	332	196	-80	67	2	437
Below Normal (13%)	180	217	37	196	-16	32	248	102	-99	76	-1	8
Dry (24%)	82	175	28	165	175	160	201	85	-31	6	14	0
Critical (15%)	14	52	53	45	166	67	96	76	0	0	3	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

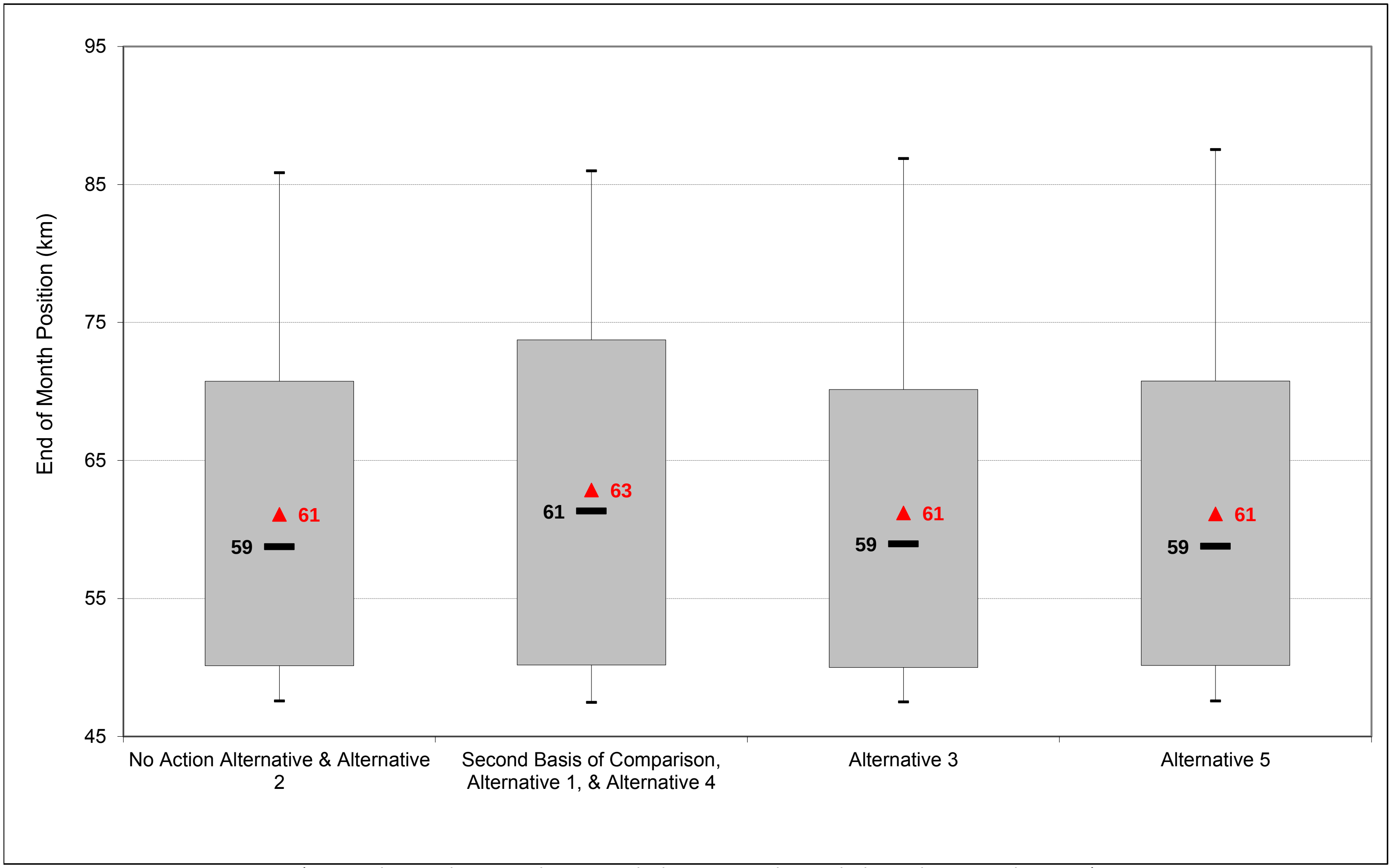
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.16. X2 Position

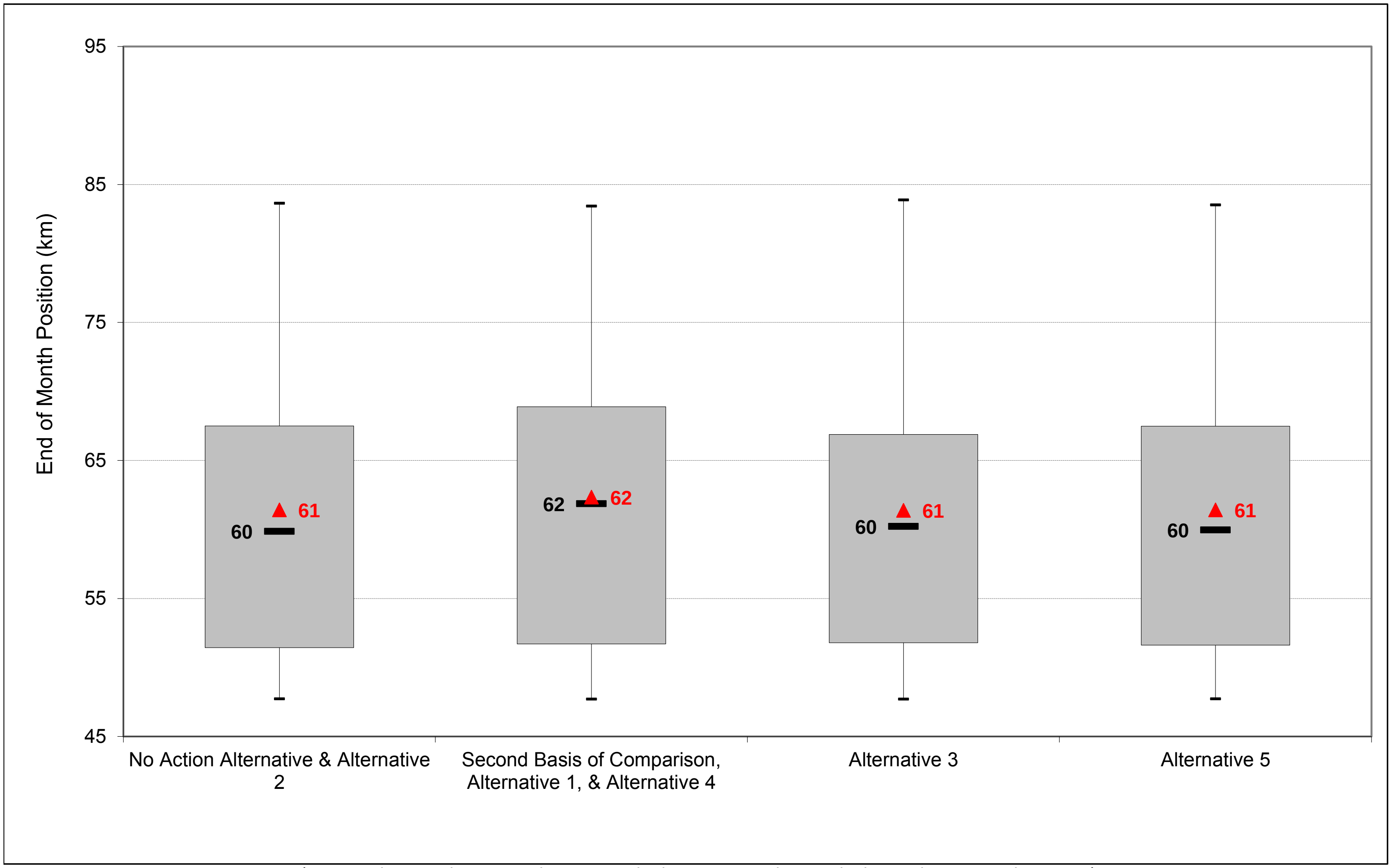
Figure C-16-1-1. X2, February Average Position



(Box=25th to 75th percentile range, whiskers=min and max, dash=median, triangle=mean)

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

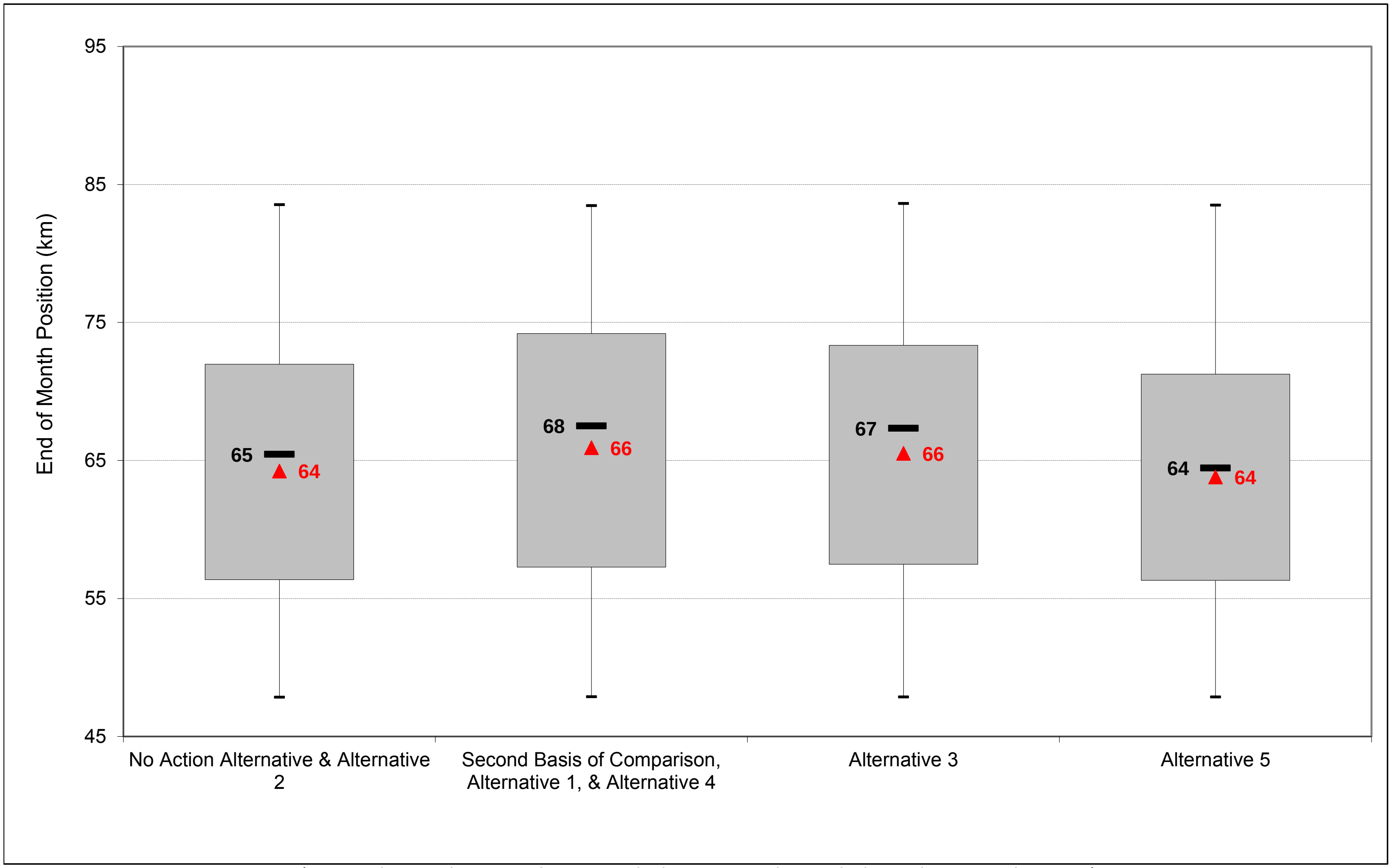
Figure C-16-1-2. X2, March Average Position



(Box=25th to 75th percentile range, whiskers=min and max, dash=median, triangle=mean)

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

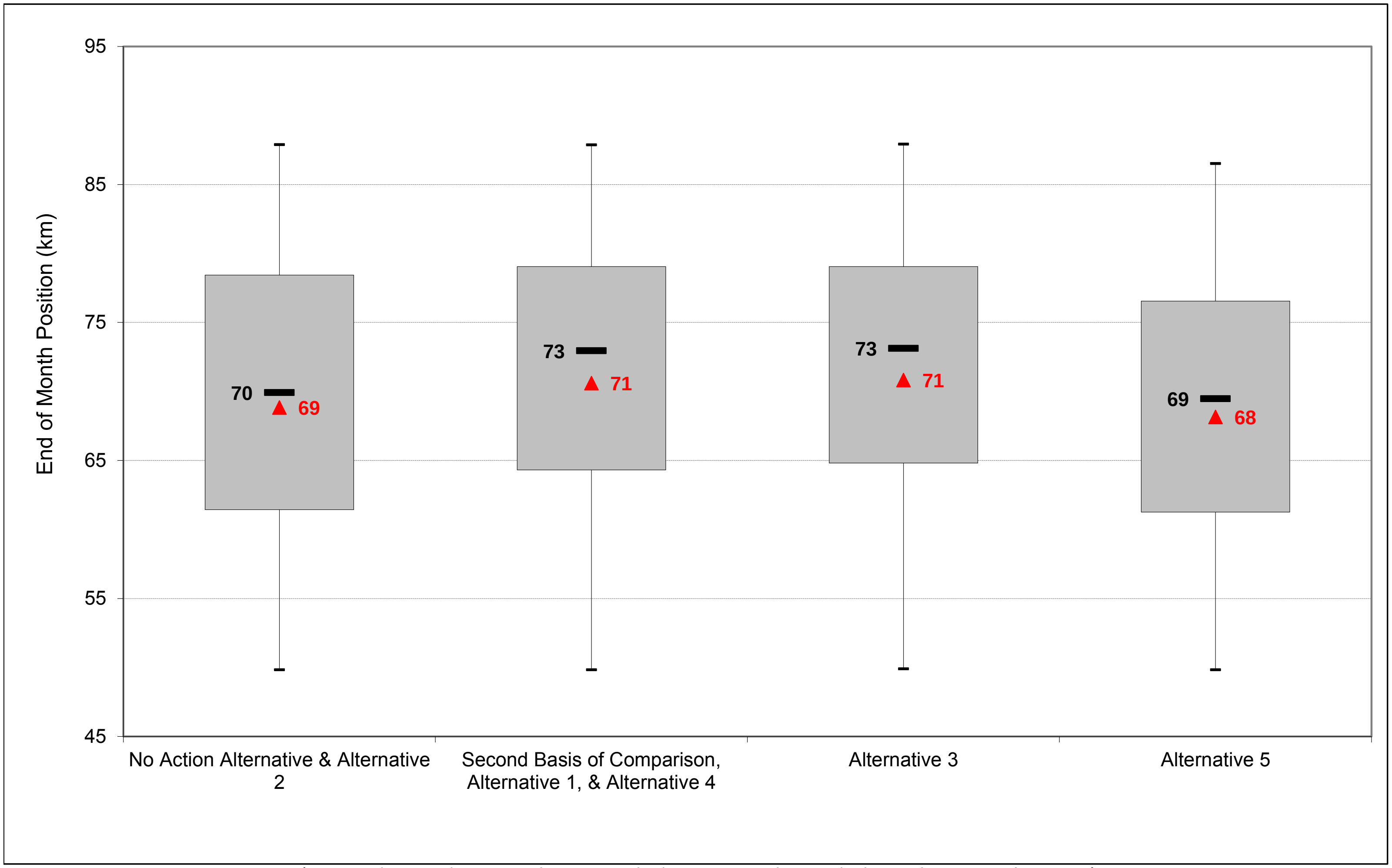
Figure C-16-1-3. X2, April Average Position



(Box=25th to 75th percentile range, whiskers=min and max, dash=median, triangle=mean)

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

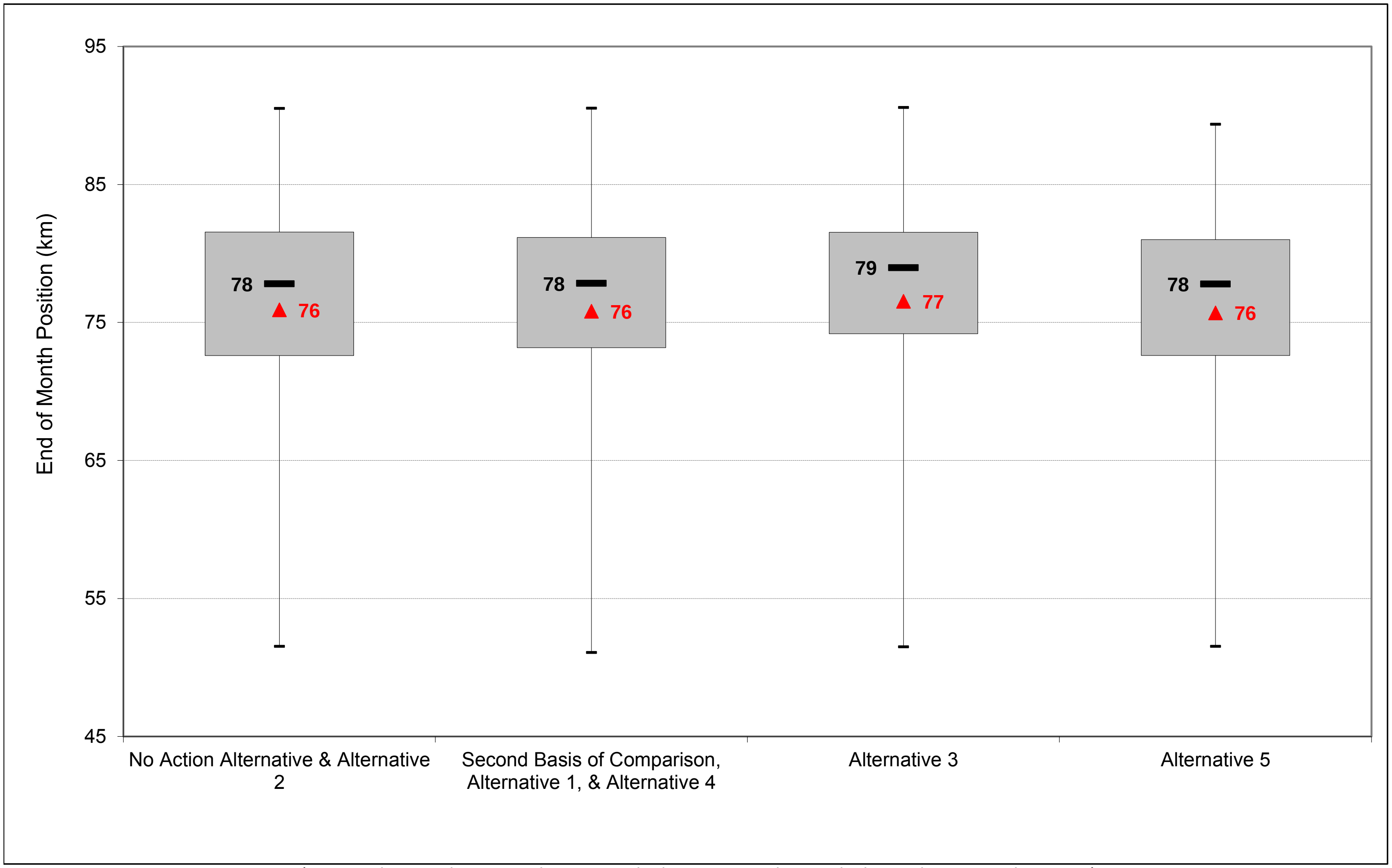
Figure C-16-1-4. X2, May Average Position



(Box=25th to 75th percentile range, whiskers=min and max, dash=median, triangle=mean)

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

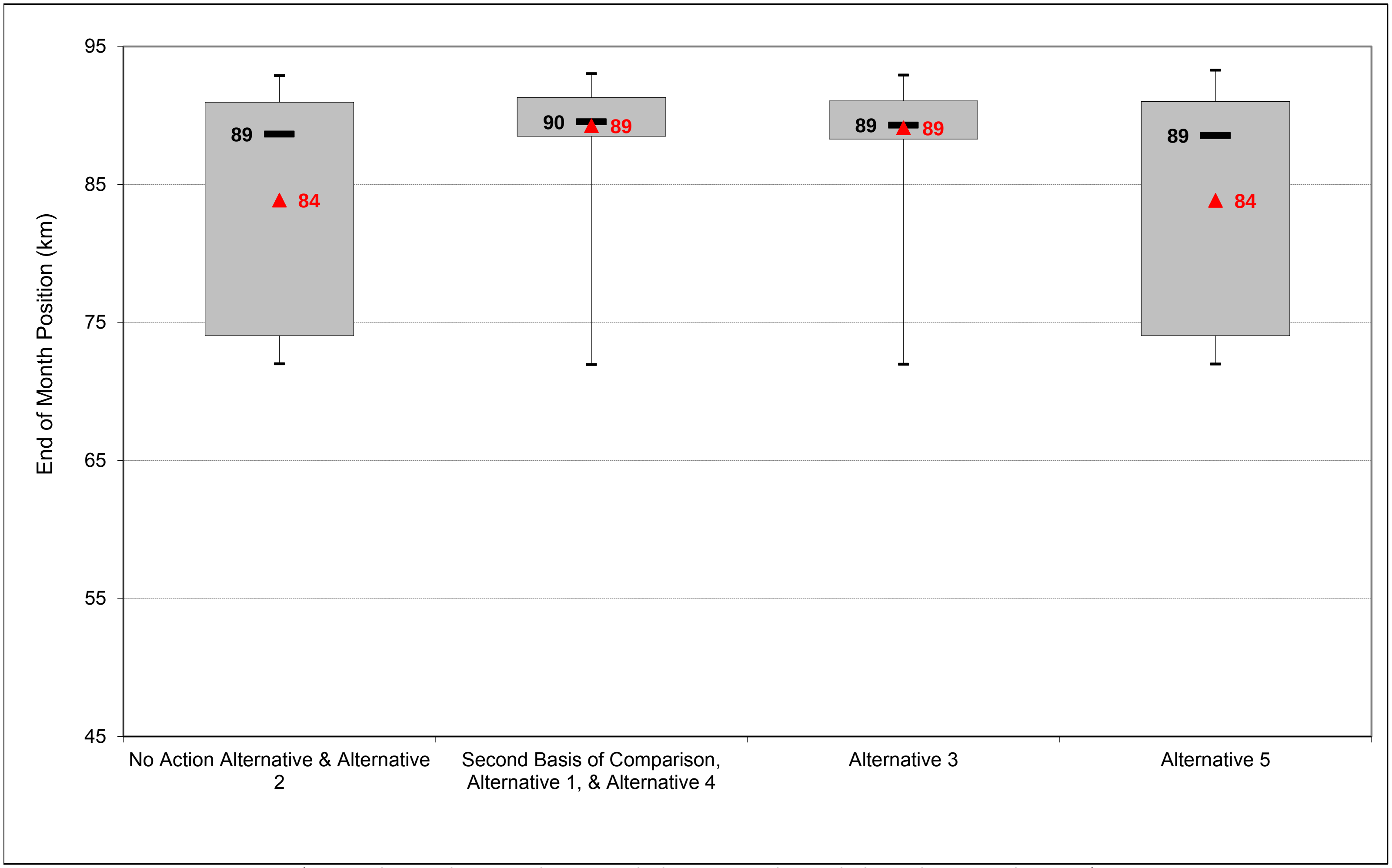
Figure C-16-1-5. X2, June Average Position



(Box=25th to 75th percentile range, whiskers=min and max, dash=median, triangle=mean)

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

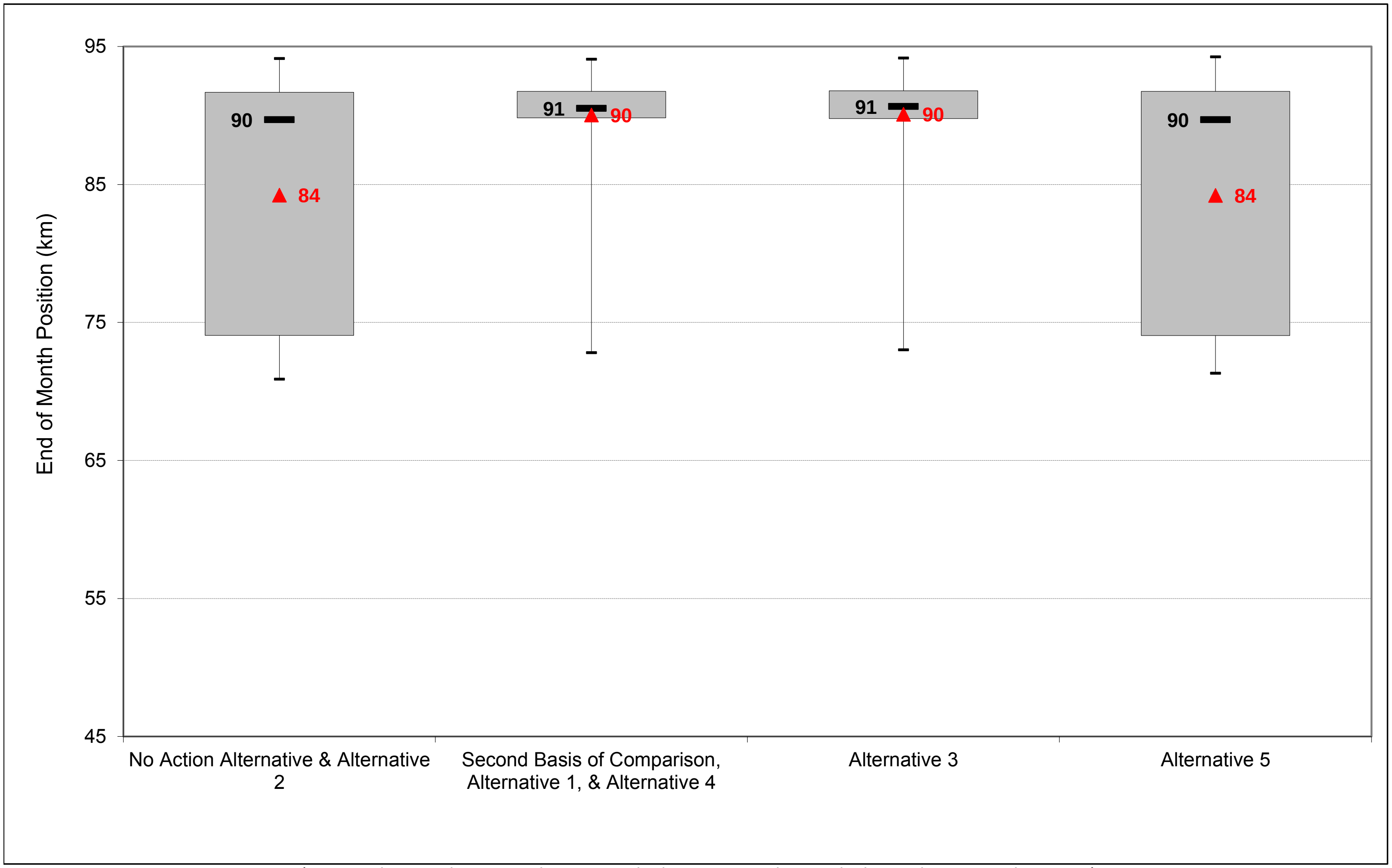
Figure C-16-1-6. X2, September Average Position



(Box=25th to 75th percentile range, whiskers=min and max, dash=median, triangle=mean)

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

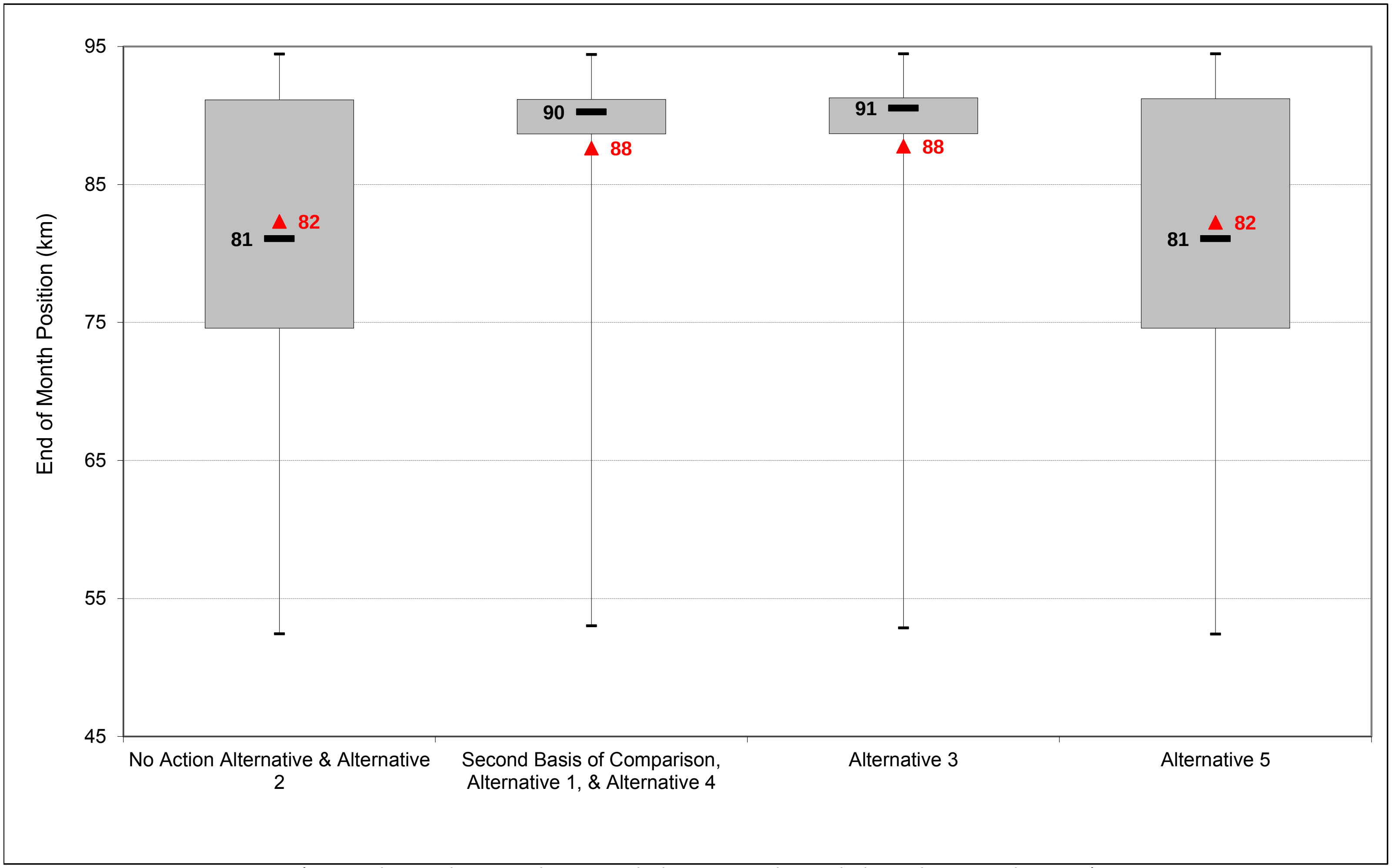
Figure C-16-1-7. X2, October Average Position



(Box=25th to 75th percentile range, whiskers=min and max, dash=median, triangle=mean)

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

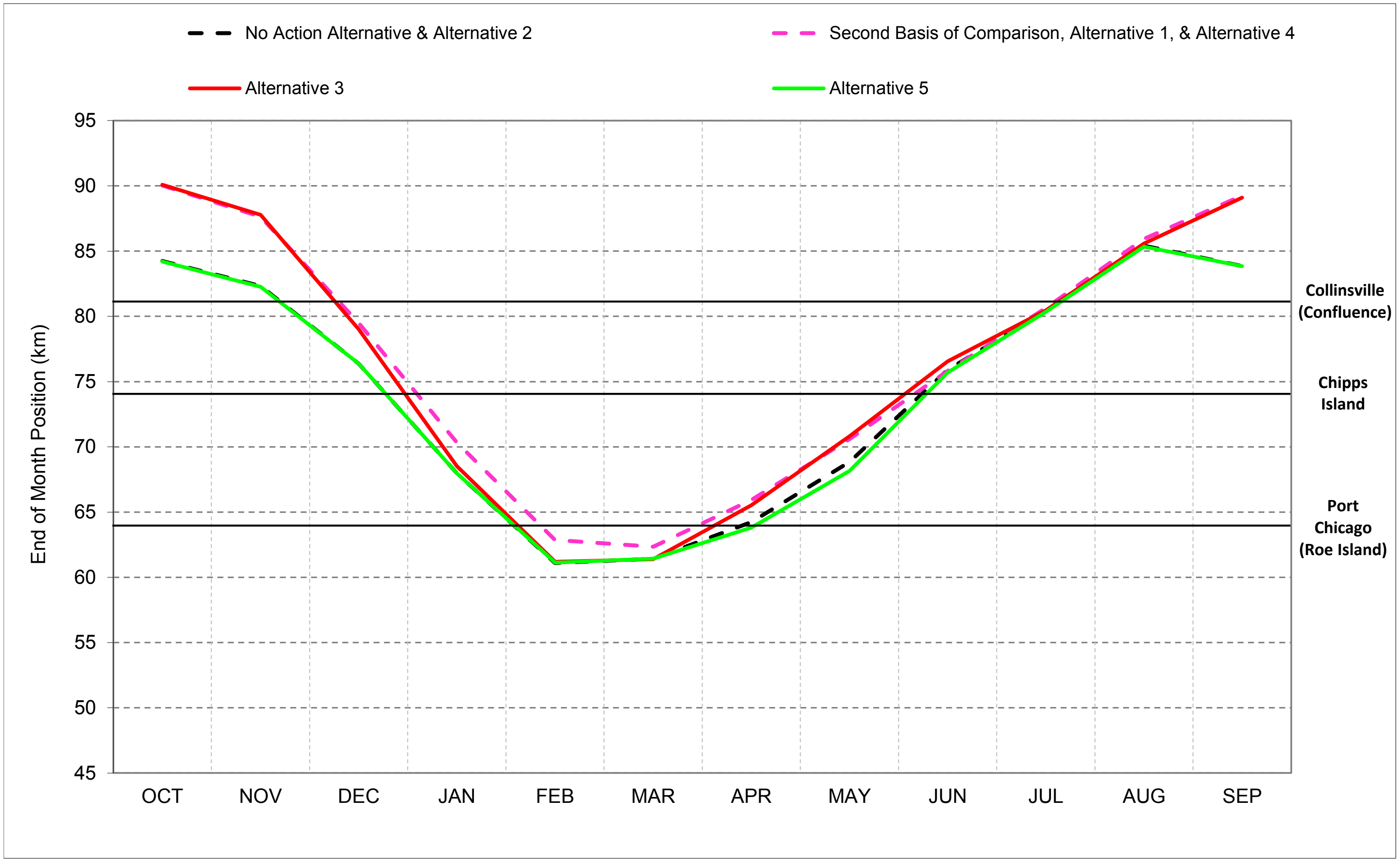
Figure C-16-1-8. X2, November Average Position



(Box=25th to 75th percentile range, whiskers=min and max, dash=median, triangle=mean)

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

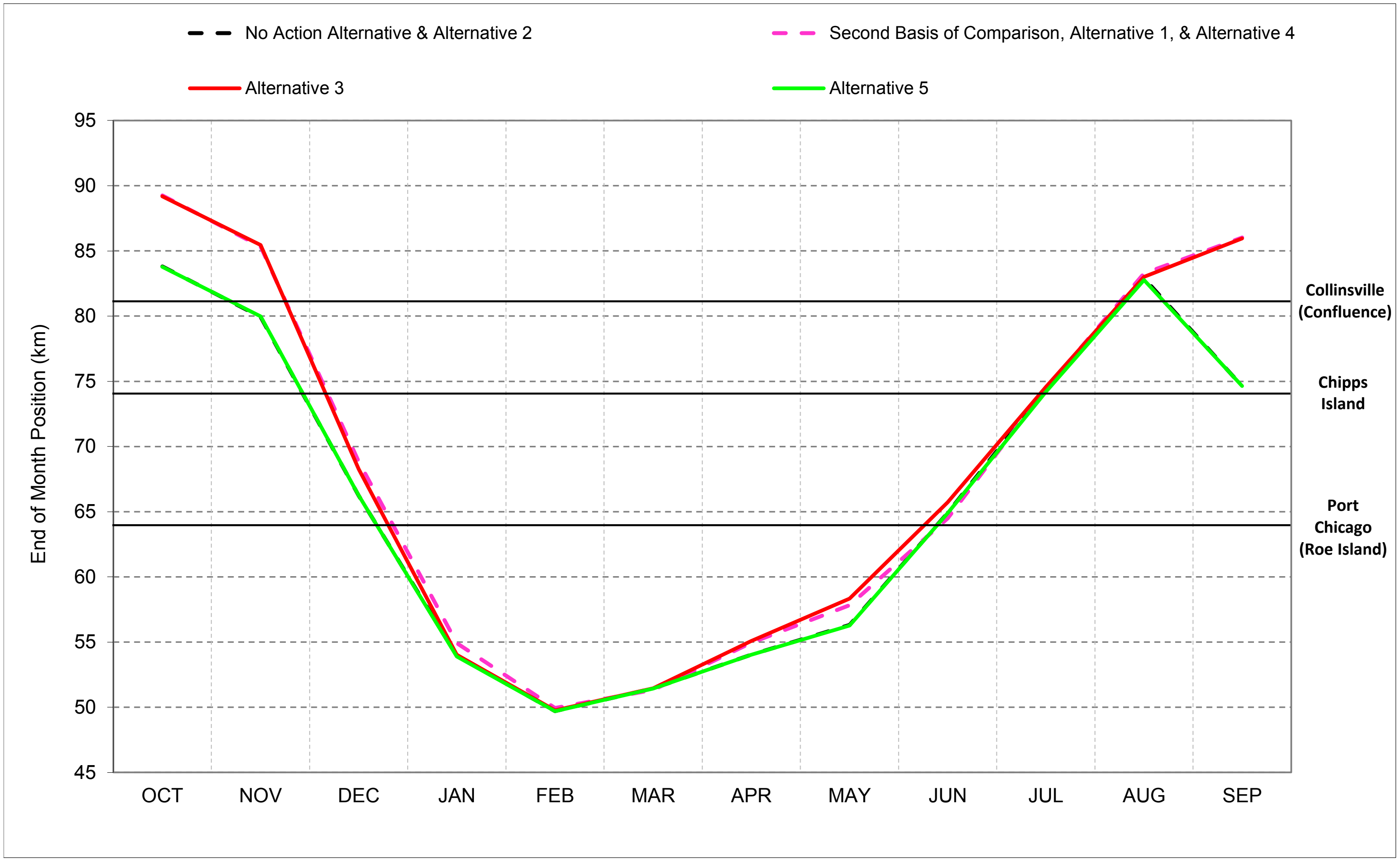
Figure C-16-2-1. X2, Long-Term* Average Position



*Based on the 82-year simulation period.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-16-2-2. X2, Wet Year* Long-Term Average Position**

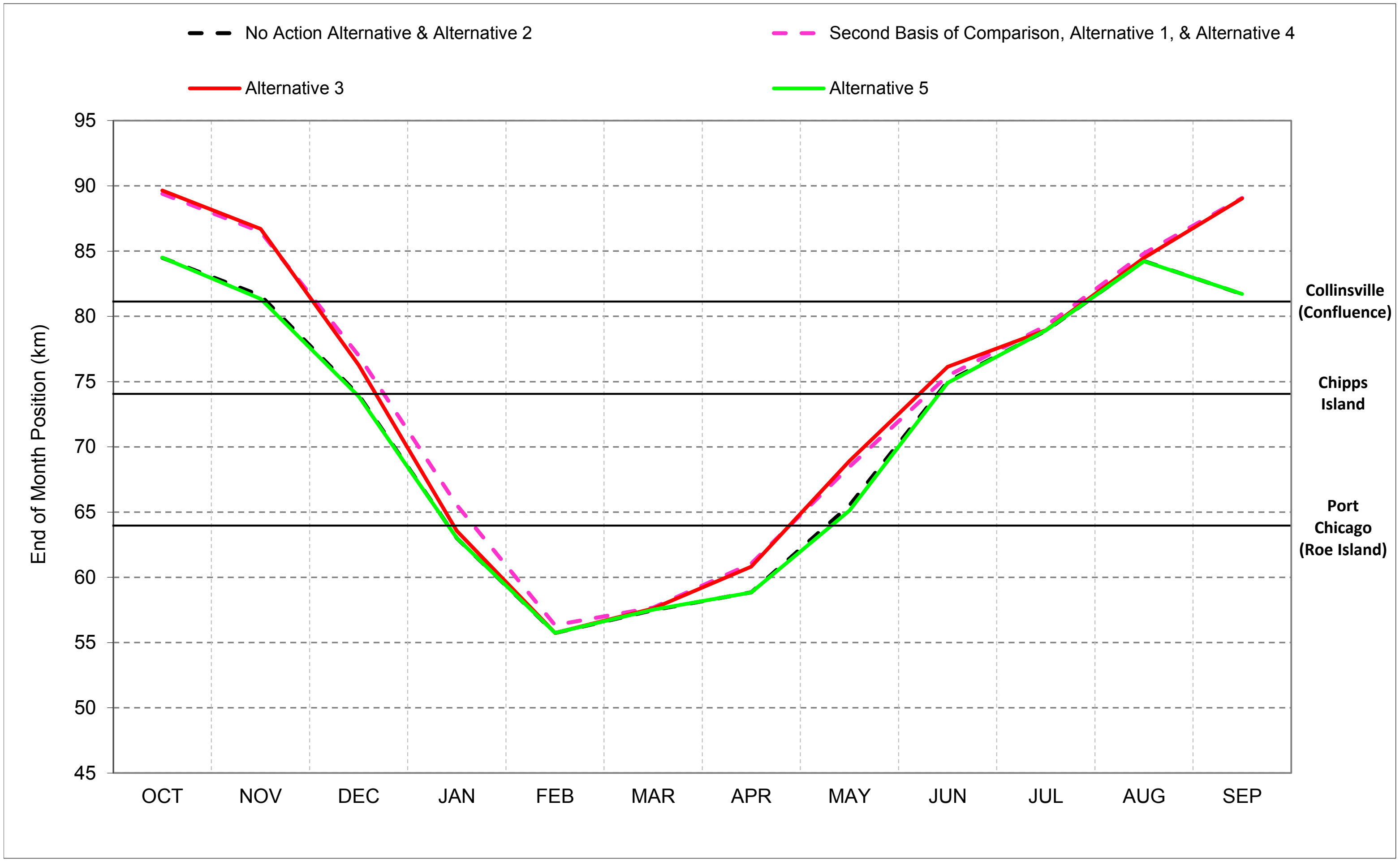


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-16-2-3. X2, Above Normal Year* Long-Term Average Position**

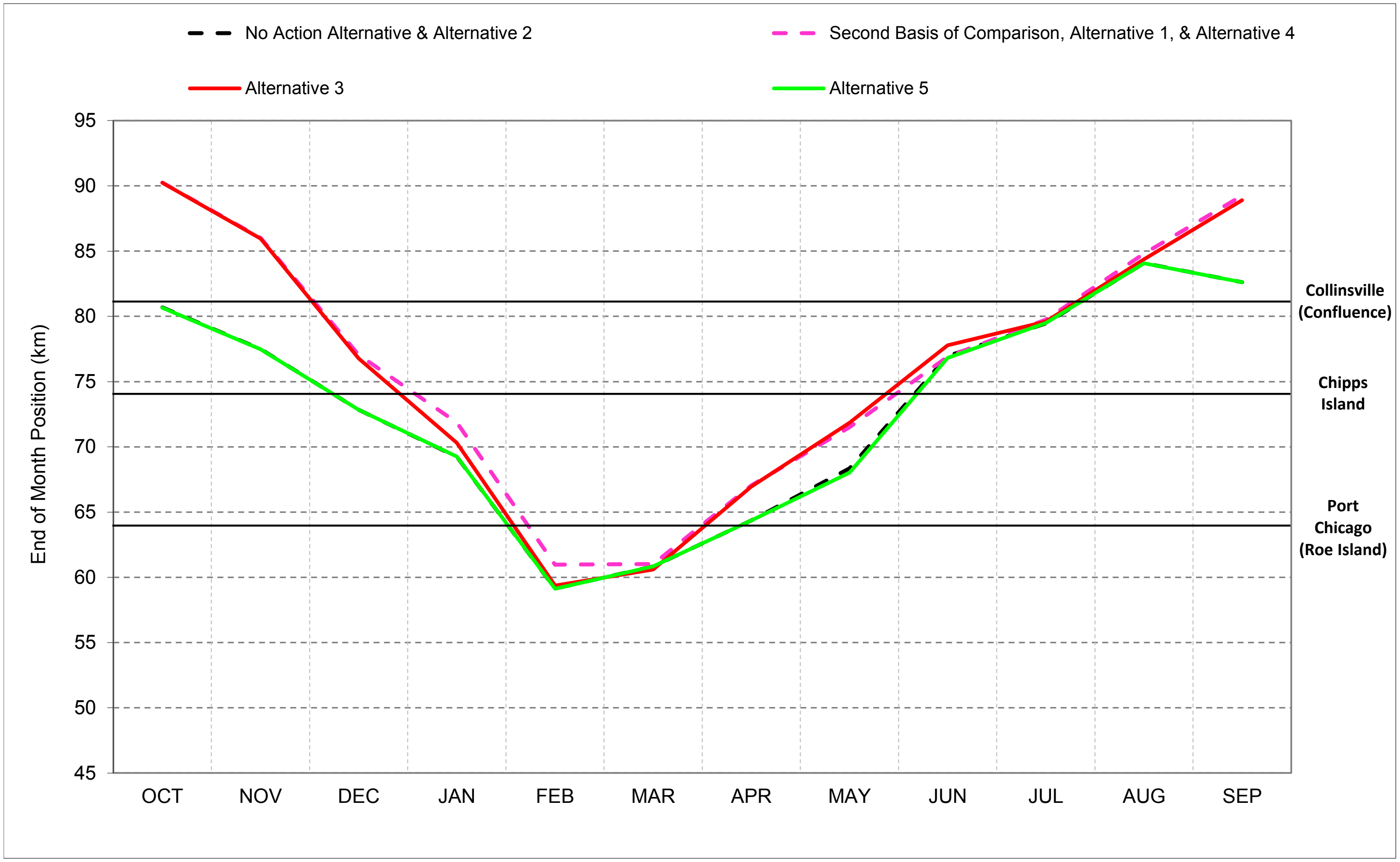


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-16-2-4. X2, Below Normal Year* Long-Term Average Position**

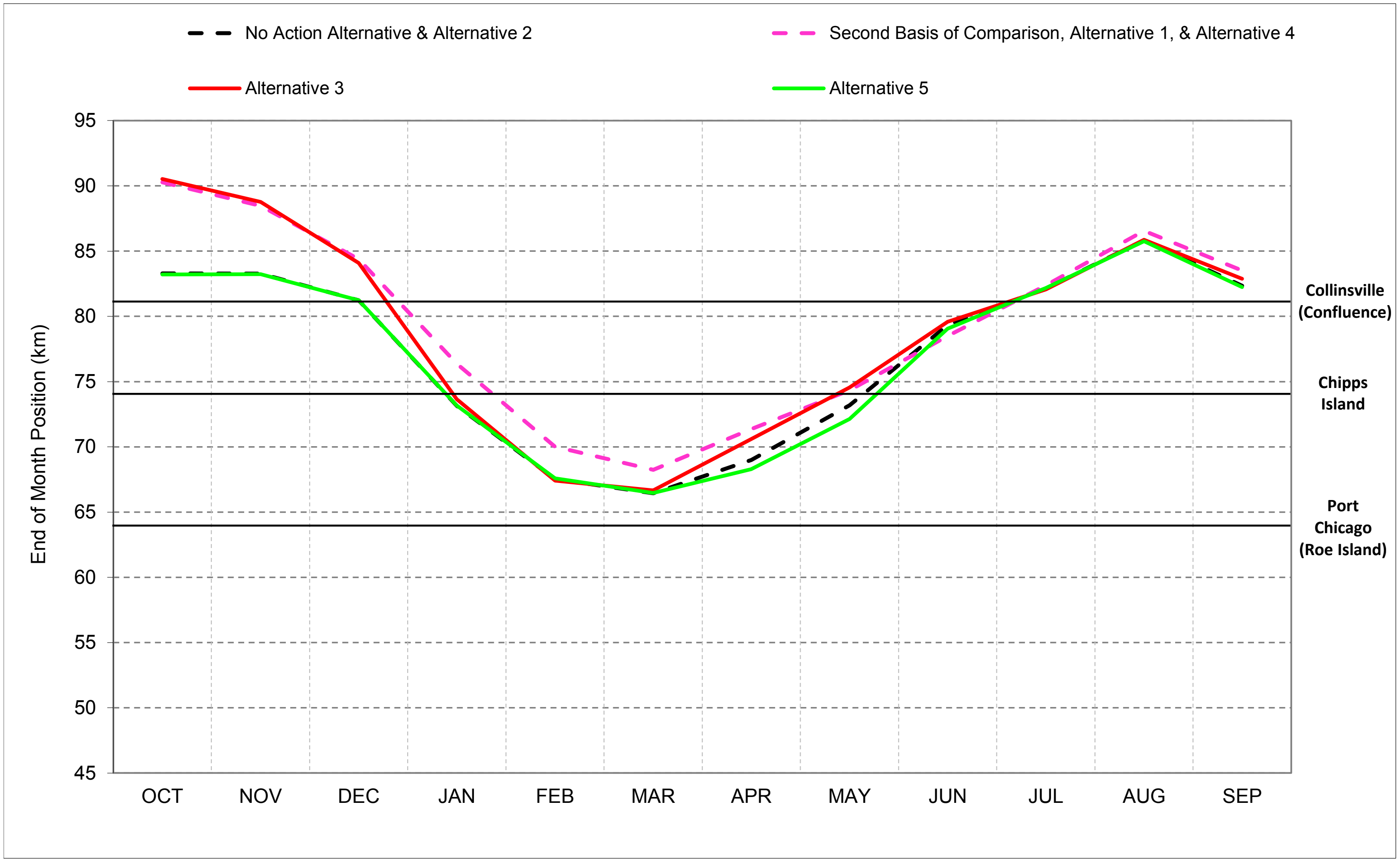


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-16-2-5. X2, Dry Year* Long-Term Average Position**

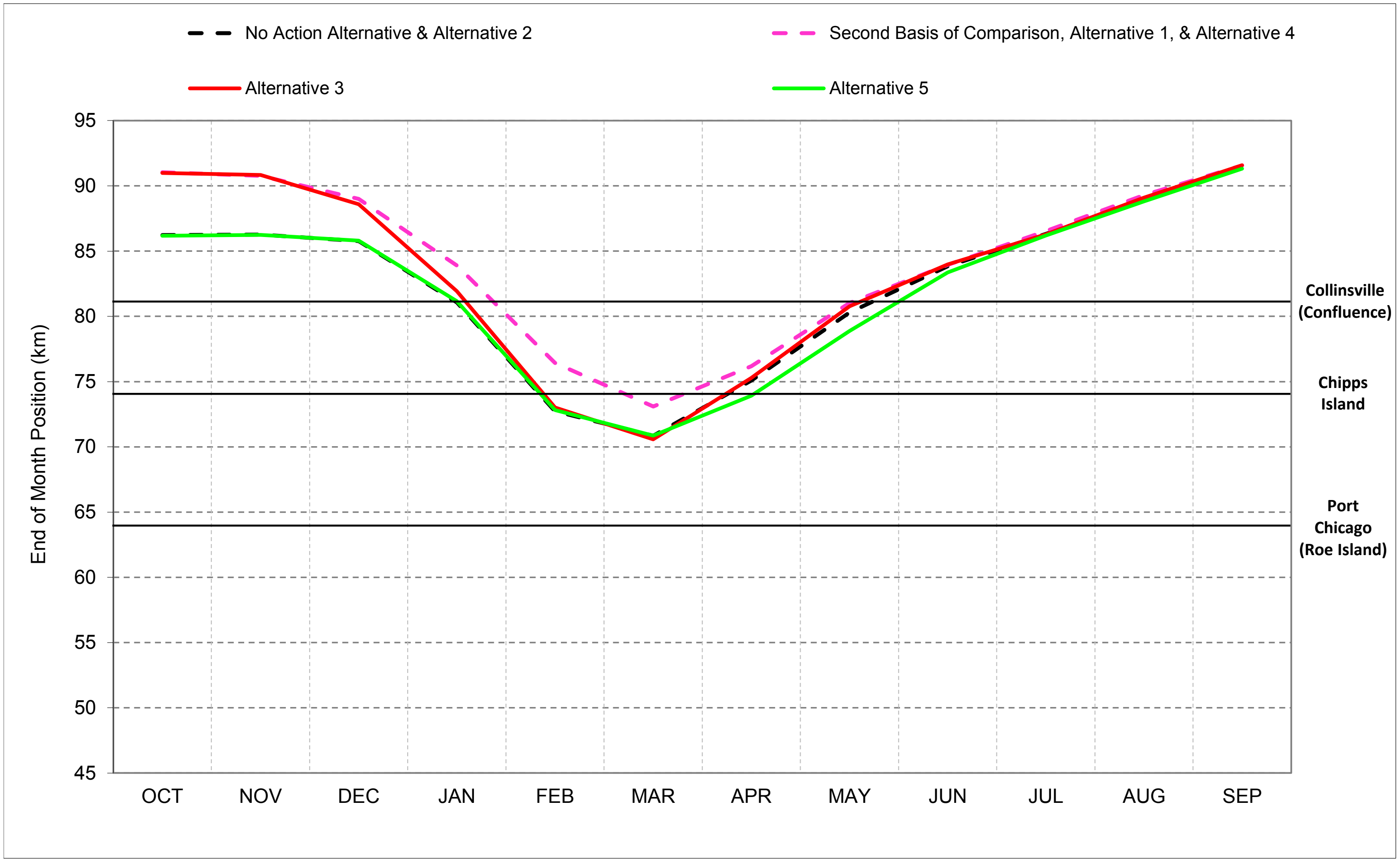


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-16-2-6. X2, Critical Year* Long-Term Average Position**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-1. X2, End of Month Position

No Action Alternative

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	93.4	93.6	90.8	84.0	77.3	75.9	78.1	81.0	83.1	86.5	89.7	91.9
20%	91.8	91.4	87.6	82.3	71.7	72.8	73.6	79.3	81.8	84.9	88.1	91.1
30%	91.6	90.9	83.9	79.8	67.2	65.7	70.0	77.3	81.0	84.3	87.5	90.6
40%	91.1	88.1	82.5	73.5	64.0	64.5	66.7	72.3	80.2	82.4	86.2	90.1
50%	89.7	81.1	81.1	71.2	58.5	59.9	64.7	69.9	77.8	80.6	84.8	88.5
60%	81.0	81.0	79.7	64.4	55.2	58.0	60.9	66.3	76.6	78.1	84.6	81.0
70%	74.1	75.1	72.0	55.1	51.9	53.9	58.0	63.8	73.4	77.4	84.1	74.1
80%	74.0	74.0	62.2	51.3	49.4	50.6	53.8	59.1	69.8	76.8	82.7	74.0
90%	74.0	74.0	52.8	49.4	48.2	49.0	49.9	53.3	63.5	74.6	82.2	74.0
Long Term												
Full Simulation Period[b]	84.2	82.3	76.4	68.0	61.1	61.4	64.2	68.8	75.9	80.4	85.4	83.9
Water Year Types[c]												
Wet (32%)	73.9	72.9	71.1	54.8	51.2	53.1	55.1	58.4	67.4	74.9	82.7	73.9
Above Normal (16%)	81.0	79.3	75.9	61.0	54.9	55.3	59.1	65.2	75.3	77.9	83.1	74.7
Below Normal (13%)	89.1	87.6	78.8	74.6	64.3	66.9	69.0	72.9	79.1	81.1	85.1	89.3
Dry (24%)	91.5	86.9	75.4	77.7	67.7	65.4	68.8	74.5	80.1	84.5	87.6	90.5
Critical (15%)	93.6	93.6	87.8	82.0	75.3	74.6	77.7	82.3	85.2	87.9	90.3	92.1

Alternative 1

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	92.6	93.1	90.9	87.3	80.8	78.5	78.7	81.5	83.5	86.7	89.9	92.0
20%	91.9	91.4	90.6	85.8	75.6	73.6	75.2	79.5	81.6	84.8	88.6	91.5
30%	91.4	91.0	89.6	83.3	72.0	68.3	73.1	78.5	80.6	84.3	88.0	91.0
40%	91.0	90.8	88.6	78.8	66.2	66.5	69.7	75.3	78.7	82.0	86.6	90.1
50%	90.5	90.3	86.7	75.6	61.4	61.6	67.4	72.9	77.8	80.9	85.3	89.5
60%	90.3	89.6	82.5	67.7	55.7	57.8	64.1	69.2	76.2	79.1	84.7	89.0
70%	90.0	89.1	76.9	56.2	52.4	54.1	59.7	66.0	74.4	78.3	84.5	88.7
80%	89.6	88.0	65.9	52.0	49.3	50.4	54.7	60.2	71.4	77.3	84.0	88.4
90%	88.2	79.6	53.3	49.5	48.3	48.8	50.4	54.6	63.9	74.7	83.0	87.8
Long Term												
Full Simulation Period[b]	90.0	87.6	79.5	70.3	62.9	62.3	65.9	70.6	75.8	80.6	85.9	89.3
Water Year Types[c]												
Wet (32%)	87.8	84.8	75.8	55.7	51.6	53.0	56.4	60.2	67.2	75.2	83.3	86.7
Above Normal (16%)	90.3	87.9	80.5	63.6	56.0	55.2	61.2	67.9	75.1	78.2	83.8	81.9
Below Normal (13%)	89.4	88.6	80.6	78.7	66.4	67.6	71.3	74.9	78.2	81.3	85.9	89.7
Dry (24%)	91.2	87.2	76.9	81.1	70.8	67.5	70.7	75.9	80.2	84.4	88.1	90.9
Critical (15%)	93.1	93.4	89.8	83.6	78.1	76.7	78.8	83.3	85.7	88.2	90.6	92.3

Alternative 1 minus No Action Alternative

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.7	-0.5	0.1	3.3	3.5	2.6	0.5	0.5	0.3	0.2	0.2	0.1
20%	0.1	-0.1	3.0	3.6	3.9	0.8	1.6	0.3	-0.2	-0.1	0.5	0.4
30%	-0.2	0.1	5.6	3.5	4.8	2.5	3.1	1.3	-0.4	0.0	0.6	0.4
40%	-0.1	2.7	6.1	5.3	2.2	2.0	3.0	3.0	-1.5	-0.4	0.3	0.0
50%	0.8	9.2	5.6	4.4	3.0	1.7	2.7	3.0	0.0	0.3	0.5	1.1
60%	9.3	8.6	2.7	3.4	0.5	-0.2	3.3	2.9	-0.4	1.0	0.1	8.0
70%	15.9	14.0	5.0	1.1	0.5	0.2	1.7	2.2	1.0	0.9	0.4	14.6
80%	15.6	13.9	3.6	0.7	-0.1	-0.2	0.9	1.0	1.6	0.4	1.3	14.4
90%	14.2	5.6	0.5	0.1	0.1	-0.2	0.5	1.2	0.4	0.1	0.8	13.8
Long Term												
Full Simulation Period[b]	5.8	5.3	3.1	2.4	1.8	0.9	1.7	1.8	-0.1	0.2	0.5	5.4
Water Year Types[c]												
Wet	13.9	11.9	4.7	0.9	0.4	0.0	1.3	1.9	-0.1	0.4	0.5	12.7
Above Normal	9.3	8.6	4.5	2.6	1.1	0.0	2.1	2.7	-0.2	0.3	0.7	7.2
Below Normal	0.3	1.0	1.8	4.2	2.1	0.8	2.3	2.0	-0.9	0.2	0.8	0.4
Dry	-0.2	0.3	1.5	3.5	3.2	2.2	1.9	1.4	0.1	-0.1	0.4	0.3
Critical	-0.5	-0.2	2.0	1.6	2.9	2.2	1.2	0.9	0.5	0.3	0.3	0.2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and And Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-2. X2, End of Month Position

No Action Alternative

Statistic	End of Month Position (km) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	93.4	93.6	90.8	84.0	77.3	75.9	78.1	81.0	83.1	86.5	89.7	91.9
20%	91.8	91.4	87.6	82.3	71.7	72.8	73.6	79.3	81.8	84.9	88.1	91.1
30%	91.6	90.9	83.9	79.8	67.2	65.7	70.0	77.3	81.0	84.3	87.5	90.6
40%	91.1	88.1	82.5	73.5	64.0	64.5	66.7	72.3	80.2	82.4	86.2	90.1
50%	89.7	81.1	81.1	71.2	58.5	59.9	64.7	69.9	77.8	80.6	84.8	88.5
60%	81.0	81.0	79.7	64.4	55.2	58.0	60.9	66.3	76.6	78.1	84.6	81.0
70%	74.1	75.1	72.0	55.1	51.9	53.9	58.0	63.8	73.4	77.4	84.1	74.1
80%	74.0	74.0	62.2	51.3	49.4	50.6	53.8	59.1	69.8	76.8	82.7	74.0
90%	74.0	74.0	52.8	49.4	48.2	49.0	49.9	53.3	63.5	74.6	82.2	74.0
Long Term												
Full Simulation Period[b]	84.2	82.3	76.4	68.0	61.1	61.4	64.2	68.8	75.9	80.4	85.4	83.9
Water Year Types[c]												
Wet (32%)	73.9	72.9	71.1	54.8	51.2	53.1	55.1	58.4	67.4	74.9	82.7	73.9
Above Normal (16%)	81.0	79.3	75.9	61.0	54.9	55.3	59.1	65.2	75.3	77.9	83.1	74.7
Below Normal (13%)	89.1	87.6	78.8	74.6	64.3	66.9	69.0	72.9	79.1	81.1	85.1	89.3
Dry (24%)	91.5	86.9	75.4	77.7	67.7	65.4	68.8	74.5	80.1	84.5	87.6	90.5
Critical (15%)	93.6	93.6	87.8	82.0	75.3	74.6	77.7	82.3	85.2	87.9	90.3	92.1

Alternative 3

Statistic	End of Month Position (km) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	93.2	93.6	90.8	86.1	77.8	75.8	78.2	81.5	83.2	86.4	90.0	92.2
20%	91.9	91.5	90.5	83.7	71.7	72.5	74.6	79.6	82.0	84.8	88.4	91.3
30%	91.6	91.1	89.4	81.5	67.6	66.1	71.3	78.4	81.0	84.3	87.7	90.8
40%	91.2	90.8	88.5	74.8	64.1	64.5	69.7	75.6	80.3	81.7	86.0	89.8
50%	90.7	90.6	86.7	71.8	58.8	60.0	67.3	73.1	78.8	80.7	84.9	89.3
60%	90.2	89.8	82.6	64.6	54.4	58.0	63.6	70.4	77.1	78.4	84.6	88.7
70%	89.9	89.0	74.2	55.1	52.2	54.4	59.9	66.8	75.1	77.8	84.2	88.4
80%	89.6	87.9	65.1	51.2	49.3	50.4	54.8	61.7	71.8	77.1	83.2	88.2
90%	88.2	79.6	53.0	49.5	48.1	48.8	50.4	54.8	64.9	75.0	82.4	87.6
Long Term												
Full Simulation Period[b]	90.1	87.8	79.0	68.5	61.2	61.4	65.5	70.8	76.5	80.5	85.6	89.1
Water Year Types[c]												
Wet (32%)	87.8	84.8	75.3	54.8	51.3	53.1	56.5	60.8	68.3	75.1	82.9	86.6
Above Normal (16%)	90.3	88.0	80.0	61.5	54.9	55.0	60.9	68.4	76.2	78.0	83.4	81.8
Below Normal (13%)	89.2	88.8	80.2	75.4	64.0	66.6	70.5	74.9	79.6	81.0	85.1	89.2
Dry (24%)	91.4	87.4	76.4	78.8	67.9	65.5	69.9	76.0	80.4	84.3	87.8	90.8
Critical (15%)	93.4	93.7	89.3	82.7	75.6	74.6	78.1	82.8	85.4	88.0	90.5	92.3

Alternative 3 minus No Action Alternative

Statistic	End of Month Position (km) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.2	-0.1	**0.0**	**2.1**	**0.5**	-0.1	**0.0**	**0.4**	**0.0**	-0.1	**0.3**	**0.3**
20%	**0.1**	**0.0**	**2.8**	**1.4**	0.0	-0.2	**1.1**	**0.3**	**0.2**	-0.1	**0.3**	**0.3**
30%	**0.0**	**0.2**	**5.5**	**1.7**	**0.4**	**0.4**	**1.2**	**1.2**	0.0	**0.0**	**0.2**	**0.2**
40%	**0.1**	**2.7**	**5.9**	**1.3**	**0.1**	0.0	**3.0**	**3.3**	**0.2**	-0.6	-0.2	-0.3
50%	**1.0**	**9.5**	**5.6**	**0.6**	**0.4**	**0.2**	**2.5**	**3.3**	**1.1**	**0.1**	**0.1**	**0.8**
60%	**9.2**	**8.8**	**2.9**	**0.2**	-0.8	**0.1**	**2.7**	**4.1**	**0.5**	**0.3**	0.0	**7.7**
70%	**15.8**	**13.9**	**2.2**	**0.0**	**0.3**	**0.4**	**1.8**	**2.9**	**1.7**	**0.3**	**0.1**	**14.4**
80%	**15.5**	**13.9**	**2.9**	-0.1	0.0	-0.2	**1.0**	**2.6**	**1.9**	**0.3**	**0.5**	**14.1**
90%	**14.2**	**5.7**	**0.2**	**0.1**	-0.1	-0.2	**0.5**	**1.5**	**1.4**	**0.4**	**0.1**	**13.6**
Long Term												
Full Simulation Period[b]	**5.9**	**5.5**	**2.6**	**0.6**	**0.1**	0.0	**1.3**	**2.0**	**0.6**	**0.0**	**0.2**	**5.2**
Water Year Types[c]												
Wet	**13.9**	**11.9**	**4.3**	**0.0**	**0.1**	**0.1**	**1.4**	**2.4**	**1.0**	**0.2**	**0.1**	**12.6**
Above Normal	**9.3**	**8.7**	**4.0**	**0.5**	0.0	-0.2	**1.9**	**3.2**	**0.9**	**0.1**	**0.3**	**7.0**
Below Normal	**0.1**	**1.2**	**1.4**	**0.8**	-0.3	-0.3	**1.6**	**2.1**	**0.5**	-0.1	**0.0**	-0.1
Dry	-0.1	**0.5**	**1.0**	**1.1**	**0.2**	**0.1**	**1.2**	**1.5**	**0.3**	-0.2	**0.2**	**0.2**
Critical	-0.1	**0.1**	**1.4**	**0.7**	**0.3**	**0.0**	**0.4**	**0.5**	**0.2**	**0.1**	**0.2**	**0.1**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-3. X2, End of Month Position

No Action Alternative

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	93.4	93.6	90.8	84.0	77.3	75.9	78.1	81.0	83.1	86.5	89.7	91.9
20%	91.8	91.4	87.6	82.3	71.7	72.8	73.6	79.3	81.8	84.9	88.1	91.1
30%	91.6	90.9	83.9	79.8	67.2	65.7	70.0	77.3	81.0	84.3	87.5	90.6
40%	91.1	88.1	82.5	73.5	64.0	64.5	66.7	72.3	80.2	82.4	86.2	90.1
50%	89.7	81.1	81.1	71.2	58.5	59.9	64.7	69.9	77.8	80.6	84.8	88.5
60%	81.0	81.0	79.7	64.4	55.2	58.0	60.9	66.3	76.6	78.1	84.6	81.0
70%	74.1	75.1	72.0	55.1	51.9	53.9	58.0	63.8	73.4	77.4	84.1	74.1
80%	74.0	74.0	62.2	51.3	49.4	50.6	53.8	59.1	69.8	76.8	82.7	74.0
90%	74.0	74.0	52.8	49.4	48.2	49.0	49.9	53.3	63.5	74.6	82.2	74.0
Long Term												
Full Simulation Period[b]	84.2	82.3	76.4	68.0	61.1	61.4	64.2	68.8	75.9	80.4	85.4	83.9
Water Year Types[c]												
Wet (32%)	73.9	72.9	71.1	54.8	51.2	53.1	55.1	58.4	67.4	74.9	82.7	73.9
Above Normal (16%)	81.0	79.3	75.9	61.0	54.9	55.3	59.1	65.2	75.3	77.9	83.1	74.7
Below Normal (13%)	89.1	87.6	78.8	74.6	64.3	66.9	69.0	72.9	79.1	81.1	85.1	89.3
Dry (24%)	91.5	86.9	75.4	77.7	67.7	65.4	68.8	74.5	80.1	84.5	87.6	90.5
Critical (15%)	93.6	93.6	87.8	82.0	75.3	74.6	77.7	82.3	85.2	87.9	90.3	92.1

Alternative 5

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	93.2	93.3	90.8	84.0	77.3	75.9	77.2	79.1	83.1	86.5	89.6	91.9
20%	91.9	91.5	87.6	82.3	71.7	72.8	72.5	77.9	81.4	84.9	88.1	91.1
30%	91.6	91.0	83.9	79.8	67.2	65.8	69.5	75.8	81.0	84.2	87.4	90.5
40%	91.0	88.0	82.4	73.5	63.9	64.5	66.4	71.5	79.6	82.3	86.1	90.0
50%	89.5	81.1	81.2	71.2	58.5	59.9	64.2	69.3	77.8	80.7	84.8	88.5
60%	81.0	81.0	79.7	64.4	55.1	57.9	60.8	66.4	76.6	78.2	84.6	81.0
70%	74.1	75.1	71.9	55.1	51.9	53.9	58.0	63.7	73.4	77.5	84.1	74.1
80%	74.0	74.1	62.2	51.3	49.4	50.6	53.5	58.9	69.8	76.8	82.6	74.0
90%	74.0	73.9	53.0	49.4	48.2	49.1	49.9	53.3	63.5	74.6	82.2	74.0
Long Term												
Full Simulation Period[b]	84.2	82.3	76.4	68.0	61.1	61.4	63.8	68.2	75.7	80.4	85.3	83.8
Water Year Types[c]												
Wet (32%)	73.9	72.9	71.1	54.7	51.2	53.1	55.1	58.2	67.3	74.7	82.6	73.9
Above Normal (16%)	81.0	79.2	75.9	60.9	54.9	55.3	59.0	65.0	75.2	77.9	83.1	74.8
Below Normal (13%)	89.1	87.2	78.6	74.6	64.3	66.9	68.4	72.1	79.0	81.1	85.0	89.3
Dry (24%)	91.4	87.0	75.4	77.7	67.7	65.4	67.9	73.4	79.8	84.5	87.6	90.5
Critical (15%)	93.5	93.5	87.9	82.1	75.5	74.6	76.7	80.8	84.5	87.7	90.2	92.1

Alternative 5 minus No Action Alternative

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.2	-0.3	0.0	0.0	0.0	0.0	-1.0	-1.9	-0.1	0.0	-0.1	0.0
20%	0.1	0.0	0.0	0.0	0.0	0.0	-1.1	-1.3	-0.3	0.0	0.0	0.0
30%	0.0	0.1	0.0	0.0	0.0	0.0	-0.5	-1.4	-0.1	-0.1	-0.1	-0.1
40%	-0.1	-0.1	-0.2	0.0	0.0	0.0	-0.3	-0.8	-0.6	-0.1	-0.1	-0.1
50%	-0.1	0.0	0.0	0.0	0.0	0.1	-0.5	-0.5	0.0	0.1	0.0	0.0
60%	0.0	0.0	0.0	0.1	-0.1	0.0	-0.1	0.1	0.0	0.0	0.0	0.0
70%	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	-0.1	0.0	0.0	-0.2	-0.2	0.0	0.0	-0.1	0.0
90%	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0
Long Term												
Full Simulation Period[b]	0.0	-0.1	0.0	0.0	0.0	0.0	-0.4	-0.7	-0.2	-0.1	-0.1	0.0
Water Year Types[c]												
Wet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	-0.1	-0.1	0.0
Above Normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.1	0.0	0.0	0.0
Below Normal	0.0	-0.4	-0.2	0.0	0.0	0.0	-0.5	-0.8	-0.1	0.0	-0.1	-0.1
Dry	0.0	0.1	0.0	0.1	0.0	0.0	-0.9	-1.1	-0.3	0.0	0.0	0.0
Critical	-0.1	-0.1	0.0	0.2	0.2	0.1	-0.9	-1.6	-0.7	-0.2	-0.1	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-4. X2, End of Month Position

Second Basis of Comparison

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	92.6	93.1	90.9	87.3	80.8	78.5	78.7	81.5	83.5	86.7	89.9	92.0
20%	91.9	91.4	90.6	85.8	75.6	73.6	75.2	79.5	81.6	84.8	88.6	91.5
30%	91.4	91.0	89.6	83.3	72.0	68.3	73.1	78.5	80.6	84.3	88.0	91.0
40%	91.0	90.8	88.6	78.8	66.2	66.5	69.7	75.3	78.7	82.0	86.6	90.1
50%	90.5	90.3	86.7	75.6	61.4	61.6	67.4	72.9	77.8	80.9	85.3	89.5
60%	90.3	89.6	82.5	67.7	55.7	57.8	64.1	69.2	76.2	79.1	84.7	89.0
70%	90.0	89.1	76.9	56.2	52.4	54.1	59.7	66.0	74.4	78.3	84.5	88.7
80%	89.6	88.0	65.9	52.0	49.3	50.4	54.7	60.2	71.4	77.3	84.0	88.4
90%	88.2	79.6	53.3	49.5	48.3	48.8	50.4	54.6	63.9	74.7	83.0	87.8
Long Term												
Full Simulation Period[b]	90.0	87.6	79.5	70.3	62.9	62.3	65.9	70.6	75.8	80.6	85.9	89.3
Water Year Types[c]												
Wet (32%)	87.8	84.8	75.8	55.7	51.6	53.0	56.4	60.2	67.2	75.2	83.3	86.7
Above Normal (16%)	90.3	87.9	80.5	63.6	56.0	55.2	61.2	67.9	75.1	78.2	83.8	81.9
Below Normal (13%)	89.4	88.6	80.6	78.7	66.4	67.6	71.3	74.9	78.2	81.3	85.9	89.7
Dry (24%)	91.2	87.2	76.9	81.1	70.8	67.5	70.7	75.9	80.2	84.4	88.1	90.9
Critical (15%)	93.1	93.4	89.8	83.6	78.1	76.7	78.8	83.3	85.7	88.2	90.6	92.3

No Action Alternative

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	93.4	93.6	90.8	84.0	77.3	75.9	78.1	81.0	83.1	86.5	89.7	91.9
20%	91.8	91.4	87.6	82.3	71.7	72.8	73.6	79.3	81.8	84.9	88.1	91.1
30%	91.6	90.9	83.9	79.8	67.2	65.7	70.0	77.3	81.0	84.3	87.5	90.6
40%	91.1	88.1	82.5	73.5	64.0	64.5	66.7	72.3	80.2	82.4	86.2	90.1
50%	89.7	81.1	81.1	71.2	58.5	59.9	64.7	69.9	77.8	80.6	84.8	88.5
60%	81.0	81.0	79.7	64.4	55.2	58.0	60.9	66.3	76.6	78.1	84.6	81.0
70%	74.1	75.1	72.0	55.1	51.9	53.9	58.0	63.8	73.4	77.4	84.1	74.1
80%	74.0	74.0	62.2	51.3	49.4	50.6	53.8	59.1	69.8	76.8	82.7	74.0
90%	74.0	74.0	52.8	49.4	48.2	49.0	49.9	53.3	63.5	74.6	82.2	74.0
Long Term												
Full Simulation Period[b]	84.2	82.3	76.4	68.0	61.1	61.4	64.2	68.8	75.9	80.4	85.4	83.9
Water Year Types[c]												
Wet (32%)	73.9	72.9	71.1	54.8	51.2	53.1	55.1	58.4	67.4	74.9	82.7	73.9
Above Normal (16%)	81.0	79.3	75.9	61.0	54.9	55.3	59.1	65.2	75.3	77.9	83.1	74.7
Below Normal (13%)	89.1	87.6	78.8	74.6	64.3	66.9	69.0	72.9	79.1	81.1	85.1	89.3
Dry (24%)	91.5	86.9	75.4	77.7	67.7	65.4	68.8	74.5	80.1	84.5	87.6	90.5
Critical (15%)	93.6	93.6	87.8	82.0	75.3	74.6	77.7	82.3	85.2	87.9	90.3	92.1

No Action Alternative minus Second Basis of Comparison

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.7	0.5	-0.1	-3.3	-3.5	-2.6	-0.5	-0.5	-0.3	-0.2	-0.2	-0.1
20%	-0.1	0.1	-3.0	-3.6	-3.9	-0.8	-1.6	-0.3	0.2	0.1	-0.5	-0.4
30%	0.2	-0.1	-5.6	-3.5	-4.8	-2.5	-3.1	-1.3	0.4	0.0	-0.6	-0.4
40%	0.1	-2.7	-6.1	-5.3	-2.2	-2.0	-3.0	-3.0	1.5	0.4	-0.3	0.0
50%	-0.8	-9.2	-5.6	-4.4	-3.0	-1.7	-2.7	-3.0	0.0	-0.3	-0.5	-1.1
60%	-9.3	-8.6	-2.7	-3.4	-0.5	0.2	-3.3	-2.9	0.4	-1.0	-0.1	-8.0
70%	-15.9	-14.0	-5.0	-1.1	-0.5	-0.2	-1.7	-2.2	-1.0	-0.9	-0.4	-14.6
80%	-15.6	-13.9	-3.6	-0.7	0.1	0.2	-0.9	-1.0	-1.6	-0.4	-1.3	-14.4
90%	-14.2	-5.6	-0.5	-0.1	-0.1	0.2	-0.5	-1.2	-0.4	-0.1	-0.8	-13.8
Long Term												
Full Simulation Period[b]	-5.8	-5.3	-3.1	-2.4	-1.8	-0.9	-1.7	-1.8	0.1	-0.2	-0.5	-5.4
Water Year Types[c]												
Wet	-13.9	-11.9	-4.7	-0.9	-0.4	0.0	-1.3	-1.9	0.1	-0.4	-0.5	-12.7
Above Normal	-9.3	-8.6	-4.5	-2.6	-1.1	0.0	-2.1	-2.7	0.2	-0.3	-0.7	-7.2
Below Normal	-0.3	-1.0	-1.8	-4.2	-2.1	-0.8	-2.3	-2.0	0.9	-0.2	-0.8	-0.4
Dry	0.2	-0.3	-1.5	-3.5	-3.2	-2.2	-1.9	-1.4	-0.1	0.1	-0.4	-0.3
Critical	0.5	0.2	-2.0	-1.6	-2.9	-2.2	-1.2	-0.9	-0.5	-0.3	-0.3	-0.2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-5. X2, End of Month Position

Second Basis of Comparison

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	92.6	93.1	90.9	87.3	80.8	78.5	78.7	81.5	83.5	86.7	89.9	92.0
20%	91.9	91.4	90.6	85.8	75.6	73.6	75.2	79.5	81.6	84.8	88.6	91.5
30%	91.4	91.0	89.6	83.3	72.0	68.3	73.1	78.5	80.6	84.3	88.0	91.0
40%	91.0	90.8	88.6	78.8	66.2	66.5	69.7	75.3	78.7	82.0	86.6	90.1
50%	90.5	90.3	86.7	75.6	61.4	61.6	67.4	72.9	77.8	80.9	85.3	89.5
60%	90.3	89.6	82.5	67.7	55.7	57.8	64.1	69.2	76.2	79.1	84.7	89.0
70%	90.0	89.1	76.9	56.2	52.4	54.1	59.7	66.0	74.4	78.3	84.5	88.7
80%	89.6	88.0	65.9	52.0	49.3	50.4	54.7	60.2	71.4	77.3	84.0	88.4
90%	88.2	79.6	53.3	49.5	48.3	48.8	50.4	54.6	63.9	74.7	83.0	87.8
Long Term												
Full Simulation Period[b]	90.0	87.6	79.5	70.3	62.9	62.3	65.9	70.6	75.8	80.6	85.9	89.3
Water Year Types[c]												
Wet (32%)	87.8	84.8	75.8	55.7	51.6	53.0	56.4	60.2	67.2	75.2	83.3	86.7
Above Normal (16%)	90.3	87.9	80.5	63.6	56.0	55.2	61.2	67.9	75.1	78.2	83.8	81.9
Below Normal (13%)	89.4	88.6	80.6	78.7	66.4	67.6	71.3	74.9	78.2	81.3	85.9	89.7
Dry (24%)	91.2	87.2	76.9	81.1	70.8	67.5	70.7	75.9	80.2	84.4	88.1	90.9
Critical (15%)	93.1	93.4	89.8	83.6	78.1	76.7	78.8	83.3	85.7	88.2	90.6	92.3

Alternative 3

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	93.2	93.6	90.8	86.1	77.8	75.8	78.2	81.5	83.2	86.4	90.0	92.2
20%	91.9	91.5	90.5	83.7	71.7	72.5	74.6	79.6	82.0	84.8	88.4	91.3
30%	91.6	91.1	89.4	81.5	67.6	66.1	71.3	78.4	81.0	84.3	87.7	90.8
40%	91.2	90.8	88.5	74.8	64.1	64.5	69.7	75.6	80.3	81.7	86.0	89.8
50%	90.7	90.6	86.7	71.8	58.8	60.0	67.3	73.1	78.8	80.7	84.9	89.3
60%	90.2	89.8	82.6	64.6	54.4	58.0	63.6	70.4	77.1	78.4	84.6	88.7
70%	89.9	89.0	74.2	55.1	52.2	54.4	59.9	66.8	75.1	77.8	84.2	88.4
80%	89.6	87.9	65.1	51.2	49.3	50.4	54.8	61.7	71.8	77.1	83.2	88.2
90%	88.2	79.6	53.0	49.5	48.1	48.8	50.4	54.8	64.9	75.0	82.4	87.6
Long Term												
Full Simulation Period[b]	90.1	87.8	79.0	68.5	61.2	61.4	65.5	70.8	76.5	80.5	85.6	89.1
Water Year Types[c]												
Wet (32%)	87.8	84.8	75.3	54.8	51.3	53.1	56.5	60.8	68.3	75.1	82.9	86.6
Above Normal (16%)	90.3	88.0	80.0	61.5	54.9	55.0	60.9	68.4	76.2	78.0	83.4	81.8
Below Normal (13%)	89.2	88.8	80.2	75.4	64.0	66.6	70.5	74.9	79.6	81.0	85.1	89.2
Dry (24%)	91.4	87.4	76.4	78.8	67.9	65.5	69.9	76.0	80.4	84.3	87.8	90.8
Critical (15%)	93.4	93.7	89.3	82.7	75.6	74.6	78.1	82.8	85.4	88.0	90.5	92.3

Alternative 3 minus Second Basis of Comparison

Statistic	End of Month Position (km)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.5	0.5	-0.1	-1.2	-3.0	-2.7	-0.5	-0.1	-0.3	-0.3	0.1	0.2
20%	0.1	0.1	-0.1	-2.2	-3.9	-1.1	-0.6	0.1	0.4	0.0	-0.2	-0.2
30%	0.2	0.1	-0.1	-1.8	-4.4	-2.1	-1.8	-0.1	0.4	0.0	-0.4	-0.2
40%	0.2	0.0	-0.2	-4.0	-2.0	-2.1	0.0	0.3	1.6	-0.3	-0.5	-0.3
50%	0.2	0.3	0.0	-3.9	-2.6	-1.6	-0.2	0.3	1.0	-0.3	-0.4	-0.2
60%	-0.1	0.1	0.2	-3.1	-1.3	0.2	-0.5	1.2	0.9	-0.7	-0.1	-0.3
70%	-0.1	-0.1	-2.7	-1.1	-0.2	0.2	0.2	0.8	0.7	-0.5	-0.2	-0.2
80%	0.0	-0.1	-0.8	-0.8	0.0	0.1	0.1	1.5	0.3	-0.2	-0.8	-0.2
90%	0.0	0.0	-0.3	0.0	-0.2	0.0	0.0	0.2	1.0	0.2	-0.6	-0.1
Long Term												
Full Simulation Period[b]	0.1	0.1	-0.5	-1.8	-1.7	-1.0	-0.4	0.2	0.7	-0.2	-0.3	-0.2
Water Year Types[c]												
Wet	0.0	0.0	-0.4	-0.9	-0.3	0.1	0.1	0.5	1.1	-0.1	-0.4	-0.1
Above Normal	0.0	0.1	-0.5	-2.1	-1.1	-0.2	-0.2	0.5	1.1	-0.2	-0.4	-0.1
Below Normal	-0.2	0.2	-0.5	-3.4	-2.4	-1.1	-0.8	0.1	1.4	-0.3	-0.7	-0.5
Dry	0.2	0.2	-0.5	-2.4	-2.9	-2.1	-0.8	0.1	0.3	-0.2	-0.2	-0.1
Critical	0.4	0.3	-0.6	-0.9	-2.5	-2.1	-0.7	-0.4	-0.3	-0.2	-0.1	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-6. X2, End of Month Position

Second Basis of Comparison

	End of Month Position (km)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	92.6	93.1	90.9	87.3	80.8	78.5	78.7	81.5	83.5	86.7	89.9	92.0
20%	91.9	91.4	90.6	85.8	75.6	73.6	75.2	79.5	81.6	84.8	88.6	91.5
30%	91.4	91.0	89.6	83.3	72.0	68.3	73.1	78.5	80.6	84.3	88.0	91.0
40%	91.0	90.8	88.6	78.8	66.2	66.5	69.7	75.3	78.7	82.0	86.6	90.1
50%	90.5	90.3	86.7	75.6	61.4	61.6	67.4	72.9	77.8	80.9	85.3	89.5
60%	90.3	89.6	82.5	67.7	55.7	57.8	64.1	69.2	76.2	79.1	84.7	89.0
70%	90.0	89.1	76.9	56.2	52.4	54.1	59.7	66.0	74.4	78.3	84.5	88.7
80%	89.6	88.0	65.9	52.0	49.3	50.4	54.7	60.2	71.4	77.3	84.0	88.4
90%	88.2	79.6	53.3	49.5	48.3	48.8	50.4	54.6	63.9	74.7	83.0	87.8
Long Term												
Full Simulation Period[b]	90.0	87.6	79.5	70.3	62.9	62.3	65.9	70.6	75.8	80.6	85.9	89.3
Water Year Types[c]												
Wet (32%)	87.8	84.8	75.8	55.7	51.6	53.0	56.4	60.2	67.2	75.2	83.3	86.7
Above Normal (16%)	90.3	87.9	80.5	63.6	56.0	55.2	61.2	67.9	75.1	78.2	83.8	81.9
Below Normal (13%)	89.4	88.6	80.6	78.7	66.4	67.6	71.3	74.9	78.2	81.3	85.9	89.7
Dry (24%)	91.2	87.2	76.9	81.1	70.8	67.5	70.7	75.9	80.2	84.4	88.1	90.9
Critical (15%)	93.1	93.4	89.8	83.6	78.1	76.7	78.8	83.3	85.7	88.2	90.6	92.3

Alternative 5

	End of Month Position (km)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	93.2	93.3	90.8	84.0	77.3	75.9	77.2	79.1	83.1	86.5	89.6	91.9
20%	91.9	91.5	87.6	82.3	71.7	72.8	72.5	77.9	81.4	84.9	88.1	91.1
30%	91.6	91.0	83.9	79.8	67.2	65.8	69.5	75.8	81.0	84.2	87.4	90.5
40%	91.0	88.0	82.4	73.5	63.9	64.5	66.4	71.5	79.6	82.3	86.1	90.0
50%	89.5	81.1	81.2	71.2	58.5	59.9	64.2	69.3	77.8	80.7	84.8	88.5
60%	81.0	81.0	79.7	64.4	55.1	57.9	60.8	66.4	76.6	78.2	84.6	81.0
70%	74.1	75.1	71.9	55.1	51.9	53.9	58.0	63.7	73.4	77.5	84.1	74.1
80%	74.0	74.1	62.2	51.3	49.4	50.6	53.5	58.9	69.8	76.8	82.6	74.0
90%	74.0	73.9	53.0	49.4	48.2	49.1	49.9	53.3	63.5	74.6	82.2	74.0
Long Term												
Full Simulation Period[b]	84.2	82.3	76.4	68.0	61.1	61.4	63.8	68.2	75.7	80.4	85.3	83.8
Water Year Types[c]												
Wet (32%)	73.9	72.9	71.1	54.7	51.2	53.1	55.1	58.2	67.3	74.7	82.6	73.9
Above Normal (16%)	81.0	79.2	75.9	60.9	54.9	55.3	59.0	65.0	75.2	77.9	83.1	74.8
Below Normal (13%)	89.1	87.2	78.6	74.6	64.3	66.9	68.4	72.1	79.0	81.1	85.0	89.3
Dry (24%)	91.4	87.0	75.4	77.7	67.7	65.4	67.9	73.4	79.8	84.5	87.6	90.5
Critical (15%)	93.5	93.5	87.9	82.1	75.5	74.6	76.7	80.8	84.5	87.7	90.2	92.1

Alternative 5 minus Second Basis of Comparison

	End of Month Position (km)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.6	0.2	-0.1	-3.2	-3.5	-2.6	-1.5	-2.4	-0.4	-0.2	-0.3	-0.1
20%	0.0	0.1	-3.0	-3.6	-3.9	-0.8	-2.7	-1.6	-0.2	0.1	-0.4	-0.4
30%	0.2	0.0	-5.6	-3.5	-4.8	-2.5	-3.6	-2.7	0.4	-0.1	-0.6	-0.5
40%	0.0	-2.8	-6.3	-5.3	-2.2	-2.0	-3.2	-3.8	0.9	0.3	-0.5	-0.1
50%	-1.0	-9.2	-5.6	-4.4	-3.0	-1.7	-3.2	-3.5	0.0	-0.2	-0.5	-1.1
60%	-9.3	-8.7	-2.7	-3.3	-0.6	0.1	-3.4	-2.8	0.3	-0.9	-0.1	-8.0
70%	-16.0	-14.0	-5.1	-1.1	-0.5	-0.2	-1.7	-2.3	-1.0	-0.8	-0.4	-14.6
80%	-15.6	-13.9	-3.6	-0.8	0.1	0.2	-1.2	-1.3	-1.6	-0.5	-1.4	-14.4
90%	-14.2	-5.6	-0.3	-0.1	-0.1	0.3	-0.5	-1.2	-0.4	-0.1	-0.8	-13.8
Long Term												
Full Simulation Period[b]	-5.8	-5.4	-3.1	-2.3	-1.7	-0.9	-2.1	-2.4	-0.1	-0.3	-0.6	-5.4
Water Year Types[c]												
Wet	-13.9	-11.9	-4.7	-1.0	-0.4	0.0	-1.3	-2.0	0.1	-0.5	-0.6	-12.7
Above Normal	-9.3	-8.6	-4.5	-2.6	-1.1	0.0	-2.1	-2.9	0.1	-0.3	-0.7	-7.1
Below Normal	-0.3	-1.4	-2.0	-4.2	-2.1	-0.7	-2.9	-2.8	0.8	-0.2	-0.9	-0.4
Dry	0.2	-0.2	-1.5	-3.4	-3.1	-2.1	-2.8	-2.5	-0.3	0.1	-0.5	-0.4
Critical	0.4	0.1	-2.0	-1.5	-2.7	-2.1	-2.1	-2.5	-1.2	-0.5	-0.4	-0.2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

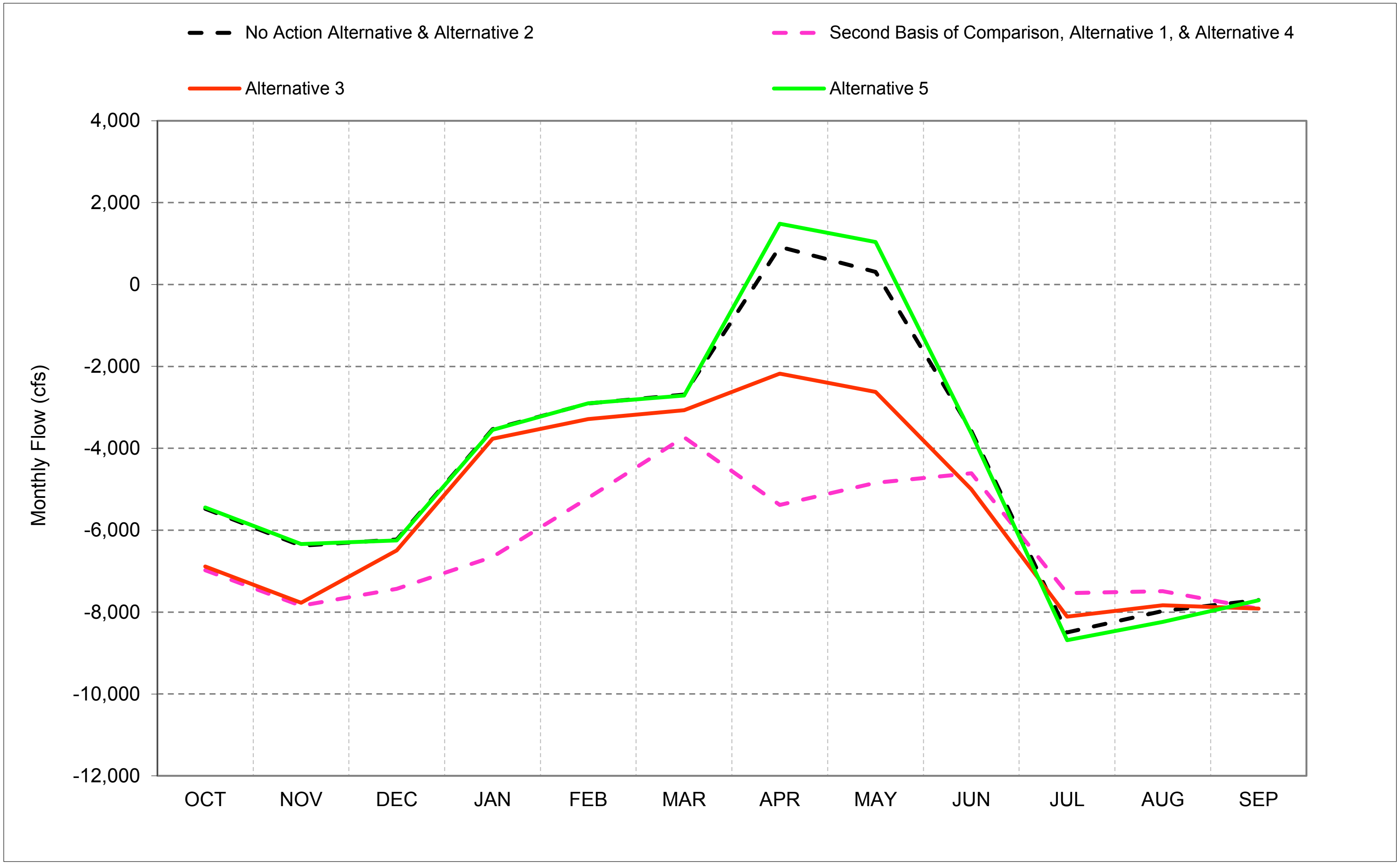
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) X2 is defined as the position of the 2% (grams of salt per kilogram of seawater) bottom salinity value along the axis of the estuary; measured in kilometers from the Golden Gate Bridge. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.17. Old and Middle River Flow

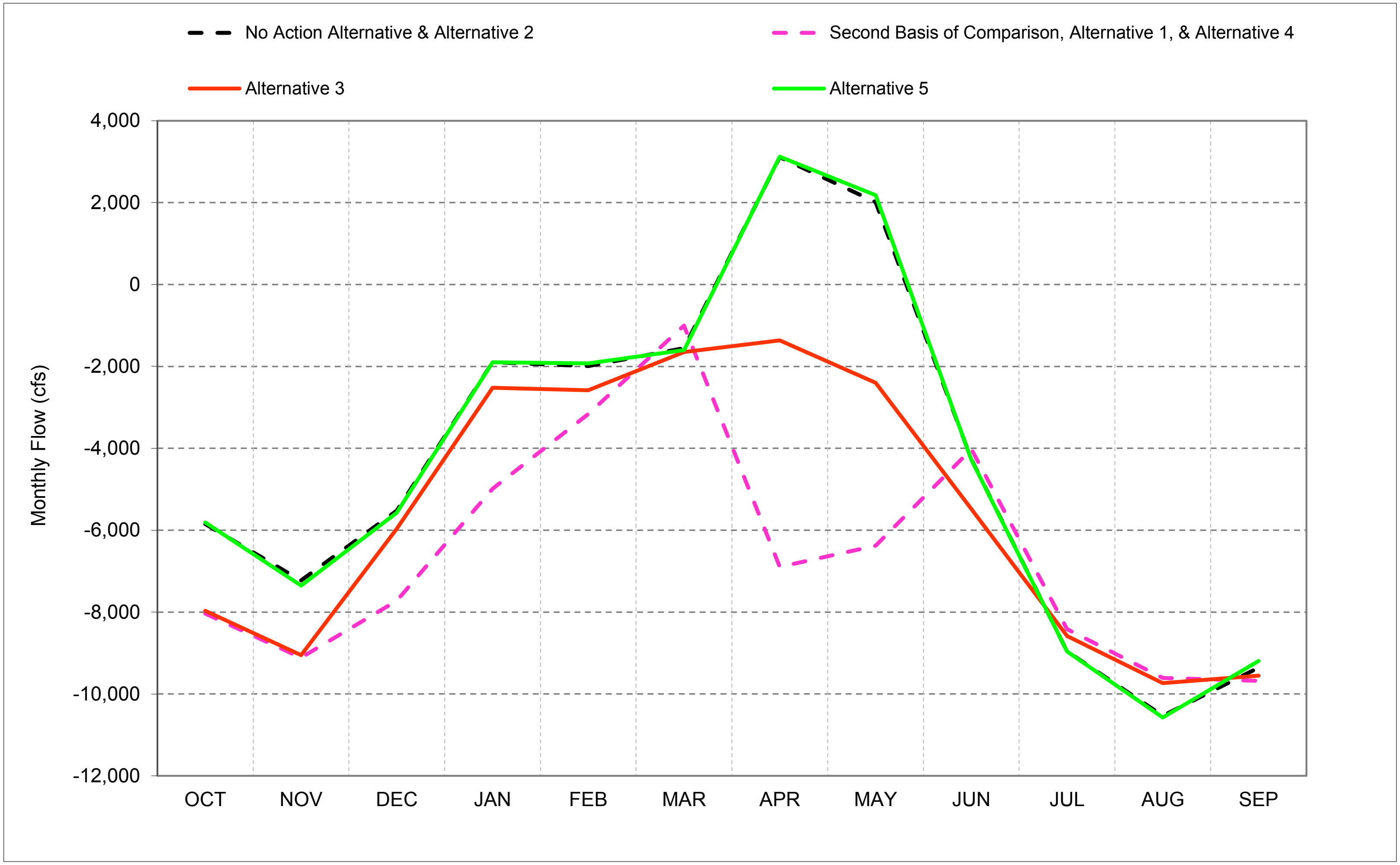
Figure C-17-1. Old and Middle River, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-17-2. Old and Middle River, Wet Year* Long-Term Average Flow**

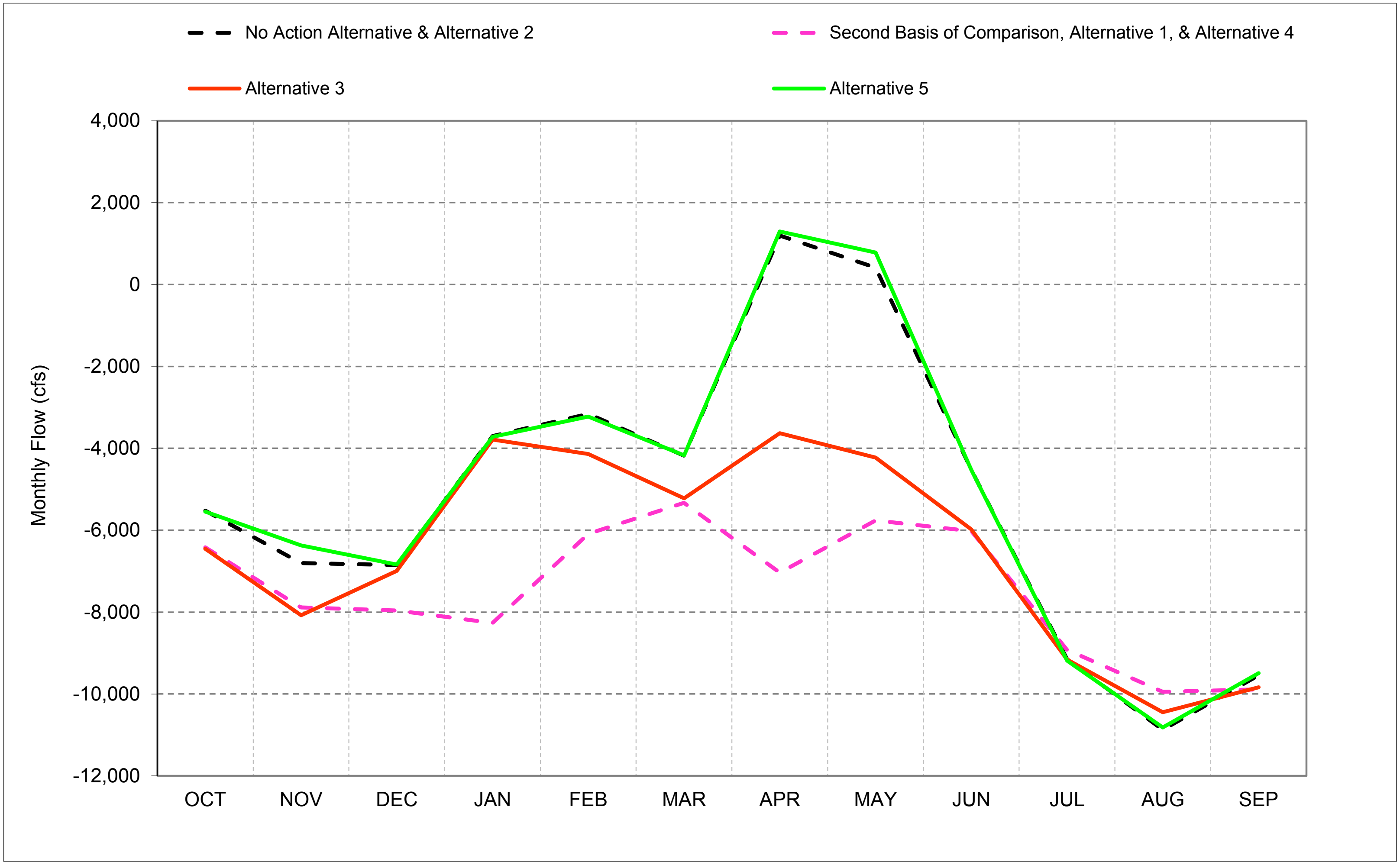


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-17-3. Old and Middle River, Above Normal Year* Long-Term Average Flow**

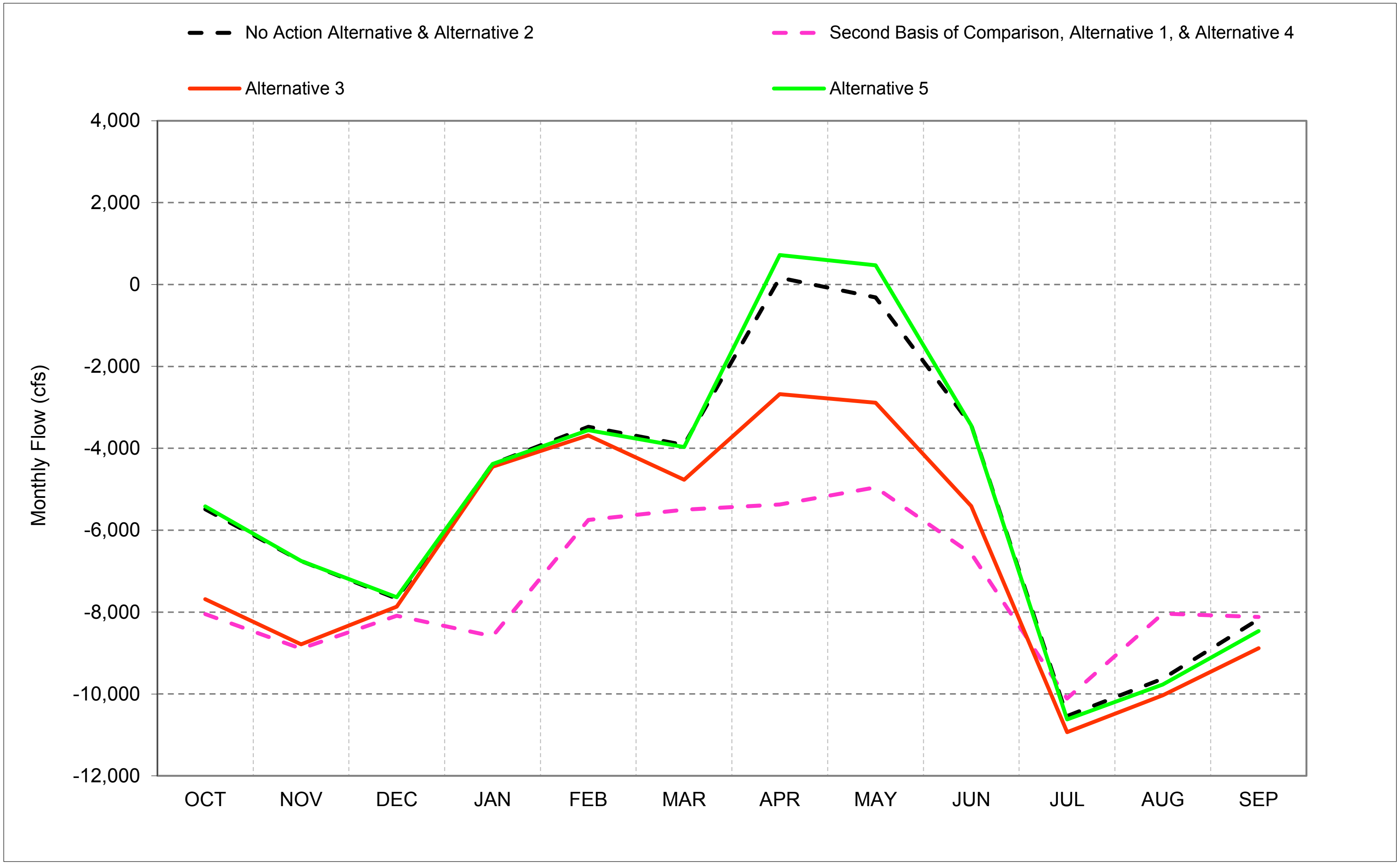


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-17-4. Old and Middle River, Below Normal Year* Long-Term Average Flow**

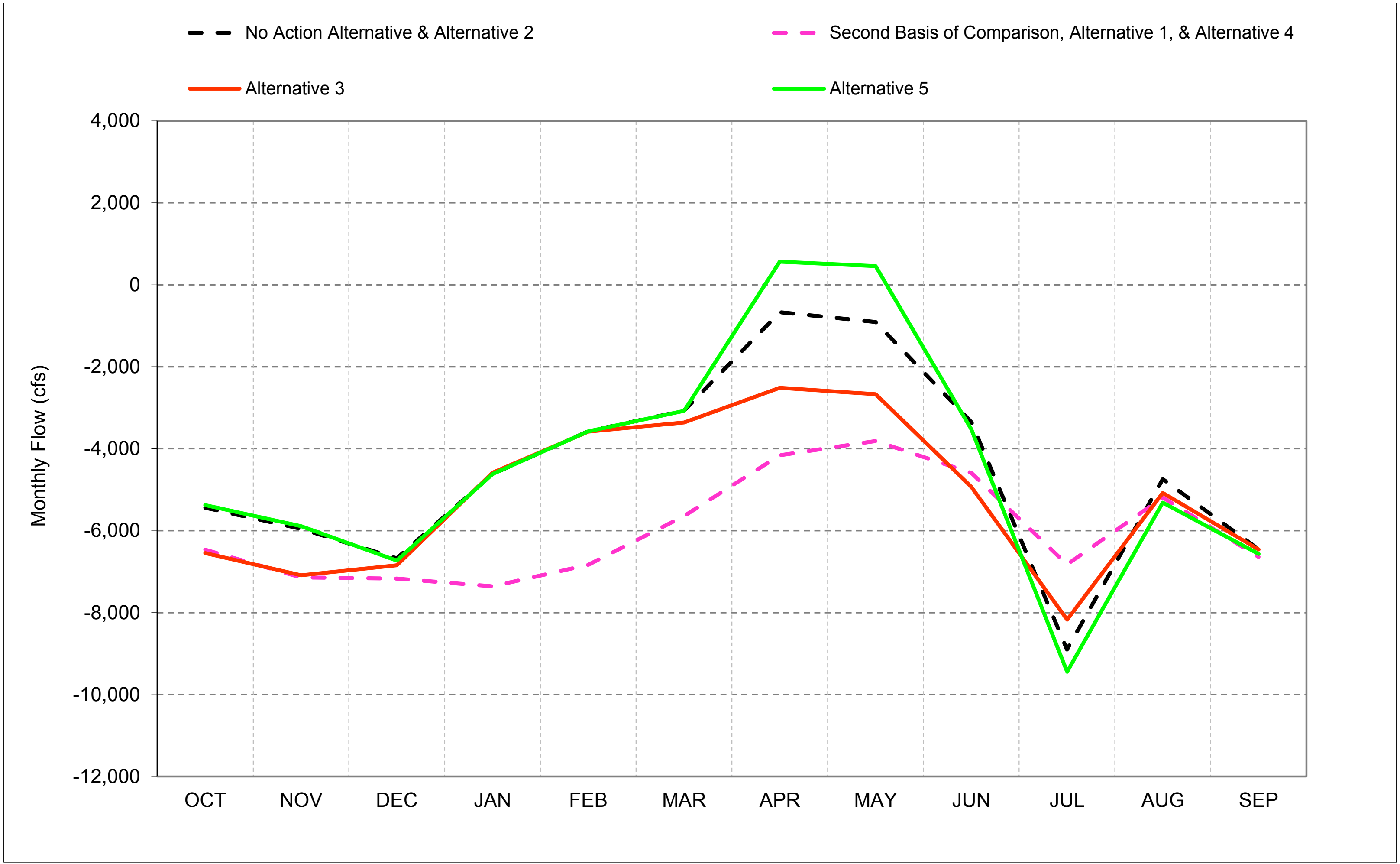


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-17-5. Old and Middle River, Dry Year* Long-Term Average Flow**

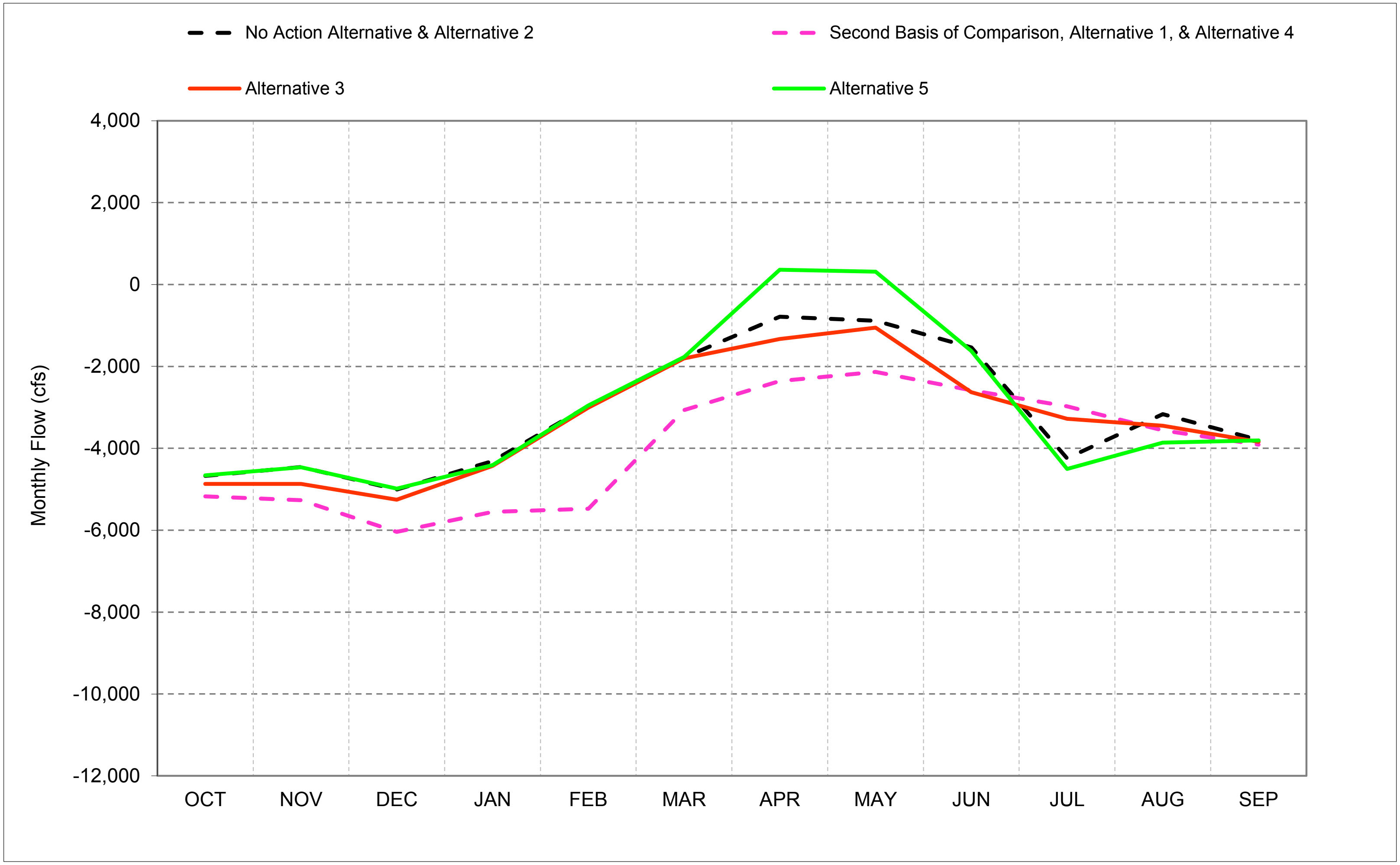


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-17-6. Old and Middle River, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-1. Old and Middle River, Monthly Flow

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-3,764	-3,724	-3,812	-2,823	-666	-969	3,205	2,797	-1,150	-4,130	-2,453	-3,775
20%	-4,076	-4,560	-4,673	-2,823	-1,771	-1,394	2,207	1,304	-1,570	-6,849	-4,032	-5,147
30%	-4,613	-5,156	-5,244	-3,355	-2,823	-2,738	1,632	561	-3,500	-7,647	-5,770	-6,006
40%	-4,820	-5,627	-5,871	-4,392	-3,314	-3,500	1,268	108	-3,500	-8,888	-7,996	-7,621
50%	-5,328	-6,320	-5,871	-4,710	-3,781	-3,500	612	-182	-3,500	-9,376	-9,956	-9,000
60%	-5,589	-6,564	-5,871	-5,000	-4,878	-4,568	-102	-483	-4,487	-9,746	-10,630	-9,256
70%	-6,253	-7,101	-7,413	-5,000	-5,000	-5,000	-448	-632	-5,000	-10,301	-10,737	-9,653
80%	-6,560	-8,185	-9,537	-5,000	-5,000	-5,000	-995	-1,129	-5,000	-10,602	-10,853	-9,884
90%	-7,404	-9,995	-9,681	-5,000	-5,000	-5,000	-1,247	-1,414	-5,000	-11,108	-11,083	-10,032
Long Term												
Full Simulation Period[b]	-5,476	-6,380	-6,228	-3,535	-2,905	-2,690	919	310	-3,577	-8,496	-7,975	-7,706
Water Year Types[c]												
Wet (32%)	-5,847	-7,229	-5,526	-1,900	-1,991	-1,552	3,110	2,011	-4,274	-8,957	-10,532	-9,358
Above Normal (16%)	-5,525	-6,801	-6,850	-3,699	-3,161	-4,176	1,196	412	-4,525	-9,151	-10,873	-9,542
Below Normal (13%)	-5,488	-6,749	-7,669	-4,380	-3,477	-3,919	165	-316	-3,445	-10,539	-9,624	-8,178
Dry (24%)	-5,440	-5,953	-6,676	-4,621	-3,573	-3,072	-670	-906	-3,350	-8,900	-4,745	-6,453
Critical (15%)	-4,671	-4,458	-5,006	-4,314	-2,968	-1,780	-786	-887	-1,539	-4,242	-3,168	-3,793

Alternative 1

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-3,392	-4,293	-4,109	-2,581	-1,241	-119	-2,051	-1,611	-2,184	-3,454	-2,880	-3,666
20%	-4,079	-5,433	-6,043	-4,838	-2,865	-1,287	-3,131	-2,897	-2,834	-5,152	-4,631	-5,107
30%	-4,769	-6,994	-6,917	-6,279	-4,367	-3,292	-3,957	-4,177	-3,308	-6,488	-5,837	-6,393
40%	-6,409	-7,620	-7,554	-7,434	-5,806	-4,012	-4,821	-4,673	-4,258	-7,155	-6,876	-8,264
50%	-7,303	-8,686	-8,173	-8,257	-6,422	-4,958	-5,864	-5,200	-4,990	-8,014	-7,941	-9,257
60%	-8,076	-9,256	-8,969	-8,848	-7,346	-5,373	-6,549	-5,517	-5,660	-8,914	-9,236	-9,689
70%	-9,075	-9,598	-9,326	-9,269	-8,323	-6,205	-7,131	-6,008	-6,016	-9,492	-10,081	-9,977
80%	-9,905	-9,959	-9,508	-9,585	-8,873	-6,616	-7,635	-6,451	-6,534	-10,052	-10,364	-10,089
90%	-10,146	-10,023	-9,665	-9,803	-9,509	-7,592	-7,991	-7,302	-6,936	-10,637	-10,683	-10,163
Long Term												
Full Simulation Period[b]	-6,980	-7,844	-7,429	-6,650	-5,206	-3,727	-5,381	-4,842	-4,611	-7,538	-7,489	-7,917
Water Year Types[c]												
Wet (32%)	-8,038	-9,112	-7,723	-4,985	-3,160	-1,004	-6,895	-6,376	-4,024	-8,414	-9,609	-9,678
Above Normal (16%)	-6,419	-7,887	-7,960	-8,266	-6,089	-5,331	-7,034	-5,761	-6,024	-8,921	-9,947	-9,886
Below Normal (13%)	-8,051	-8,891	-8,088	-8,590	-5,749	-5,501	-5,370	-4,954	-6,578	-10,111	-8,035	-8,118
Dry (24%)	-6,466	-7,140	-7,171	-7,358	-6,832	-5,646	-4,159	-3,813	-4,591	-6,827	-5,191	-6,639
Critical (15%)	-5,171	-5,266	-6,040	-5,551	-5,474	-3,067	-2,358	-2,134	-2,583	-2,973	-3,561	-3,911

Alternative 1 minus No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	373	-569	-298	241	-575	850	-5,257	-4,408	-1,033	675	-426	109
20%	-3	-873	-1,370	-2,015	-1,094	107	-5,338	-4,202	-1,264	1,697	-599	39
30%	-156	-1,838	-1,673	-2,924	-1,545	-554	-5,589	-4,738	192	1,159	-67	-387
40%	-1,588	-1,993	-1,683	-3,042	-2,492	-512	-6,090	-4,781	-758	1,733	1,120	-644
50%	-1,975	-2,366	-2,302	-3,548	-2,641	-1,458	-6,475	-5,018	-1,490	1,362	2,016	-257
60%	-2,487	-2,692	-3,098	-3,848	-2,467	-806	-6,447	-5,034	-1,173	831	1,394	-433
70%	-2,822	-2,497	-1,913	-4,269	-3,323	-1,205	-6,682	-5,376	-1,016	809	656	-325
80%	-3,345	-1,773	29	-4,585	-3,873	-1,616	-6,640	-5,322	-1,534	550	489	-205
90%	-2,742	-28	16	-4,803	-4,509	-2,592	-6,744	-5,887	-1,936	471	400	-132
Long Term												
Full Simulation Period[b]	-1,504	-1,464	-1,201	-3,115	-2,301	-1,037	-6,300	-5,152	-1,034	958	486	-211
Water Year Types[c]												
Wet (32%)	-2,191	-1,882	-2,198	-3,084	-1,169	549	-10,005	-8,387	250	543	923	-320
Above Normal (16%)	-895	-1,086	-1,110	-4,566	-2,928	-1,155	-8,229	-6,173	-1,499	230	926	-344
Below Normal (13%)	-2,563	-2,142	-419	-4,210	-2,273	-1,582	-5,535	-4,638	-3,133	429	1,589	59
Dry (24%)	-1,026	-1,187	-495	-2,737	-3,259	-2,574	-3,489	-2,907	-1,241	2,073	-446	-186
Critical (15%)	-500	-809	-1,034	-1,237	-2,505	-1,287	-1,572	-1,247	-1,044	1,268	-394	-118

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-2. Old and Middle River, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-3,764	-3,724	-3,812	-2,823	-666	-969	3,205	2,797	-1,150	-4,130	-2,453	-3,775
20%	-4,076	-4,560	-4,673	-2,823	-1,771	-1,394	2,207	1,304	-1,570	-6,849	-4,032	-5,147
30%	-4,613	-5,156	-5,244	-3,355	-2,823	-2,738	1,632	561	-3,500	-7,647	-5,770	-6,006
40%	-4,820	-5,627	-5,871	-4,392	-3,314	-3,500	1,268	108	-3,500	-8,888	-7,996	-7,621
50%	-5,328	-6,320	-5,871	-4,710	-3,781	-3,500	612	-182	-3,500	-9,376	-9,956	-9,000
60%	-5,589	-6,564	-5,871	-5,000	-4,878	-4,568	-102	-483	-4,487	-9,746	-10,630	-9,256
70%	-6,253	-7,101	-7,413	-5,000	-5,000	-5,000	-448	-632	-5,000	-10,301	-10,737	-9,653
80%	-6,560	-8,185	-9,537	-5,000	-5,000	-5,000	-995	-1,129	-5,000	-10,602	-10,853	-9,884
90%	-7,404	-9,995	-9,681	-5,000	-5,000	-5,000	-1,247	-1,414	-5,000	-11,108	-11,083	-10,032
Long Term												
Full Simulation Period[b]	-5,476	-6,380	-6,228	-3,535	-2,905	-2,690	919	310	-3,577	-8,496	-7,975	-7,706
Water Year Types[c]												
Wet (32%)	-5,847	-7,229	-5,526	-1,900	-1,991	-1,552	3,110	2,011	-4,274	-8,957	-10,532	-9,358
Above Normal (16%)	-5,525	-6,801	-6,850	-3,699	-3,161	-4,176	1,196	412	-4,525	-9,151	-10,873	-9,542
Below Normal (13%)	-5,488	-6,749	-7,669	-4,380	-3,477	-3,919	165	-316	-3,445	-10,539	-9,624	-8,178
Dry (24%)	-5,440	-5,953	-6,676	-4,621	-3,573	-3,072	-670	-906	-3,350	-8,900	-4,745	-6,453
Critical (15%)	-4,671	-4,458	-5,006	-4,314	-2,968	-1,780	-786	-887	-1,539	-4,242	-3,168	-3,793

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-3,471	-4,154	-3,935	-2,361	-447	-819	405	-673	-2,098	-3,660	-3,007	-3,495
20%	-4,101	-5,233	-5,184	-3,500	-1,896	-1,347	-946	-1,150	-4,287	-5,775	-4,278	-5,225
30%	-4,803	-6,947	-6,403	-3,500	-2,838	-2,283	-1,200	-1,150	-4,625	-7,093	-6,258	-6,437
40%	-5,638	-7,541	-6,403	-3,500	-3,500	-3,500	-2,086	-2,560	-5,017	-8,012	-7,669	-8,402
50%	-7,049	-8,326	-6,403	-5,000	-3,500	-3,500	-2,787	-3,326	-5,526	-8,990	-9,396	-9,192
60%	-8,252	-9,400	-6,811	-5,000	-4,273	-3,616	-3,368	-3,500	-5,750	-9,549	-9,845	-9,680
70%	-8,982	-9,810	-7,677	-5,000	-5,000	-5,061	-3,526	-3,500	-5,750	-10,046	-10,212	-9,842
80%	-9,734	-9,990	-8,823	-5,000	-5,621	-6,252	-4,031	-4,451	-6,160	-10,767	-10,624	-10,044
90%	-10,085	-10,084	-9,552	-6,976	-7,500	-7,499	-4,474	-5,149	-7,011	-11,148	-10,797	-10,177
Long Term												
Full Simulation Period[b]	-6,888	-7,771	-6,494	-3,764	-3,283	-3,072	-2,176	-2,623	-4,997	-8,112	-7,831	-7,917
Water Year Types[c]												
Wet (32%)	-7,965	-9,052	-5,964	-2,522	-2,581	-1,646	-1,367	-2,399	-5,476	-8,581	-9,731	-9,555
Above Normal (16%)	-6,452	-8,078	-6,997	-3,789	-4,137	-5,220	-3,630	-4,226	-5,981	-9,160	-10,444	-9,839
Below Normal (13%)	-7,685	-8,790	-7,868	-4,451	-3,689	-4,765	-2,676	-2,885	-5,409	-10,929	-10,032	-8,880
Dry (24%)	-6,546	-7,086	-6,848	-4,588	-3,582	-3,358	-2,517	-2,670	-4,927	-8,172	-5,079	-6,457
Critical (15%)	-4,869	-4,871	-5,252	-4,429	-3,011	-1,804	-1,328	-1,054	-2,628	-3,280	-3,450	-3,839

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	293	-431	-123	462	219	149	-2,801	-3,470	-948	470	-554	280
20%	-24	-673	-512	-677	-125	46	-3,153	-2,455	-2,717	1,074	-246	-79
30%	-190	-1,791	-1,159	-145	-16	455	-2,832	-1,711	-1,125	554	-488	-431
40%	-817	-1,914	-532	892	-186	0	-3,354	-2,668	-1,517	876	326	-781
50%	-1,721	-2,006	-532	-290	281	0	-3,399	-3,144	-2,026	386	560	-193
60%	-2,663	-2,836	-940	0	605	951	-3,266	-3,017	-1,263	196	785	-423
70%	-2,729	-2,709	-265	0	0	-61	-3,078	-2,868	-750	256	525	-189
80%	-3,174	-1,805	713	0	-621	-1,252	-3,036	-3,323	-1,160	-165	230	-160
90%	-2,681	-89	129	-1,976	-2,500	-2,499	-3,227	-3,735	-2,011	-39	286	-146
Long Term												
Full Simulation Period[b]	-1,412	-1,391	-267	-230	-379	-382	-3,095	-2,933	-1,420	384	144	-211
Water Year Types[c]												
Wet (32%)	-2,119	-1,823	-438	-622	-590	-93	-4,477	-4,410	-1,202	376	800	-197
Above Normal (16%)	-927	-1,277	-147	-89	-975	-1,044	-4,826	-4,637	-1,456	-10	429	-297
Below Normal (13%)	-2,197	-2,041	-199	-71	-212	-846	-2,841	-2,569	-1,964	-389	-408	-703
Dry (24%)	-1,106	-1,133	-172	33	-9	-286	-1,847	-1,764	-1,577	728	-334	-4
Critical (15%)	-198	-414	-246	-115	-43	-24	-541	-167	-1,089	962	-282	-46

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-3. Old and Middle River, Monthly Flow

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-3,764	-3,724	-3,812	-2,823	-666	-969	3,205	2,797	-1,150	-4,130	-2,453	-3,775
20%	-4,076	-4,560	-4,673	-2,823	-1,771	-1,394	2,207	1,304	-1,570	-6,849	-4,032	-5,147
30%	-4,613	-5,156	-5,244	-3,355	-2,823	-2,738	1,632	561	-3,500	-7,647	-5,770	-6,006
40%	-4,820	-5,627	-5,871	-4,392	-3,314	-3,500	1,268	108	-3,500	-8,888	-7,996	-7,621
50%	-5,328	-6,320	-5,871	-4,710	-3,781	-3,500	612	-182	-3,500	-9,376	-9,956	-9,000
60%	-5,589	-6,564	-5,871	-5,000	-4,878	-4,568	-102	-483	-4,487	-9,746	-10,630	-9,256
70%	-6,253	-7,101	-7,413	-5,000	-5,000	-5,000	-448	-632	-5,000	-10,301	-10,737	-9,653
80%	-6,560	-8,185	-9,537	-5,000	-5,000	-5,000	-995	-1,129	-5,000	-10,602	-10,853	-9,884
90%	-7,404	-9,995	-9,681	-5,000	-5,000	-5,000	-1,247	-1,414	-5,000	-11,108	-11,083	-10,032
Long Term												
Full Simulation Period[b]	-5,476	-6,380	-6,228	-3,535	-2,905	-2,690	919	310	-3,577	-8,496	-7,975	-7,706
Water Year Types[c]												
Wet (32%)	-5,847	-7,229	-5,526	-1,900	-1,991	-1,552	3,110	2,011	-4,274	-8,957	-10,532	-9,358
Above Normal (16%)	-5,525	-6,801	-6,850	-3,699	-3,161	-4,176	1,196	412	-4,525	-9,151	-10,873	-9,542
Below Normal (13%)	-5,488	-6,749	-7,669	-4,380	-3,477	-3,919	165	-316	-3,445	-10,539	-9,624	-8,178
Dry (24%)	-5,440	-5,953	-6,676	-4,621	-3,573	-3,072	-670	-906	-3,350	-8,900	-4,745	-6,453
Critical (15%)	-4,671	-4,458	-5,006	-4,314	-2,968	-1,780	-786	-887	-1,539	-4,242	-3,168	-3,793

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-3,722	-3,722	-3,826	-2,823	-641	-965	3,206	2,797	-1,150	-4,455	-3,295	-3,913
20%	-4,102	-4,558	-4,737	-2,823	-1,771	-1,394	2,134	1,335	-2,319	-6,620	-4,451	-5,247
30%	-4,583	-5,162	-5,150	-3,355	-2,820	-2,738	1,566	712	-3,500	-8,001	-6,361	-6,304
40%	-4,858	-5,603	-5,871	-4,378	-3,267	-3,500	1,270	568	-3,500	-9,172	-8,612	-7,552
50%	-5,145	-6,098	-5,871	-4,710	-3,513	-3,500	623	381	-3,500	-9,522	-10,244	-8,864
60%	-5,368	-6,494	-5,871	-5,000	-4,878	-4,568	381	381	-4,467	-9,822	-10,615	-9,232
70%	-6,237	-7,087	-7,453	-5,000	-5,000	-5,000	381	381	-5,000	-10,430	-10,756	-9,654
80%	-6,583	-8,086	-9,466	-5,000	-5,000	-5,000	381	381	-5,000	-10,694	-10,844	-9,915
90%	-7,355	-9,871	-9,681	-5,000	-5,000	-5,000	381	381	-5,000	-11,168	-11,076	-10,031
Long Term												
Full Simulation Period[b]	-5,443	-6,337	-6,246	-3,551	-2,904	-2,710	1,482	1,034	-3,631	-8,687	-8,239	-7,714
Water Year Types[c]												
Wet (32%)	-5,812	-7,354	-5,572	-1,900	-1,926	-1,598	3,122	2,182	-4,275	-8,965	-10,573	-9,193
Above Normal (16%)	-5,543	-6,368	-6,838	-3,716	-3,222	-4,174	1,292	780	-4,521	-9,187	-10,817	-9,491
Below Normal (13%)	-5,418	-6,748	-7,637	-4,380	-3,554	-3,971	718	468	-3,444	-10,623	-9,770	-8,460
Dry (24%)	-5,380	-5,893	-6,731	-4,620	-3,578	-3,074	565	453	-3,523	-9,446	-5,313	-6,571
Critical (15%)	-4,661	-4,461	-4,983	-4,409	-2,957	-1,770	363	310	-1,623	-4,501	-3,860	-3,805

Alternative 5 minus No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	42	2	-14	0	25	4	0	0	0	-325	-841	-138
20%	-26	2	-64	0	0	0	-73	31	-748	229	-419	-101
30%	29	-6	94	0	3	0	-67	152	0	-355	-591	-299
40%	-37	23	0	14	46	0	2	460	0	-284	-617	68
50%	183	222	0	0	268	0	11	563	0	-145	-287	136
60%	221	70	0	0	0	0	483	864	19	-76	15	25
70%	16	14	-40	0	0	0	830	1,014	0	-128	-19	-1
80%	-23	99	71	0	0	0	1,376	1,510	0	-92	10	-31
90%	49	124	0	0	0	0	1,629	1,796	0	-60	7	1
Long Term												
Full Simulation Period[b]	34	43	-19	-16	1	-20	563	725	-54	-191	-263	-8
Water Year Types[c]												
Wet (32%)	35	-124	-46	0	65	-46	12	171	-1	-9	-41	165
Above Normal (16%)	-19	433	12	-16	-61	2	96	368	4	-36	56	51
Below Normal (13%)	70	1	32	0	-77	-53	552	785	1	-84	-145	-283
Dry (24%)	60	60	-56	1	-5	-1	1,235	1,359	-173	-546	-568	-118
Critical (15%)	10	-4	23	-95	11	10	1,150	1,197	-84	-260	-692	-11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-4. Old and Middle River, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-3,392	-4,293	-4,109	-2,581	-1,241	-119	-2,051	-1,611	-2,184	-3,454	-2,880	-3,666
20%	-4,079	-5,433	-6,043	-4,838	-2,865	-1,287	-3,131	-2,897	-2,834	-5,152	-4,631	-5,107
30%	-4,769	-6,994	-6,917	-6,279	-4,367	-3,292	-3,957	-4,177	-3,308	-6,488	-5,837	-6,393
40%	-6,409	-7,620	-7,554	-7,434	-5,806	-4,012	-4,821	-4,673	-4,258	-7,155	-6,876	-8,264
50%	-7,303	-8,686	-8,173	-8,257	-6,422	-4,958	-5,864	-5,200	-4,990	-8,014	-7,941	-9,257
60%	-8,076	-9,256	-8,969	-8,848	-7,346	-5,373	-6,549	-5,517	-5,660	-8,914	-9,236	-9,689
70%	-9,075	-9,598	-9,326	-9,269	-8,323	-6,205	-7,131	-6,008	-6,016	-9,492	-10,081	-9,977
80%	-9,905	-9,959	-9,508	-9,585	-8,873	-6,616	-7,635	-6,451	-6,534	-10,052	-10,364	-10,089
90%	-10,146	-10,023	-9,665	-9,803	-9,509	-7,592	-7,991	-7,302	-6,936	-10,637	-10,683	-10,163
Long Term												
Full Simulation Period[b]	-6,980	-7,844	-7,429	-6,650	-5,206	-3,727	-5,381	-4,842	-4,611	-7,538	-7,489	-7,917
Water Year Types[c]												
Wet (32%)	-8,038	-9,112	-7,723	-4,985	-3,160	-1,004	-6,895	-6,376	-4,024	-8,414	-9,609	-9,678
Above Normal (16%)	-6,419	-7,887	-7,960	-8,266	-6,089	-5,331	-7,034	-5,761	-6,024	-8,921	-9,947	-9,886
Below Normal (13%)	-8,051	-8,891	-8,088	-8,590	-5,749	-5,501	-5,370	-4,954	-6,578	-10,111	-8,035	-8,118
Dry (24%)	-6,466	-7,140	-7,171	-7,358	-6,832	-5,646	-4,159	-3,813	-4,591	-6,827	-5,191	-6,639
Critical (15%)	-5,171	-5,266	-6,040	-5,551	-5,474	-3,067	-2,358	-2,134	-2,583	-2,973	-3,561	-3,911

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-3,764	-3,724	-3,812	-2,823	-666	-969	3,205	2,797	-1,150	-4,130	-2,453	-3,775
20%	-4,076	-4,560	-4,673	-2,823	-1,771	-1,394	2,207	1,304	-1,570	-6,849	-4,032	-5,147
30%	-4,613	-5,156	-5,244	-3,355	-2,823	-2,738	1,632	561	-3,500	-7,647	-5,770	-6,006
40%	-4,820	-5,627	-5,871	-4,392	-3,314	-3,500	1,268	108	-3,500	-8,888	-7,996	-7,621
50%	-5,328	-6,320	-5,871	-4,710	-3,781	-3,500	612	-182	-3,500	-9,376	-9,956	-9,000
60%	-5,589	-6,564	-5,871	-5,000	-4,878	-4,568	-102	-483	-4,487	-9,746	-10,630	-9,256
70%	-6,253	-7,101	-7,413	-5,000	-5,000	-5,000	-448	-632	-5,000	-10,301	-10,737	-9,653
80%	-6,560	-8,185	-9,537	-5,000	-5,000	-5,000	-995	-1,129	-5,000	-10,602	-10,853	-9,884
90%	-7,404	-9,995	-9,681	-5,000	-5,000	-5,000	-1,247	-1,414	-5,000	-11,108	-11,083	-10,032
Long Term												
Full Simulation Period[b]	-5,476	-6,380	-6,228	-3,535	-2,905	-2,690	919	310	-3,577	-8,496	-7,975	-7,706
Water Year Types[c]												
Wet (32%)	-5,847	-7,229	-5,526	-1,900	-1,991	-1,552	3,110	2,011	-4,274	-8,957	-10,532	-9,358
Above Normal (16%)	-5,525	-6,801	-6,850	-3,699	-3,161	-4,176	1,196	412	-4,525	-9,151	-10,873	-9,542
Below Normal (13%)	-5,488	-6,749	-7,669	-4,380	-3,477	-3,919	165	-316	-3,445	-10,539	-9,624	-8,178
Dry (24%)	-5,440	-5,953	-6,676	-4,621	-3,573	-3,072	-670	-906	-3,350	-8,900	-4,745	-6,453
Critical (15%)	-4,671	-4,458	-5,006	-4,314	-2,968	-1,780	-786	-887	-1,539	-4,242	-3,168	-3,793

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-373	569	298	-241	575	-850	5,257	4,408	1,033	-675	426	-109
20%	3	873	1,370	2,015	1,094	-107	5,338	4,202	1,264	-1,697	599	-39
30%	156	1,838	1,673	2,924	1,545	554	5,589	4,738	-192	-1,159	67	387
40%	1,588	1,993	1,683	3,042	2,492	512	6,090	4,781	758	-1,733	-1,120	644
50%	1,975	2,366	2,302	3,548	2,641	1,458	6,475	5,018	1,490	-1,362	-2,016	257
60%	2,487	2,692	3,098	3,848	2,467	806	6,447	5,034	1,173	-831	-1,394	433
70%	2,822	2,497	1,913	4,269	3,323	1,205	6,682	5,376	1,016	-809	-656	325
80%	3,345	1,773	-29	4,585	3,873	1,616	6,640	5,322	1,534	-550	-489	205
90%	2,742	28	-16	4,803	4,509	2,592	6,744	5,887	1,936	-471	-400	132
Long Term												
Full Simulation Period[b]	1,504	1,464	1,201	3,115	2,301	1,037	6,300	5,152	1,034	-958	-486	211
Water Year Types[c]												
Wet (32%)	2,191	1,882	2,198	3,084	1,169	-549	10,005	8,387	-250	-543	-923	320
Above Normal (16%)	895	1,086	1,110	4,566	2,928	1,155	8,229	6,173	1,499	-230	-926	344
Below Normal (13%)	2,563	2,142	419	4,210	2,273	1,582	5,535	4,638	3,133	-429	-1,589	-59
Dry (24%)	1,026	1,187	495	2,737	3,259	2,574	3,489	2,907	1,241	-2,073	446	186
Critical (15%)	500	809	1,034	1,237	2,505	1,287	1,572	1,247	1,044	-1,268	394	118

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-5. Old and Middle River, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-3,392	-4,293	-4,109	-2,581	-1,241	-119	-2,051	-1,611	-2,184	-3,454	-2,880	-3,666
20%	-4,079	-5,433	-6,043	-4,838	-2,865	-1,287	-3,131	-2,897	-2,834	-5,152	-4,631	-5,107
30%	-4,769	-6,994	-6,917	-6,279	-4,367	-3,292	-3,957	-4,177	-3,308	-6,488	-5,837	-6,393
40%	-6,409	-7,620	-7,554	-7,434	-5,806	-4,012	-4,821	-4,673	-4,258	-7,155	-6,876	-8,264
50%	-7,303	-8,686	-8,173	-8,257	-6,422	-4,958	-5,864	-5,200	-4,990	-8,014	-7,941	-9,257
60%	-8,076	-9,256	-8,969	-8,848	-7,346	-5,373	-6,549	-5,517	-5,660	-8,914	-9,236	-9,689
70%	-9,075	-9,598	-9,326	-9,269	-8,323	-6,205	-7,131	-6,008	-6,016	-9,492	-10,081	-9,977
80%	-9,905	-9,959	-9,508	-9,585	-8,873	-6,616	-7,635	-6,451	-6,534	-10,052	-10,364	-10,089
90%	-10,146	-10,023	-9,665	-9,803	-9,509	-7,592	-7,991	-7,302	-6,936	-10,637	-10,683	-10,163
Long Term												
Full Simulation Period[b]	-6,980	-7,844	-7,429	-6,650	-5,206	-3,727	-5,381	-4,842	-4,611	-7,538	-7,489	-7,917
Water Year Types[c]												
Wet (32%)	-8,038	-9,112	-7,723	-4,985	-3,160	-1,004	-6,895	-6,376	-4,024	-8,414	-9,609	-9,678
Above Normal (16%)	-6,419	-7,887	-7,960	-8,266	-6,089	-5,331	-7,034	-5,761	-6,024	-8,921	-9,947	-9,886
Below Normal (13%)	-8,051	-8,891	-8,088	-8,590	-5,749	-5,501	-5,370	-4,954	-6,578	-10,111	-8,035	-8,118
Dry (24%)	-6,466	-7,140	-7,171	-7,358	-6,832	-5,646	-4,159	-3,813	-4,591	-6,827	-5,191	-6,639
Critical (15%)	-5,171	-5,266	-6,040	-5,551	-5,474	-3,067	-2,358	-2,134	-2,583	-2,973	-3,561	-3,911

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-3,471	-4,154	-3,935	-2,361	-447	-819	405	-673	-2,098	-3,660	-3,007	-3,495
20%	-4,101	-5,233	-5,184	-3,500	-1,896	-1,347	-946	-1,150	-4,287	-5,775	-4,278	-5,225
30%	-4,803	-6,947	-6,403	-3,500	-2,838	-2,283	-1,200	-1,150	-4,625	-7,093	-6,258	-6,437
40%	-5,638	-7,541	-6,403	-3,500	-3,500	-3,500	-2,086	-2,560	-5,017	-8,012	-7,669	-8,402
50%	-7,049	-8,326	-6,403	-5,000	-3,500	-3,500	-2,787	-3,326	-5,526	-8,990	-9,396	-9,192
60%	-8,252	-9,400	-6,811	-5,000	-4,273	-3,616	-3,368	-3,500	-5,750	-9,549	-9,845	-9,680
70%	-8,982	-9,810	-7,677	-5,000	-5,000	-5,061	-3,526	-3,500	-5,750	-10,046	-10,212	-9,842
80%	-9,734	-9,990	-8,823	-5,000	-5,621	-6,252	-4,031	-4,451	-6,160	-10,767	-10,624	-10,044
90%	-10,085	-10,084	-9,552	-6,976	-7,500	-7,499	-4,474	-5,149	-7,011	-11,148	-10,797	-10,177
Long Term												
Full Simulation Period[b]	-6,888	-7,771	-6,494	-3,764	-3,283	-3,072	-2,176	-2,623	-4,997	-8,112	-7,831	-7,917
Water Year Types[c]												
Wet (32%)	-7,965	-9,052	-5,964	-2,522	-2,581	-1,646	-1,367	-2,399	-5,476	-8,581	-9,731	-9,555
Above Normal (16%)	-6,452	-8,078	-6,997	-3,789	-4,137	-5,220	-3,630	-4,226	-5,981	-9,160	-10,444	-9,839
Below Normal (13%)	-7,685	-8,790	-7,868	-4,451	-3,689	-4,765	-2,676	-2,885	-5,409	-10,929	-10,032	-8,880
Dry (24%)	-6,546	-7,086	-6,848	-4,588	-3,582	-3,358	-2,517	-2,670	-4,927	-8,172	-5,079	-6,457
Critical (15%)	-4,869	-4,871	-5,252	-4,429	-3,011	-1,804	-1,328	-1,054	-2,628	-3,280	-3,450	-3,839

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-79	139	175	220	794	-701	2,456	938	85	-205	-127	172
20%	-22	200	858	1,338	969	-61	2,185	1,747	-1,453	-623	353	-118
30%	-34	47	514	2,779	1,529	1,009	2,757	3,027	-1,317	-605	-421	-43
40%	771	79	1,151	3,934	2,306	512	2,735	2,112	-759	-857	-793	-137
50%	254	360	1,769	3,257	2,922	1,458	3,077	1,874	-536	-976	-1,455	64
60%	-177	-144	2,158	3,848	3,072	1,757	3,181	2,017	-90	-635	-609	10
70%	93	-213	1,648	4,269	3,323	1,144	3,605	2,508	266	-553	-131	136
80%	171	-31	685	4,585	3,252	365	3,604	1,999	375	-715	-259	45
90%	61	-61	112	2,827	2,009	93	3,517	2,153	-75	-511	-114	-14
Long Term												
Full Simulation Period[b]	92	73	934	2,886	1,923	656	3,205	2,219	-386	-574	-342	0
Water Year Types[c]												
Wet (32%)	73	60	1,759	2,463	579	-642	5,528	3,977	-1,453	-167	-123	124
Above Normal (16%)	-32	-191	963	4,477	1,952	111	3,403	1,535	43	-240	-497	48
Below Normal (13%)	366	101	220	4,139	2,061	736	2,695	2,069	1,169	-818	-1,997	-762
Dry (24%)	-80	54	323	2,770	3,249	2,288	1,642	1,144	-336	-1,345	112	182
Critical (15%)	302	395	789	1,123	2,462	1,263	1,030	1,081	-45	-307	112	73

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-6. Old and Middle River, Monthly Flow

Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-3,392	-4,293	-4,109	-2,581	-1,241	-119	-2,051	-1,611	-2,184	-3,454	-2,880	-3,666
20%	-4,079	-5,433	-6,043	-4,838	-2,865	-1,287	-3,131	-2,897	-2,834	-5,152	-4,631	-5,107
30%	-4,769	-6,994	-6,917	-6,279	-4,367	-3,292	-3,957	-4,177	-3,308	-6,488	-5,837	-6,393
40%	-6,409	-7,620	-7,554	-7,434	-5,806	-4,012	-4,821	-4,673	-4,258	-7,155	-6,876	-8,264
50%	-7,303	-8,686	-8,173	-8,257	-6,422	-4,958	-5,864	-5,200	-4,990	-8,014	-7,941	-9,257
60%	-8,076	-9,256	-8,969	-8,848	-7,346	-5,373	-6,549	-5,517	-5,660	-8,914	-9,236	-9,689
70%	-9,075	-9,598	-9,326	-9,269	-8,323	-6,205	-7,131	-6,008	-6,016	-9,492	-10,081	-9,977
80%	-9,905	-9,959	-9,508	-9,585	-8,873	-6,616	-7,635	-6,451	-6,534	-10,052	-10,364	-10,089
90%	-10,146	-10,023	-9,665	-9,803	-9,509	-7,592	-7,991	-7,302	-6,936	-10,637	-10,683	-10,163
Long Term												
Full Simulation Period[b]	-6,980	-7,844	-7,429	-6,650	-5,206	-3,727	-5,381	-4,842	-4,611	-7,538	-7,489	-7,917
Water Year Types[c]												
Wet (32%)	-8,038	-9,112	-7,723	-4,985	-3,160	-1,004	-6,895	-6,376	-4,024	-8,414	-9,609	-9,678
Above Normal (16%)	-6,419	-7,887	-7,960	-8,266	-6,089	-5,331	-7,034	-5,761	-6,024	-8,921	-9,947	-9,886
Below Normal (13%)	-8,051	-8,891	-8,088	-8,590	-5,749	-5,501	-5,370	-4,954	-6,578	-10,111	-8,035	-8,118
Dry (24%)	-6,466	-7,140	-7,171	-7,358	-6,832	-5,646	-4,159	-3,813	-4,591	-6,827	-5,191	-6,639
Critical (15%)	-5,171	-5,266	-6,040	-5,551	-5,474	-3,067	-2,358	-2,134	-2,583	-2,973	-3,561	-3,911

Alternative 5

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-3,722	-3,722	-3,826	-2,823	-641	-965	3,206	2,797	-1,150	-4,455	-3,295	-3,913
20%	-4,102	-4,558	-4,737	-2,823	-1,771	-1,394	2,134	1,335	-2,319	-6,620	-4,451	-5,247
30%	-4,583	-5,162	-5,150	-3,355	-2,820	-2,738	1,566	712	-3,500	-8,001	-6,361	-6,304
40%	-4,858	-5,603	-5,871	-4,378	-3,267	-3,500	1,270	568	-3,500	-9,172	-8,612	-7,552
50%	-5,145	-6,098	-5,871	-4,710	-3,513	-3,500	623	381	-3,500	-9,522	-10,244	-8,864
60%	-5,368	-6,494	-5,871	-5,000	-4,878	-4,568	381	381	-4,467	-9,822	-10,615	-9,232
70%	-6,237	-7,087	-7,453	-5,000	-5,000	-5,000	381	381	-5,000	-10,430	-10,756	-9,654
80%	-6,583	-8,086	-9,466	-5,000	-5,000	-5,000	381	381	-5,000	-10,694	-10,844	-9,915
90%	-7,355	-9,871	-9,681	-5,000	-5,000	-5,000	381	381	-5,000	-11,168	-11,076	-10,031
Long Term												
Full Simulation Period[b]	-5,443	-6,337	-6,246	-3,551	-2,904	-2,710	1,482	1,034	-3,631	-8,687	-8,239	-7,714
Water Year Types[c]												
Wet (32%)	-5,812	-7,354	-5,572	-1,900	-1,926	-1,598	3,122	2,182	-4,275	-8,965	-10,573	-9,193
Above Normal (16%)	-5,543	-6,368	-6,838	-3,716	-3,222	-4,174	1,292	780	-4,521	-9,187	-10,817	-9,491
Below Normal (13%)	-5,418	-6,748	-7,637	-4,380	-3,554	-3,971	718	468	-3,444	-10,623	-9,770	-8,460
Dry (24%)	-5,380	-5,893	-6,731	-4,620	-3,578	-3,074	565	453	-3,523	-9,446	-5,313	-6,571
Critical (15%)	-4,661	-4,461	-4,983	-4,409	-2,957	-1,770	363	310	-1,623	-4,501	-3,860	-3,805

Alternative 5 minus Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-331	571	284	-241	600	-846	5,257	4,408	1,033	-1,001	-415	-247
20%	-23	875	1,306	2,015	1,094	-107	5,265	4,233	516	-1,468	180	-140
30%	186	1,832	1,767	2,924	1,548	554	5,522	4,889	-192	-1,514	-524	89
40%	1,551	2,016	1,683	3,056	2,539	512	6,091	5,240	758	-2,017	-1,736	712
50%	2,158	2,588	2,302	3,548	2,909	1,458	6,487	5,582	1,490	-1,507	-2,303	393
60%	2,707	2,762	3,098	3,848	2,467	806	6,930	5,899	1,193	-907	-1,378	458
70%	2,838	2,511	1,873	4,269	3,323	1,205	7,512	6,390	1,016	-937	-675	323
80%	3,322	1,872	42	4,585	3,873	1,616	8,016	6,832	1,534	-642	-479	174
90%	2,791	152	-16	4,803	4,509	2,592	8,372	7,683	1,936	-531	-393	132
Long Term												
Full Simulation Period[b]	1,537	1,508	1,182	3,099	2,302	1,017	6,863	5,876	980	-1,149	-750	203
Water Year Types[c]												
Wet (32%)	2,226	1,758	2,151	3,084	1,234	-595	10,017	8,558	-251	-552	-964	485
Above Normal (16%)	876	1,519	1,122	4,550	2,867	1,158	8,325	6,541	1,503	-266	-871	395
Below Normal (13%)	2,633	2,144	450	4,210	2,196	1,530	6,088	5,422	3,134	-512	-1,735	-342
Dry (24%)	1,086	1,247	439	2,738	3,254	2,573	4,724	4,266	1,068	-2,620	-122	68
Critical (15%)	510	805	1,058	1,142	2,516	1,296	2,721	2,445	961	-1,528	-298	107

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

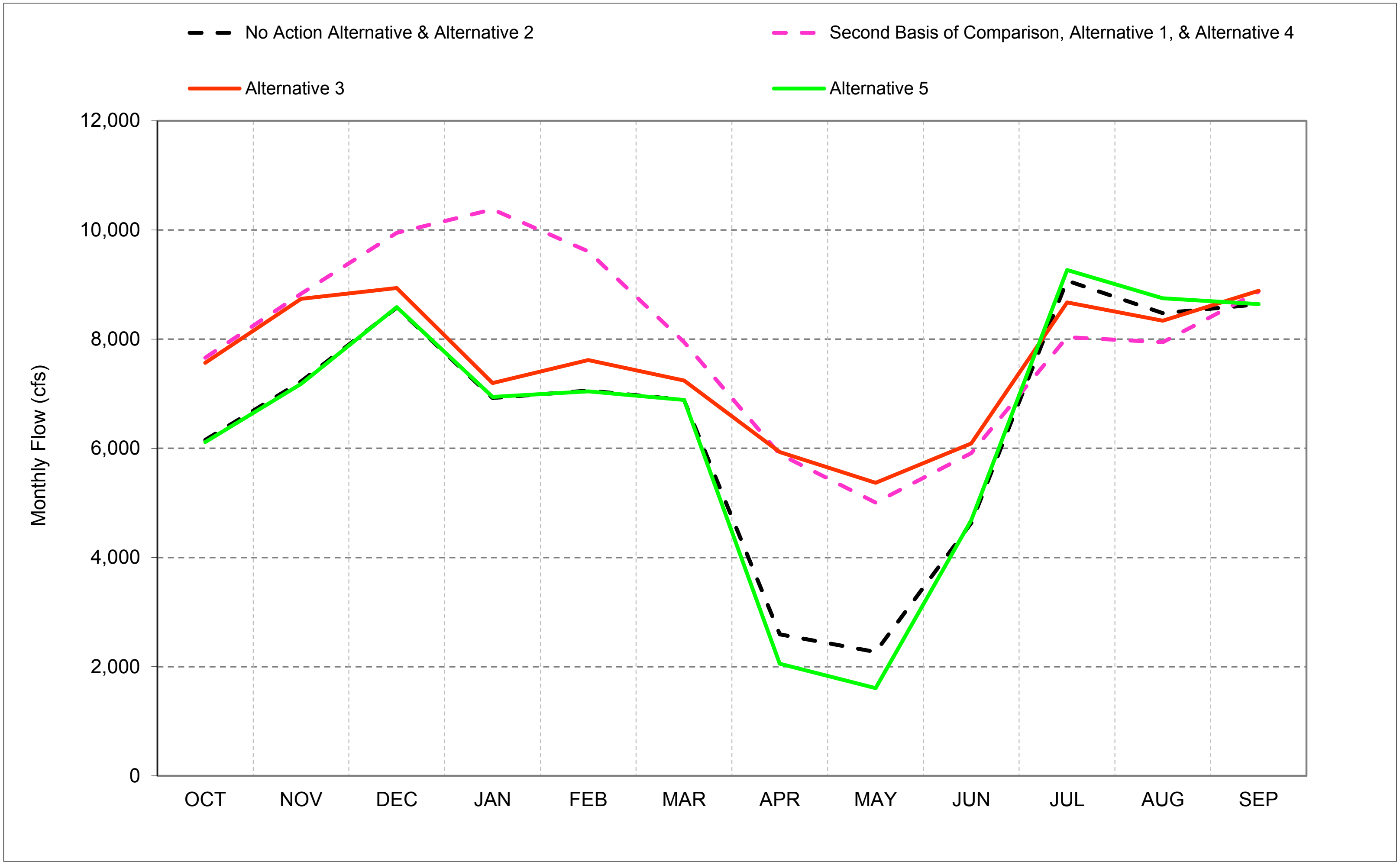
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.18. Exports through Jones and Banks Pumping Plants

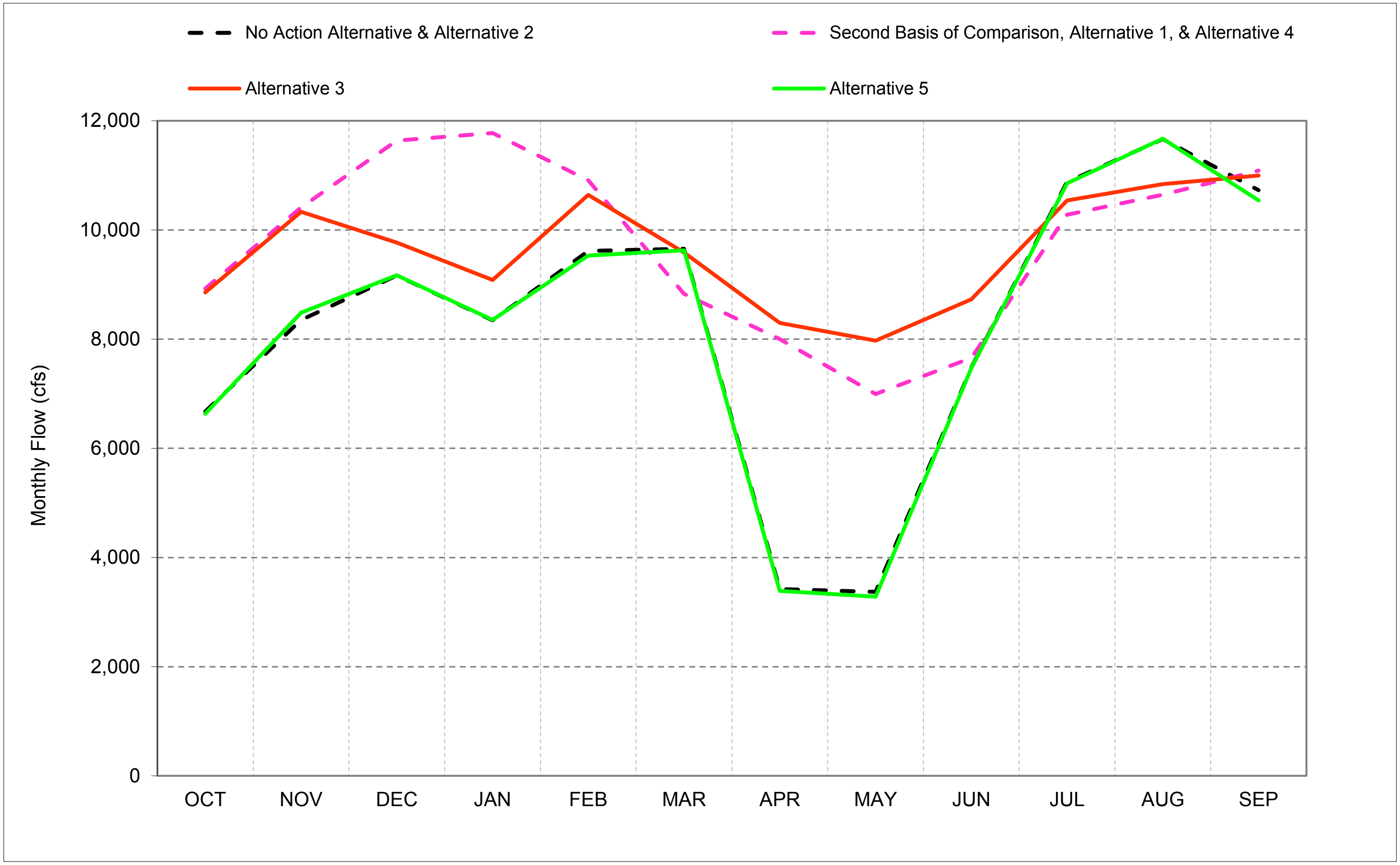
Figure C-18-1-1. Exports Through Jones and Banks Pumping Plants, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-1-2. Exports Through Jones and Banks Pumping Plants, Wet Year* Long-Term Average Flow**

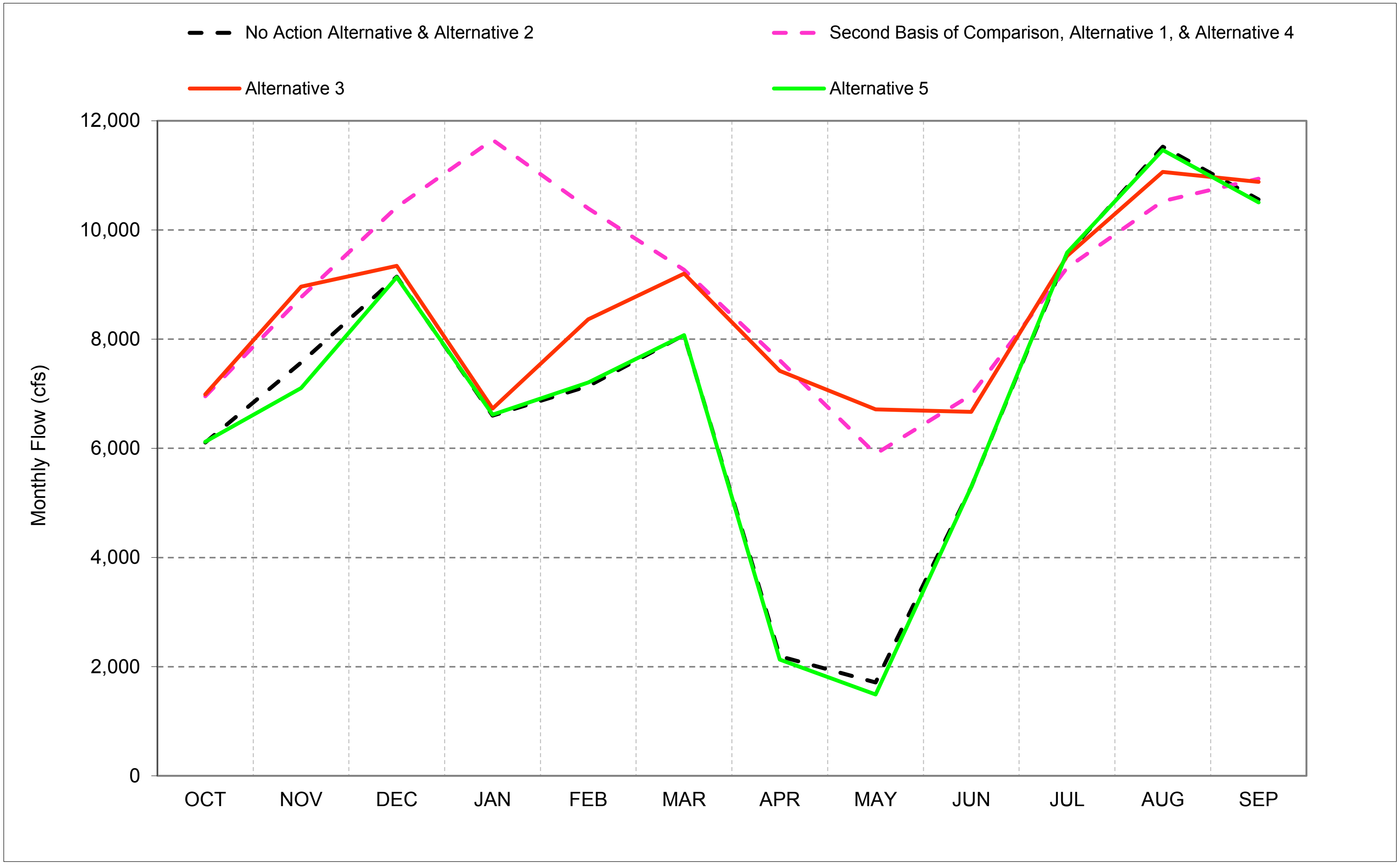


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-1-3. Exports Through Jones and Banks Pumping Plants, Above Normal Year* Long-Term Average Flow**

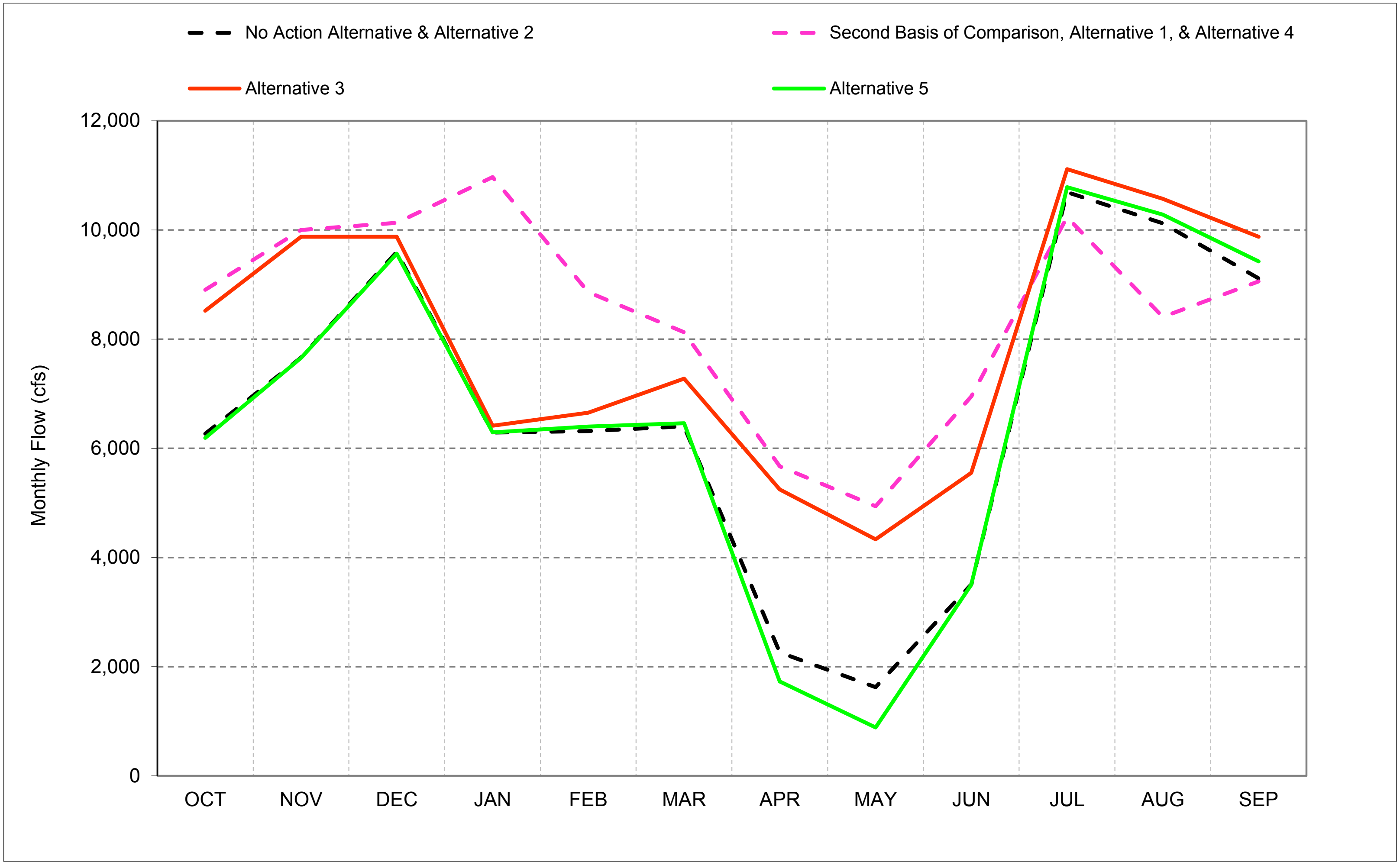


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-1-4. Exports Through Jones and Banks Pumping Plants, Below Normal Year* Long-Term Average Flow**

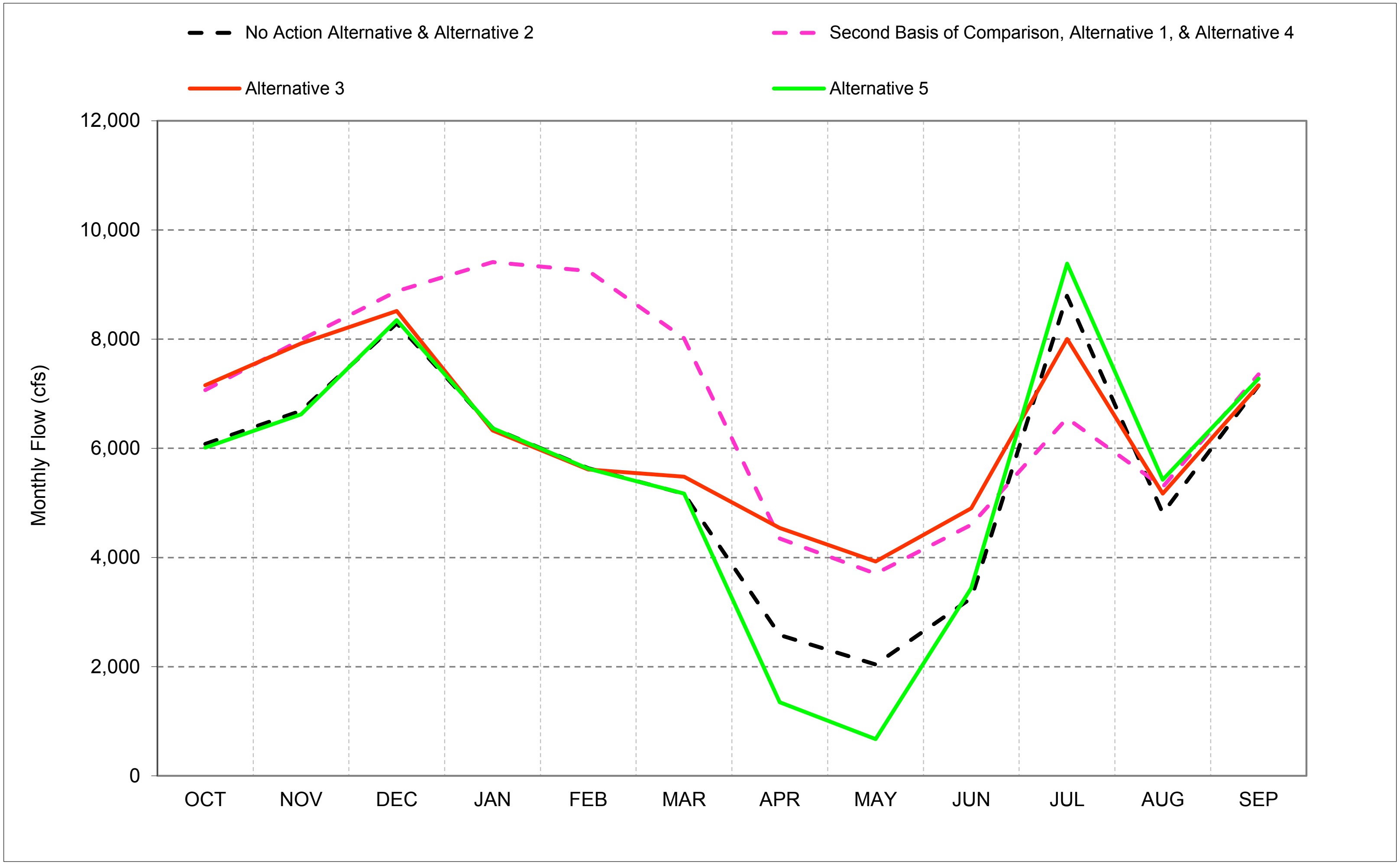


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-1-5. Exports Through Jones and Banks Pumping Plants, Dry Year* Long-Term Average Flow**

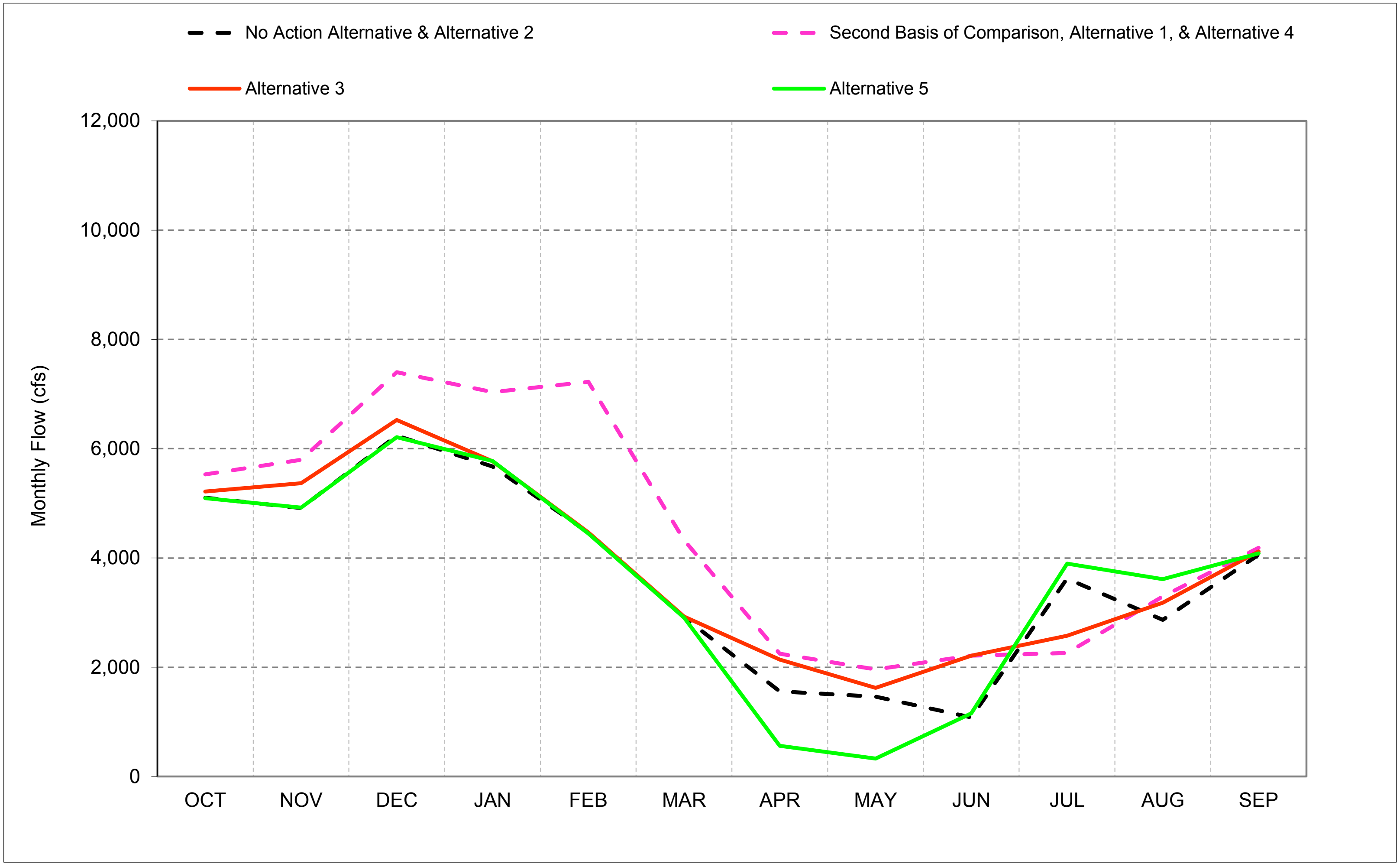


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-1-6. Exports Through Jones and Banks Pumping Plants, Critical Year* Long-Term Average Flow**

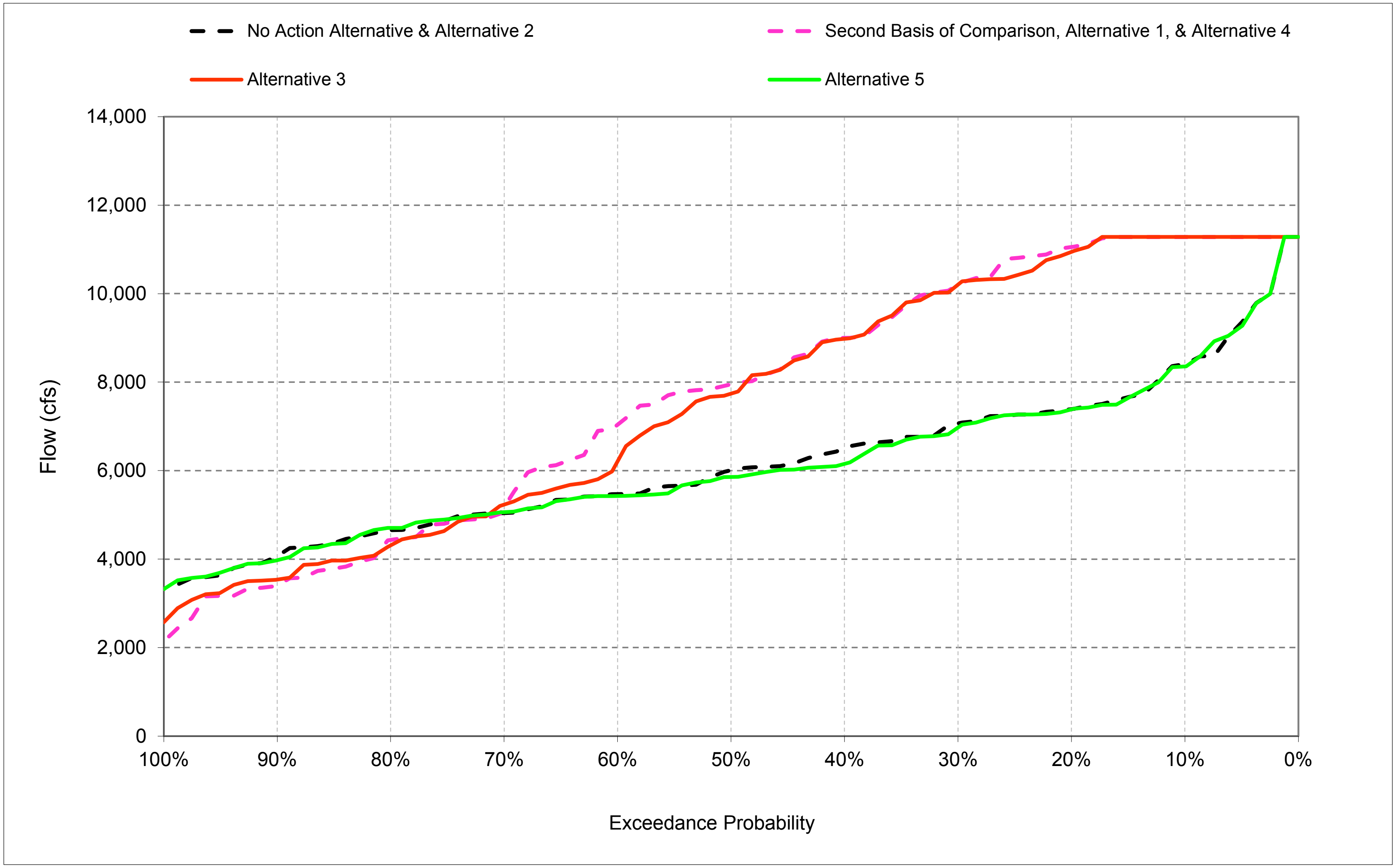


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

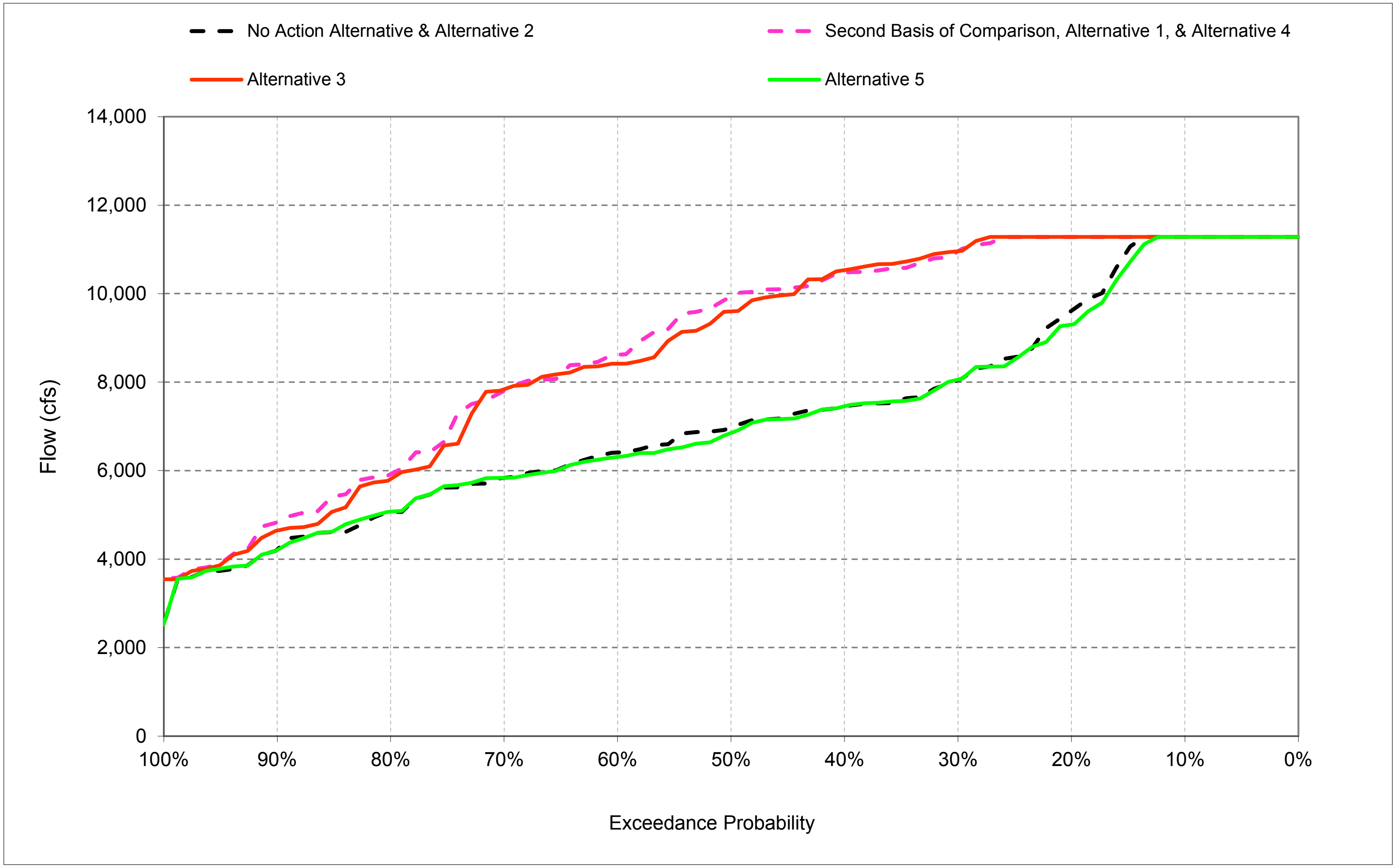
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-1. Exports Through Jones and Banks Pumping Plants, October



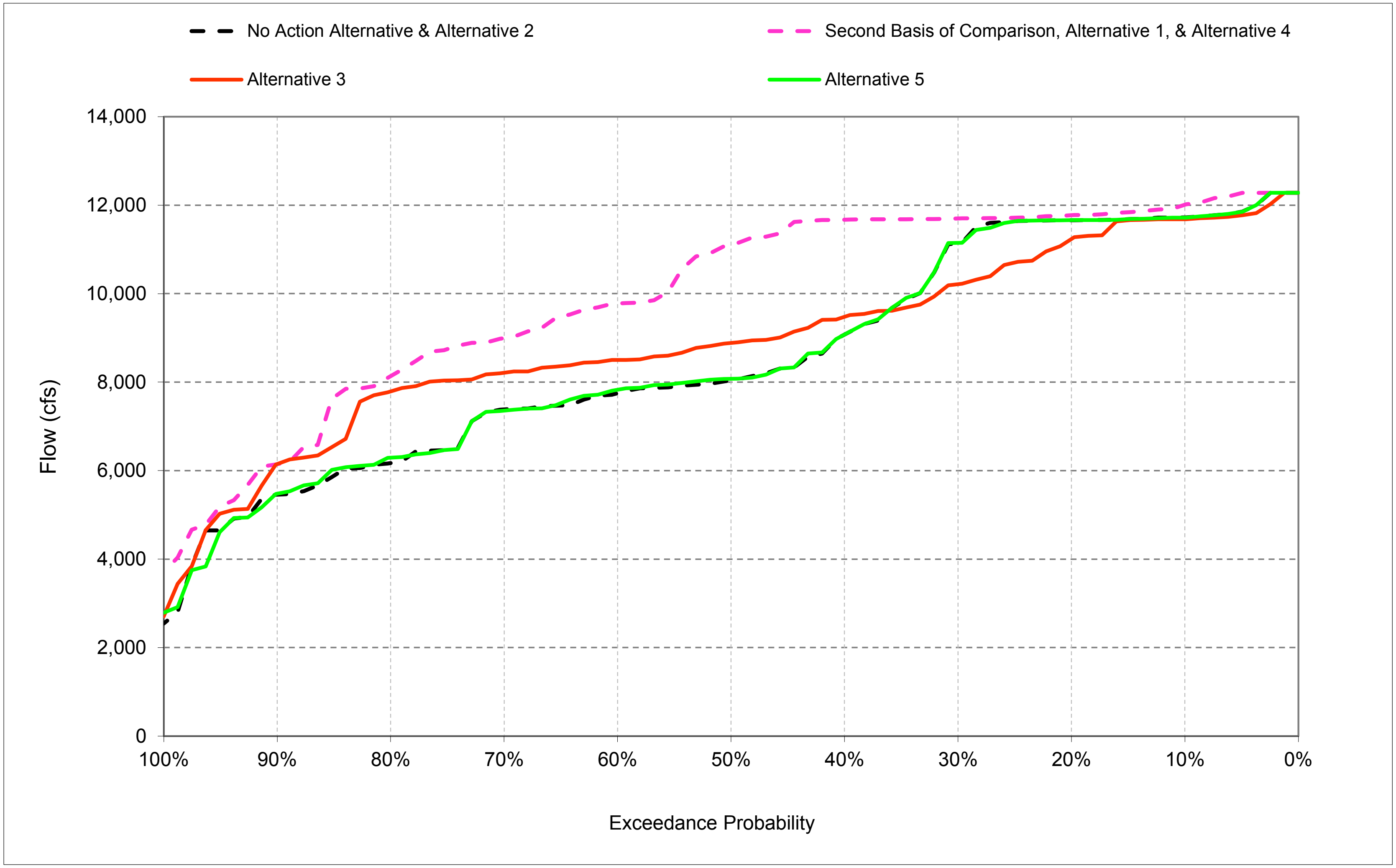
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-2. Exports Through Jones and Banks Pumping Plants, November



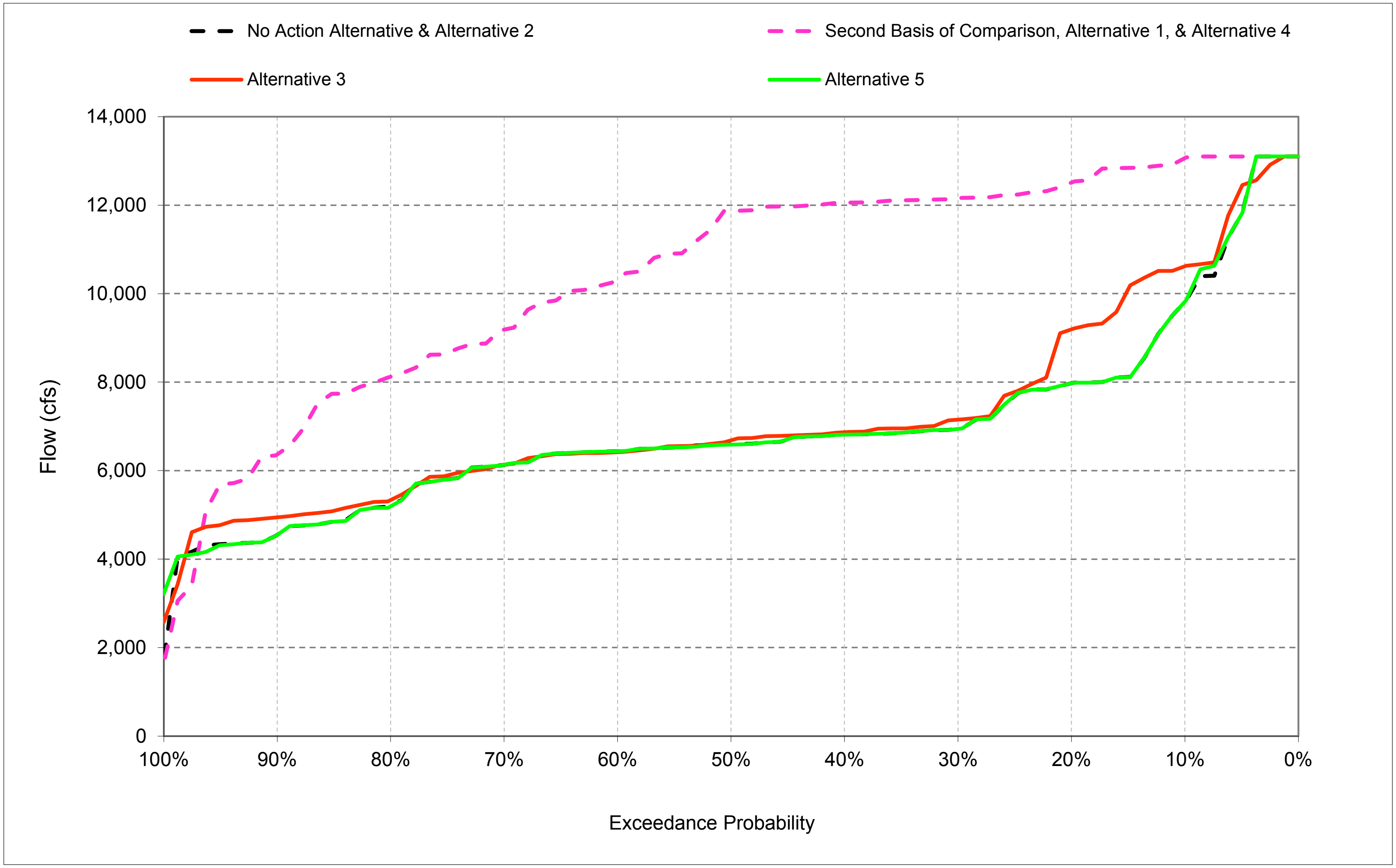
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-3. Exports Through Jones and Banks Pumping Plants, December



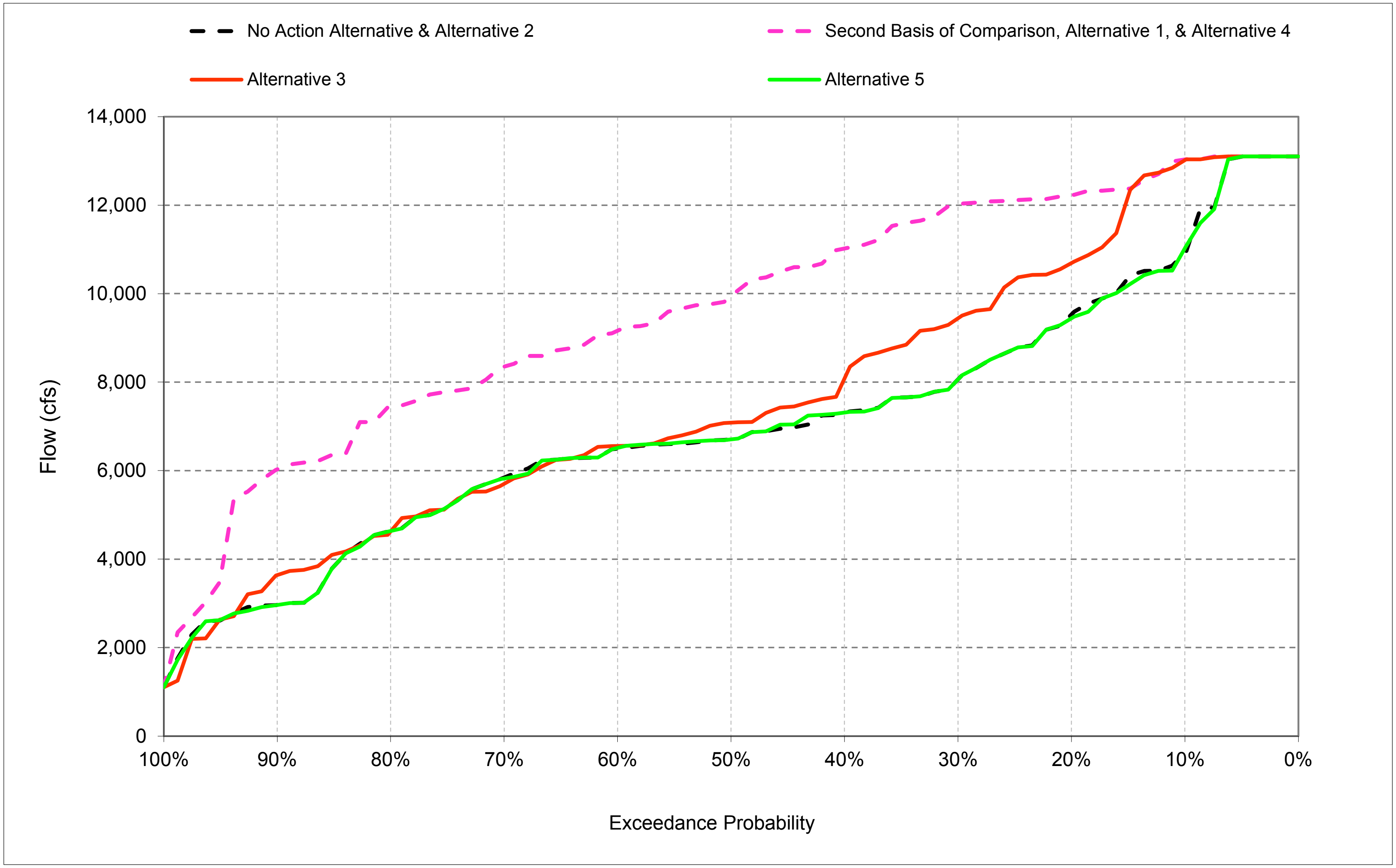
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-4. Exports Through Jones and Banks Pumping Plants, January



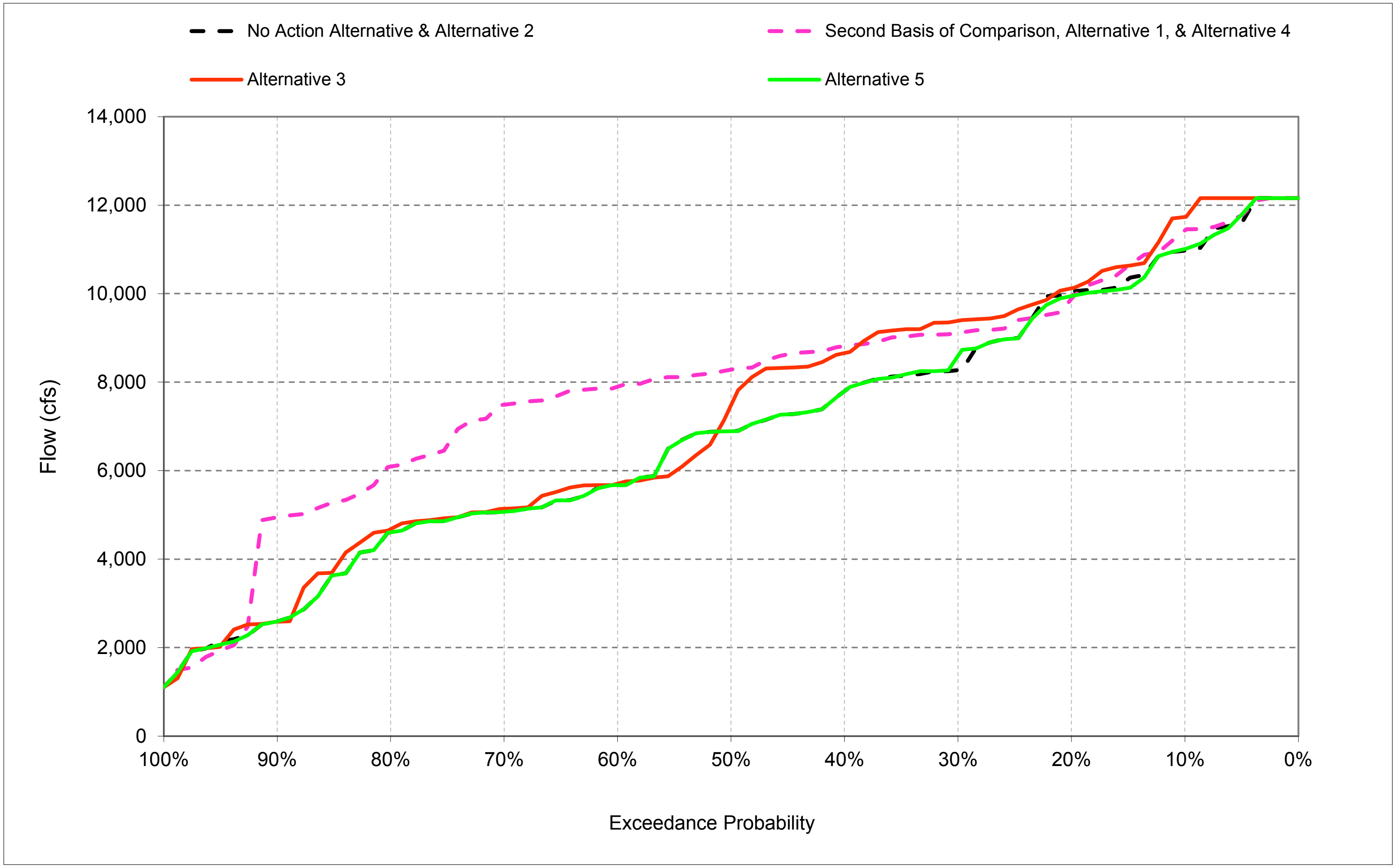
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-5. Exports Through Jones and Banks Pumping Plants, February



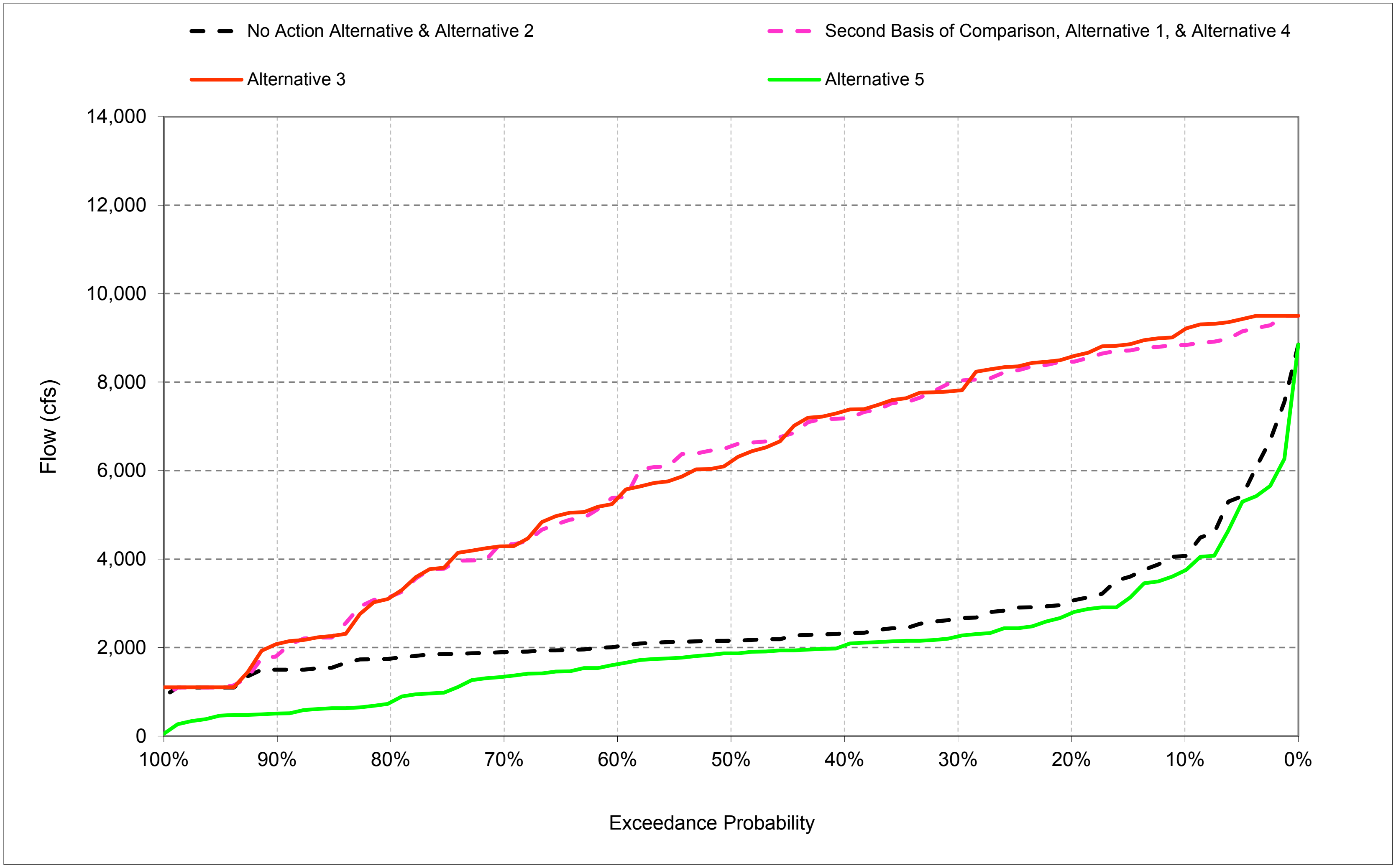
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-6. Exports Through Jones and Banks Pumping Plants, March



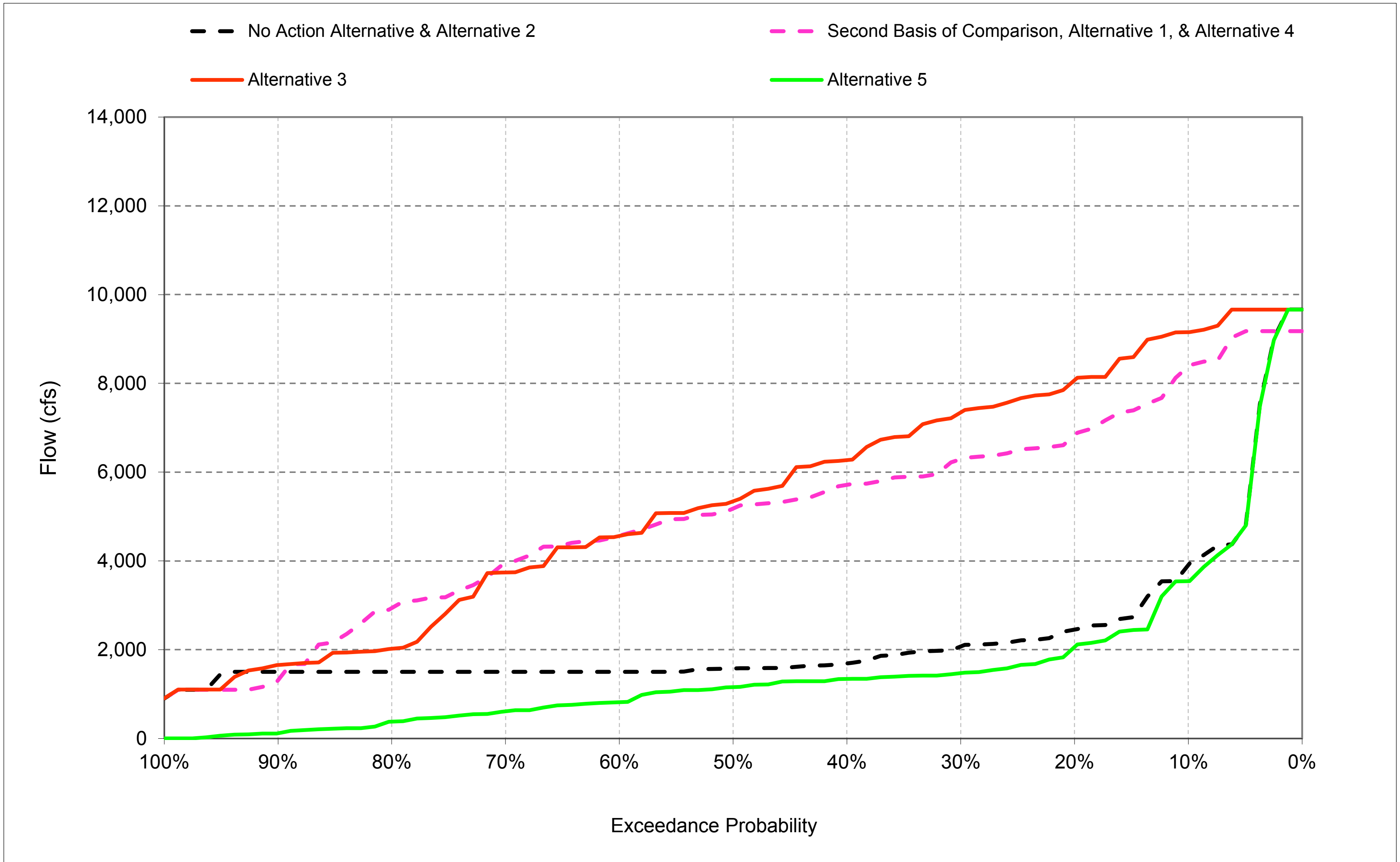
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-7. Exports Through Jones and Banks Pumping Plants, April



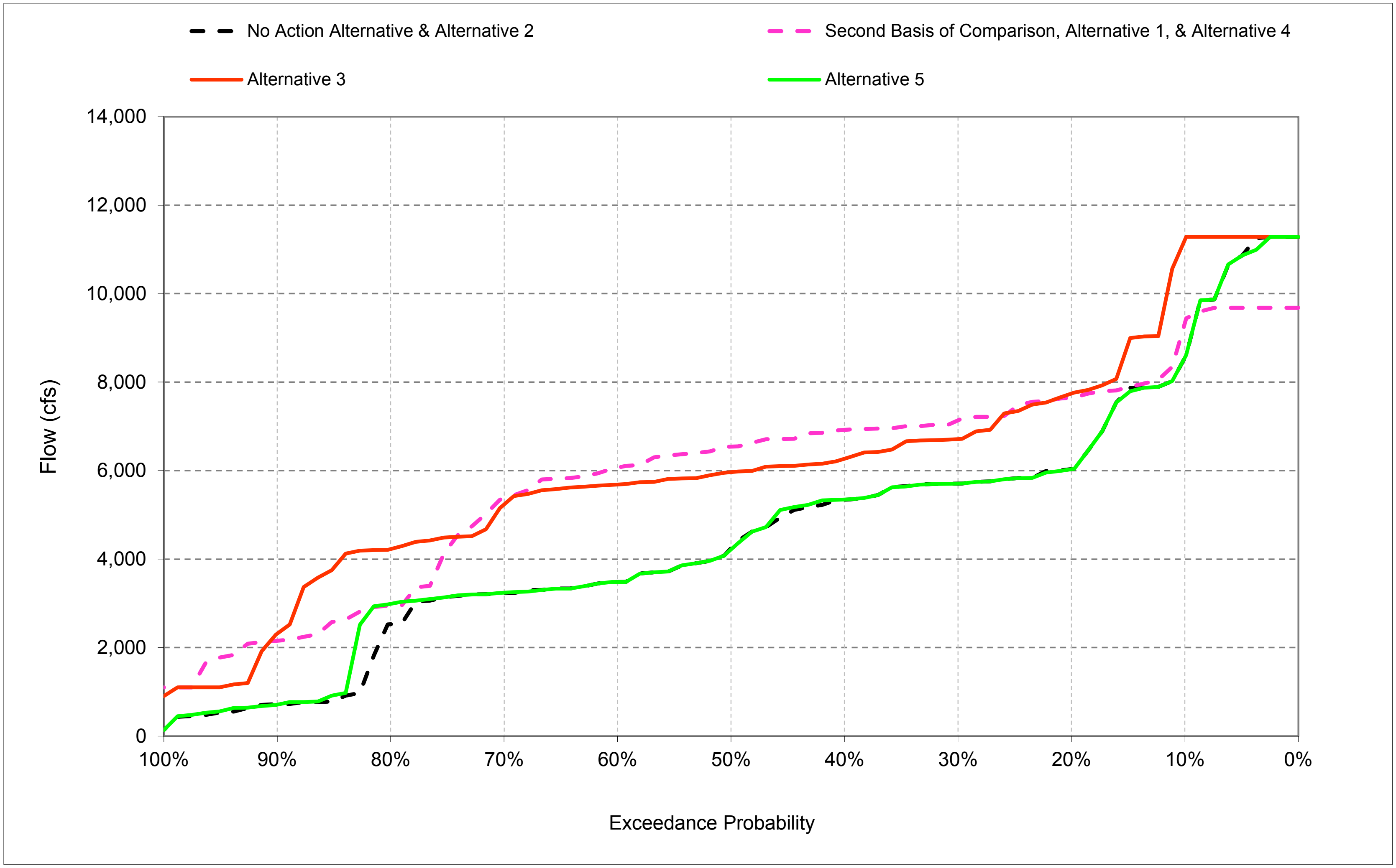
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-8. Exports Through Jones and Banks Pumping Plants, May



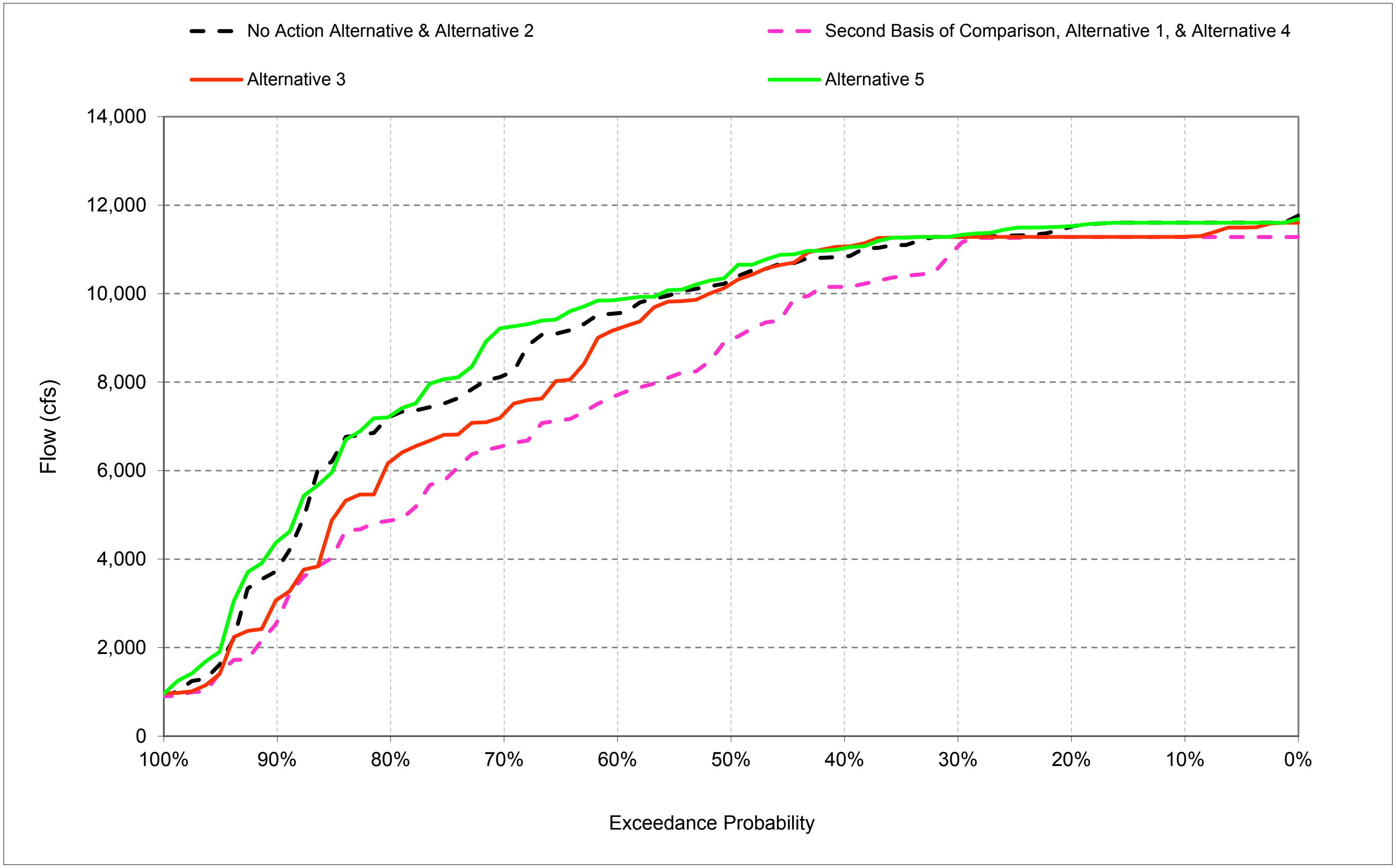
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-9. Exports Through Jones and Banks Pumping Plants, June



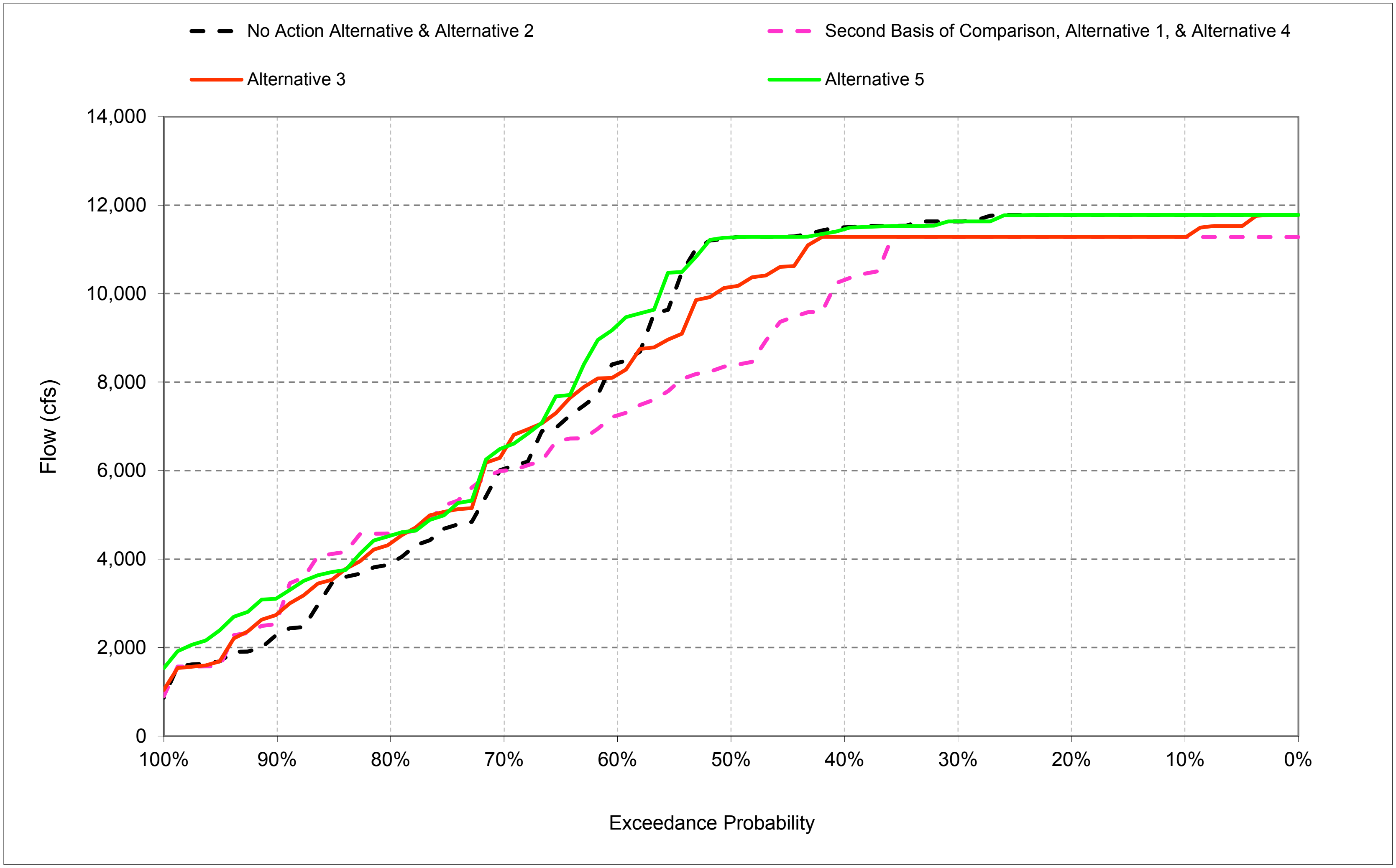
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-10. Exports Through Jones and Banks Pumping Plants, July



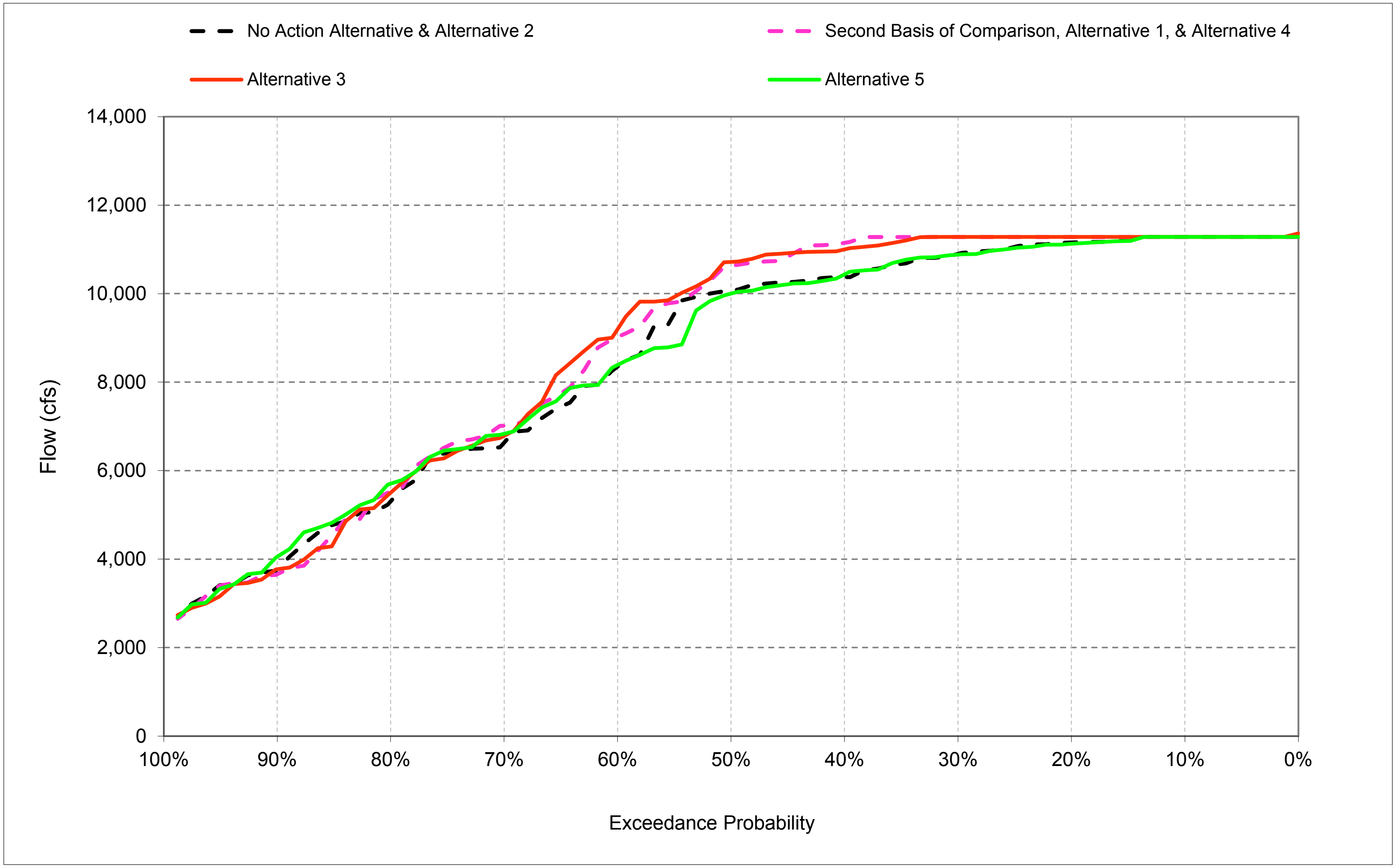
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-11. Exports Through Jones and Banks Pumping Plants, August



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-18-2-12. Exports Through Jones and Banks Pumping Plants, September



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-1-1. Exports Through Jones and Banks Pumping Plants, Monthly Export Rate

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Rate (cfs)											
Probability of Exceedance[a]												
10%	8,412	11,280	11,725	9,816	10,924	10,973	4,073	3,906	8,550	11,605	11,780	11,280
20%	7,390	9,616	11,661	7,974	9,529	10,037	3,049	2,454	6,033	11,512	11,780	11,158
30%	7,065	8,047	11,142	6,944	8,059	8,270	2,653	2,073	5,707	11,280	11,630	10,941
40%	6,502	7,448	9,074	6,813	7,307	7,796	2,320	1,690	5,343	10,841	11,500	10,468
50%	6,011	6,980	8,042	6,597	6,707	6,893	2,157	1,575	4,248	10,312	11,257	10,146
60%	5,469	6,409	7,751	6,440	6,495	5,672	2,027	1,500	3,484	9,557	8,434	8,546
70%	5,041	5,834	7,383	6,130	5,846	5,073	1,898	1,500	3,232	8,156	6,039	6,891
80%	4,653	5,070	6,170	5,217	4,636	4,607	1,752	1,500	2,529	7,224	3,907	5,631
90%	4,068	4,215	5,455	4,546	2,963	2,592	1,500	1,500	720	3,768	2,291	4,090
Long Term												
Full Simulation Period[b]	6,155	7,225	8,578	6,921	7,056	6,887	2,593	2,270	4,634	9,071	8,476	8,636
Water Year Types[c]												
Wet (32%)	6,674	8,350	9,168	8,346	9,616	9,656	3,424	3,371	7,479	10,876	11,663	10,727
Above Normal (16%)	6,108	7,568	9,145	6,598	7,142	8,074	2,193	1,712	5,297	9,549	11,524	10,558
Below Normal (13%)	6,270	7,660	9,597	6,291	6,316	6,402	2,260	1,625	3,509	10,692	10,123	9,114
Dry (24%)	6,080	6,687	8,287	6,372	5,633	5,167	2,578	2,041	3,255	8,793	4,808	7,151
Critical (15%)	5,104	4,916	6,238	5,672	4,467	2,915	1,558	1,465	1,083	3,621	2,869	4,060

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Rate (cfs)											
Probability of Exceedance[a]												
10%	11,280	11,280	12,011	13,065	13,032	11,429	8,841	8,382	9,334	11,280	11,280	11,280
20%	11,055	11,280	11,772	12,511	12,226	9,882	8,461	6,831	7,652	11,280	11,280	11,280
30%	10,198	10,956	11,699	12,155	12,020	9,114	8,015	6,289	7,137	11,065	11,280	11,280
40%	9,001	10,469	11,672	12,056	11,020	8,815	7,182	5,713	6,920	10,154	10,308	11,235
50%	7,952	9,934	11,110	11,874	9,946	8,283	6,552	5,183	6,543	8,966	8,374	10,679
60%	7,037	8,619	9,776	10,334	9,164	7,898	5,392	4,566	6,067	7,712	7,250	9,166
70%	5,177	7,803	8,992	9,187	8,353	7,489	4,337	3,930	5,372	6,565	6,000	7,066
80%	4,433	5,919	8,133	8,123	7,442	6,091	3,152	2,936	2,951	4,873	4,578	5,708
90%	3,405	4,838	6,145	6,367	6,030	4,944	1,825	1,309	2,153	2,596	2,623	3,805
Long Term												
Full Simulation Period[b]	7,660	8,828	9,949	10,376	9,608	7,948	5,893	5,006	5,913	8,036	7,945	8,870
Water Year Types[c]												
Wet (32%)	8,927	10,409	11,637	11,774	10,908	8,829	7,999	6,994	7,657	10,279	10,645	11,087
Above Normal (16%)	6,953	8,763	10,418	11,650	10,392	9,269	7,610	5,897	6,980	9,306	10,525	10,937
Below Normal (13%)	8,905	9,999	10,129	10,967	8,862	8,126	5,670	4,939	6,952	10,234	8,407	9,055
Dry (24%)	7,067	7,987	8,879	9,410	9,250	8,016	4,349	3,704	4,602	6,552	5,293	7,354
Critical (15%)	5,530	5,798	7,399	7,037	7,223	4,330	2,248	1,961	2,213	2,260	3,297	4,187

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Rate (cfs)											
Probability of Exceedance[a]												
10%	2,868	0	286	3,249	2,108	456	4,767	4,476	784	-325	-500	0
20%	3,665	1,664	111	4,538	2,696	-155	5,412	4,377	1,619	-232	-500	122
30%	3,133	2,909	557	5,211	3,961	844	5,362	4,216	1,430	-215	-350	339
40%	2,499	3,022	2,598	5,242	3,713	1,019	4,862	4,023	1,577	-687	-1,192	767
50%	1,941	2,954	3,069	5,277	3,239	1,390	4,395	3,608	2,296	-1,346	-2,884	533
60%	1,569	2,209	2,025	3,894	2,669	2,226	3,365	3,066	2,583	-1,845	-1,184	620
70%	136	1,969	1,609	3,057	2,508	2,416	2,439	2,430	2,141	-1,591	-39	175
80%	-220	849	1,963	2,906	2,806	1,484	1,400	1,436	422	-2,351	671	77
90%	-663	623	690	1,821	3,067	2,352	325	-191	1,433	-1,172	332	-285
Long Term												
Full Simulation Period[b]	1,505	1,603	1,370	3,456	2,552	1,060	3,300	2,735	1,279	-1,035	-531	234
Water Year Types[c]												
Wet (32%)	2,253	2,060	2,469	3,428	1,292	-827	4,575	3,624	178	-597	-1,018	360
Above Normal (16%)	845	1,195	1,273	5,052	3,249	1,195	5,417	4,185	1,682	-243	-999	379
Below Normal (13%)	2,636	2,339	532	4,676	2,546	1,724	3,410	3,313	3,443	-457	-1,716	-59
Dry (24%)	987	1,300	592	3,038	3,616	2,848	1,771	1,663	1,347	-2,241	485	203
Critical (15%)	427	882	1,161	1,364	2,756	1,415	690	497	1,131	-1,361	427	127

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-1-2. Exports Through Jones and Banks Pumping Plants, Monthly Export Rate

No Action Alternative

Statistic	Monthly Export Rate (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,412	11,280	11,725	9,816	10,924	10,973	4,073	3,906	8,550	11,605	11,780	11,280
20%	7,390	9,616	11,661	7,974	9,529	10,037	3,049	2,454	6,033	11,512	11,780	11,158
30%	7,065	8,047	11,142	6,944	8,059	8,270	2,653	2,073	5,707	11,280	11,630	10,941
40%	6,502	7,448	9,074	6,813	7,307	7,796	2,320	1,690	5,343	10,841	11,500	10,468
50%	6,011	6,980	8,042	6,597	6,707	6,893	2,157	1,575	4,248	10,312	11,257	10,146
60%	5,469	6,409	7,751	6,440	6,495	5,672	2,027	1,500	3,484	9,557	8,434	8,546
70%	5,041	5,834	7,383	6,130	5,846	5,073	1,898	1,500	3,232	8,156	6,039	6,891
80%	4,653	5,070	6,170	5,217	4,636	4,607	1,752	1,500	2,529	7,224	3,907	5,631
90%	4,068	4,215	5,455	4,546	2,963	2,592	1,500	1,500	720	3,768	2,291	4,090
Long Term												
Full Simulation Period[b]	6,155	7,225	8,578	6,921	7,056	6,887	2,593	2,270	4,634	9,071	8,476	8,636
Water Year Types[c]												
Wet (32%)	6,674	8,350	9,168	8,346	9,616	9,656	3,424	3,371	7,479	10,876	11,663	10,727
Above Normal (16%)	6,108	7,568	9,145	6,598	7,142	8,074	2,193	1,712	5,297	9,549	11,524	10,558
Below Normal (13%)	6,270	7,660	9,597	6,291	6,316	6,402	2,260	1,625	3,509	10,692	10,123	9,114
Dry (24%)	6,080	6,687	8,287	6,372	5,633	5,167	2,578	2,041	3,255	8,793	4,808	7,151
Critical (15%)	5,104	4,916	6,238	5,672	4,467	2,915	1,558	1,465	1,083	3,621	2,869	4,060

Alternative 3

Statistic	Monthly Export Rate (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	11,280	11,280	11,683	10,617	13,018	11,734	9,192	9,155	11,208	11,289	11,280	11,280
20%	10,943	11,280	11,237	9,194	10,692	10,122	8,575	8,070	7,741	11,280	11,280	11,280
30%	10,200	10,959	10,215	7,153	9,440	9,388	7,808	7,344	6,712	11,280	11,280	11,280
40%	8,979	10,530	9,478	6,871	8,078	8,658	7,349	6,270	6,269	11,065	11,280	11,044
50%	7,738	9,599	8,885	6,684	7,085	7,475	6,203	5,343	5,964	10,221	10,153	10,755
60%	6,211	8,419	8,500	6,416	6,557	5,707	5,374	4,562	5,684	9,204	8,172	9,621
70%	5,232	7,840	8,213	6,136	5,700	5,140	4,288	3,738	5,232	7,285	6,446	7,012
80%	4,310	5,809	7,790	5,334	4,623	4,679	3,138	2,021	4,227	6,212	4,356	5,780
90%	3,539	4,644	6,148	4,944	3,641	2,584	2,083	1,654	2,317	3,087	2,763	3,830
Long Term												
Full Simulation Period[b]	7,566	8,739	8,934	7,195	7,616	7,239	5,932	5,370	6,087	8,671	8,335	8,884
Water Year Types[c]												
Wet (32%)	8,853	10,333	9,769	9,084	10,641	9,584	8,298	7,973	8,726	10,540	10,840	10,996
Above Normal (16%)	6,987	8,959	9,342	6,729	8,362	9,199	7,419	6,714	6,667	9,523	11,061	10,878
Below Normal (13%)	8,517	9,873	9,875	6,415	6,652	7,278	5,247	4,331	5,550	11,113	10,568	9,877
Dry (24%)	7,156	7,923	8,512	6,325	5,613	5,481	4,543	3,929	4,900	8,000	5,172	7,156
Critical (15%)	5,214	5,369	6,525	5,770	4,472	2,927	2,139	1,626	2,210	2,576	3,183	4,118

Alternative 3 minus No Action Alternative

Statistic	Monthly Export Rate (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,868	0	-42	801	2,094	762	5,119	5,249	2,658	-316	-500	0
20%	3,553	1,664	-424	1,221	1,163	84	5,526	5,616	1,709	-232	-500	122
30%	3,135	2,911	-927	209	1,381	1,118	5,154	5,271	1,005	0	-350	339
40%	2,476	3,082	405	57	772	862	5,029	4,580	926	224	-220	576
50%	1,727	2,619	843	87	378	581	4,046	3,768	1,717	-92	-1,105	608
60%	742	2,009	749	-25	61	35	3,347	3,062	2,200	-353	-262	1,074
70%	191	2,006	830	6	-145	66	2,389	2,238	2,001	-871	407	121
80%	-343	739	1,620	117	-12	72	1,387	521	1,699	-1,013	449	149
90%	-529	429	693	399	678	-8	583	154	1,597	-681	472	-260
Long Term												
Full Simulation Period[b]	1,410	1,514	356	274	559	352	3,339	3,099	1,452	-400	-140	248
Water Year Types[c]												
Wet (32%)	2,179	1,983	602	738	1,025	-72	4,874	4,602	1,246	-335	-824	269
Above Normal (16%)	879	1,391	197	131	1,220	1,126	5,226	5,002	1,370	-26	-463	320
Below Normal (13%)	2,248	2,213	277	123	336	876	2,987	2,706	2,042	422	445	763
Dry (24%)	1,076	1,236	225	-47	-20	314	1,965	1,888	1,645	-792	363	5
Critical (15%)	110	453	287	98	5	12	581	161	1,127	-1,045	313	58

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-1-3. Exports Through Jones and Banks Pumping Plants, Monthly Export Rate

No Action Alternative

Statistic	Monthly Export Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,412	11,280	11,725	9,816	10,924	10,973	4,073	3,906	8,550	11,605	11,780	11,280
20%	7,390	9,616	11,661	7,974	9,529	10,037	3,049	2,454	6,033	11,512	11,780	11,158
30%	7,065	8,047	11,142	6,944	8,059	8,270	2,653	2,073	5,707	11,280	11,630	10,941
40%	6,502	7,448	9,074	6,813	7,307	7,796	2,320	1,690	5,343	10,841	11,500	10,468
50%	6,011	6,980	8,042	6,597	6,707	6,893	2,157	1,575	4,248	10,312	11,257	10,146
60%	5,469	6,409	7,751	6,440	6,495	5,672	2,027	1,500	3,484	9,557	8,434	8,546
70%	5,041	5,834	7,383	6,130	5,846	5,073	1,898	1,500	3,232	8,156	6,039	6,891
80%	4,653	5,070	6,170	5,217	4,636	4,607	1,752	1,500	2,529	7,224	3,907	5,631
90%	4,068	4,215	5,455	4,546	2,963	2,592	1,500	1,500	720	3,768	2,291	4,090
Long Term												
Full Simulation Period[b]	6,155	7,225	8,578	6,921	7,056	6,887	2,593	2,270	4,634	9,071	8,476	8,636
Water Year Types[c]												
Wet (32%)	6,674	8,350	9,168	8,346	9,616	9,656	3,424	3,371	7,479	10,876	11,663	10,727
Above Normal (16%)	6,108	7,568	9,145	6,598	7,142	8,074	2,193	1,712	5,297	9,549	11,524	10,558
Below Normal (13%)	6,270	7,660	9,597	6,291	6,316	6,402	2,260	1,625	3,509	10,692	10,123	9,114
Dry (24%)	6,080	6,687	8,287	6,372	5,633	5,167	2,578	2,041	3,255	8,793	4,808	7,151
Critical (15%)	5,104	4,916	6,238	5,672	4,467	2,915	1,558	1,465	1,083	3,621	2,869	4,060

Alternative 5

Statistic	Monthly Export Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,356	11,280	11,719	9,816	11,019	11,008	3,744	3,544	8,550	11,605	11,780	11,280
20%	7,383	9,301	11,661	7,974	9,441	9,947	2,778	2,058	6,031	11,526	11,780	11,128
30%	6,974	8,056	11,147	6,944	8,059	8,592	2,254	1,472	5,707	11,315	11,630	10,883
40%	6,151	7,452	9,074	6,813	7,314	7,796	2,048	1,342	5,347	11,030	11,458	10,513
50%	5,859	6,850	8,073	6,590	6,707	6,893	1,871	1,158	4,221	10,499	11,271	10,056
60%	5,426	6,310	7,828	6,438	6,513	5,672	1,624	817	3,484	9,864	9,291	8,537
70%	5,061	5,838	7,355	6,130	5,822	5,069	1,346	612	3,242	9,231	6,523	6,972
80%	4,703	5,072	6,294	5,196	4,635	4,607	762	378	2,989	7,243	4,528	5,828
90%	3,977	4,203	5,478	4,546	2,963	2,592	510	120	710	4,400	3,124	4,271
Long Term												
Full Simulation Period[b]	6,116	7,178	8,583	6,939	7,045	6,883	2,057	1,609	4,684	9,266	8,748	8,643
Water Year Types[c]												
Wet (32%)	6,634	8,483	9,172	8,352	9,528	9,624	3,389	3,282	7,464	10,853	11,670	10,537
Above Normal (16%)	6,122	7,102	9,132	6,616	7,206	8,071	2,130	1,490	5,293	9,588	11,463	10,502
Below Normal (13%)	6,190	7,658	9,563	6,291	6,399	6,459	1,731	887	3,499	10,782	10,280	9,421
Dry (24%)	6,012	6,621	8,345	6,367	5,626	5,169	1,351	674	3,440	9,384	5,422	7,278
Critical (15%)	5,093	4,920	6,213	5,776	4,448	2,905	564	330	1,157	3,894	3,612	4,085

Alternative 5 minus No Action Alternative

Statistic	Monthly Export Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-56	0	-6	0	95	36	-329	-362	0	0	0	0
20%	-7	-315	0	0	-88	-91	-271	-396	-2	14	0	-30
30%	-91	9	5	0	0	322	-400	-601	0	35	0	-58
40%	-351	5	0	0	7	0	-272	-349	4	188	-43	44
50%	-152	-130	31	-7	0	0	-286	-417	-27	187	14	-91
60%	-42	-100	77	-2	18	0	-404	-683	0	307	857	-9
70%	21	4	-28	0	-23	-4	-553	-888	11	1,075	484	81
80%	50	2	124	-21	-1	0	-990	-1,122	460	19	622	197
90%	-91	-11	23	0	0	0	-990	-1,380	-9	632	832	181
Long Term												
Full Simulation Period[b]	-39	-47	5	18	-11	-4	-537	-662	49	195	272	7
Water Year Types[c]												
Wet (32%)	-40	133	4	5	-89	-31	-35	-88	-15	-22	6	-190
Above Normal (16%)	14	-465	-13	17	64	-3	-63	-222	-4	39	-61	-56
Below Normal (13%)	-79	-2	-35	-1	84	58	-528	-738	-10	90	157	307
Dry (24%)	-68	-66	58	-5	-7	1	-1,226	-1,367	185	591	614	127
Critical (15%)	-10	4	-26	104	-18	-11	-994	-1,135	74	273	743	25

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-1-4. Exports Through Jones and Banks Pumping Plants, Monthly Export Rate

Second Basis of Comparison

Statistic	Monthly Export Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	11,280	11,280	12,011	13,065	13,032	11,429	8,841	8,382	9,334	11,280	11,280	11,280
20%	11,055	11,280	11,772	12,511	12,226	9,882	8,461	6,831	7,652	11,280	11,280	11,280
30%	10,198	10,956	11,699	12,155	12,020	9,114	8,015	6,289	7,137	11,065	11,280	11,280
40%	9,001	10,469	11,672	12,056	11,020	8,815	7,182	5,713	6,920	10,154	10,308	11,235
50%	7,952	9,934	11,110	11,874	9,946	8,283	6,552	5,183	6,543	8,966	8,374	10,679
60%	7,037	8,619	9,776	10,334	9,164	7,898	5,392	4,566	6,067	7,712	7,250	9,166
70%	5,177	7,803	8,992	9,187	8,353	7,489	4,337	3,930	5,372	6,565	6,000	7,066
80%	4,433	5,919	8,133	8,123	7,442	6,091	3,152	2,936	2,951	4,873	4,578	5,708
90%	3,405	4,838	6,145	6,367	6,030	4,944	1,825	1,309	2,153	2,596	2,623	3,805
Long Term												
Full Simulation Period[b]	7,660	8,828	9,949	10,376	9,608	7,948	5,893	5,006	5,913	8,036	7,945	8,870
Water Year Types[c]												
Wet (32%)	8,927	10,409	11,637	11,774	10,908	8,829	7,999	6,994	7,657	10,279	10,645	11,087
Above Normal (16%)	6,953	8,763	10,418	11,650	10,392	9,269	7,610	5,897	6,980	9,306	10,525	10,937
Below Normal (13%)	8,905	9,999	10,129	10,967	8,862	8,126	5,670	4,939	6,952	10,234	8,407	9,055
Dry (24%)	7,067	7,987	8,879	9,410	9,250	8,016	4,349	3,704	4,602	6,552	5,293	7,354
Critical (15%)	5,530	5,798	7,399	7,037	7,223	4,330	2,248	1,961	2,213	2,260	3,297	4,187

No Action Alternative

Statistic	Monthly Export Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,412	11,280	11,725	9,816	10,924	10,973	4,073	3,906	8,550	11,605	11,780	11,280
20%	7,390	9,616	11,661	7,974	9,529	10,037	3,049	2,454	6,033	11,512	11,780	11,158
30%	7,065	8,047	11,142	6,944	8,059	8,270	2,653	2,073	5,707	11,280	11,630	10,941
40%	6,502	7,448	9,074	6,813	7,307	7,796	2,320	1,690	5,343	10,841	11,500	10,468
50%	6,011	6,980	8,042	6,597	6,707	6,893	2,157	1,575	4,248	10,312	11,257	10,146
60%	5,469	6,409	7,751	6,440	6,495	5,672	2,027	1,500	3,484	9,557	8,434	8,546
70%	5,041	5,834	7,383	6,130	5,846	5,073	1,898	1,500	3,232	8,156	6,039	6,891
80%	4,653	5,070	6,170	5,217	4,636	4,607	1,752	1,500	2,529	7,224	3,907	5,631
90%	4,068	4,215	5,455	4,546	2,963	2,592	1,500	1,500	720	3,768	2,291	4,090
Long Term												
Full Simulation Period[b]	6,155	7,225	8,578	6,921	7,056	6,887	2,593	2,270	4,634	9,071	8,476	8,636
Water Year Types[c]												
Wet (32%)	6,674	8,350	9,168	8,346	9,616	9,656	3,424	3,371	7,479	10,876	11,663	10,727
Above Normal (16%)	6,108	7,568	9,145	6,598	7,142	8,074	2,193	1,712	5,297	9,549	11,524	10,558
Below Normal (13%)	6,270	7,660	9,597	6,291	6,316	6,402	2,260	1,625	3,509	10,692	10,123	9,114
Dry (24%)	6,080	6,687	8,287	6,372	5,633	5,167	2,578	2,041	3,255	8,793	4,808	7,151
Critical (15%)	5,104	4,916	6,238	5,672	4,467	2,915	1,558	1,465	1,083	3,621	2,869	4,060

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Export Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-2,868	0	-286	-3,249	-2,108	-456	-4,767	-4,476	-784	325	500	0
20%	-3,665	-1,664	-111	-4,538	-2,696	155	-5,412	-4,377	-1,619	232	500	-122
30%	-3,133	-2,909	-557	-5,211	-3,961	-844	-5,362	-4,216	-1,430	215	350	-339
40%	-2,499	-3,022	-2,598	-5,242	-3,713	-1,019	-4,862	-4,023	-1,577	687	1,192	-767
50%	-1,941	-2,954	-3,069	-5,277	-3,239	-1,390	-4,395	-3,608	-2,296	1,346	2,884	-533
60%	-1,569	-2,209	-2,025	-3,894	-2,669	-2,226	-3,365	-3,066	-2,583	1,845	1,184	-620
70%	-136	-1,969	-1,609	-3,057	-2,508	-2,416	-2,439	-2,430	-2,141	1,591	39	-175
80%	220	-849	-1,963	-2,906	-2,806	-1,484	-1,400	-1,436	-422	2,351	-671	-77
90%	663	-623	-690	-1,821	-3,067	-2,352	-325	191	-1,433	1,172	-332	285
Long Term												
Full Simulation Period[b]	-1,505	-1,603	-1,370	-3,456	-2,552	-1,060	-3,300	-2,735	-1,279	1,035	531	-234
Water Year Types[c]												
Wet (32%)	-2,253	-2,060	-2,469	-3,428	-1,292	827	-4,575	-3,624	-178	597	1,018	-360
Above Normal (16%)	-845	-1,195	-1,273	-5,052	-3,249	-1,195	-5,417	-4,185	-1,682	243	999	-379
Below Normal (13%)	-2,636	-2,339	-532	-4,676	-2,546	-1,724	-3,410	-3,313	-3,443	457	1,716	59
Dry (24%)	-987	-1,300	-592	-3,038	-3,616	-2,848	-1,771	-1,663	-1,347	2,241	-485	-203
Critical (15%)	-427	-882	-1,161	-1,364	-2,756	-1,415	-690	-497	-1,131	1,361	-427	-127

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-1-5. Exports Through Jones and Banks Pumping Plants, Monthly Export Rate

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Rate (cfs)											
Probability of Exceedance[a]												
10%	11,280	11,280	12,011	13,065	13,032	11,429	8,841	8,382	9,334	11,280	11,280	11,280
20%	11,055	11,280	11,772	12,511	12,226	9,882	8,461	6,831	7,652	11,280	11,280	11,280
30%	10,198	10,956	11,699	12,155	12,020	9,114	8,015	6,289	7,137	11,065	11,280	11,280
40%	9,001	10,469	11,672	12,056	11,020	8,815	7,182	5,713	6,920	10,154	10,308	11,235
50%	7,952	9,934	11,110	11,874	9,946	8,283	6,552	5,183	6,543	8,966	8,374	10,679
60%	7,037	8,619	9,776	10,334	9,164	7,898	5,392	4,566	6,067	7,712	7,250	9,166
70%	5,177	7,803	8,992	9,187	8,353	7,489	4,337	3,930	5,372	6,565	6,000	7,066
80%	4,433	5,919	8,133	8,123	7,442	6,091	3,152	2,936	2,951	4,873	4,578	5,708
90%	3,405	4,838	6,145	6,367	6,030	4,944	1,825	1,309	2,153	2,596	2,623	3,805
Long Term												
Full Simulation Period[b]	7,660	8,828	9,949	10,376	9,608	7,948	5,893	5,006	5,913	8,036	7,945	8,870
Water Year Types[c]												
Wet (32%)	8,927	10,409	11,637	11,774	10,908	8,829	7,999	6,994	7,657	10,279	10,645	11,087
Above Normal (16%)	6,953	8,763	10,418	11,650	10,392	9,269	7,610	5,897	6,980	9,306	10,525	10,937
Below Normal (13%)	8,905	9,999	10,129	10,967	8,862	8,126	5,670	4,939	6,952	10,234	8,407	9,055
Dry (24%)	7,067	7,987	8,879	9,410	9,250	8,016	4,349	3,704	4,602	6,552	5,293	7,354
Critical (15%)	5,530	5,798	7,399	7,037	7,223	4,330	2,248	1,961	2,213	2,260	3,297	4,187

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Rate (cfs)											
Probability of Exceedance[a]												
10%	11,280	11,280	11,683	10,617	13,018	11,734	9,192	9,155	11,208	11,289	11,280	11,280
20%	10,943	11,280	11,237	9,194	10,692	10,122	8,575	8,070	7,741	11,280	11,280	11,280
30%	10,200	10,959	10,215	7,153	9,440	9,388	7,808	7,344	6,712	11,280	11,280	11,280
40%	8,979	10,530	9,478	6,871	8,078	8,658	7,349	6,270	6,269	11,065	11,280	11,044
50%	7,738	9,599	8,885	6,684	7,085	7,475	6,203	5,343	5,964	10,221	10,153	10,755
60%	6,211	8,419	8,500	6,416	6,557	5,707	5,374	4,562	5,684	9,204	8,172	9,621
70%	5,232	7,840	8,213	6,136	5,700	5,140	4,288	3,738	5,232	7,285	6,446	7,012
80%	4,310	5,809	7,790	5,334	4,623	4,679	3,138	2,021	4,227	6,212	4,356	5,780
90%	3,539	4,644	6,148	4,944	3,641	2,584	2,083	1,654	2,317	3,087	2,763	3,830
Long Term												
Full Simulation Period[b]	7,566	8,739	8,934	7,195	7,616	7,239	5,932	5,370	6,087	8,671	8,335	8,884
Water Year Types[c]												
Wet (32%)	8,853	10,333	9,769	9,084	10,641	9,584	8,298	7,973	8,726	10,540	10,840	10,996
Above Normal (16%)	6,987	8,959	9,342	6,729	8,362	9,199	7,419	6,714	6,667	9,523	11,061	10,878
Below Normal (13%)	8,517	9,873	9,875	6,415	6,652	7,278	5,247	4,331	5,550	11,113	10,568	9,877
Dry (24%)	7,156	7,923	8,512	6,325	5,613	5,481	4,543	3,929	4,900	8,000	5,172	7,156
Critical (15%)	5,214	5,369	6,525	5,770	4,472	2,927	2,139	1,626	2,210	2,576	3,183	4,118

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Rate (cfs)											
Probability of Exceedance[a]												
10%	0	0	-328	-2,448	-15	306	351	772	1,874	9	0	0
20%	-112	0	-535	-3,317	-1,534	239	114	1,239	90	0	0	0
30%	2	2	-1,484	-5,001	-2,579	274	-208	1,055	-425	215	0	0
40%	-22	60	-2,193	-5,185	-2,941	-158	167	557	-652	911	972	-191
50%	-214	-335	-2,225	-5,190	-2,861	-809	-349	160	-579	1,255	1,779	76
60%	-826	-200	-1,276	-3,918	-2,607	-2,191	-18	-4	-383	1,492	922	454
70%	55	37	-779	-3,051	-2,653	-2,350	-49	-191	-140	720	447	-54
80%	-123	-110	-343	-2,789	-2,818	-1,412	-13	-915	1,277	1,339	-222	71
90%	134	-194	3	-1,422	-2,389	-2,361	257	346	164	490	140	25
Long Term												
Full Simulation Period[b]	-95	-89	-1,014	-3,181	-1,992	-709	39	364	173	635	390	14
Water Year Types[c]												
Wet (32%)	-74	-77	-1,867	-2,690	-266	755	300	978	1,069	262	195	-91
Above Normal (16%)	34	196	-1,076	-4,921	-2,029	-69	-191	817	-313	217	536	-59
Below Normal (13%)	-388	-126	-254	-4,552	-2,210	-848	-423	-608	-1,402	879	2,160	822
Dry (24%)	89	-64	-367	-3,084	-3,637	-2,535	194	225	298	1,449	-121	-198
Critical (15%)	-316	-429	-874	-1,266	-2,751	-1,403	-109	-336	-4	316	-114	-70

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-1-6. Exports Through Jones and Banks Pumping Plants, Monthly Export Rate

Second Basis of Comparison

Statistic	Monthly Export Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	11,280	11,280	12,011	13,065	13,032	11,429	8,841	8,382	9,334	11,280	11,280	11,280
20%	11,055	11,280	11,772	12,511	12,226	9,882	8,461	6,831	7,652	11,280	11,280	11,280
30%	10,198	10,956	11,699	12,155	12,020	9,114	8,015	6,289	7,137	11,065	11,280	11,280
40%	9,001	10,469	11,672	12,056	11,020	8,815	7,182	5,713	6,920	10,154	10,308	11,235
50%	7,952	9,934	11,110	11,874	9,946	8,283	6,552	5,183	6,543	8,966	8,374	10,679
60%	7,037	8,619	9,776	10,334	9,164	7,898	5,392	4,566	6,067	7,712	7,250	9,166
70%	5,177	7,803	8,992	9,187	8,353	7,489	4,337	3,930	5,372	6,565	6,000	7,066
80%	4,433	5,919	8,133	8,123	7,442	6,091	3,152	2,936	2,951	4,873	4,578	5,708
90%	3,405	4,838	6,145	6,367	6,030	4,944	1,825	1,309	2,153	2,596	2,623	3,805
Long Term												
Full Simulation Period[b]	7,660	8,828	9,949	10,376	9,608	7,948	5,893	5,006	5,913	8,036	7,945	8,870
Water Year Types[c]												
Wet (32%)	8,927	10,409	11,637	11,774	10,908	8,829	7,999	6,994	7,657	10,279	10,645	11,087
Above Normal (16%)	6,953	8,763	10,418	11,650	10,392	9,269	7,610	5,897	6,980	9,306	10,525	10,937
Below Normal (13%)	8,905	9,999	10,129	10,967	8,862	8,126	5,670	4,939	6,952	10,234	8,407	9,055
Dry (24%)	7,067	7,987	8,879	9,410	9,250	8,016	4,349	3,704	4,602	6,552	5,293	7,354
Critical (15%)	5,530	5,798	7,399	7,037	7,223	4,330	2,248	1,961	2,213	2,260	3,297	4,187

Alternative 5

Statistic	Monthly Export Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,356	11,280	11,719	9,816	11,019	11,008	3,744	3,544	8,550	11,605	11,780	11,280
20%	7,383	9,301	11,661	7,974	9,441	9,947	2,778	2,058	6,031	11,526	11,780	11,128
30%	6,974	8,056	11,147	6,944	8,059	8,592	2,254	1,472	5,707	11,315	11,630	10,883
40%	6,151	7,452	9,074	6,813	7,314	7,796	2,048	1,342	5,347	11,030	11,458	10,513
50%	5,859	6,850	8,073	6,590	6,707	6,893	1,871	1,158	4,221	10,499	11,271	10,056
60%	5,426	6,310	7,828	6,438	6,513	5,672	1,624	817	3,484	9,864	9,291	8,537
70%	5,061	5,838	7,355	6,130	5,822	5,069	1,346	612	3,242	9,231	6,523	6,972
80%	4,703	5,072	6,294	5,196	4,635	4,607	762	378	2,989	7,243	4,528	5,828
90%	3,977	4,203	5,478	4,546	2,963	2,592	510	120	710	4,400	3,124	4,271
Long Term												
Full Simulation Period[b]	6,116	7,178	8,583	6,939	7,045	6,883	2,057	1,609	4,684	9,266	8,748	8,643
Water Year Types[c]												
Wet (32%)	6,634	8,483	9,172	8,352	9,528	9,624	3,389	3,282	7,464	10,853	11,670	10,537
Above Normal (16%)	6,122	7,102	9,132	6,616	7,206	8,071	2,130	1,490	5,293	9,588	11,463	10,502
Below Normal (13%)	6,190	7,658	9,563	6,291	6,399	6,459	1,731	887	3,499	10,782	10,280	9,421
Dry (24%)	6,012	6,621	8,345	6,367	5,626	5,169	1,351	674	3,440	9,384	5,422	7,278
Critical (15%)	5,093	4,920	6,213	5,776	4,448	2,905	564	330	1,157	3,894	3,612	4,085

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Export Rate (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-2,924	0	-292	-3,249	-2,013	-420	-5,097	-4,838	-784	325	500	0
20%	-3,672	-1,979	-111	-4,538	-2,784	64	-5,683	-4,773	-1,621	246	500	-152
30%	-3,224	-2,900	-553	-5,211	-3,961	-522	-5,762	-4,817	-1,430	251	350	-397
40%	-2,850	-3,017	-2,598	-5,242	-3,706	-1,019	-5,134	-4,371	-1,574	876	1,149	-722
50%	-2,093	-3,084	-3,037	-5,284	-3,239	-1,390	-4,681	-4,025	-2,322	1,533	2,898	-623
60%	-1,611	-2,309	-1,948	-3,896	-2,651	-2,227	-3,768	-3,749	-2,583	2,152	2,041	-629
70%	-115	-1,965	-1,637	-3,057	-2,531	-2,420	-2,992	-3,318	-2,130	2,666	523	-94
80%	270	-848	-1,839	-2,927	-2,807	-1,483	-2,390	-2,558	39	2,371	-49	120
90%	572	-634	-667	-1,821	-3,067	-2,352	-1,315	-1,189	-1,443	1,804	500	466
Long Term												
Full Simulation Period[b]	-1,544	-1,650	-1,365	-3,437	-2,563	-1,064	-3,836	-3,397	-1,230	1,230	803	-228
Water Year Types[c]												
Wet (32%)	-2,293	-1,927	-2,465	-3,423	-1,380	796	-4,610	-3,712	-193	574	1,025	-550
Above Normal (16%)	-832	-1,661	-1,286	-5,035	-3,185	-1,198	-5,481	-4,407	-1,687	282	938	-435
Below Normal (13%)	-2,715	-2,341	-567	-4,676	-2,463	-1,667	-3,939	-4,052	-3,453	548	1,873	366
Dry (24%)	-1,055	-1,366	-534	-3,042	-3,623	-2,847	-2,998	-3,030	-1,162	2,832	129	-76
Critical (15%)	-437	-878	-1,187	-1,260	-2,775	-1,425	-1,684	-1,631	-1,056	1,635	316	-103

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-2-1. Exports Through Jones and Banks Pumping Plants, Monthly Export Volume

No Action Alternative

Statistic	Monthly Export Volume (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	517	671	721	604	611	675	242	240	509	714	724	671
20%	454	572	717	490	532	617	181	151	359	708	724	664
30%	434	479	685	427	448	508	158	127	340	694	715	651
40%	400	443	558	419	409	479	138	104	318	667	707	623
50%	370	415	494	406	380	424	128	97	253	634	692	604
60%	336	381	477	396	363	349	121	92	207	588	519	509
70%	310	347	454	377	325	312	113	92	192	501	371	410
80%	286	302	379	321	267	283	104	92	150	444	240	335
90%	250	251	335	280	165	159	89	92	43	232	141	243
Long Term												
Full Simulation Period[b]	378	430	527	426	395	423	154	140	276	558	521	514
Water Year Types[c]												
Wet (32%)	410	497	564	513	537	594	204	207	445	669	717	638
Above Normal (16%)	376	450	562	406	401	496	130	105	315	587	709	628
Below Normal (13%)	386	456	590	387	354	394	134	100	209	657	622	542
Dry (24%)	374	398	510	392	315	318	153	126	194	541	296	426
Critical (15%)	314	293	384	349	250	179	93	90	64	223	176	242

Alternative 1

Statistic	Monthly Export Volume (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	694	671	739	803	727	703	526	515	555	694	694	671
20%	680	671	724	769	686	608	503	420	455	694	694	671
30%	627	652	719	747	668	560	477	387	425	680	694	671
40%	553	623	718	741	614	542	427	351	412	624	634	669
50%	489	591	683	730	552	509	390	319	389	551	515	635
60%	433	513	601	635	519	486	321	281	361	474	446	545
70%	318	464	553	565	465	461	258	242	320	404	369	420
80%	273	352	500	499	416	374	188	181	176	300	281	340
90%	209	288	378	391	335	304	109	80	128	160	161	226
Long Term												
Full Simulation Period[b]	471	525	612	638	538	489	351	308	352	494	489	528
Water Year Types[c]												
Wet (32%)	549	619	716	724	609	543	476	430	456	632	655	660
Above Normal (16%)	428	521	641	716	584	570	453	363	415	572	647	651
Below Normal (13%)	548	595	623	674	497	500	337	304	414	629	517	539
Dry (24%)	435	475	546	579	518	493	259	228	274	403	325	438
Critical (15%)	340	345	455	433	406	266	134	121	132	139	203	249

Alternative 1 minus No Action Alternative

Statistic	Monthly Export Volume (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	176	0	18	200	116	28	284	275	47	-20	-31	0
20%	225	99	7	279	154	-10	322	269	96	-14	-31	7
30%	193	173	34	320	220	52	319	259	85	-13	-22	20
40%	154	180	160	322	205	63	289	247	94	-42	-73	46
50%	119	176	189	324	172	85	262	222	137	-83	-177	32
60%	96	131	125	239	156	137	200	189	154	-113	-73	37
70%	8	117	99	188	140	149	145	149	127	-98	-2	10
80%	-14	51	121	179	150	91	83	88	25	-145	41	5
90%	-41	37	42	112	170	145	19	-12	85	-72	20	-17
Long Term												
Full Simulation Period[b]	93	95	84	212	143	65	196	168	76	-64	-33	14
Water Year Types[c]												
Wet (32%)	139	123	152	211	72	-51	272	223	11	-37	-63	21
Above Normal (16%)	52	71	78	311	183	73	322	257	100	-15	-61	23
Below Normal (13%)	162	139	33	287	143	106	203	204	205	-28	-105	-4
Dry (24%)	61	77	36	187	202	175	105	102	80	-138	30	12
Critical (15%)	26	52	71	84	156	87	41	31	67	-84	26	8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-2-2. Exports Through Jones and Banks Pumping Plants, Monthly Export Volume

No Action Alternative

Statistic	Monthly Export Volume (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	517	671	721	604	611	675	242	240	509	714	724	671
20%	454	572	717	490	532	617	181	151	359	708	724	664
30%	434	479	685	427	448	508	158	127	340	694	715	651
40%	400	443	558	419	409	479	138	104	318	667	707	623
50%	370	415	494	406	380	424	128	97	253	634	692	604
60%	336	381	477	396	363	349	121	92	207	588	519	509
70%	310	347	454	377	325	312	113	92	192	501	371	410
80%	286	302	379	321	267	283	104	92	150	444	240	335
90%	250	251	335	280	165	159	89	92	43	232	141	243
Long Term												
Full Simulation Period[b]	378	430	527	426	395	423	154	140	276	558	521	514
Water Year Types[c]												
Wet (32%)	410	497	564	513	537	594	204	207	445	669	717	638
Above Normal (16%)	376	450	562	406	401	496	130	105	315	587	709	628
Below Normal (13%)	386	456	590	387	354	394	134	100	209	657	622	542
Dry (24%)	374	398	510	392	315	318	153	126	194	541	296	426
Critical (15%)	314	293	384	349	250	179	93	90	64	223	176	242

Alternative 3

Statistic	Monthly Export Volume (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	694	671	718	653	725	722	547	563	667	694	694	671
20%	673	671	691	565	603	622	510	496	461	694	694	671
30%	627	652	628	440	524	577	465	452	399	694	694	671
40%	552	627	583	422	449	532	437	386	373	680	694	657
50%	476	571	546	411	393	460	369	329	355	628	624	640
60%	382	501	523	395	365	351	320	281	338	566	502	572
70%	322	467	505	377	320	316	255	230	311	448	396	417
80%	265	346	479	328	264	288	187	124	252	382	268	344
90%	218	276	378	304	202	159	124	102	138	190	170	228
Long Term												
Full Simulation Period[b]	465	520	549	442	426	445	353	330	362	533	513	529
Water Year Types[c]												
Wet (32%)	544	615	601	559	594	589	494	490	519	648	667	654
Above Normal (16%)	430	533	574	414	469	566	441	413	397	586	680	647
Below Normal (13%)	524	587	607	394	373	448	312	266	330	683	650	588
Dry (24%)	440	471	523	389	314	337	270	242	292	492	318	426
Critical (15%)	321	319	401	355	251	180	127	100	131	158	196	245

Alternative 3 minus No Action Alternative

Statistic	Monthly Export Volume (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	176	0	-3	49	114	47	305	323	158	-19	-31	0
20%	218	99	-26	75	71	5	329	345	102	-14	-31	7
30%	193	173	-57	13	77	69	307	324	60	0	-22	20
40%	152	183	25	4	41	53	299	282	55	14	-14	34
50%	106	156	52	5	13	36	241	232	102	-6	-68	36
60%	46	120	46	-2	2	2	199	188	131	-22	-16	64
70%	12	119	51	0	-5	4	142	138	119	-54	25	7
80%	-21	44	100	7	-3	4	83	32	101	-62	28	9
90%	-33	26	43	25	38	-1	35	9	95	-42	29	-15
Long Term												
Full Simulation Period[b]	87	90	22	17	31	22	199	191	86	-25	-9	15
Water Year Types[c]												
Wet (32%)	134	118	37	45	57	-4	290	283	74	-21	-51	16
Above Normal (16%)	54	83	12	8	68	69	311	308	81	-2	-28	19
Below Normal (13%)	138	132	17	8	19	54	178	166	121	26	27	45
Dry (24%)	66	74	14	-3	-1	19	117	116	98	-49	22	0
Critical (15%)	7	27	18	6	0	1	35	10	67	-64	19	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-2-3. Exports Through Jones and Banks Pumping Plants, Monthly Export Volume

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Volume (TAF)											
Probability of Exceedance[a]												
10%	517	671	721	604	611	675	242	240	509	714	724	671
20%	454	572	717	490	532	617	181	151	359	708	724	664
30%	434	479	685	427	448	508	158	127	340	694	715	651
40%	400	443	558	419	409	479	138	104	318	667	707	623
50%	370	415	494	406	380	424	128	97	253	634	692	604
60%	336	381	477	396	363	349	121	92	207	588	519	509
70%	310	347	454	377	325	312	113	92	192	501	371	410
80%	286	302	379	321	267	283	104	92	150	444	240	335
90%	250	251	335	280	165	159	89	92	43	232	141	243
Long Term												
Full Simulation Period[b]	378	430	527	426	395	423	154	140	276	558	521	514
Water Year Types[c]												
Wet (32%)	410	497	564	513	537	594	204	207	445	669	717	638
Above Normal (16%)	376	450	562	406	401	496	130	105	315	587	709	628
Below Normal (13%)	386	456	590	387	354	394	134	100	209	657	622	542
Dry (24%)	374	398	510	392	315	318	153	126	194	541	296	426
Critical (15%)	314	293	384	349	250	179	93	90	64	223	176	242

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Volume (TAF)											
Probability of Exceedance[a]												
10%	514	671	721	604	613	677	223	218	509	714	724	671
20%	454	553	717	490	528	612	165	127	359	709	724	662
30%	429	479	685	427	448	528	134	91	340	696	715	648
40%	378	443	558	419	416	479	122	83	318	678	705	626
50%	360	408	496	405	380	424	111	71	251	646	693	598
60%	334	375	481	396	363	349	97	50	207	606	571	508
70%	311	347	452	377	323	312	80	38	193	568	401	415
80%	289	302	387	319	267	283	45	23	178	445	278	347
90%	245	250	337	280	165	159	30	7	42	271	192	254
Long Term												
Full Simulation Period[b]	376	427	528	427	394	423	122	99	279	570	538	514
Water Year Types[c]												
Wet (32%)	408	505	564	514	532	592	202	202	444	667	718	627
Above Normal (16%)	376	423	561	407	405	496	127	92	315	590	705	625
Below Normal (13%)	381	456	588	387	359	397	103	55	208	663	632	561
Dry (24%)	370	394	513	392	315	318	80	41	205	577	333	433
Critical (15%)	313	293	382	355	249	179	34	20	69	239	222	243

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Volume (TAF)											
Probability of Exceedance[a]												
10%	-3	0	0	0	2	2	-20	-22	0	0	0	0
20%	0	-19	0	0	-4	-6	-16	-24	0	1	0	-2
30%	-6	1	0	0	0	20	-24	-37	0	2	0	-3
40%	-22	0	0	0	8	0	-16	-21	0	12	-3	3
50%	-9	-8	2	0	0	0	-17	-26	-2	11	1	-5
60%	-3	-6	5	0	0	0	-24	-42	0	19	53	-1
70%	1	0	-2	0	-1	0	-33	-55	1	66	30	5
80%	3	0	8	-1	0	0	-59	-69	27	1	38	12
90%	-6	-1	1	0	0	0	-59	-85	-1	39	51	11
Long Term												
Full Simulation Period[b]	-2	-3	0	1	-1	0	-32	-41	3	12	17	0
Water Year Types[c]												
Wet (32%)	-2	8	0	0	-5	-2	-2	-5	-1	-1	0	-11
Above Normal (16%)	1	-28	-1	1	4	0	-4	-14	0	2	-4	-3
Below Normal (13%)	-5	0	-2	0	5	4	-31	-45	-1	6	10	18
Dry (24%)	-4	-4	4	0	0	0	-73	-84	11	36	38	8
Critical (15%)	-1	0	-2	6	-1	-1	-59	-70	4	17	46	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-2-4. Exports Through Jones and Banks Pumping Plants, Monthly Export Volume

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Volume (TAF)											
Probability of Exceedance[a]												
10%	694	671	739	803	727	703	526	515	555	694	694	671
20%	680	671	724	769	686	608	503	420	455	694	694	671
30%	627	652	719	747	668	560	477	387	425	680	694	671
40%	553	623	718	741	614	542	427	351	412	624	634	669
50%	489	591	683	730	552	509	390	319	389	551	515	635
60%	433	513	601	635	519	486	321	281	361	474	446	545
70%	318	464	553	565	465	461	258	242	320	404	369	420
80%	273	352	500	499	416	374	188	181	176	300	281	340
90%	209	288	378	391	335	304	109	80	128	160	161	226
Long Term												
Full Simulation Period[b]	471	525	612	638	538	489	351	308	352	494	489	528
Water Year Types[c]												
Wet (32%)	549	619	716	724	609	543	476	430	456	632	655	660
Above Normal (16%)	428	521	641	716	584	570	453	363	415	572	647	651
Below Normal (13%)	548	595	623	674	497	500	337	304	414	629	517	539
Dry (24%)	435	475	546	579	518	493	259	228	274	403	325	438
Critical (15%)	340	345	455	433	406	266	134	121	132	139	203	249

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Volume (TAF)											
Probability of Exceedance[a]												
10%	517	671	721	604	611	675	242	240	509	714	724	671
20%	454	572	717	490	532	617	181	151	359	708	724	664
30%	434	479	685	427	448	508	158	127	340	694	715	651
40%	400	443	558	419	409	479	138	104	318	667	707	623
50%	370	415	494	406	380	424	128	97	253	634	692	604
60%	336	381	477	396	363	349	121	92	207	588	519	509
70%	310	347	454	377	325	312	113	92	192	501	371	410
80%	286	302	379	321	267	283	104	92	150	444	240	335
90%	250	251	335	280	165	159	89	92	43	232	141	243
Long Term												
Full Simulation Period[b]	378	430	527	426	395	423	154	140	276	558	521	514
Water Year Types[c]												
Wet (32%)	410	497	564	513	537	594	204	207	445	669	717	638
Above Normal (16%)	376	450	562	406	401	496	130	105	315	587	709	628
Below Normal (13%)	386	456	590	387	354	394	134	100	209	657	622	542
Dry (24%)	374	398	510	392	315	318	153	126	194	541	296	426
Critical (15%)	314	293	384	349	250	179	93	90	64	223	176	242

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Volume (TAF)											
Probability of Exceedance[a]												
10%	-176	0	-18	-200	-116	-28	-284	-275	-47	20	31	0
20%	-225	-99	-7	-279	-154	10	-322	-269	-96	14	31	-7
30%	-193	-173	-34	-320	-220	-52	-319	-259	-85	13	22	-20
40%	-154	-180	-160	-322	-205	-63	-289	-247	-94	42	73	-46
50%	-119	-176	-189	-324	-172	-85	-262	-222	-137	83	177	-32
60%	-96	-131	-125	-239	-156	-137	-200	-189	-154	113	73	-37
70%	-8	-117	-99	-188	-140	-149	-145	-149	-127	98	2	-10
80%	14	-51	-121	-179	-150	-91	-83	-88	-25	145	-41	-5
90%	41	-37	-42	-112	-170	-145	-19	12	-85	72	-20	17
Long Term												
Full Simulation Period[b]	-93	-95	-84	-212	-143	-65	-196	-168	-76	64	33	-14
Water Year Types[c]												
Wet (32%)	-139	-123	-152	-211	-72	51	-272	-223	-11	37	63	-21
Above Normal (16%)	-52	-71	-78	-311	-183	-73	-322	-257	-100	15	61	-23
Below Normal (13%)	-162	-139	-33	-287	-143	-106	-203	-204	-205	28	105	4
Dry (24%)	-61	-77	-36	-187	-202	-175	-105	-102	-80	138	-30	-12
Critical (15%)	-26	-52	-71	-84	-156	-87	-41	-31	-67	84	-26	-8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-2-5. Exports Through Jones and Banks Pumping Plants, Monthly Export Volume

Second Basis of Comparison

	Monthly Export Volume (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	694	671	739	803	727	703	526	515	555	694	694	671
20%	680	671	724	769	686	608	503	420	455	694	694	671
30%	627	652	719	747	668	560	477	387	425	680	694	671
40%	553	623	718	741	614	542	427	351	412	624	634	669
50%	489	591	683	730	552	509	390	319	389	551	515	635
60%	433	513	601	635	519	486	321	281	361	474	446	545
70%	318	464	553	565	465	461	258	242	320	404	369	420
80%	273	352	500	499	416	374	188	181	176	300	281	340
90%	209	288	378	391	335	304	109	80	128	160	161	226
Long Term												
Full Simulation Period[b]	471	525	612	638	538	489	351	308	352	494	489	528
Water Year Types[c]												
Wet (32%)	549	619	716	724	609	543	476	430	456	632	655	660
Above Normal (16%)	428	521	641	716	584	570	453	363	415	572	647	651
Below Normal (13%)	548	595	623	674	497	500	337	304	414	629	517	539
Dry (24%)	435	475	546	579	518	493	259	228	274	403	325	438
Critical (15%)	340	345	455	433	406	266	134	121	132	139	203	249

Alternative 3

	Monthly Export Volume (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	694	671	718	653	725	722	547	563	667	694	694	671
20%	673	671	691	565	603	622	510	496	461	694	694	671
30%	627	652	628	440	524	577	465	452	399	694	694	671
40%	552	627	583	422	449	532	437	386	373	680	694	657
50%	476	571	546	411	393	460	369	329	355	628	624	640
60%	382	501	523	395	365	351	320	281	338	566	502	572
70%	322	467	505	377	320	316	255	230	311	448	396	417
80%	265	346	479	328	264	288	187	124	252	382	268	344
90%	218	276	378	304	202	159	124	102	138	190	170	228
Long Term												
Full Simulation Period[b]	465	520	549	442	426	445	353	330	362	533	513	529
Water Year Types[c]												
Wet (32%)	544	615	601	559	594	589	494	490	519	648	667	654
Above Normal (16%)	430	533	574	414	469	566	441	413	397	586	680	647
Below Normal (13%)	524	587	607	394	373	448	312	266	330	683	650	588
Dry (24%)	440	471	523	389	314	337	270	242	292	492	318	426
Critical (15%)	321	319	401	355	251	180	127	100	131	158	196	245

Alternative 3 minus Second Basis of Comparison

	Monthly Export Volume (TAF)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	-20	-151	-2	19	21	47	112	1	0	0
20%	-7	0	-33	-204	-83	15	7	76	5	0	0	0
30%	0	0	-91	-308	-143	17	-12	65	-25	13	0	0
40%	-1	4	-135	-319	-165	-10	10	34	-39	56	60	-11
50%	-13	-20	-137	-319	-159	-50	-21	10	-34	77	109	5
60%	-51	-12	-78	-241	-154	-135	-1	0	-23	92	57	27
70%	3	2	-48	-188	-145	-144	-3	-12	-8	44	27	-3
80%	-8	-7	-21	-172	-152	-87	-1	-56	76	82	-14	4
90%	8	-12	0	-87	-133	-145	15	21	10	30	9	1
Long Term												
Full Simulation Period[b]	-6	-5	-62	-196	-112	-44	2	22	10	39	24	1
Water Year Types[c]												
Wet (32%)	-5	-5	-115	-165	-15	46	18	60	64	16	12	-5
Above Normal (16%)	2	12	-66	-303	-115	-4	-11	50	-19	13	33	-3
Below Normal (13%)	-24	-7	-16	-280	-124	-52	-25	-37	-83	54	133	49
Dry (24%)	5	-4	-23	-190	-203	-156	12	14	18	89	-7	-12
Critical (15%)	-19	-26	-54	-78	-156	-86	-6	-21	0	19	-7	-4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-2-6. Exports Through Jones and Banks Pumping Plants, Monthly Export Volume

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Volume (TAF)											
Probability of Exceedance[a]												
10%	694	671	739	803	727	703	526	515	555	694	694	671
20%	680	671	724	769	686	608	503	420	455	694	694	671
30%	627	652	719	747	668	560	477	387	425	680	694	671
40%	553	623	718	741	614	542	427	351	412	624	634	669
50%	489	591	683	730	552	509	390	319	389	551	515	635
60%	433	513	601	635	519	486	321	281	361	474	446	545
70%	318	464	553	565	465	461	258	242	320	404	369	420
80%	273	352	500	499	416	374	188	181	176	300	281	340
90%	209	288	378	391	335	304	109	80	128	160	161	226
Long Term												
Full Simulation Period[b]	471	525	612	638	538	489	351	308	352	494	489	528
Water Year Types[c]												
Wet (32%)	549	619	716	724	609	543	476	430	456	632	655	660
Above Normal (16%)	428	521	641	716	584	570	453	363	415	572	647	651
Below Normal (13%)	548	595	623	674	497	500	337	304	414	629	517	539
Dry (24%)	435	475	546	579	518	493	259	228	274	403	325	438
Critical (15%)	340	345	455	433	406	266	134	121	132	139	203	249

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Volume (TAF)											
Probability of Exceedance[a]												
10%	514	671	721	604	613	677	223	218	509	714	724	671
20%	454	553	717	490	528	612	165	127	359	709	724	662
30%	429	479	685	427	448	528	134	91	340	696	715	648
40%	378	443	558	419	416	479	122	83	318	678	705	626
50%	360	408	496	405	380	424	111	71	251	646	693	598
60%	334	375	481	396	363	349	97	50	207	606	571	508
70%	311	347	452	377	323	312	80	38	193	568	401	415
80%	289	302	387	319	267	283	45	23	178	445	278	347
90%	245	250	337	280	165	159	30	7	42	271	192	254
Long Term												
Full Simulation Period[b]	376	427	528	427	394	423	122	99	279	570	538	514
Water Year Types[c]												
Wet (32%)	408	505	564	514	532	592	202	202	444	667	718	627
Above Normal (16%)	376	423	561	407	405	496	127	92	315	590	705	625
Below Normal (13%)	381	456	588	387	359	397	103	55	208	663	632	561
Dry (24%)	370	394	513	392	315	318	80	41	205	577	333	433
Critical (15%)	313	293	382	355	249	179	34	20	69	239	222	243

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Export Volume (TAF)											
Probability of Exceedance[a]												
10%	-180	0	-18	-200	-114	-26	-303	-298	-47	20	31	0
20%	-226	-118	-7	-279	-158	4	-338	-294	-96	15	31	-9
30%	-198	-173	-34	-320	-220	-32	-343	-296	-85	15	22	-24
40%	-175	-180	-160	-322	-198	-63	-306	-269	-94	54	71	-43
50%	-129	-184	-187	-325	-172	-85	-279	-247	-138	94	178	-37
60%	-99	-137	-120	-240	-156	-137	-224	-230	-154	132	125	-37
70%	-7	-117	-101	-188	-141	-149	-178	-204	-127	164	32	-6
80%	17	-50	-113	-180	-150	-91	-142	-157	2	146	-3	7
90%	35	-38	-41	-112	-170	-145	-78	-73	-86	111	31	28
Long Term												
Full Simulation Period[b]	-95	-98	-84	-211	-144	-65	-228	-209	-73	76	49	-14
Water Year Types[c]												
Wet (32%)	-141	-115	-152	-210	-77	49	-274	-228	-11	35	63	-33
Above Normal (16%)	-51	-99	-79	-310	-179	-74	-326	-271	-100	17	58	-26
Below Normal (13%)	-167	-139	-35	-288	-138	-102	-234	-249	-205	34	115	22
Dry (24%)	-65	-81	-33	-187	-203	-175	-178	-186	-69	174	8	-5
Critical (15%)	-27	-52	-73	-77	-157	-88	-100	-100	-63	101	19	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

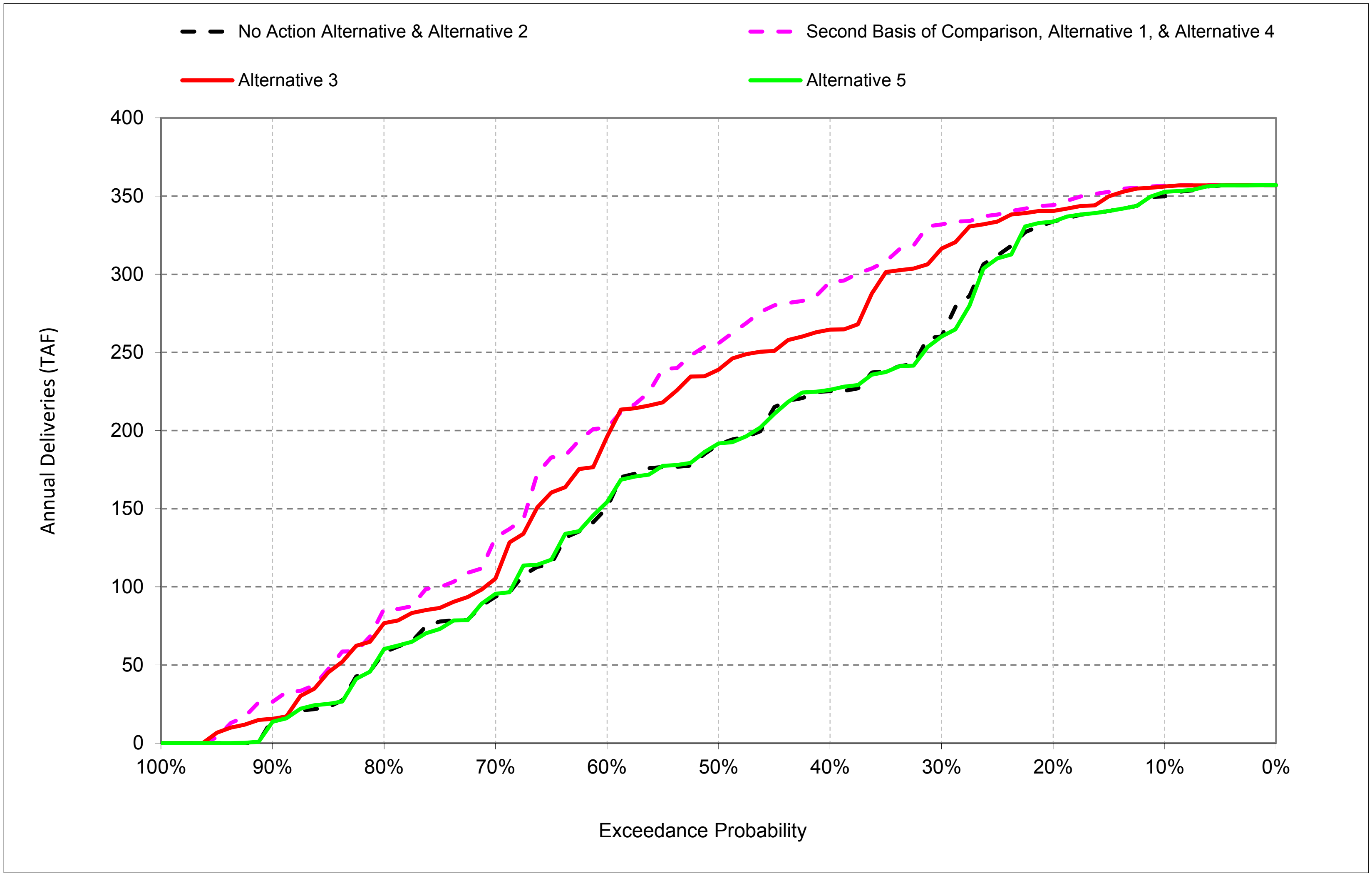
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

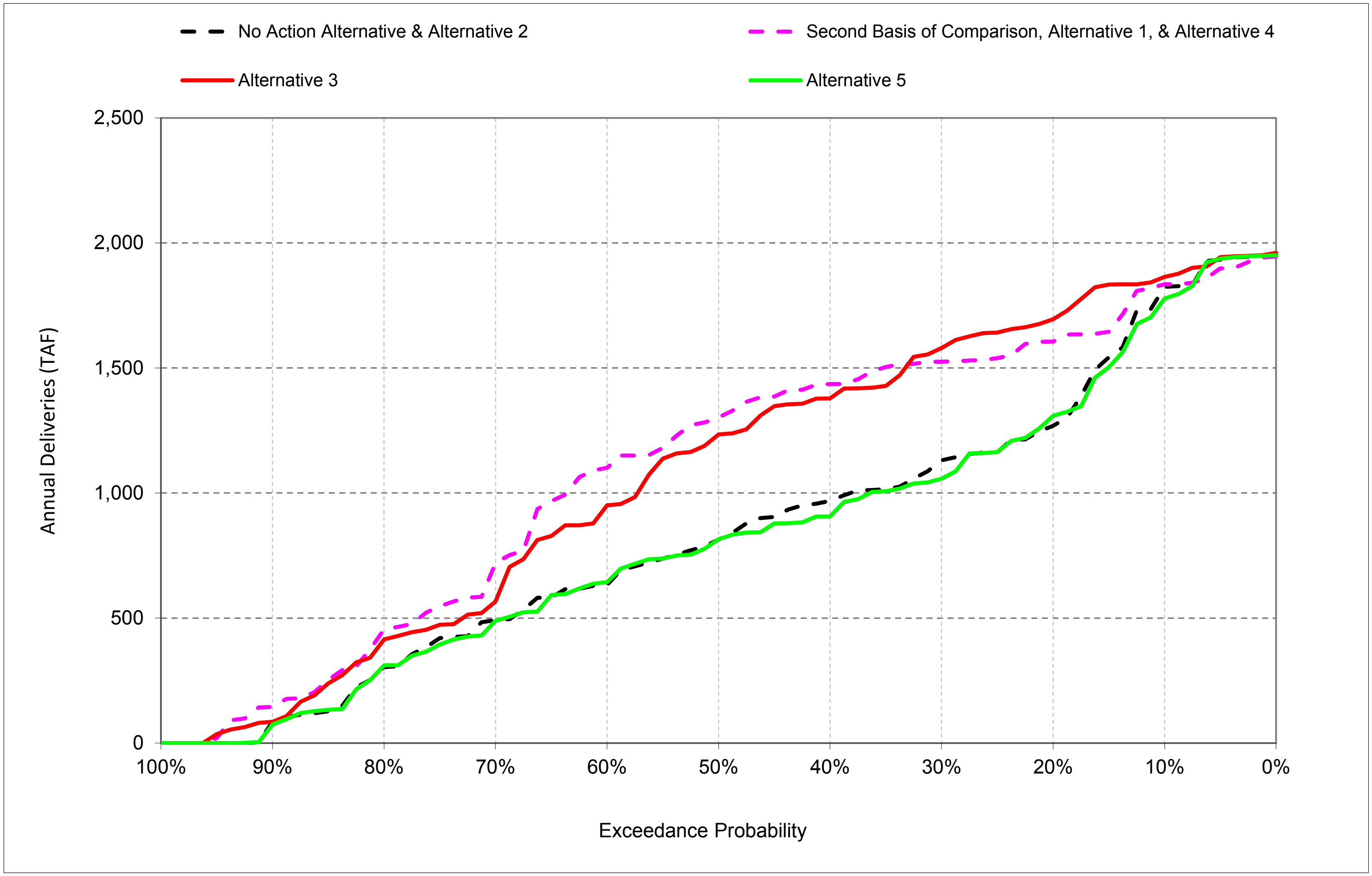
C.19. CVP Deliveries

Figure C-19-1-1. Annual CVP North of Delta Agricultural Water Service Contract Deliveries



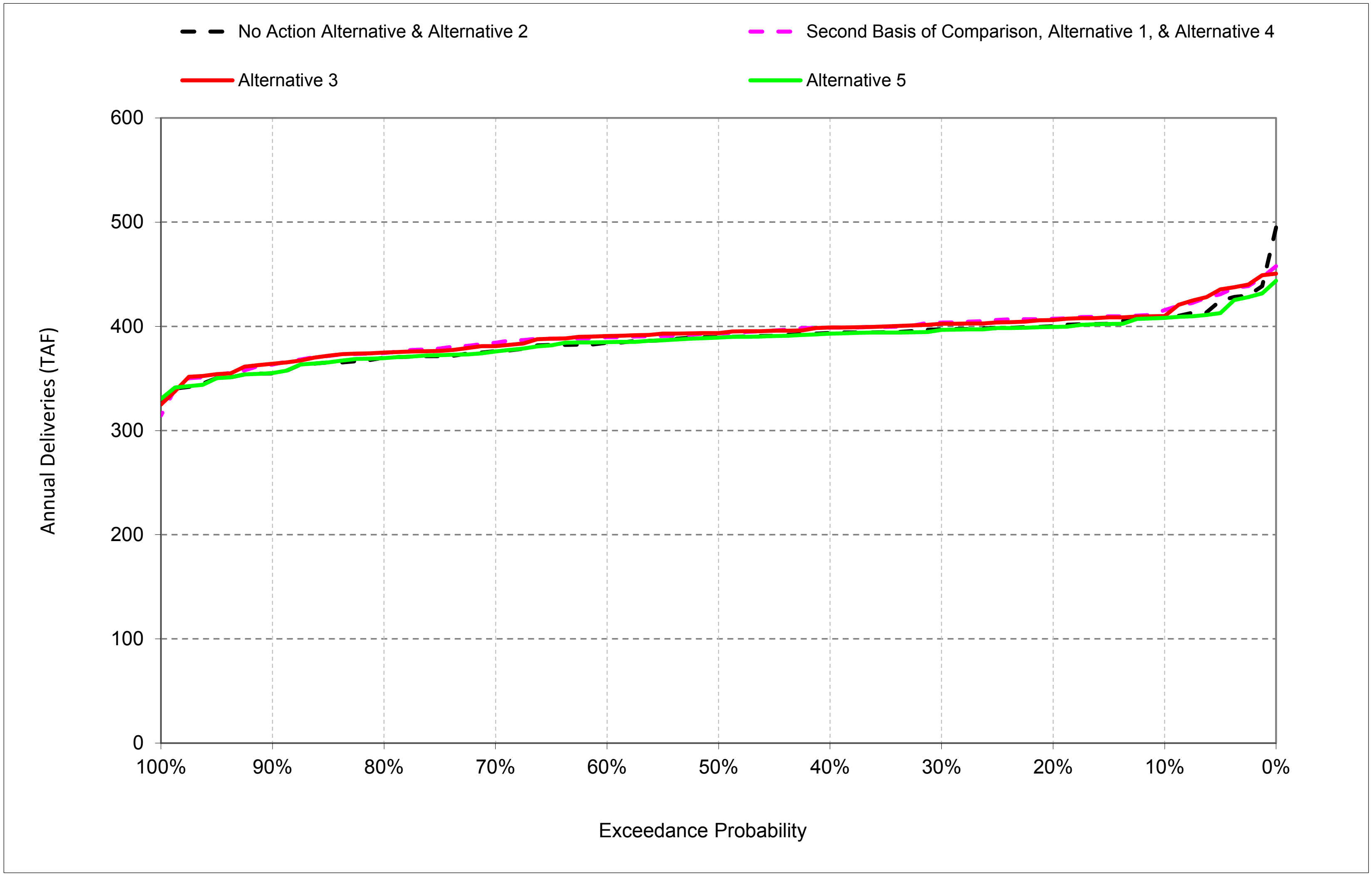
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Annual deliveries are based on March to February Average.

Figure C-19-1-2. Annual CVP South of Delta Agricultural Water Service Contract Deliveries



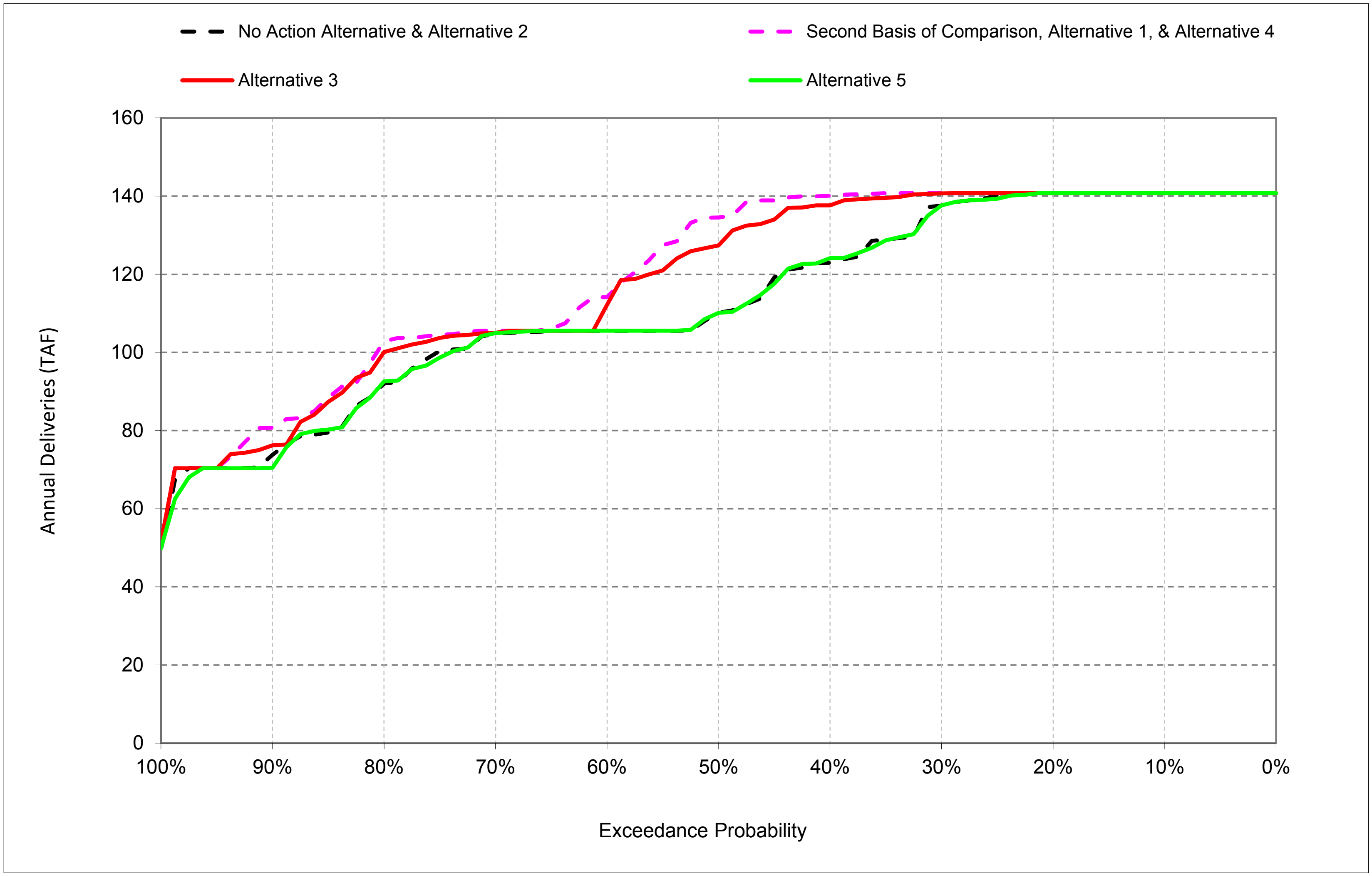
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Does not include Eastside Contractors deliveries. 6) Annual deliveries are based on March to February Average.

Figure C-19-1-3. Annual CVP North of Delta M&I Water Service Contract Deliveries



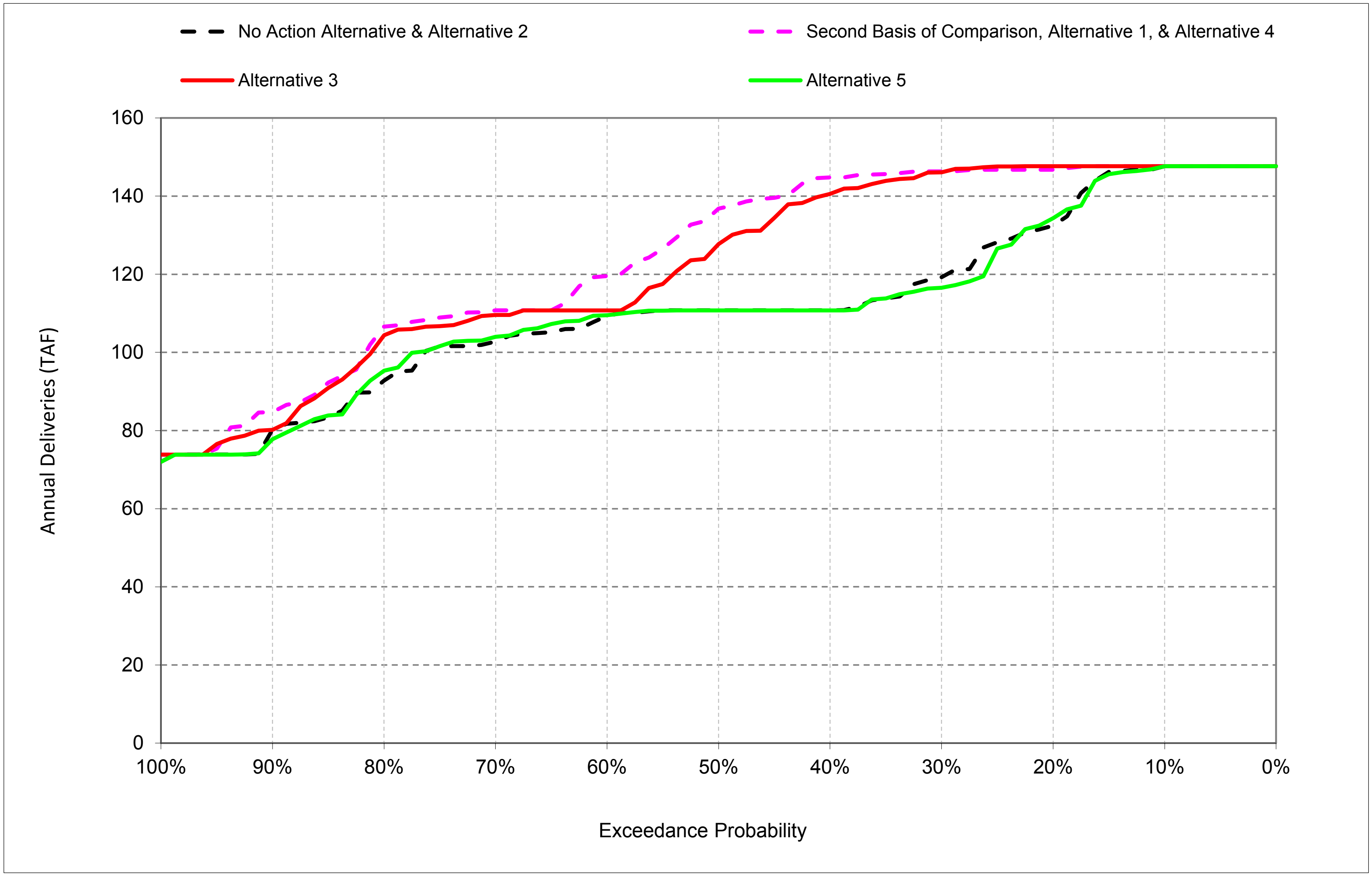
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on March to February Average.

Figure C-19-1-4. Annual CVP American River M&I Water Service Contract Deliveries



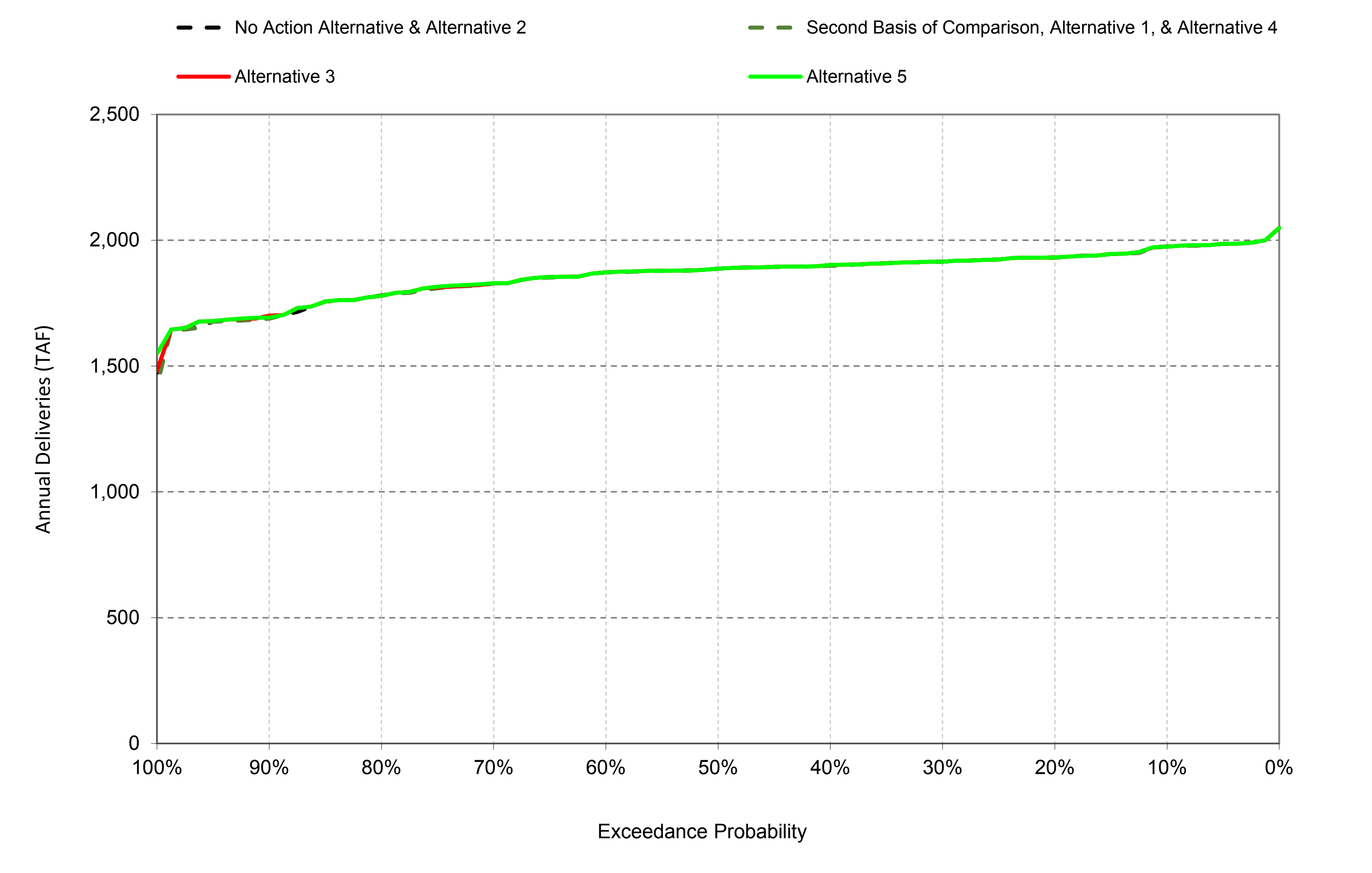
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Annual deliveries are based on March to February Average.

Figure C-19-1-5. Annual CVP South of Delta M&I Water Service Contract Deliveries



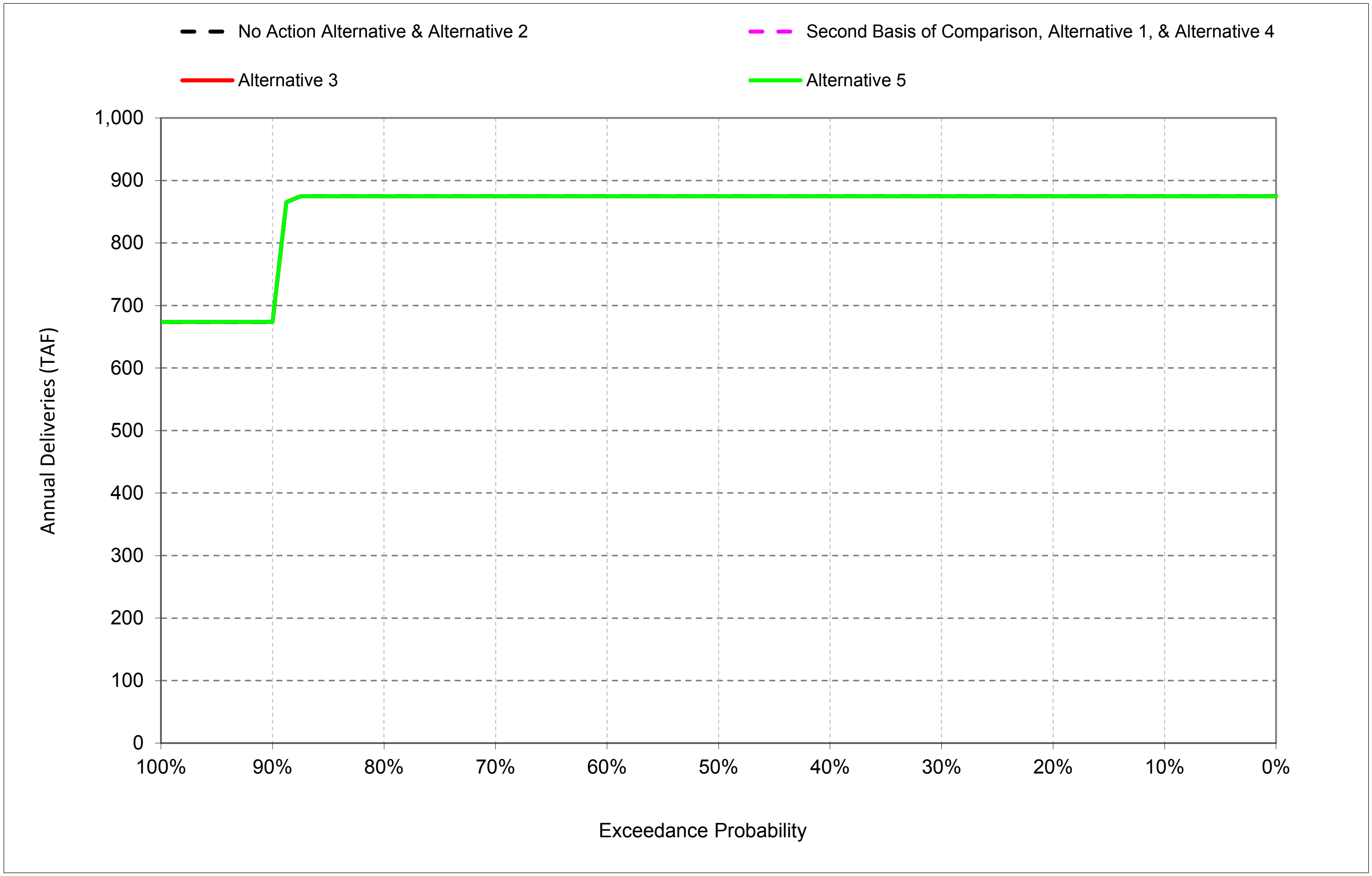
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Does not include Eastside Contractors deliveries. 6) Annual deliveries are based on March to February Average.

Figure C-19-1-6. Annual CVP Settlement Contractors Deliveries



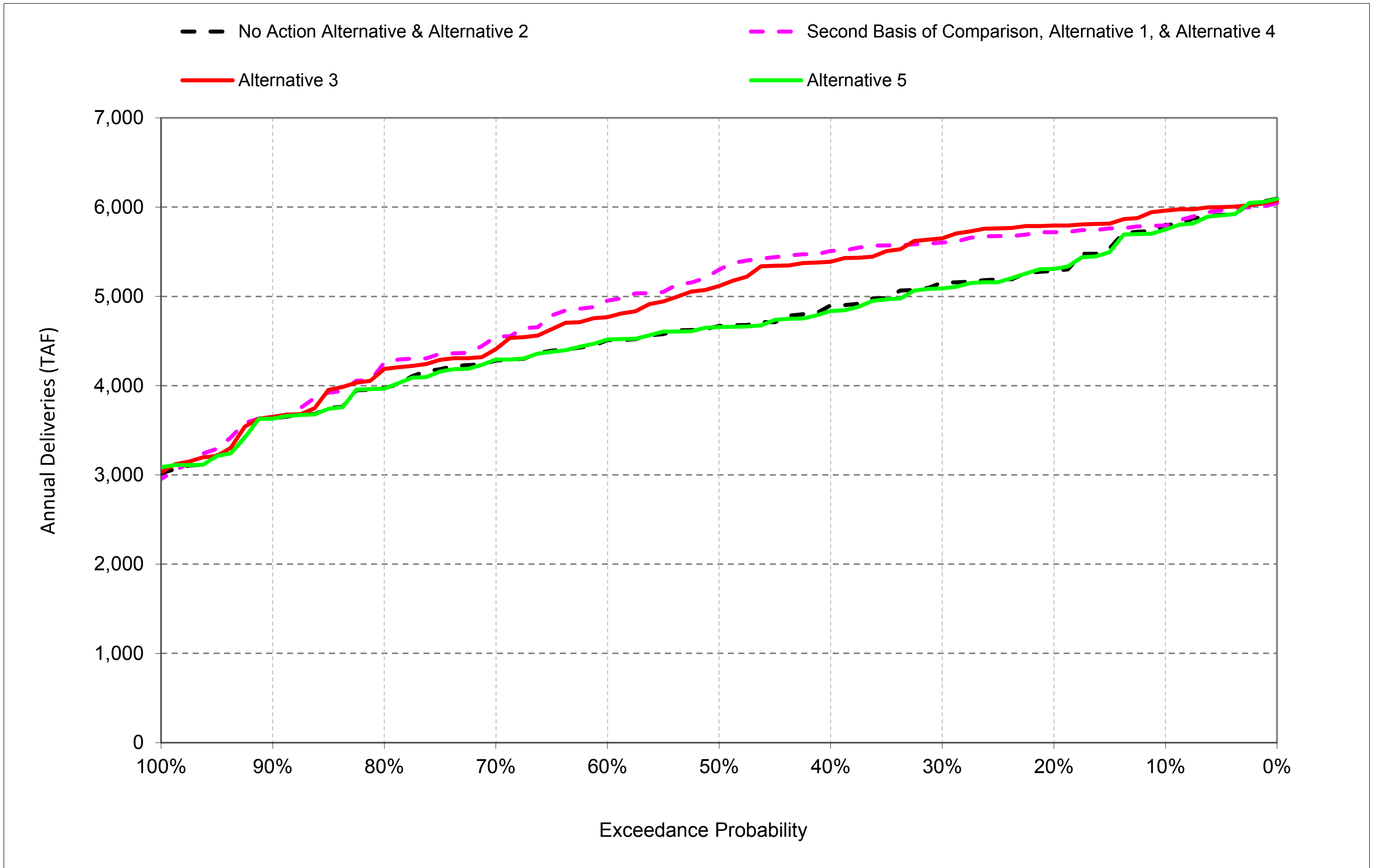
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Annual deliveries are based on March to February Average.

Figure C-19-1-7. Annual CVP Exchange Contractors Deliveries



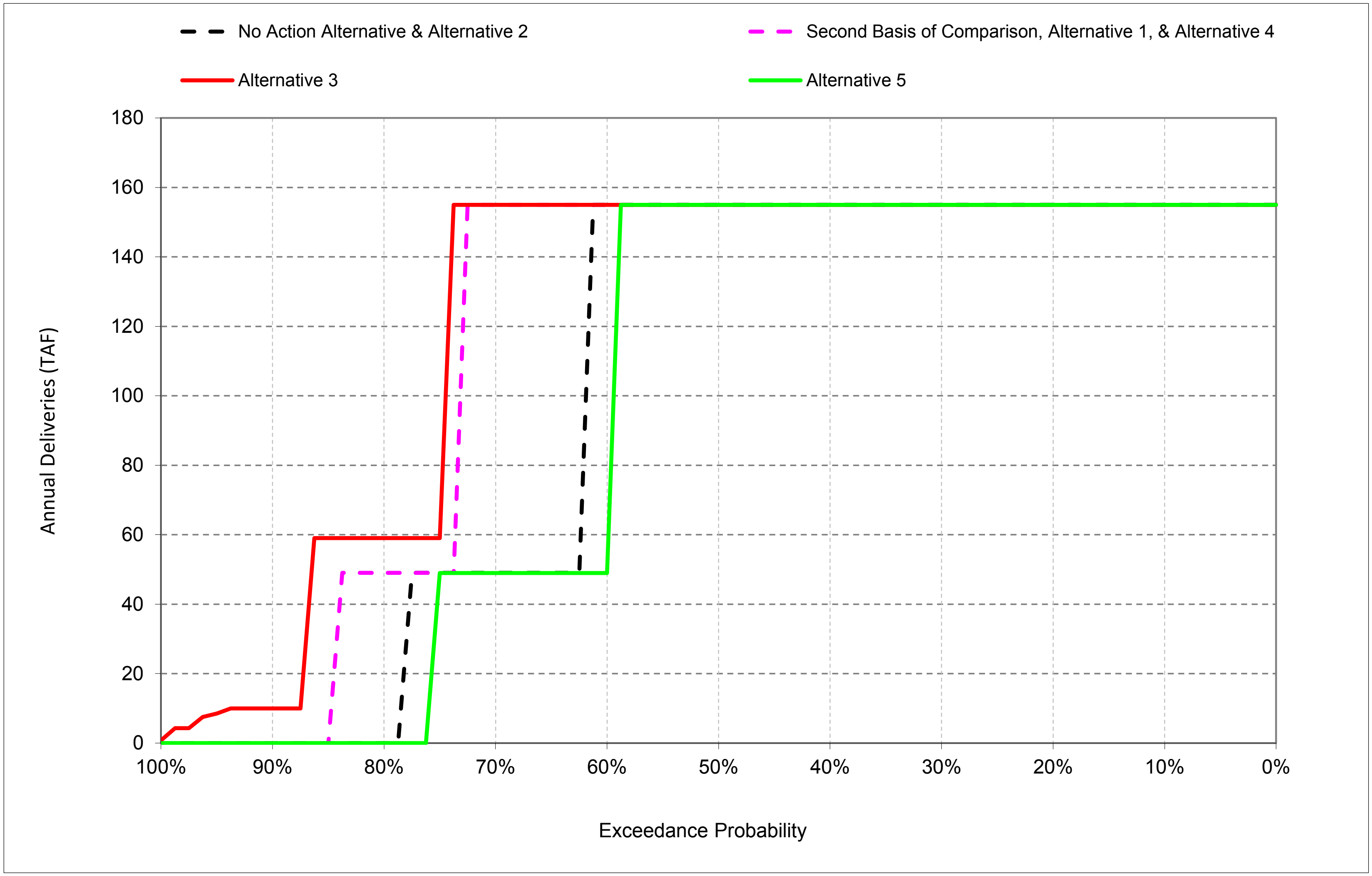
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Annual deliveries are based on March to February Average.

Figure C-19-1-8. Annual CVP Total Deliveries



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Does not include Eastside Contractors deliveries. 6) Annual deliveries are based on March to February Average.

Figure C-19-1-9. Annual CVP Eastside Contractors Deliveries



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Annual deliveries are based on March to February Average.

Table C-19-1-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP Deliveries

					Alternative 1	No Action Alternative	Alternative 1 minus No Action Alternative
Water Supply Reliability							
Sacramento River Hydrologic Region							
	CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,858	1,859	-1
				Dry	1,905	1,906	-1
				Critical	1,732	1,737	-5
	CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	155	146	8
				Dry	151	146	5
				Critical	105	102	3
	CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	214	207	7
				Dry	192	186	5
				Critical	151	152	-1
	CVP Ag	Contract Delivery (annual average - does not include Settlement contractors)	(TAF/year)	Long Term	219	185	34
				Dry	122	86	37
				Critical	35	24	12
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users and Eastside Contractors deliveries)							
	CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
				Dry	875	875	0
				Critical	741	741	0
	CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	260	261	0
				Dry	268	269	-1
				Critical	221	224	-3
	CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	17	15	2
				Dry	15	14	1
				Critical	12	11	1
	CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	348	269	79
				Dry	203	140	63
				Critical	61	41	20
San Francisco Bay Hydrologic Region							
	CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	286	275	11
				Dry	292	284	9
				Critical	305	301	4
	CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	43	33	11
				Dry	25	17	8
				Critical	7	5	2
Central Coast Hydrologic Region							
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)							
	CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	12	12	0
				Dry	12	12	0
				Critical	10	10	0
	CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term	709	545	164
				Dry	422	288	134
				Critical	127	85	41
Total For All Regions							
	Total Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	4,973	4,660	313
				Dry	4,483	4,221	261
				Critical	3,508	3,433	75

Notes:
1) Long-term Average is the average quantity for the 82-year simulation period.
2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.
3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences are discussed in the text.
5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.
6) Annual deliveries are based on March to February Average.
7) In the table on the following page, San Francisco Bay Hydrologic Region M&I deliveries are divided between North of Delta M&I deliveries (Contra Costa Water District) and South of Delta M&I deliveries (San Felipe Division); and San Francisco Bay Hydrologic Region Ag deliveries are only included in South of Delta Ag deliveries.

Table C-19-1-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP

				Alternative 1	No Action Alternative	Alternative 1 minus No Action Alternative
Water Supply Reliability						
North of Delta						
CVP Ag	Contract Delivery (annual average; does not include Settlement contractors)	(TAF/year)	Long Term	219	185	34
			Dry	122	86	37
			Critical	35	24	12
CVP M&I (Including American River)	Contract Delivery (annual average)	(TAF/year)	Long Term	392	386	7
			Dry	390	385	5
			Critical	383	383	-1
CVP M&I American River	Contract Delivery (annual average)	(TAF/year)	Long Term	120	113	7
			Dry	105	97	8
			Critical	79	75	5
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,858	1,859	-1
			Dry	1,905	1,906	-1
			Critical	1,732	1,737	-5
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	155	146	8
			Dry	151	146	5
			Critical	105	102	3
Total CVP North of Delta Ag and M&I Deliveries						
Total CVP Ag and M&I Deliveries	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term	612	571	41
			Dry	512	470	42
			Critical	418	407	11
South of Delta (Not including Eastside Contractors deliveries, or Friant-Kern Canal or Madera Canal water users)						
CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	1,100	847	253
			Dry	650	445	206
			Critical	195	131	64
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	125	112	13
			Dry	109	99	10
			Critical	85	80	4
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry	875	875	0
			Critical	741	741	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	272	273	-1
			Dry	280	281	-1
			Critical	232	234	-3
Total CVP South of Delta Ag and M&I Deliveries						
Total CVP Ag and M&I Deliveries	Contract Delivery (annual average)	(TAF/year)	Long Term	1,225	958	266
			Dry	759	544	216
			Critical	280	212	68
Eastside Contractors deliveries						
Water Rights	Delivery (annual average)	(TAF/year)	Long Term	514	508	6
			Dry	524	524	0
			Critical	486	445	42
CVP Service Contracts	Contract Delivery (annual average)	(TAF/year)	Long Term	118	104	15
			Dry	98	84	13
			Critical	25	4	21
Total Eastside Contractors Deliveries						
Total Water Rights and CVP Service Contracts Deliveries	Delivery (annual average)	(TAF/year)	Long Term	632	611	21
			Dry	621	608	13
			Critical	511	449	63

Notes:
1) Long-term Average is the average quantity for the 82-year simulation period.
2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.
3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences are discussed in the text.
5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.
6) Annual deliveries are based on March to February Average.

Table C-19-2-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP Deliveries

				Alternative 3	No Action Alternative	Alternative 3 minus No Action Alternative
Water Supply Reliability						
Sacramento River Hydrologic Region						
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,860	1,859	1
			Dry	1,906	1,906	0
			Critical	1,742	1,737	5
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	153	146	7
			Dry	149	146	4
			Critical	103	102	1
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	214	207	6
			Dry	192	186	6
			Critical	152	152	1
CVP Ag	Contract Delivery (annual average - does not include Settlement contractors)	(TAF/year)	Long Term	209	185	24
			Dry	111	86	25
			Critical	31	24	7
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users and Eastside Contractors deliveries)						
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry	875	875	0
			Critical	741	741	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	261	261	0
			Dry	269	269	0
			Critical	224	224	0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	17	15	1
			Dry	15	14	1
			Critical	11	11	0
CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	342	269	73
			Dry	185	140	45
			Critical	53	41	12
San Francisco Bay Hydrologic Region						
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	284	275	9
			Dry	291	284	7
			Critical	304	301	2
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	42	33	9
			Dry	23	17	6
			Critical	6	5	1
Central Coast Hydrologic Region						
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)						
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	12	12	0
			Dry	12	12	0
			Critical	10	10	0
CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term	696	545	150
			Dry	387	288	99
			Critical	108	85	23
Total For All Regions						
Total Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	4,942	4,660	282
			Dry	4,415	4,221	194
			Critical	3,486	3,433	53

Notes:

1) Long-term Average is the average quantity for the 82-year simulation period.

2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.

4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.

5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.

6) Annual deliveries are based on March to February Average.

7) In the table on the following page, San Francisco Bay Hydrologic Region M&I deliveries are divided between North of Delta M&I deliveries (Contra Costa Water District) and South of Delta M&I deliveries (San Felipe Division); and San Francisco Bay Hydrologic Region Ag deliveries are only included in South of Delta Ag deliveries.

Table C-19-2-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP

				Alternative 3	No Action Alternative	Alternative 3 minus No Action Alternative
Water Supply Reliability						
North of Delta						
CVP Ag	Contract Delivery (annual average; does not include Settlement contractors)	(TAF/year)	Long Term	209	185	24
			Dry	111	86	25
			Critical	31	24	7
CVP M&I (Including American River)	Contract Delivery (annual average)	(TAF/year)	Long Term	392	386	6
			Dry	390	385	6
			Critical	384	383	1
CVP M&I American River	Contract Delivery (annual average)	(TAF/year)	Long Term	118	113	6
			Dry	104	97	7
			Critical	78	75	3
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,860	1,859	1
			Dry	1,906	1,906	0
			Critical	1,742	1,737	5
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	153	146	7
			Dry	149	146	4
			Critical	103	102	1
Total CVP North of Delta Ag and M&I Deliveries						
Total CVP Ag and M&I Deliveries	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term	602	571	30
			Dry	501	470	31
			Critical	415	407	8
South of Delta (Not including Eastside Contractors deliveries, or Friant-Kern Canal or Madera Canal water users)						
CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	1,079	847	233
			Dry	596	445	151
			Critical	168	131	36
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	122	112	11
			Dry	108	99	8
			Critical	83	80	2
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry	875	875	0
			Critical	741	741	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	273	273	0
			Dry	281	281	0
			Critical	234	234	0
Total CVP South of Delta Ag and M&I Deliveries						
Total CVP Ag and M&I Deliveries	Contract Delivery (annual average)	(TAF/year)	Long Term	1,202	958	243
			Dry	703	544	159
			Critical	250	212	38
Eastside Contractors deliveries						
Water Rights	Delivery (annual average)	(TAF/year)	Long Term	513	508	5
			Dry	524	524	0
			Critical	478	445	33
CVP Service Contracts	Contract Delivery (annual average)	(TAF/year)	Long Term	123	104	20
			Dry	109	84	25
			Critical	36	4	32
Total Eastside Contractors Deliveries						
Total Water Rights and CVP Service Contracts Deliveries	Delivery (annual average)	(TAF/year)	Long Term	636	611	25
			Dry	633	608	25
			Critical	514	449	66

Notes:
1) Long-term Average is the average quantity for the 82-year simulation period.
2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.
3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.
5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.
6) Annual deliveries are based on March to February Average.

Table C-19-3-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP Deliveries

					Alternative 5	No Action Alternative	Alternative 5 minus No Action Alternative
Water Supply Reliability							
Sacramento River Hydrologic Region							
	CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,861	1,859	2
				Dry	1,906	1,906	0
				Critical	1,747	1,737	10
	CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	146	146	0
				Dry	145	146	0
				Critical	103	102	1
	CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	207	207	0
				Dry	186	186	0
				Critical	152	152	0
	CVP Ag	Contract Delivery (annual average - does not include Settlement contractors)	(TAF/year)	Long Term	185	185	0
				Dry	85	86	0
				Critical	24	24	0
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users and Eastside Contractors deliveries)							
	CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
				Dry	875	875	0
				Critical	741	741	0
	CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	261	261	0
				Dry	269	269	0
				Critical	222	224	-2
	CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	15	15	0
				Dry	14	14	0
				Critical	11	11	0
	CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	264	269	-5
				Dry	135	140	-5
				Critical	40	41	-1
San Francisco Bay Hydrologic Region							
	CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	275	275	0
				Dry	284	284	1
				Critical	301	301	0
	CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	32	33	0
				Dry	17	17	0
				Critical	5	5	0
Central Coast Hydrologic Region							
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)							
	CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	12	12	0
				Dry	12	12	0
				Critical	10	10	0
	CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term	538	545	-7
				Dry	281	288	-7
				Critical	85	85	0
Total For All Regions							
	Total Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	4,649	4,660	-11
				Dry	4,210	4,221	-12
				Critical	3,441	3,433	8

Notes:
1) Long-term Average is the average quantity for the 82-year simulation period.
2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.
3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.
5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.
6) Annual deliveries are based on March to February Average.
7) In the table on the following page, San Francisco Bay Hydrologic Region M&I deliveries are divided between North of Delta M&I deliveries (Contra Costa Water District) and South of Delta M&I deliveries (San Felipe Division); and San Francisco Bay Hydrologic Region Ag deliveries are only included in South of Delta Ag deliveries.

Table C-19-3-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP

				Alternative 5	No Action Alternative	Alternative 5 minus No Action Alternative
Water Supply Reliability						
North of Delta						
CVP Ag	Contract Delivery (annual average; does not include Settlement contractors)	(TAF/year)	Long Term	185	185	0
			Dry	85	86	0
			Critical	24	24	0
CVP M&I (Including American River)	Contract Delivery (annual average)	(TAF/year)	Long Term	386	386	0
			Dry	384	385	0
			Critical	384	383	1
CVP M&I American River	Contract Delivery (annual average)	(TAF/year)	Long Term	112	113	0
			Dry	96	97	0
			Critical	74	75	-1
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,861	1,859	2
			Dry	1,906	1,906	0
			Critical	1,747	1,737	10
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	146	146	0
			Dry	145	146	0
			Critical	103	102	1
Total CVP North of Delta Ag and M&I Deliveries						
Total CVP Ag and M&I Deliveries	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term	571	571	0
			Dry	470	470	0
			Critical	408	407	1
South of Delta (Not including Eastside Contractors deliveries, or Friant-Kern Canal or Madera Canal water users)						
CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	834	847	-13
			Dry	433	445	-12
			Critical	130	131	-1
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	112	112	0
			Dry	100	99	1
			Critical	80	80	0
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry	875	875	0
			Critical	741	741	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	273	273	0
			Dry	281	281	0
			Critical	232	234	-2
Total CVP South of Delta Ag and M&I Deliveries						
Total CVP Ag and M&I Deliveries	Contract Delivery (annual average)	(TAF/year)	Long Term	946	958	-13
			Dry	533	544	-11
			Critical	210	212	-2
Eastside Contractors deliveries						
Water Rights	Delivery (annual average)	(TAF/year)	Long Term	502	508	-6
			Dry	524	524	0
			Critical	406	445	-39
CVP Service Contracts	Contract Delivery (annual average)	(TAF/year)	Long Term	100	104	-4
			Dry	69	84	-16
			Critical	8	4	4
Total Eastside Contractors Deliveries						
Total Water Rights and CVP Service Contracts Deliveries	Delivery (annual average)	(TAF/year)	Long Term	602	611	-10
			Dry	593	608	-16
			Critical	414	449	-35

Notes:

1) Long-term Average is the average quantity for the 82-year simulation period.

2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.

4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.

5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.

6) Annual deliveries are based on March to February Average.

Table C-19-4-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP Deliveries

				No Action Alternative	Second Basis of Comparison	No Action Alternative minus Second Basis of Comparison
Water Supply Reliability						
Sacramento River Hydrologic Region						
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,859	1,858	1
			Dry	1,906	1,905	1
			Critical	1,737	1,732	5
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	146	155	-8
			Dry	146	151	-5
			Critical	102	105	-3
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	207	214	-7
			Dry	186	192	-5
			Critical	152	151	1
CVP Ag	Contract Delivery (annual average - does not include Settlement contractors)	(TAF/year)	Long Term	185	219	-34
			Dry	86	122	-37
			Critical	24	35	-12
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users and Eastside Contractors deliveries)						
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry	875	875	0
			Critical	741	741	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	261	260	0
			Dry	269	268	1
			Critical	224	221	3
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	15	17	-2
			Dry	14	15	-1
			Critical	11	12	-1
CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	269	348	-79
			Dry	140	203	-63
			Critical	41	61	-20
San Francisco Bay Hydrologic Region						
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	275	286	-11
			Dry	284	292	-9
			Critical	301	305	-4
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	33	43	-11
			Dry	17	25	-8
			Critical	5	7	-2
Central Coast Hydrologic Region						
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)						
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	12	12	0
			Dry	12	12	0
			Critical	10	10	0
CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term	545	709	-164
			Dry	288	422	-134
			Critical	85	127	-41
Total For All Regions						
Total Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	4,660	4,973	-313
			Dry	4,221	4,483	-261
			Critical	3,433	3,508	-75

Notes:
1) Long-term Average is the average quantity for the 82-year simulation period.
2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.
3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.
5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.
6) Annual deliveries are based on March to February Average.
7) In the table on the following page, San Francisco Bay Hydrologic Region M&I deliveries are divided between North of Delta M&I deliveries (Contra Costa Water District) and South of Delta M&I deliveries (San Felipe Division); and San Francisco Bay Hydrologic Region Ag deliveries are only included in South of Delta Ag deliveries.

Table C-19-4-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP

				No Action Alternative	Second Basis of Comparison	No Action Alternative minus Second Basis of Comparison
Water Supply Reliability						
North of Delta						
CVP Ag	Contract Delivery (annual average; does not include Settlement contractors)	(TAF/year)	Long Term	185	219	-34
			Dry	86	122	-37
			Critical	24	35	-12
CVP M&I (Including American River)	Contract Delivery (annual average)	(TAF/year)	Long Term	386	392	-7
			Dry	385	390	-5
			Critical	383	383	1
CVP M&I American River	Contract Delivery (annual average)	(TAF/year)	Long Term	113	120	-7
			Dry	97	105	-8
			Critical	75	79	-5
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,859	1,858	1
			Dry	1,906	1,905	1
			Critical	1,737	1,732	5
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	146	155	-8
			Dry	146	151	-5
			Critical	102	105	-3
Total CVP North of Delta Ag and M&I Deliveries						
Total CVP Ag and M&I Deliveries	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term	571	612	-41
			Dry	470	512	-42
			Critical	407	418	-11
South of Delta (Not including Eastside Contractors deliveries, or Friant-Kern Canal or Madera Canal water users)						
CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	847	1,100	-253
			Dry	445	650	-206
			Critical	131	195	-64
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	112	125	-13
			Dry	99	109	-10
			Critical	80	85	-4
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry	875	875	0
			Critical	741	741	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	273	272	1
			Dry	281	280	1
			Critical	234	232	3
Total CVP South of Delta Ag and M&I Deliveries						
Total CVP Ag and M&I Deliveries	Contract Delivery (annual average)	(TAF/year)	Long Term	958	1,225	-266
			Dry	544	759	-216
			Critical	212	280	-68
Eastside Contractors deliveries						
Water Rights	Delivery (annual average)	(TAF/year)	Long Term	508	514	-6
			Dry	524	524	0
			Critical	445	486	-42
CVP Service Contracts	Contract Delivery (annual average)	(TAF/year)	Long Term	104	118	-15
			Dry	84	98	-13
			Critical	4	25	-21
Total Eastside Contractors Deliveries						
Total Water Rights and CVP Service Contracts Deliveries	Delivery (annual average)	(TAF/year)	Long Term	611	632	-21
			Dry	608	621	-13
			Critical	449	511	-63

Notes:
1) Long-term Average is the average quantity for the 82-year simulation period.
2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.
3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.
5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.
6) Annual deliveries are based on March to February Average.

Table C-19-5-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP Deliveries

				Alternative 3	Second Basis of Comparison	Alternative 3 minus Second Basis of Comparison
Water Supply Reliability						
Sacramento River Hydrologic Region						
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,860	1,858	2
			Dry	1,906	1,905	1
			Critical	1,742	1,732	10
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	153	155	-1
			Dry	149	151	-2
			Critical	103	105	-2
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	214	214	0
			Dry	192	192	0
			Critical	152	151	2
CVP Ag	Contract Delivery (annual average - does not include Settlement contractors)	(TAF/year)	Long Term	209	219	-10
			Dry	111	122	-11
			Critical	31	35	-4
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users and Eastside Contractors deliveries)						
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry	875	875	0
			Critical	741	741	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	261	260	1
			Dry	269	268	1
			Critical	224	221	3
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	17	17	0
			Dry	15	15	0
			Critical	11	12	0
CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	342	348	-6
			Dry	185	203	-17
			Critical	53	61	-8
San Francisco Bay Hydrologic Region						
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	284	286	-2
			Dry	291	292	-1
			Critical	304	305	-2
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	42	43	-1
			Dry	23	25	-2
			Critical	6	7	-1
Central Coast Hydrologic Region						
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)						
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	12	12	0
			Dry	12	12	0
			Critical	10	10	0
CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term	696	709	-13
			Dry	387	422	-35
			Critical	108	127	-18
Total For All Regions						
Total Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	4,942	4,973	-32
			Dry	4,415	4,483	-67
			Critical	3,486	3,508	-22

Notes:
1) Long-term Average is the average quantity for the 82-year simulation period.
2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.
3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.
5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.
6) Annual deliveries are based on March to February Average.
7) In the table on the following page, San Francisco Bay Hydrologic Region M&I deliveries are divided between North of Delta M&I deliveries (Contra Costa Water District) and South of Delta M&I deliveries (San Felipe Division); and San Francisco Bay Hydrologic Region Ag deliveries are only included in South of Delta Ag deliveries.

Table C-19-5-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP

					Alternative 3	Second Basis of Comparison	Alternative 3 minus Second Basis of Comparison
Water Supply Reliability							
North of Delta							
CVP Ag	Contract Delivery (annual average; does not include Settlement contractors)	(TAF/year)	Long Term		209	219	-10
			Dry		111	122	-11
			Critical		31	35	-4
CVP M&I (Including American River)	Contract Delivery (annual average)	(TAF/year)	Long Term		392	392	0
			Dry		390	390	0
			Critical		384	383	2
CVP M&I American River	Contract Delivery (annual average)	(TAF/year)	Long Term		118	120	-2
			Dry		104	105	-1
			Critical		78	79	-2
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term		1,860	1,858	2
			Dry		1,906	1,905	1
			Critical		1,742	1,732	10
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term		153	155	-1
			Dry		149	151	-2
			Critical		103	105	-2
Total CVP North of Delta Ag and M&I Deliveries							
Total CVP Ag and M&I Deliveries	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term		602	612	-10
			Dry		501	512	-11
			Critical		415	418	-3
South of Delta (Not including Eastside Contractors deliveries, or Friant-Kern Canal or Madera Canal water users)							
CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term		1,079	1,100	-20
			Dry		596	650	-55
			Critical		168	195	-28
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term		122	125	-2
			Dry		108	109	-1
			Critical		83	85	-2
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term		852	852	0
			Dry		875	875	0
			Critical		741	741	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term		273	272	1
			Dry		281	280	1
			Critical		234	232	3
Total CVP South of Delta Ag and M&I Deliveries							
Total CVP Ag and M&I Deliveries	Contract Delivery (annual average)	(TAF/year)	Long Term		1,202	1,225	-23
			Dry		703	759	-56
			Critical		250	280	-30
Eastside Contractors deliveries							
Water Rights	Delivery (annual average)	(TAF/year)	Long Term		513	514	-1
			Dry		524	524	0
			Critical		478	486	-8
CVP Service Contracts	Contract Delivery (annual average)	(TAF/year)	Long Term		123	118	5
			Dry		109	98	12
			Critical		36	25	11
Total Eastside Contractors Deliveries							
Total Water Rights and CVP Service Contracts Deliveries	Delivery (annual average)	(TAF/year)	Long Term		636	632	4
			Dry		633	621	12
			Critical		514	511	3

Notes:
1) Long-term Average is the average quantity for the 82-year simulation period.
2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.
3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.
5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.
6) Annual deliveries are based on March to February Average.

Table C-19-6-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP Deliveries

				Alternative 5	Second Basis of Comparison	Alternative 5 minus Second Basis of Comparison
Water Supply Reliability						
Sacramento River Hydrologic Region						
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,861	1,858	3
			Dry	1,906	1,905	1
			Critical	1,747	1,732	15
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	146	155	-8
			Dry	145	151	-6
			Critical	103	105	-2
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	207	214	-6
			Dry	186	192	-6
			Critical	152	151	1
CVP Ag	Contract Delivery (annual average - does not include Settlement contractors)	(TAF/year)	Long Term	185	219	-34
			Dry	85	122	-37
			Critical	24	35	-11
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users and Eastside Contractors deliveries)						
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry	875	875	0
			Critical	741	741	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	261	260	0
			Dry	269	268	1
			Critical	222	221	0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	15	17	-2
			Dry	14	15	-1
			Critical	11	12	-1
CVP Ag	Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	264	348	-84
			Dry	135	203	-68
			Critical	40	61	-21
San Francisco Bay Hydrologic Region						
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	275	286	-11
			Dry	284	292	-8
			Critical	301	305	-4
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	32	43	-11
			Dry	17	25	-8
			Critical	5	7	-2
Central Coast Hydrologic Region						
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)						
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	12	12	0
			Dry	12	12	0
			Critical	10	10	0
CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term	538	709	-171
			Dry	281	422	-141
			Critical	85	127	-42
Total For All Regions						
Total Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	4,649	4,973	-324
			Dry	4,210	4,483	-273
			Critical	3,441	3,508	-67

Notes:

1) Long-term Average is the average quantity for the 82-year simulation period.

2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.

4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.

5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.

6) Annual deliveries are based on March to February Average.

7) In the table on the following page, San Francisco Bay Hydrologic Region M&I deliveries are divided between North of Delta M&I deliveries (Contra Costa Water District) and South of Delta M&I deliveries (San Felipe Division); and San Francisco Bay Hydrologic Region Ag deliveries are only included in South of Delta Ag deliveries.

Table C-19-6-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, CVP

					Alternative 5	Second Basis of Comparison	Alternative 5 minus Second Basis of Comparison
Water Supply Reliability							
North of Delta							
CVP Ag		Contract Delivery (annual average; does not include Settlement contractors)	(TAF/year)	Long Term	185	219	-34
				Dry	85	122	-37
				Critical	24	35	-11
CVP M&I (Including American River)		Contract Delivery (annual average)	(TAF/year)	Long Term	386	392	-6
				Dry	384	390	-6
				Critical	384	383	1
CVP M&I American River		Contract Delivery (annual average)	(TAF/year)	Long Term	112	120	-7
				Dry	96	105	-9
				Critical	74	79	-6
CVP Settlement		Contract Delivery (annual average)	(TAF/year)	Long Term	1,861	1,858	3
				Dry	1,906	1,905	1
				Critical	1,747	1,732	15
CVP Refuge Level 2		Contract Delivery (annual average)	(TAF/year)	Long Term	146	155	-8
				Dry	145	151	-6
				Critical	103	105	-2
Total CVP North of Delta Ag and M&I Deliveries							
Total CVP Ag and M&I Deliveries		Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term	571	612	-41
				Dry	470	512	-42
				Critical	408	418	-10
South of Delta (Not including Eastside Contractors deliveries, or Friant-Kern Canal or Madera Canal water users)							
CVP Ag		Contract Delivery (annual average; does not include Exchange contractors)	(TAF/year)	Long Term	834	1,100	-266
				Dry	433	650	-217
				Critical	130	195	-65
CVP M&I		Contract Delivery (annual average)	(TAF/year)	Long Term	112	125	-13
				Dry	100	109	-9
				Critical	80	85	-5
CVP Exchange		Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
				Dry	875	875	0
				Critical	741	741	0
CVP Refuge Level 2		Contract Delivery (annual average)	(TAF/year)	Long Term	273	272	0
				Dry	281	280	1
				Critical	232	232	0
Total CVP South of Delta Ag and M&I Deliveries							
Total CVP Ag and M&I Deliveries		Contract Delivery (annual average)	(TAF/year)	Long Term	946	1,225	-279
				Dry	533	759	-226
				Critical	210	280	-70
Eastside Contractors deliveries							
Water Rights		Delivery (annual average)	(TAF/year)	Long Term	502	514	-12
				Dry	524	524	0
				Critical	406	486	-80
CVP Service Contracts		Contract Delivery (annual average)	(TAF/year)	Long Term	100	118	-19
				Dry	69	98	-29
				Critical	8	25	-17
Total Eastside Contractors Deliveries							
Total Water Rights and CVP Service Contracts Deliveries		Delivery (annual average)	(TAF/year)	Long Term	602	632	-31
				Dry	593	621	-29
				Critical	414	511	-97

Notes:
1) Long-term Average is the average quantity for the 82-year simulation period.
2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.
3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text.
5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text.
6) Annual deliveries are based on March to February Average.

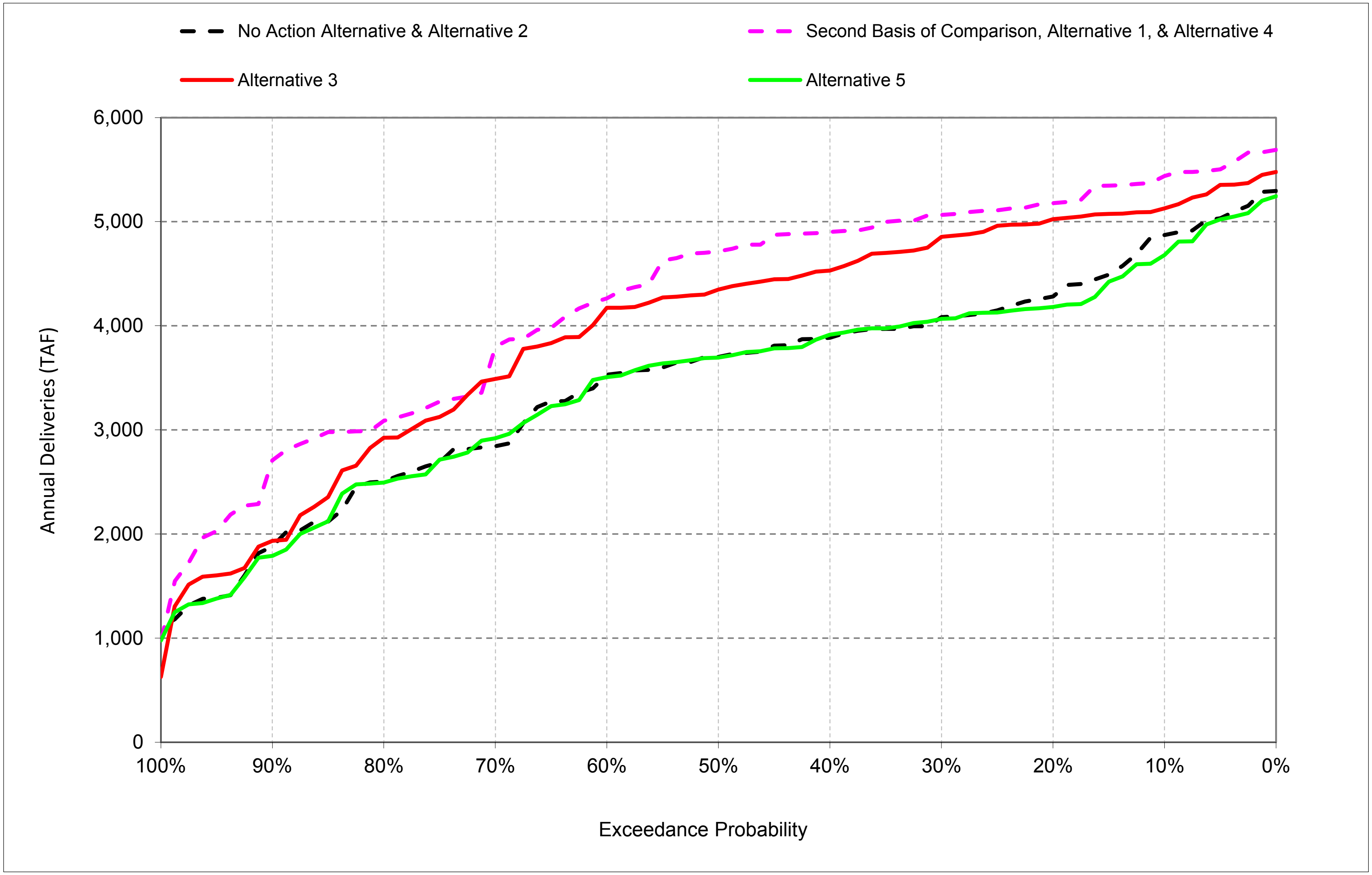
Table C-19-7. Stanislaus CVP and Water Rights Deliveries, Long-Term Averages

	Stanislaus Deliveries		Difference from No Action Alternative		Difference from Second Basis of Comparison	
	CVP	Water Rights	CVP	Water Rights	CVP	Water Rights
	(TAF)	(TAF)	(TAF)	(TAF)	(TAF)	(TAF)
No Action Alternative	103.5	507.8				
Second Basis of Comparison	118.3	514.0	14.8	6.2		
Alternative 2	103.5	507.8			-14.8	-6.2
Alternative 3	123.2	512.7	19.6	4.9	4.8	-1.2
Alternative 5	99.7	502.1	-3.8	-5.7	-18.6	-11.9

Notes:
1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions.
2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text.
3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

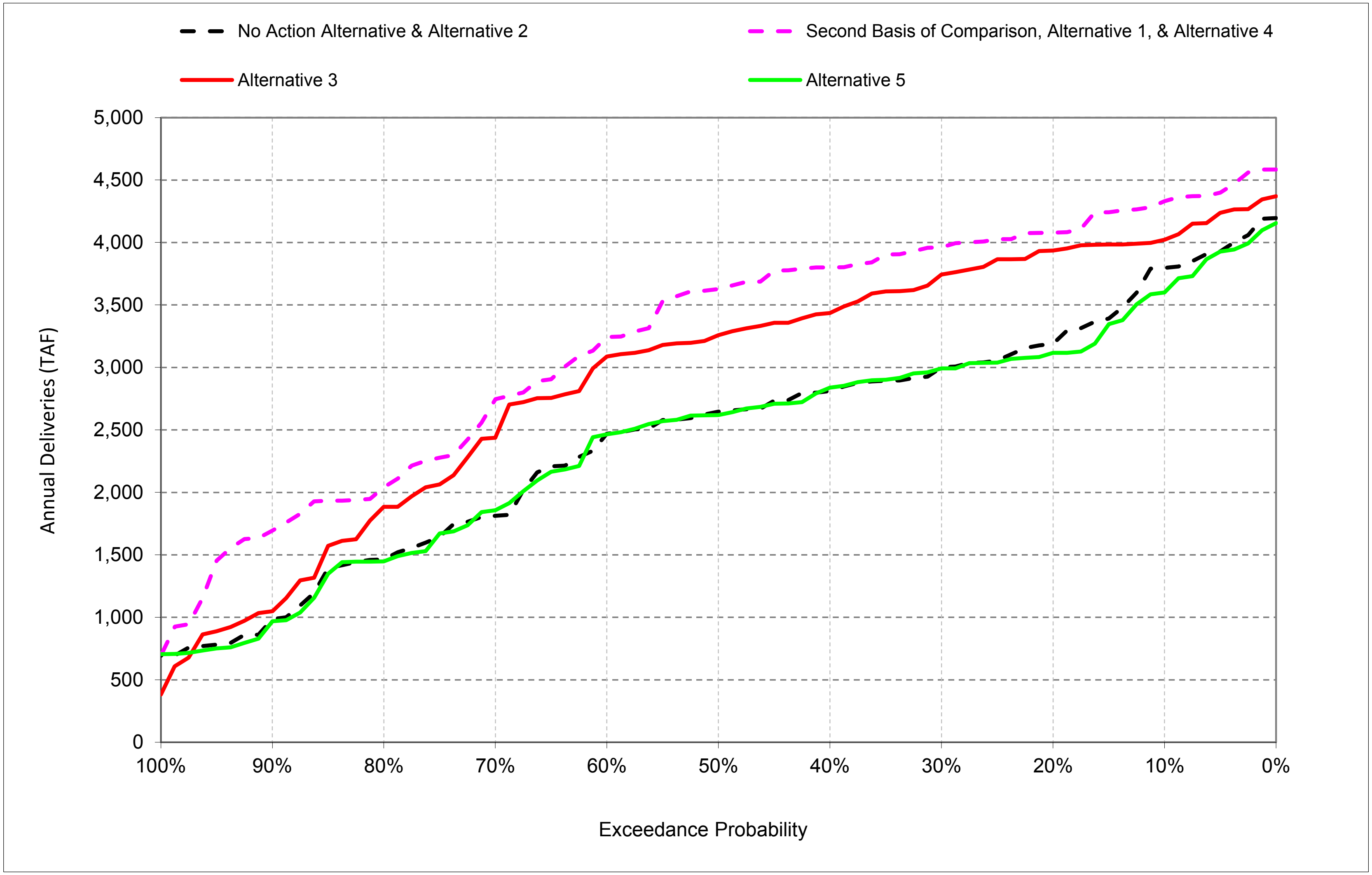
C.20. SWP Deliveries

Figure C-20-1-1. Total Annual SWP Deliveries



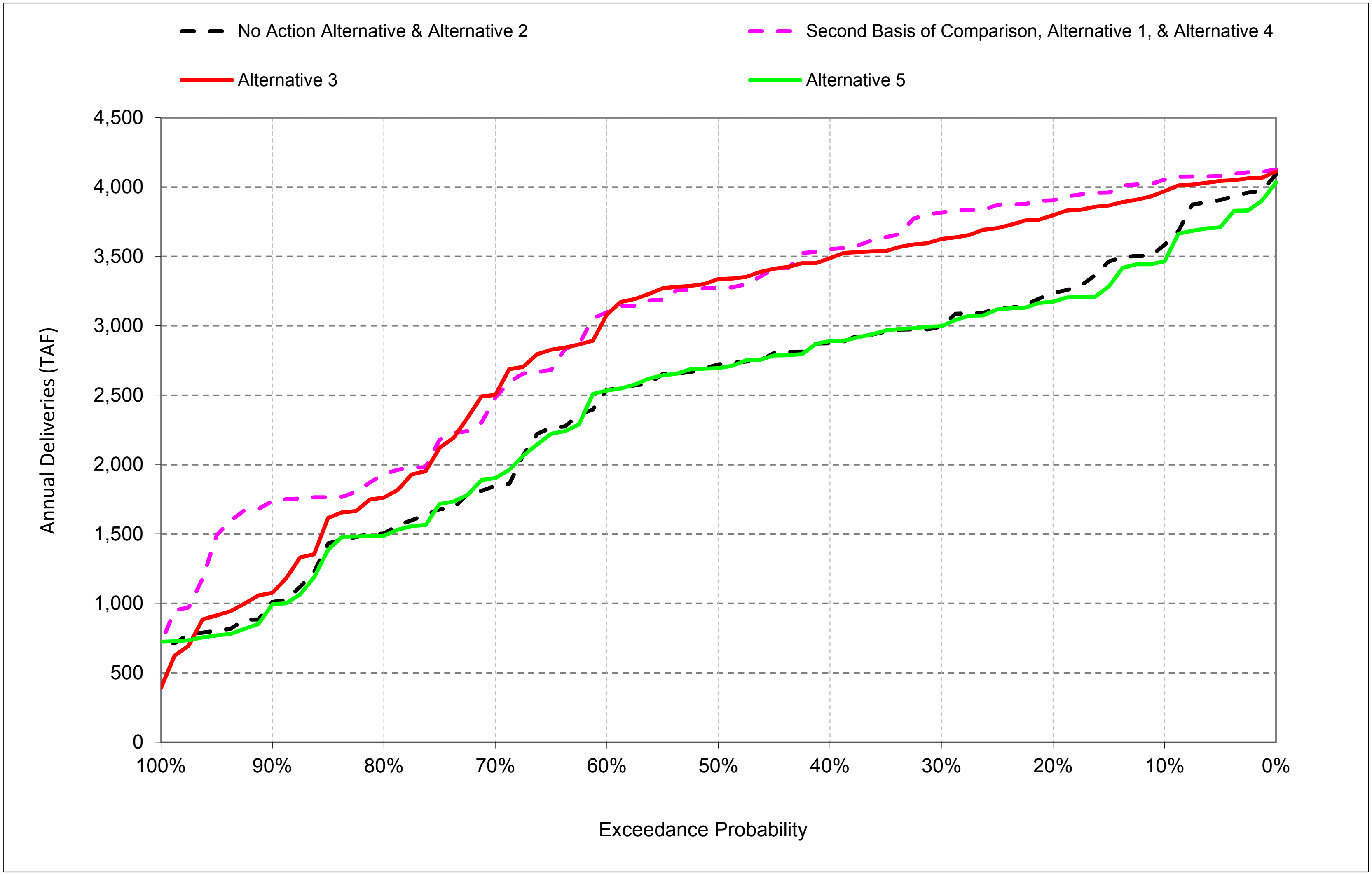
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Figure C-20-1-2. Total Annual SWP South of Delta Deliveries including Article 21 and 56



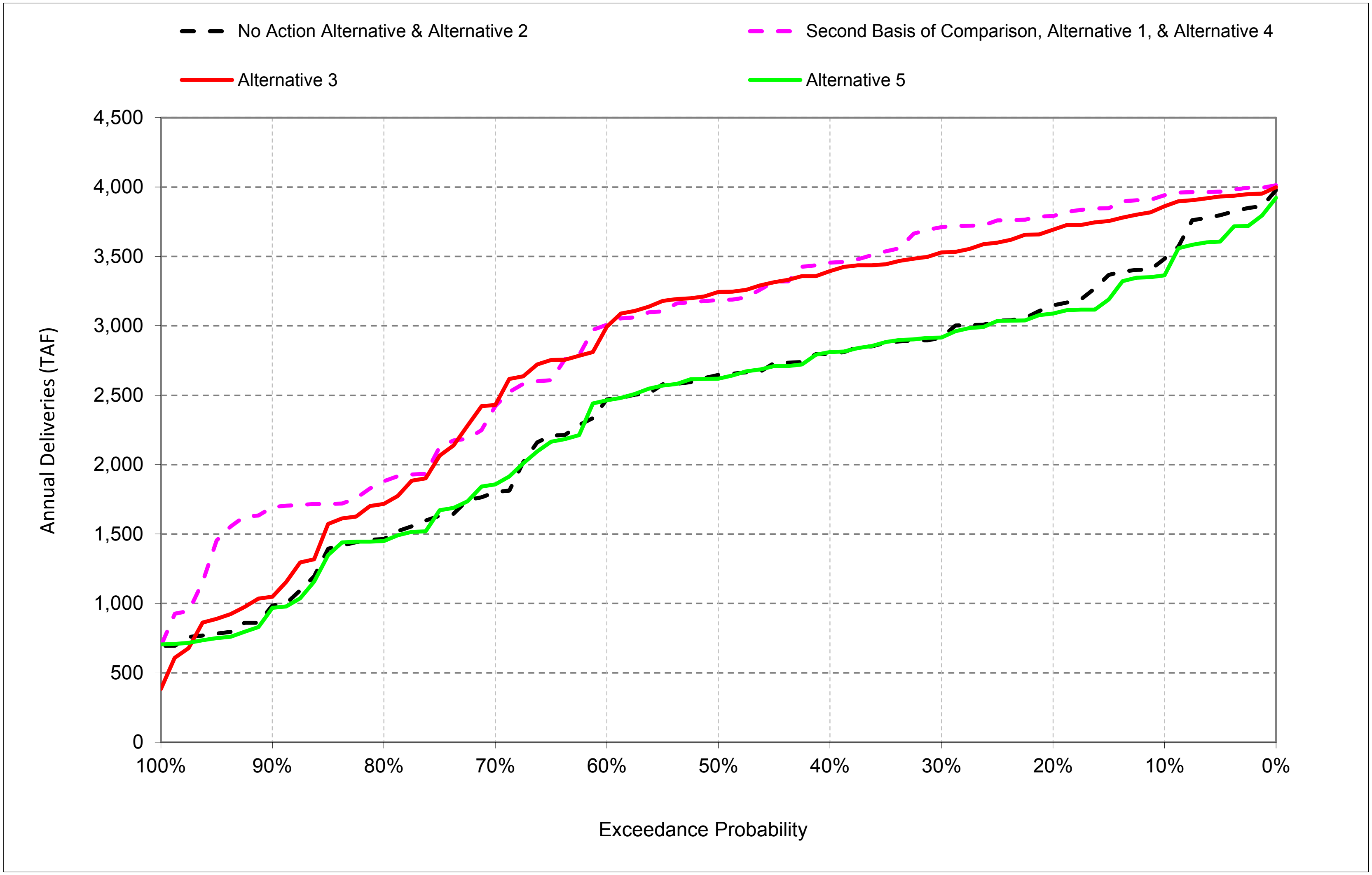
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Figure C-20-1-3. Annual SWP Table A Deliveries with Article 56



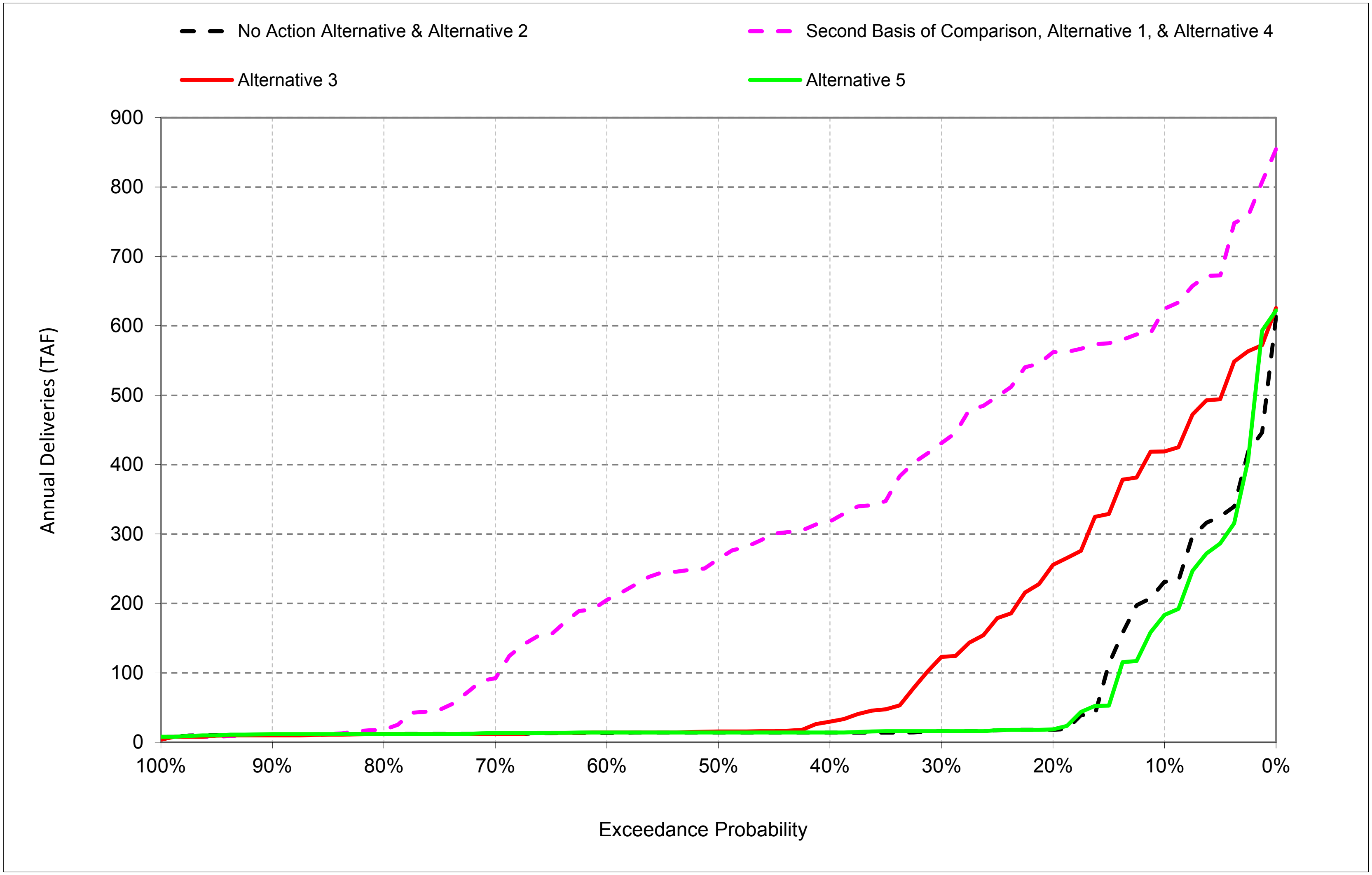
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Figure C-20-1-4. Annual SWP South of Delta Table A Deliveries with Article 56



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Figure C-20-1-5. Annual SWP Article 21 Deliveries



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-1-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

					Alternative 1	No Action Alternative	Alternative 1 minus No Action Alternative
Water Supply Reliability							
Sacramento River Hydrologic Region							
	SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term	931	931	0
				Dry	946	946	0
				Critical	709	710	-1
	SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	27	22	5
				Dry	19	16	3
				Critical	12	9	3
San Joaquin River Hydrologic Region							
	SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	4	3	1
				Dry	3	3	1
				Critical	2	1	0
San Francisco Bay Hydrologic Region							
	SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	220	181	39
				Dry	167	137	30
				Critical	103	76	27
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	22	15	7
				Dry	21	14	6
				Critical	12	13	-1
Central Coast Hydrologic Region							
	SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	52	42	10
				Dry	39	31	8
				Critical	24	17	7
Tulare Lake Hydrologic Region							
	SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	99	81	18
				Dry	75	60	15
				Critical	46	33	14
	SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	736	599	137
				Dry	557	447	110
				Critical	340	246	94
	SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	176	26	150
				Dry	141	5	136
				Critical	28	10	18
South Lahontan Hydrologic Region							
	SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	325	266	59
				Dry	253	204	50
				Critical	156	115	41
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	4	0	4
				Dry	4	0	4
				Critical	2	1	1
South Coast Hydrologic Region							
	SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,544	1,276	268
				Dry	1,240	1,008	232
				Critical	792	563	229
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	90	18	72
				Dry	75	4	70
				Critical	7	4	3
	SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	9	8	2
				Dry	7	6	1
				Critical	4	3	1
	SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	2	0	2
				Dry	1	0	1
				Critical	0	0	0
Total For All Regions							
	Total Supplies (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	3,947	3,409	537
				Dry	3,308	2,858	450
				Critical	2,189	1,773	415
	Total Article 21 Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	294	60	234
				Dry	242	24	218
				Critical	49	27	22

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-1-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

				Alternative 1	No Action Alternative	Alternative 1 minus No Action Alternative
Water Supply Reliability						
North of Delta						
SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	0	0	0
			Dry	0	0	0
			Critical	0	0	0
SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	83	68	15
			Dry	62	51	11
			Critical	53	43	11
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	12	13	-1
			Dry	13	14	-1
			Critical	12	13	-1
Total SWP North of Delta						
Total SWP Ag and M&I NOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	83	68	15
			Dry	62	51	11
			Critical	53	43	11
Total SWP Ag and M&I Article 21 NOD	Contract Delivery (annual average)	(TAF/year)	Long Term	12	13	-1
			Dry	13	14	-1
			Critical	12	13	-1
South of Delta						
SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	750	610	139
			Dry	567	455	112
			Critical	484	378	106
SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	178	27	152
			Dry	143	5	138
			Critical	100	7	93
SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	2,183	1,800	383
			Dry	1,732	1,406	327
			Critical	1,494	1,173	321
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	104	20	84
			Dry	86	5	82
			Critical	58	5	53
Total SWP South of Delta						
Total SWP Ag and M&I SOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	2,933	2,410	523
			Dry	2,299	1,861	439
			Critical	1,978	1,551	427
Total SWP Ag and M&I Article 21 SOD	Contract Delivery (annual average)	(TAF/year)	Long Term	282	47	236
			Dry	229	10	219
			Critical	158	12	146

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-2-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

					Alternative 3	No Action Alternative	Alternative 3 minus No Action Alternative
Water Supply Reliability							
Sacramento River Hydrologic Region							
	SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term	932	931	1
				Dry	946	946	0
				Critical	721	710	10
	SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	25	22	4
				Dry	18	16	3
				Critical	9	9	0
San Joaquin River Hydrologic Region							
	SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	4	3	1
				Dry	3	3	0
				Critical	1	1	0
San Francisco Bay Hydrologic Region							
	SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	211	181	30
				Dry	160	137	23
				Critical	77	76	1
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	17	15	2
				Dry	16	14	1
				Critical	12	13	-1
Central Coast Hydrologic Region							
	SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	50	42	7
				Dry	37	31	5
				Critical	18	17	1
Tulare Lake Hydrologic Region							
	SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	95	81	14
				Dry	71	60	11
				Critical	35	33	2
	SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	703	599	104
				Dry	523	447	76
				Critical	253	246	8
	SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	72	26	46
				Dry	36	5	31
				Critical	13	10	3
South Lahontan Hydrologic Region							
	SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	312	266	46
				Dry	240	204	36
				Critical	118	115	4
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	2	0	2
				Dry	2	0	2
				Critical	1	1	0
South Coast Hydrologic Region							
	SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,493	1,276	216
				Dry	1,182	1,008	174
				Critical	596	563	33
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	26	18	8
				Dry	6	4	2
				Critical	7	4	3
	SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	9	8	1
				Dry	7	6	1
				Critical	3	3	0
	SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	1	0	1
				Dry	0	0	0
				Critical	0	0	0
Total For All Regions							
	Total Supplies (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	3,834	3,409	425
				Dry	3,187	2,858	329
				Critical	1,832	1,773	58
	Total Article 21 Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	119	60	59
				Dry	60	24	36
				Critical	33	27	6

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-2-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

				Alternative 3	No Action Alternative	Alternative 3 minus No Action Alternative
Water Supply Reliability						
North of Delta						
SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	0	0	0
			Dry	0	0	0
			Critical	0	0	0
SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	80	68	11
			Dry	60	51	8
			Critical	48	43	5
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	12	13	-1
			Dry	13	14	-1
			Critical	12	13	-1
Total SWP North of Delta						
Total SWP Ag and M&I NOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	80	68	11
			Dry	60	51	8
			Critical	48	43	5
Total SWP Ag and M&I Article 21 NOD	Contract Delivery (annual average)	(TAF/year)	Long Term	12	13	-1
			Dry	13	14	-1
			Critical	12	13	-1
South of Delta						
SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	716	610	106
			Dry	533	455	78
			Critical	430	378	52
SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	73	27	47
			Dry	36	5	31
			Critical	27	7	21
SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	2,106	1,800	306
			Dry	1,649	1,406	243
			Critical	1,340	1,173	167
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	33	20	13
			Dry	11	5	6
			Critical	10	5	5
Total SWP South of Delta						
Total SWP Ag and M&I SOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	2,822	2,410	412
			Dry	2,182	1,861	321
			Critical	1,770	1,551	219
Total SWP Ag and M&I Article 21 SOD	Contract Delivery (annual average)	(TAF/year)	Long Term	106	47	60
			Dry	47	10	37
			Critical	38	12	26

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-3-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

				Alternative 5	No Action Alternative	Alternative 5 minus No Action Alternative
Water Supply Reliability						
Sacramento River Hydrologic Region						
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term	932	931	1
			Dry	946	946	0
			Critical	717	710	6
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	21	22	0
			Dry	16	16	0
			Critical	9	9	0
San Joaquin River Hydrologic Region						
SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	3	3	0
			Dry	3	3	0
			Critical	1	1	0
San Francisco Bay Hydrologic Region						
SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	178	181	-3
			Dry	136	137	-1
			Critical	74	76	-2
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	15	15	0
			Dry	15	14	1
			Critical	12	13	0
Central Coast Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	42	42	-1
			Dry	31	31	0
			Critical	17	17	-1
Tulare Lake Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	80	81	-1
			Dry	60	60	0
			Critical	32	33	-1
SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	588	599	-12
			Dry	440	447	-6
			Critical	233	246	-13
SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	24	26	-2
			Dry	6	5	1
			Critical	0	10	-9
South Lahontan Hydrologic Region						
SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	263	266	-3
			Dry	203	204	-1
			Critical	109	115	-6
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	0	0	0
			Dry	0	0	0
			Critical	0	1	-1
South Coast Hydrologic Region						
SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,268	1,276	-8
			Dry	1,002	1,008	-6
			Critical	545	563	-18
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	17	18	-1
			Dry	4	4	0
			Critical	0	4	-4
SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	7	8	0
			Dry	6	6	0
			Critical	3	3	0
SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	0	0	0
			Dry	0	0	0
			Critical	0	0	0
Total For All Regions						
Total Supplies (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	3,382	3,409	-27
			Dry	2,842	2,858	-16
			Critical	1,739	1,773	-35
Total Article 21 Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	56	60	-3
			Dry	25	24	2
			Critical	13	27	-14

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-3-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

					Alternative 5	No Action Alternative	Alternative 5 minus No Action Alternative
Water Supply Reliability							
North of Delta							
	SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	0	0	0
				Dry	0	0	0
				Critical	0	0	0
	SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	67	68	-1
				Dry	51	51	0
				Critical	42	43	-1
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	13	13	0
				Dry	14	14	1
				Critical	13	13	1
Total SWP North of Delta							
	Total SWP Ag and M&I NOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	67	68	-1
				Dry	51	51	0
				Critical	42	43	-1
	Total SWP Ag and M&I Article 21 NOD	Contract Delivery (annual average)	(TAF/year)	Long Term	13	13	0
				Dry	14	14	1
				Critical	13	13	1
South of Delta							
	SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	598	610	-12
				Dry	449	455	-7
				Critical	369	378	-9
	SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	24	27	-2
				Dry	6	5	1
				Critical	4	7	-3
	SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,784	1,800	-15
				Dry	1,397	1,406	-9
				Critical	1,157	1,173	-16
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	19	20	-1
				Dry	5	5	0
				Critical	3	5	-2
Total SWP South of Delta							
	Total SWP Ag and M&I SOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	2,383	2,410	-27
				Dry	1,845	1,861	-15
				Critical	1,526	1,551	-25
	Total SWP Ag and M&I Article 21 SOD	Contract Delivery (annual average)	(TAF/year)	Long Term	43	47	-4
				Dry	11	10	1
				Critical	7	12	-5

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-4-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

				No Action Alternative	Second Basis of Comparison	No Action Alternative minus Second Basis of Comparison
Water Supply Reliability						
Sacramento River Hydrologic Region						
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term	931	931	0
			Dry	946	946	0
			Critical	710	709	1
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	22	27	-5
			Dry	16	19	-3
			Critical	9	12	-3
San Joaquin River Hydrologic Region						
SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	3	4	-1
			Dry	3	3	-1
			Critical	1	2	0
San Francisco Bay Hydrologic Region						
SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	181	220	-39
			Dry	137	167	-30
			Critical	76	103	-27
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	15	22	-7
			Dry	14	21	-6
			Critical	13	12	1
Central Coast Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	42	52	-10
			Dry	31	39	-8
			Critical	17	24	-7
Tulare Lake Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	81	99	-18
			Dry	60	75	-15
			Critical	33	46	-14
SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	599	736	-137
			Dry	447	557	-110
			Critical	246	340	-94
SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	26	176	-150
			Dry	5	141	-136
			Critical	10	28	-18
South Lahontan Hydrologic Region						
SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	266	325	-59
			Dry	204	253	-50
			Critical	115	156	-41
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	0	4	-4
			Dry	0	4	-4
			Critical	1	2	-1
South Coast Hydrologic Region						
SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,276	1,544	-268
			Dry	1,008	1,240	-232
			Critical	563	792	-229
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	18	90	-72
			Dry	4	75	-70
			Critical	4	7	-3
SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	8	9	-2
			Dry	6	7	-1
			Critical	3	4	-1
SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	0	2	-2
			Dry	0	1	-1
			Critical	0	0	0
Total For All Regions						
Total Supplies (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	3,409	3,947	-537
			Dry	2,858	3,308	-450
			Critical	1,773	2,189	-415
Total Article 21 Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	60	294	-234
			Dry	24	242	-218
			Critical	27	49	-22

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-4-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

				No Action Alternative	Second Basis of Comparison	No Action Alternative minus Second Basis of Comparison
Water Supply Reliability						
North of Delta						
SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	0	0	0
			Dry	0	0	0
			Critical	0	0	0
SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	68	83	-15
			Dry	51	62	-11
			Critical	43	53	-11
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	13	12	1
			Dry	14	13	1
			Critical	13	12	1
Total SWP North of Delta						
Total SWP Ag and M&I NOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	68	83	-15
			Dry	51	62	-11
			Critical	43	53	-11
Total SWP Ag and M&I Article 21 NOD	Contract Delivery (annual average)	(TAF/year)	Long Term	13	12	1
			Dry	14	13	1
			Critical	13	12	1
South of Delta						
SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	610	750	-139
			Dry	455	567	-112
			Critical	378	484	-106
SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	27	178	-152
			Dry	5	143	-138
			Critical	7	100	-93
SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,800	2,183	-383
			Dry	1,406	1,732	-327
			Critical	1,173	1,494	-321
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	20	104	-84
			Dry	5	86	-82
			Critical	5	58	-53
Total SWP South of Delta						
Total SWP Ag and M&I SOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	2,410	2,933	-523
			Dry	1,861	2,299	-439
			Critical	1,551	1,978	-427
Total SWP Ag and M&I Article 21 SOD	Contract Delivery (annual average)	(TAF/year)	Long Term	47	282	-236
			Dry	10	229	-219
			Critical	12	158	-146

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-5-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

					Alternative 3	Second Basis of Comparison	Alternative 3 minus Second Basis of Comparison
Water Supply Reliability							
Sacramento River Hydrologic Region							
	SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term	932	931	2
				Dry	946	946	0
				Critical	721	709	11
	SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	25	27	-1
				Dry	18	19	-1
				Critical	9	12	-3
San Joaquin River Hydrologic Region							
	SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	4	4	0
				Dry	3	3	0
				Critical	1	2	0
San Francisco Bay Hydrologic Region							
	SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	211	220	-8
				Dry	160	167	-7
				Critical	77	103	-26
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	17	22	-5
				Dry	16	21	-5
				Critical	12	12	0
Central Coast Hydrologic Region							
	SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	50	52	-2
				Dry	37	39	-2
				Critical	18	24	-6
Tulare Lake Hydrologic Region							
	SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	95	99	-4
				Dry	71	75	-4
				Critical	35	46	-12
	SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	703	736	-33
				Dry	523	557	-33
				Critical	253	340	-86
	SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	72	176	-104
				Dry	36	141	-106
				Critical	13	28	-15
South Lahontan Hydrologic Region							
	SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	312	325	-13
				Dry	240	253	-14
				Critical	118	156	-38
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	2	4	-1
				Dry	2	4	-2
				Critical	1	2	-1
South Coast Hydrologic Region							
	SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,493	1,544	-51
				Dry	1,182	1,240	-59
				Critical	596	792	-196
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	26	90	-64
				Dry	6	75	-68
				Critical	7	7	0
	SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	9	9	0
				Dry	7	7	0
				Critical	3	4	-1
	SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	1	2	-1
				Dry	0	1	-1
				Critical	0	0	0
Total For All Regions							
	Total Supplies (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	3,834	3,947	-113
				Dry	3,187	3,308	-120
				Critical	1,832	2,189	-357
	Total Article 21 Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	119	294	-175
				Dry	60	242	-182
				Critical	33	49	-16

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-5-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

					Alternative 3	Second Basis of Comparison	Alternative 3 minus Second Basis of Comparison
Water Supply Reliability							
North of Delta							
	SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	0	0	0
				Dry	0	0	0
				Critical	0	0	0
	SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	80	83	-3
				Dry	60	62	-3
				Critical	48	53	-5
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	12	12	1
				Dry	13	13	0
				Critical	12	12	0
Total SWP North of Delta							
	Total SWP Ag and M&I NOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	80	83	-3
				Dry	60	62	-3
				Critical	48	53	-5
	Total SWP Ag and M&I Article 21 NOD	Contract Delivery (annual average)	(TAF/year)	Long Term	12	12	1
				Dry	13	13	0
				Critical	12	12	0
South of Delta							
	SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	716	750	-34
				Dry	533	567	-34
				Critical	430	484	-54
	SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	73	178	-105
				Dry	36	143	-107
				Critical	27	100	-72
	SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	2,106	2,183	-77
				Dry	1,649	1,732	-84
				Critical	1,340	1,494	-154
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	33	104	-71
				Dry	11	86	-75
				Critical	10	58	-48
Total SWP South of Delta							
	Total SWP Ag and M&I SOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	2,822	2,933	-111
				Dry	2,182	2,299	-118
				Critical	1,770	1,978	-208
	Total SWP Ag and M&I Article 21 SOD	Contract Delivery (annual average)	(TAF/year)	Long Term	106	282	-176
				Dry	47	229	-182
				Critical	38	158	-120

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text. 6) Annual deliveries are based on January to December average.

Table C-20-6-1. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

				Alternative 5	Second Basis of Comparison	Alternative 5 minus Second Basis of Comparison
Water Supply Reliability						
Sacramento River Hydrologic Region						
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term	932	931	1
			Dry	946	946	0
			Critical	717	709	7
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	21	27	-5
			Dry	16	19	-3
			Critical	9	12	-3
San Joaquin River Hydrologic Region						
SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	3	4	-1
			Dry	3	3	-1
			Critical	1	2	0
San Francisco Bay Hydrologic Region						
SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	178	220	-42
			Dry	136	167	-31
			Critical	74	103	-30
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	15	22	-7
			Dry	15	21	-6
			Critical	12	12	1
Central Coast Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	42	52	-10
			Dry	31	39	-8
			Critical	17	24	-8
Tulare Lake Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	80	99	-20
			Dry	60	75	-16
			Critical	32	46	-15
SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	588	736	-148
			Dry	440	557	-116
			Critical	233	340	-107
SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	24	176	-152
			Dry	6	141	-135
			Critical	0	28	-27
South Lahontan Hydrologic Region						
SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	263	325	-63
			Dry	203	253	-51
			Critical	109	156	-47
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	0	4	-4
			Dry	0	4	-4
			Critical	0	2	-2
South Coast Hydrologic Region						
SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,268	1,544	-276
			Dry	1,002	1,240	-238
			Critical	545	792	-247
SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	17	90	-73
			Dry	4	75	-70
			Critical	0	7	-7
SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	7	9	-2
			Dry	6	7	-1
			Critical	3	4	-1
SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	0	2	-2
			Dry	0	1	-1
			Critical	0	0	0
Total For All Regions						
Total Supplies (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	3,382	3,947	-565
			Dry	2,842	3,308	-465
			Critical	1,739	2,189	-450
Total Article 21 Supplies	Contract Delivery (annual average)	(TAF/year)	Long Term	56	294	-238
			Dry	25	242	-217
			Critical	13	49	-36

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text. 6) Annual deliveries are based on January to December average.

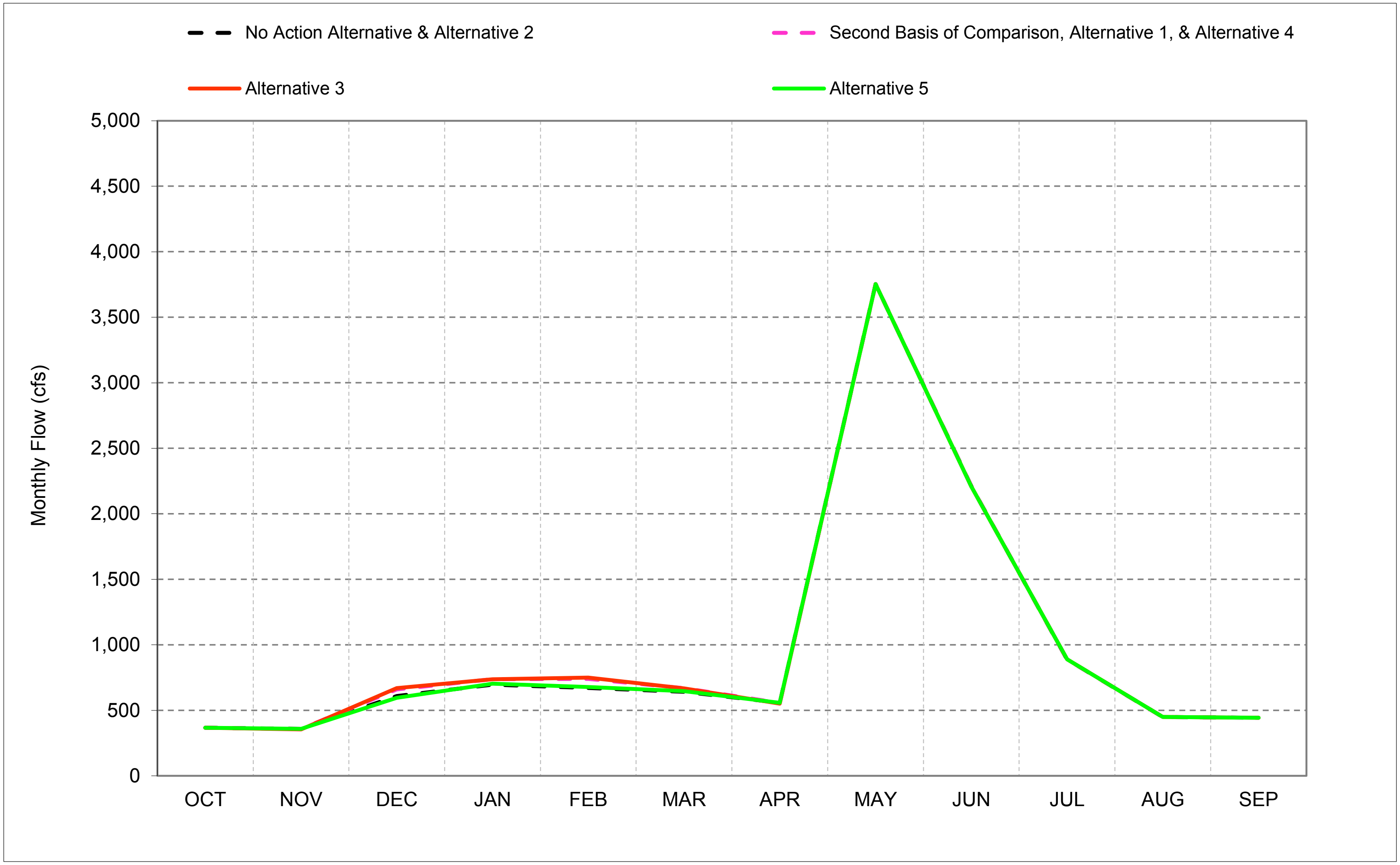
Table C-20-6-2. CALSIM II Summary Reporting Metrics, Long-Term Average and Dry and Critical Year Averages, SWP

					Alternative 5	Second Basis of Comparison	Alternative 5 minus Second Basis of Comparison
Water Supply Reliability							
North of Delta							
	SWP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	0	0	0
				Dry	0	0	0
				Critical	0	0	0
	SWP M&I (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	67	83	-16
				Dry	51	62	-11
				Critical	42	53	-11
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	13	12	2
				Dry	14	13	1
				Critical	13	12	2
Total SWP North of Delta							
	Total SWP Ag and M&I NOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	67	83	-16
				Dry	51	62	-11
				Critical	42	53	-11
	Total SWP Ag and M&I Article 21 NOD	Contract Delivery (annual average)	(TAF/year)	Long Term	13	12	2
				Dry	14	13	1
				Critical	13	12	2
South of Delta							
	SWP Ag (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	598	750	-151
				Dry	449	567	-118
				Critical	369	484	-115
	SWP Ag Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	24	178	-154
				Dry	6	143	-137
				Critical	4	100	-96
	SWP M&I (w/o Article 21)	Contract Delivery (includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,784	2,183	-399
				Dry	1,397	1,732	-336
				Critical	1,157	1,494	-337
	SWP M&I Article 21	Contract Delivery (annual average)	(TAF/year)	Long Term	19	104	-85
				Dry	5	86	-81
				Critical	3	58	-55
Total SWP South of Delta							
	Total SWP Ag and M&I SOD (w/o Article 21)	Contract Delivery (annual average)	(TAF/year)	Long Term	2,383	2,933	-550
				Dry	1,845	2,299	-454
				Critical	1,526	1,978	-451
	Total SWP Ag and M&I Article 21 SOD	Contract Delivery (annual average)	(TAF/year)	Long Term	43	282	-239
				Dry	11	229	-218
				Critical	7	158	-151

Notes: 1) Long-term Average is the average quantity for the 82-year simulation period. 2) Dry and Critical Year designations are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030. 3) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 4) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences are discussed in the text. 5) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences are discussed in the text. 6) Annual deliveries are based on January to December average.

C.21. Trinity River Flow below Lewiston

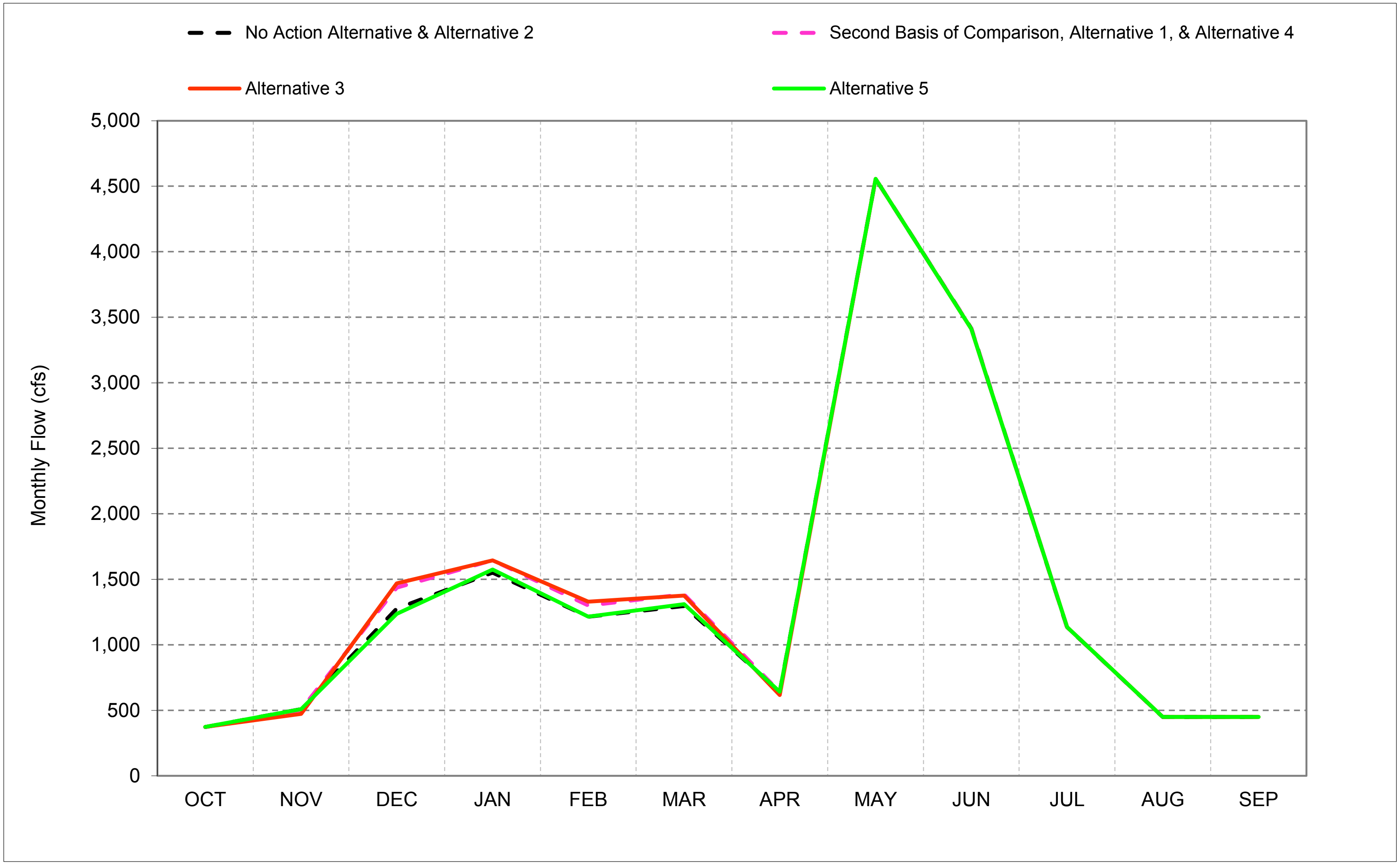
Figure C-21-1. Trinity River below Lewiston Reservoir, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-21-2. Trinity River below Lewiston Reservoir, Wet Year* Long-Term Average Flow**

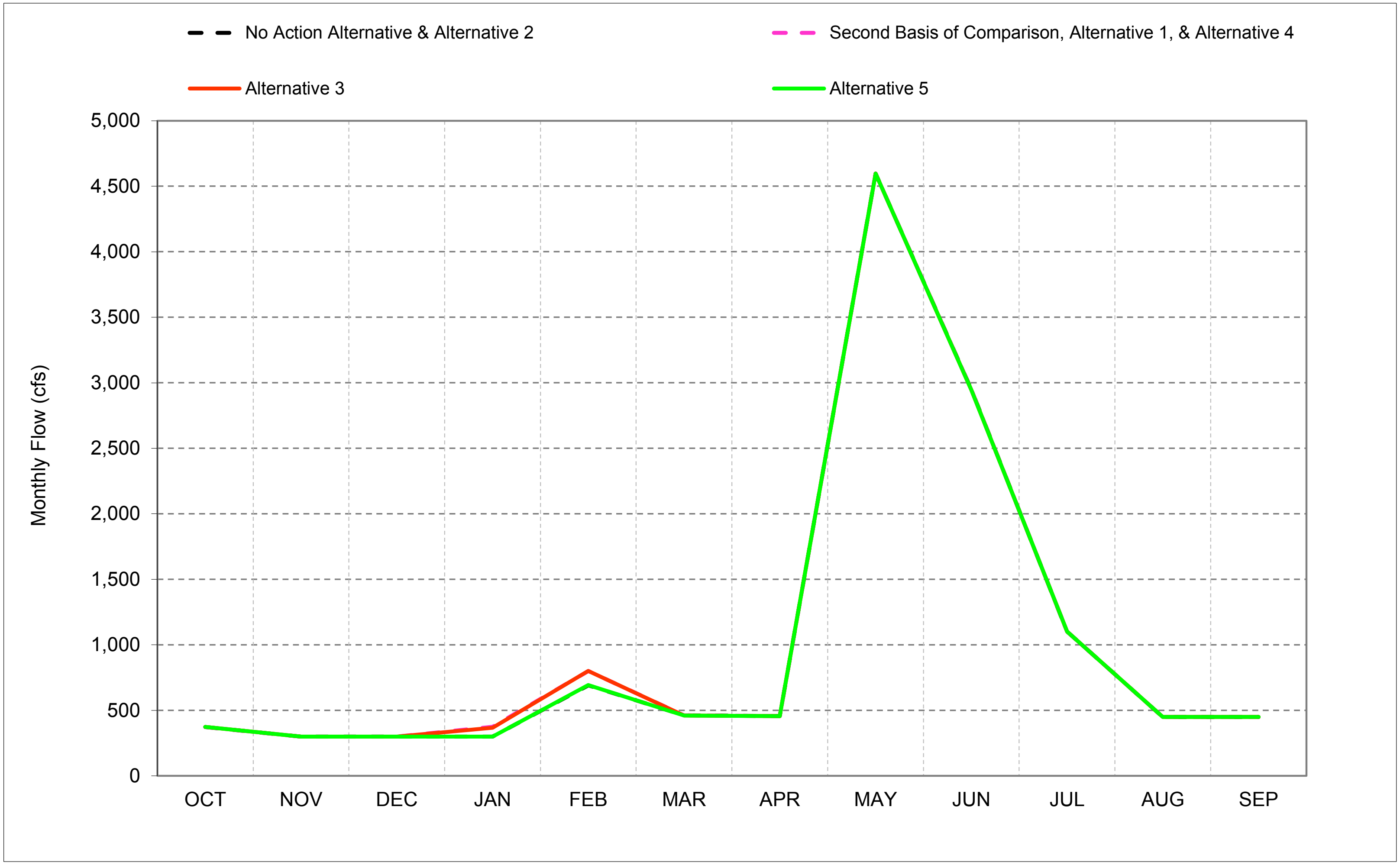


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-21-3. Trinity River below Lewiston Reservoir, Above Normal Year* Long-Term Average Flow**

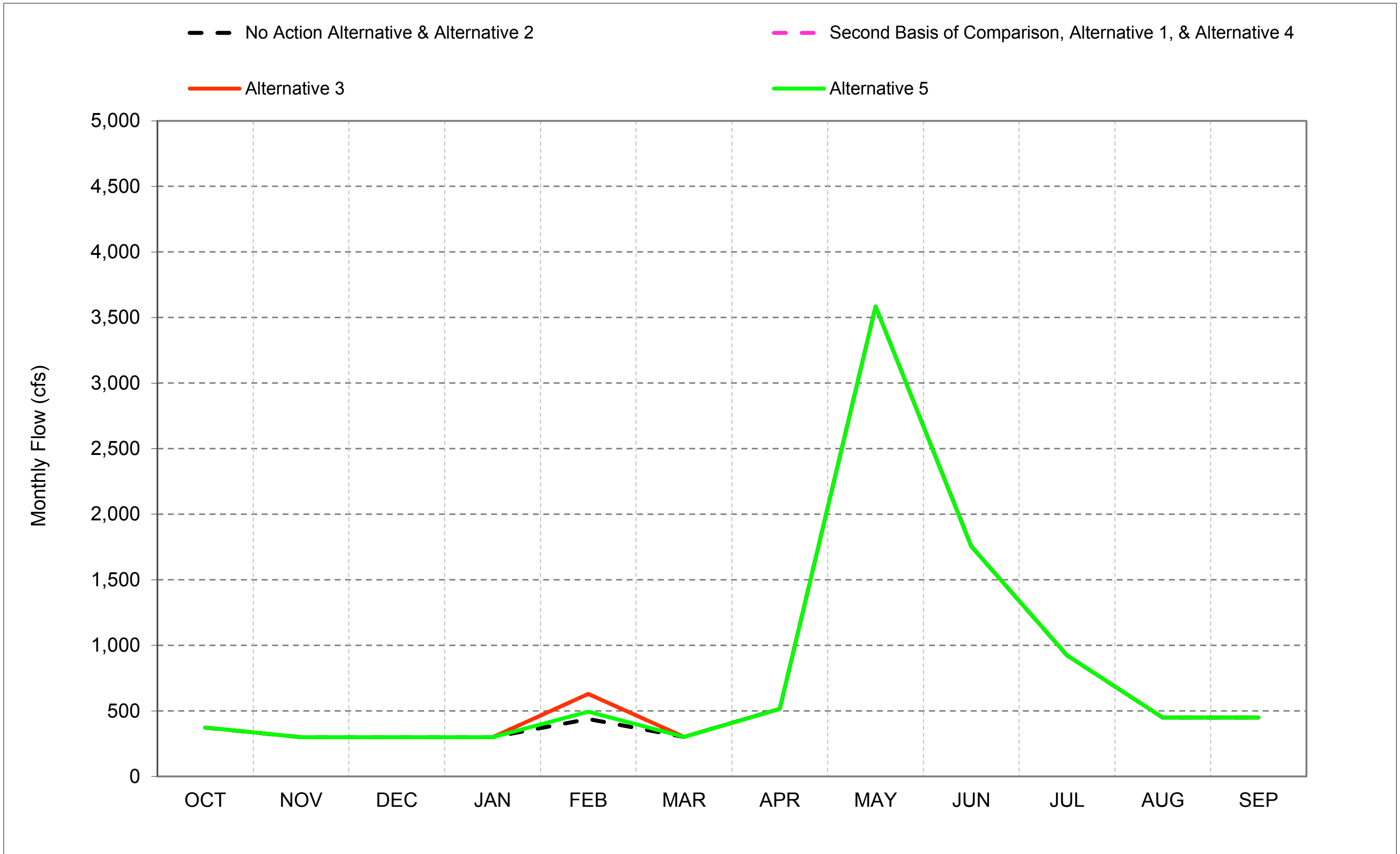


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-21-4. Trinity River below Lewiston Reservoir, Below Normal Year* Long-Term Average Flow**

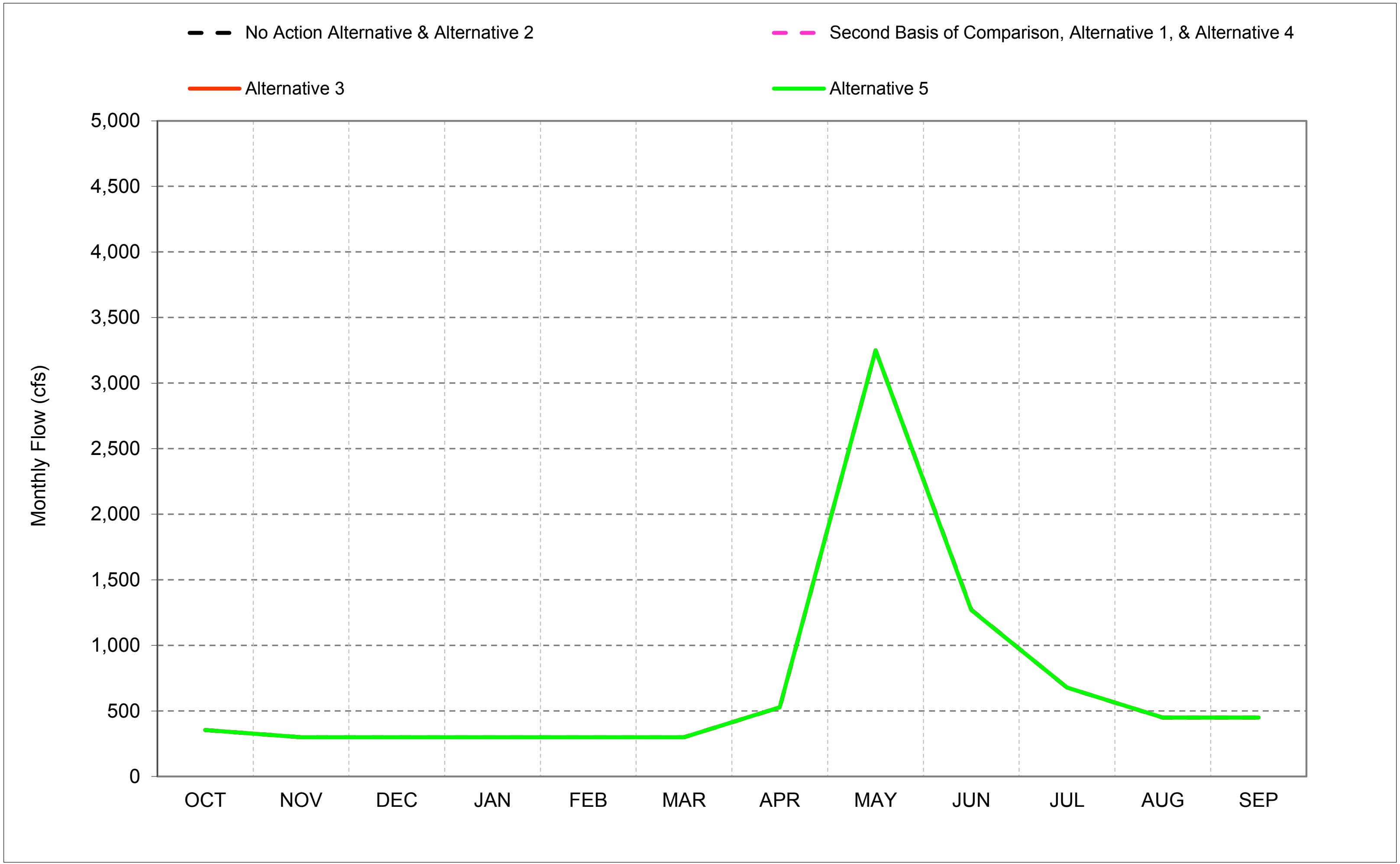


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-21-5. Trinity River below Lewiston Reservoir, Dry Year* Long-Term Average Flow**

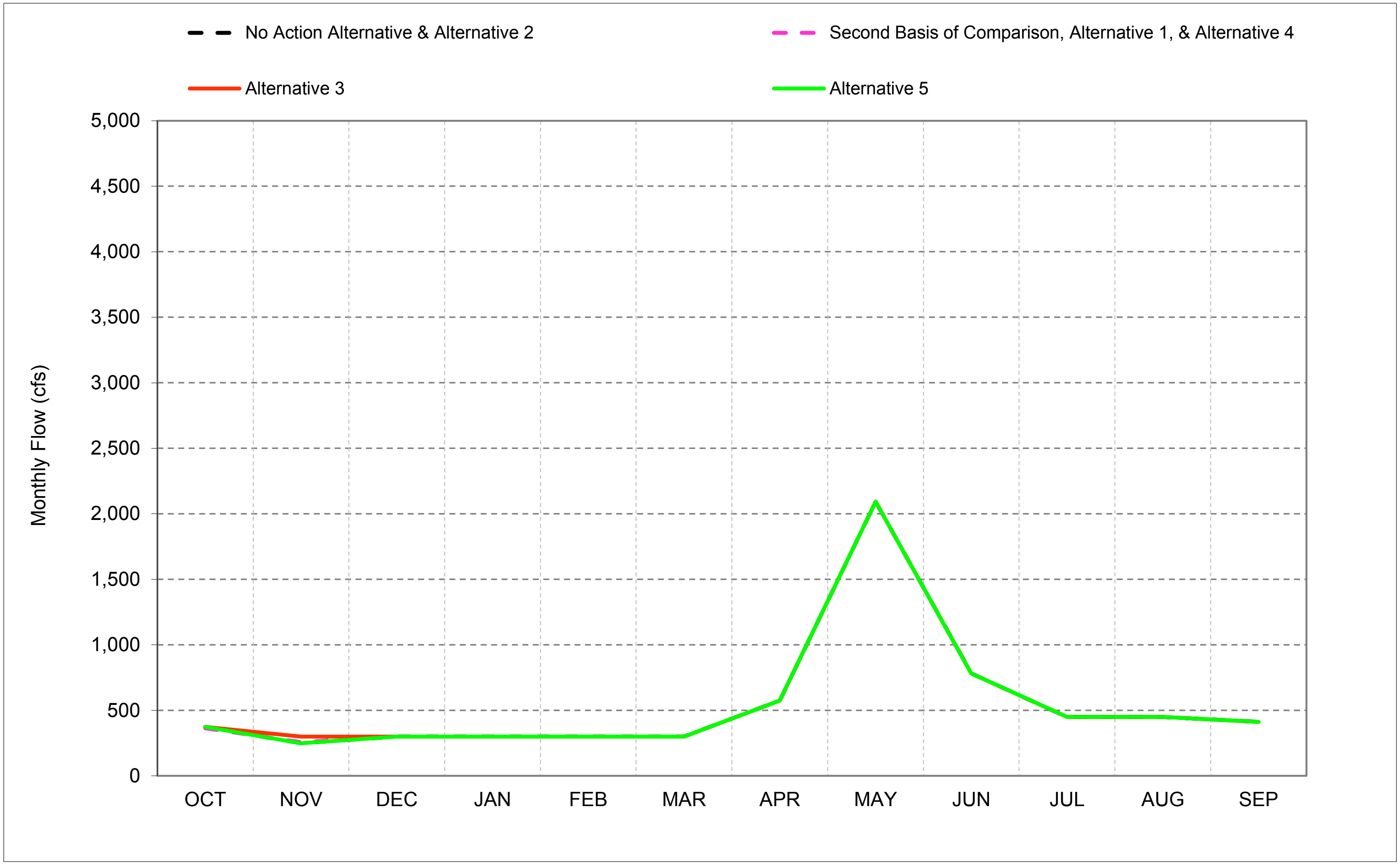


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-21-6. Trinity River below Lewiston Reservoir, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-1. Trinity River below Lewiston Reservoir, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	552	1,240	328	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	368	359	610	697	671	642	559	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	510	1,277	1,552	1,215	1,297	643	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	300	691	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	438	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	373	250	300	300	300	300	575	2,092	783	450	450	413

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	1,448	2,106	527	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	367	358	660	739	741	670	557	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	504	1,437	1,646	1,300	1,386	639	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	374	801	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	630	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	364	257	300	300	300	300	575	2,092	783	450	450	413

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	896	866	198	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	-1	-1	51	42	70	28	-1	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	-6	160	94	86	89	-4	0	0	0	0	0
Above Normal (16%)	0	0	0	74	110	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	192	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	-9	7	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-2. Trinity River below Lewiston Reservoir, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	552	1,240	328	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	368	359	610	697	671	642	559	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	510	1,277	1,552	1,215	1,297	643	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	300	691	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	438	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	373	250	300	300	300	300	575	2,092	783	450	450	413

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	1,439	2,157	328	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	493	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	473	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	368	355	671	737	750	667	551	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	474	1,469	1,645	1,329	1,376	618	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	367	801	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	630	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	373	300	300	300	300	300	575	2,092	783	450	450	413

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	887	916	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	-28	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	-20	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	-4	61	40	79	25	-8	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	-36	193	93	114	79	-26	0	0	0	0	0
Above Normal (16%)	0	0	0	67	110	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	192	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	0	50	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-3. Trinity River below Lewiston Reservoir, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	552	1,240	328	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	368	359	610	697	671	642	559	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	510	1,277	1,552	1,215	1,297	643	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	300	691	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	438	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	373	250	300	300	300	300	575	2,092	783	450	450	413

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	553	1,747	328	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	368	359	597	704	679	647	559	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	510	1,237	1,575	1,217	1,311	643	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	300	694	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	495	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	373	250	300	300	300	300	575	2,092	783	450	450	413

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	1	506	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	-13	7	9	5	0	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	0	-40	23	2	14	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	3	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	56	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-4. Trinity River below Lewiston Reservoir, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	1,448	2,106	527	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	367	358	660	739	741	670	557	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	504	1,437	1,646	1,300	1,386	639	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	374	801	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	630	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	364	257	300	300	300	300	575	2,092	783	450	450	413

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	552	1,240	328	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	368	359	610	697	671	642	559	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	510	1,277	1,552	1,215	1,297	643	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	300	691	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	438	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	373	250	300	300	300	300	575	2,092	783	450	450	413

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	-896	-866	-198	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	1	1	-51	-42	-70	-28	1	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	6	-160	-94	-86	-89	4	0	0	0	0	0
Above Normal (16%)	0	0	0	-74	-110	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	-192	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	9	-7	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-5. Trinity River below Lewiston Reservoir, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	1,448	2,106	527	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	367	358	660	739	741	670	557	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	504	1,437	1,646	1,300	1,386	639	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	374	801	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	630	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	364	257	300	300	300	300	575	2,092	783	450	450	413

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	1,439	2,157	328	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	493	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	473	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	368	355	671	737	750	667	551	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	474	1,469	1,645	1,329	1,376	618	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	367	801	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	630	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	373	300	300	300	300	300	575	2,092	783	450	450	413

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	-9	51	-198	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	-28	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	-20	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	1	-3	10	-2	9	-3	-7	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	-30	32	-2	29	-10	-22	0	0	0	0	0
Above Normal (16%)	0	0	0	-7	0	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	9	43	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-6. Trinity River below Lewiston Reservoir, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	1,448	2,106	527	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	367	358	660	739	741	670	557	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	504	1,437	1,646	1,300	1,386	639	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	374	801	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	630	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	364	257	300	300	300	300	575	2,092	783	450	450	413

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	373	300	300	553	1,747	328	600	4,709	4,626	1,102	450	450
20%	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450
30%	373	300	300	300	300	300	540	4,570	2,526	1,102	450	450
40%	373	300	300	300	300	300	521	4,570	2,526	1,102	450	450
50%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
60%	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450
70%	373	300	300	300	300	300	460	2,924	783	450	450	450
80%	373	300	300	300	300	300	460	2,924	783	450	450	450
90%	373	300	300	300	300	300	427	1,498	783	450	450	450
Long Term												
Full Simulation Period[b]	368	359	597	704	679	647	559	3,753	2,210	890	450	445
Water Year Types[c]												
Wet (32%)	373	510	1,237	1,575	1,217	1,311	643	4,556	3,413	1,136	450	450
Above Normal (16%)	373	300	300	300	694	462	457	4,597	2,948	1,102	450	450
Below Normal (13%)	373	300	300	300	495	303	517	3,585	1,755	924	450	450
Dry (24%)	354	300	300	300	300	300	528	3,250	1,271	678	450	450
Critical (15%)	373	250	300	300	300	300	575	2,092	783	450	450	413

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	-895	-359	-198	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	1	1	-63	-34	-62	-24	1	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	6	-200	-71	-84	-75	4	0	0	0	0	0
Above Normal (16%)	0	0	0	-74	-107	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	-135	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	9	-7	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

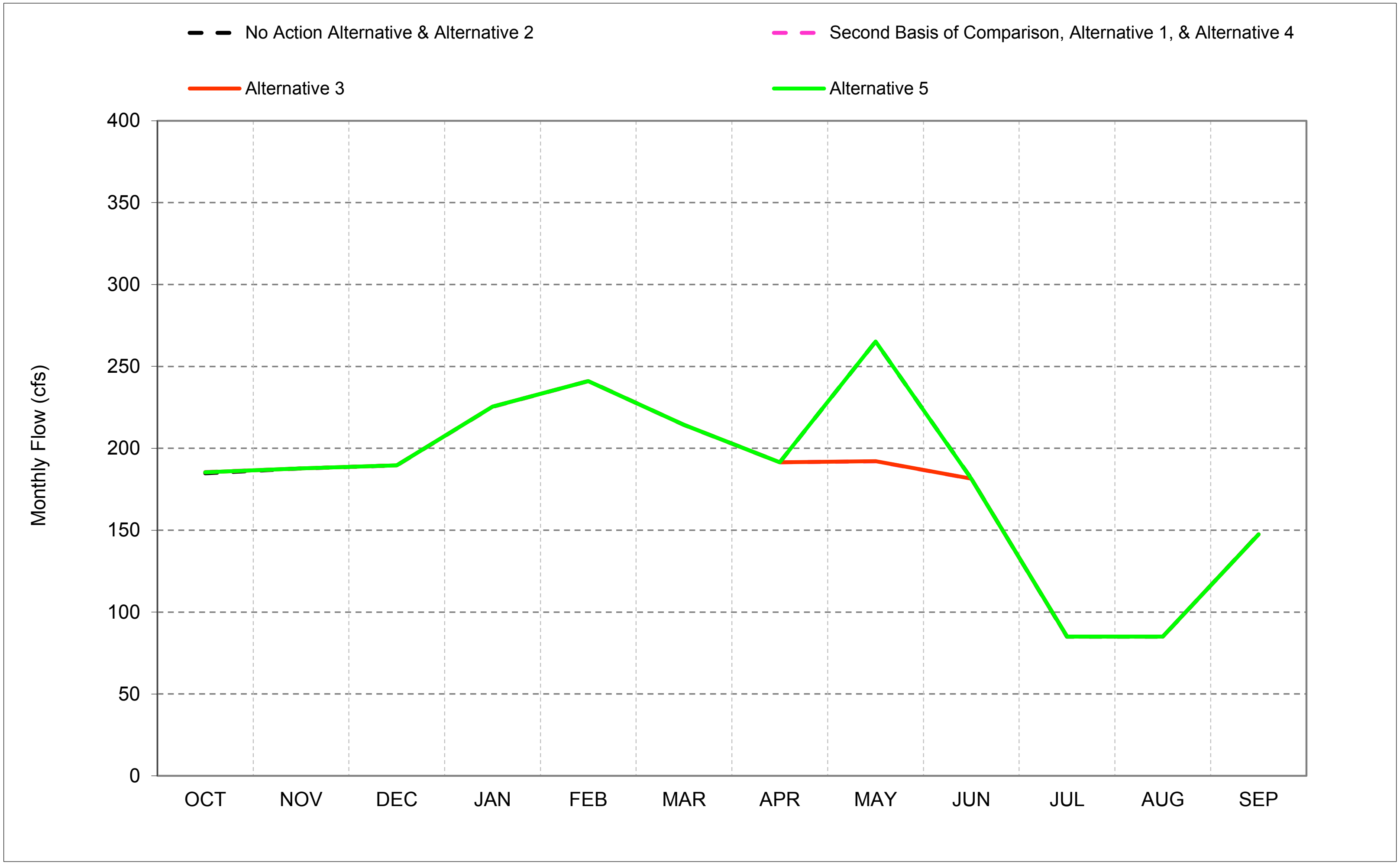
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.22. Clear Creek Flow below Whiskeytown

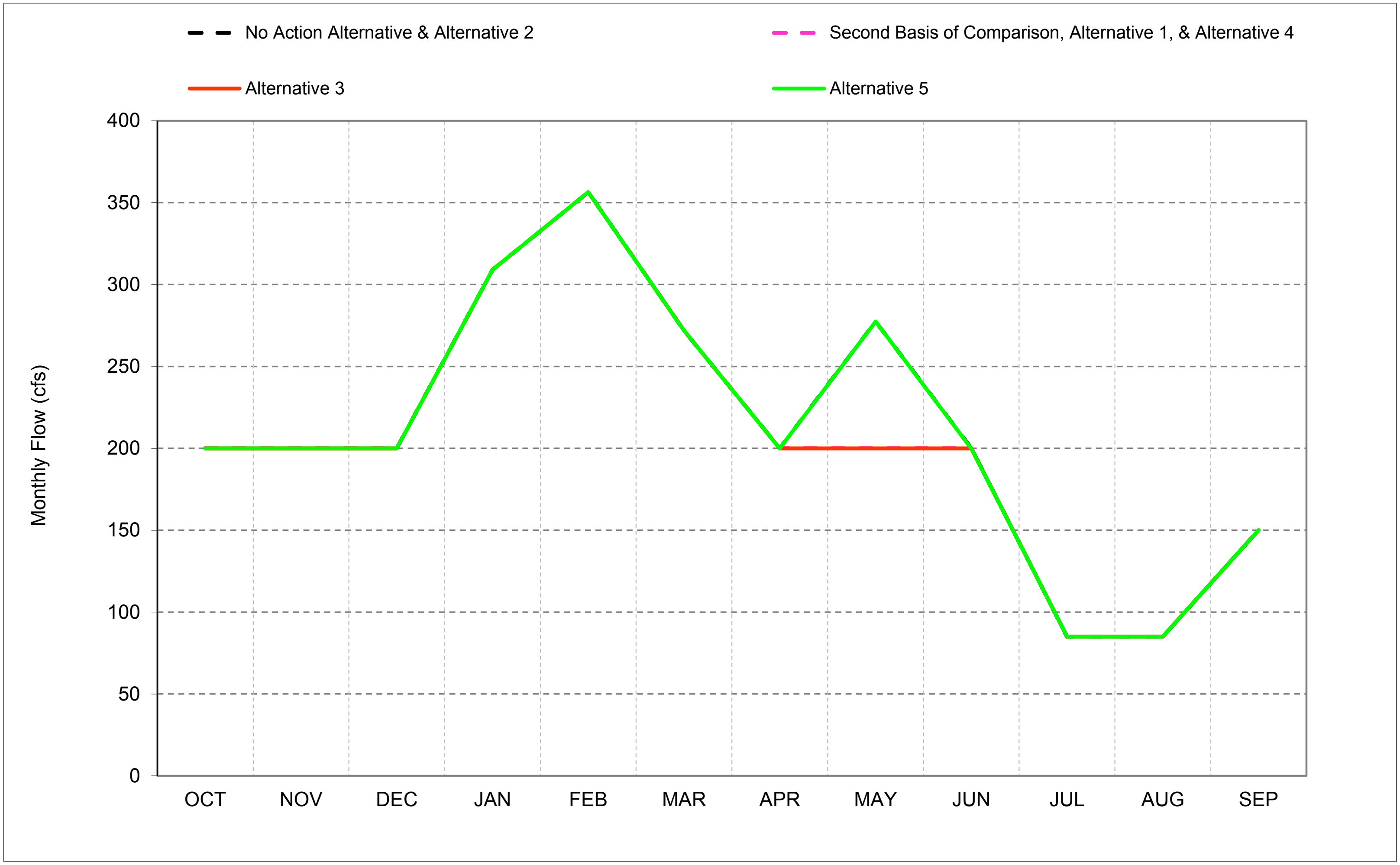
Figure C-22-1. Clear Creek below Whiskeytown, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-22-2. Clear Creek below Whiskeytown, Wet Year* Long-Term Average Flow**

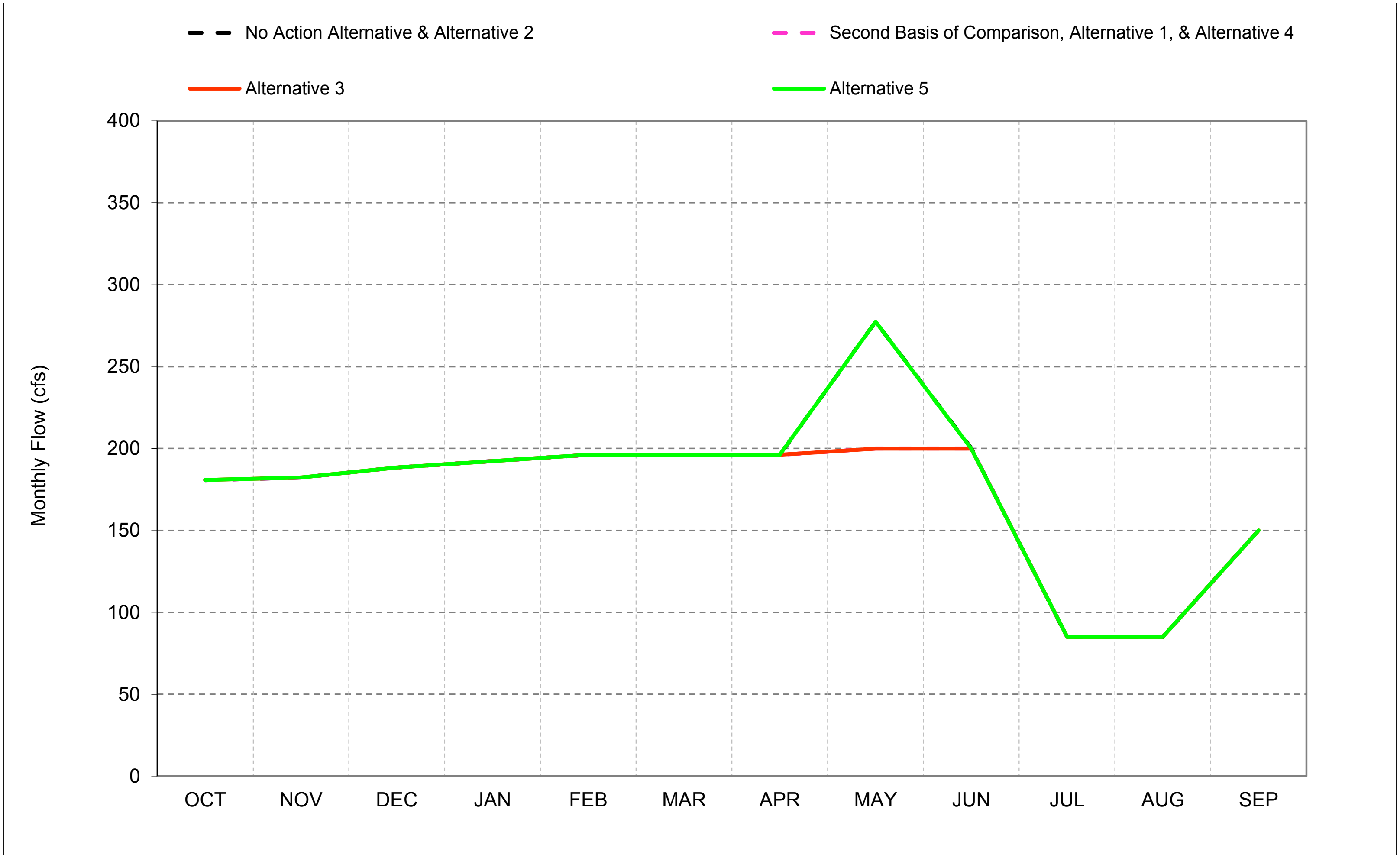


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-22-3. Clear Creek below Whiskeytown, Above Normal Year* Long-Term Average Flow**

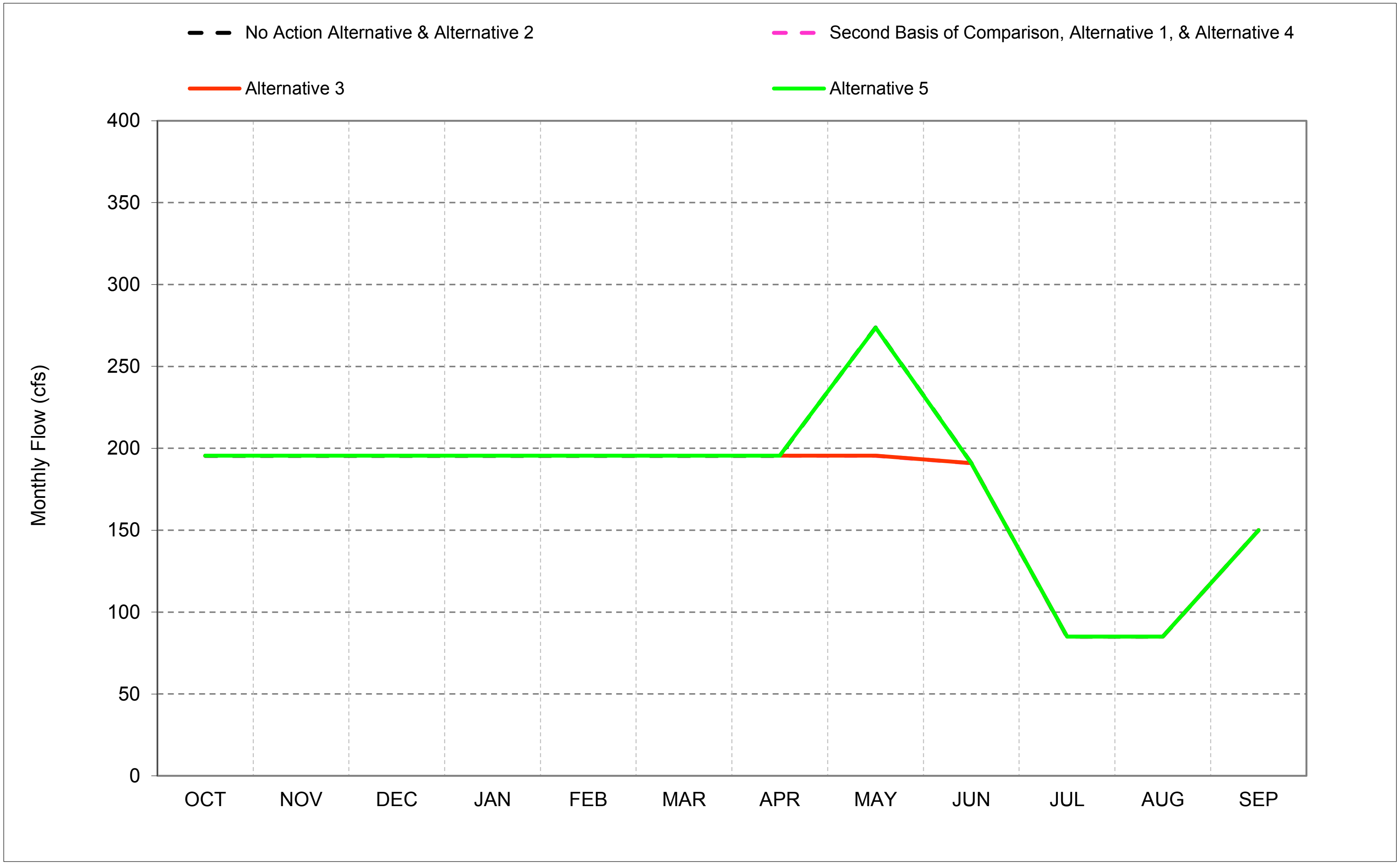


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-22-4. Clear Creek below Whiskeytown, Below Normal Year* Long-Term Average Flow**

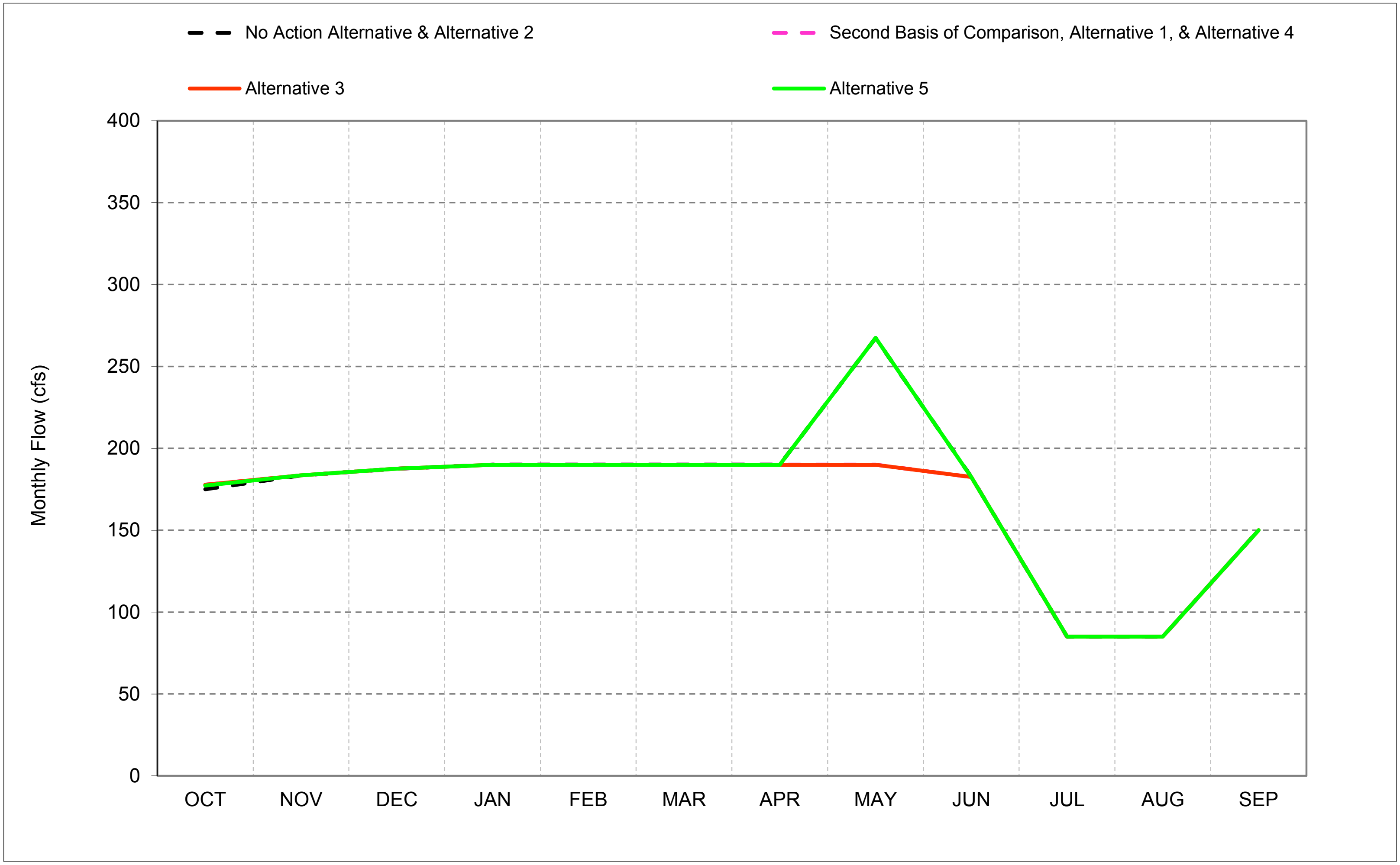


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-22-5. Clear Creek below Whiskeytown, Dry Year* Long-Term Average Flow**

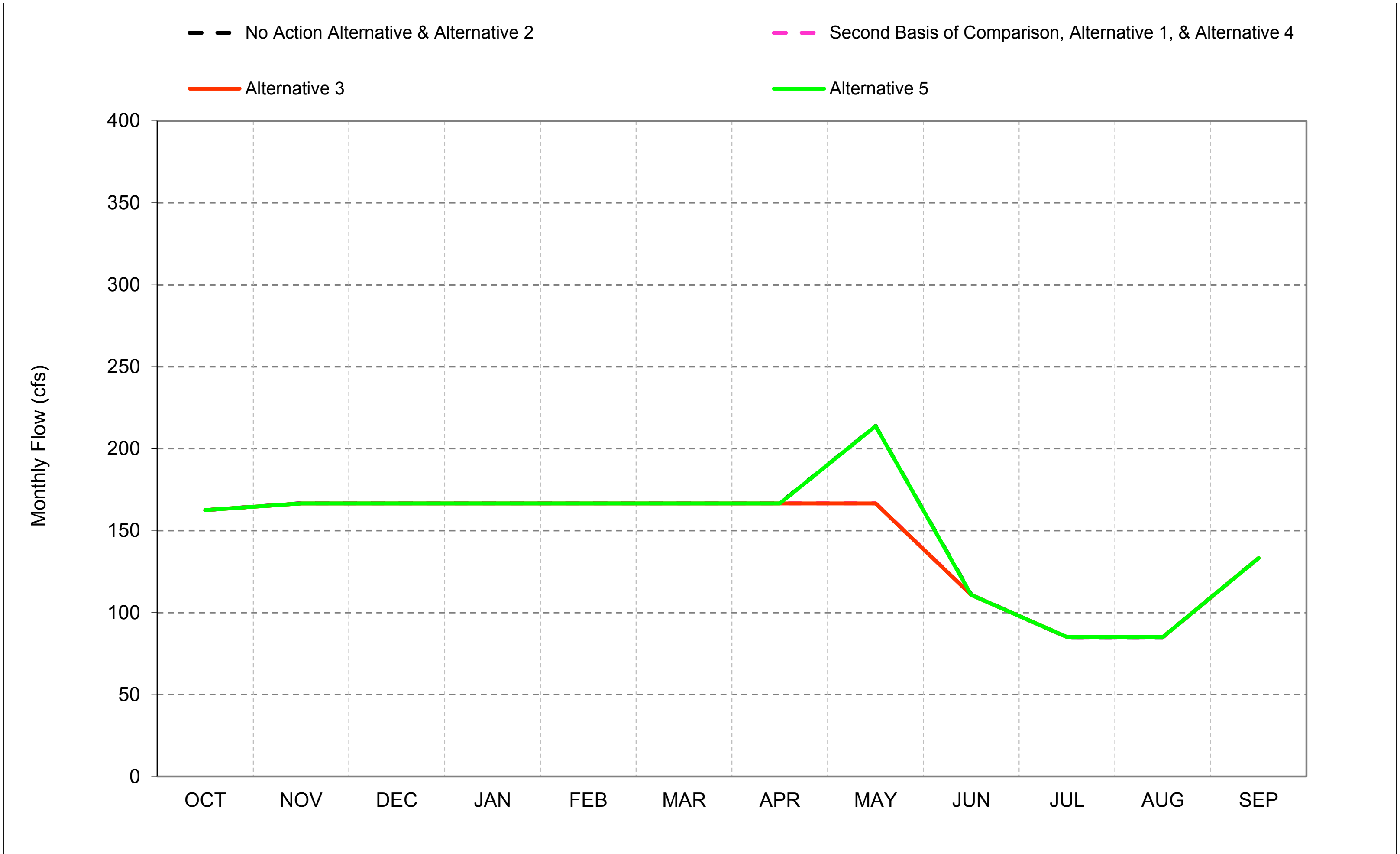


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-22-6. Clear Creek below Whiskeytown, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-1. Clear Creek below Whiskeytown, Monthly Flow

No Action Alternative

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	277	200	85	85	150
20%	200	200	200	200	200	200	200	277	200	85	85	150
30%	200	200	200	200	200	200	200	277	200	85	85	150
40%	200	200	200	200	200	200	200	277	200	85	85	150
50%	200	200	200	200	200	200	200	277	200	85	85	150
60%	200	200	200	200	200	200	200	277	200	85	85	150
70%	200	200	200	200	200	200	200	277	200	85	85	150
80%	200	200	200	200	200	200	200	277	150	85	85	150
90%	150	150	150	150	150	150	150	237	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	265	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	277	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	277	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	274	191	85	85	150
Dry (24%)	175	184	188	190	190	190	190	267	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	214	111	85	85	133

Alternative 1

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	200	200	85	85	150
20%	200	200	200	200	200	200	200	200	200	85	85	150
30%	200	200	200	200	200	200	200	200	200	85	85	150
40%	200	200	200	200	200	200	200	200	200	85	85	150
50%	200	200	200	200	200	200	200	200	200	85	85	150
60%	200	200	200	200	200	200	200	200	200	85	85	150
70%	200	200	200	200	200	200	200	200	200	85	85	150
80%	200	200	200	200	200	200	200	200	150	85	85	150
90%	150	150	150	150	150	150	150	150	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	192	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	200	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	200	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	195	191	85	85	150
Dry (24%)	178	184	188	190	190	190	190	190	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	167	111	85	85	133

Alternative 1 minus No Action Alternative

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	-77	0	0	0	0
20%	0	0	0	0	0	0	0	-77	0	0	0	0
30%	0	0	0	0	0	0	0	-77	0	0	0	0
40%	0	0	0	0	0	0	0	-77	0	0	0	0
50%	0	0	0	0	0	0	0	-77	0	0	0	0
60%	0	0	0	0	0	0	0	-77	0	0	0	0
70%	0	0	0	0	0	0	0	-77	0	0	0	0
80%	0	0	0	0	0	0	0	-77	0	0	0	0
90%	0	0	0	0	0	0	0	-87	0	0	0	0
Long Term												
Full Simulation Period[b]	1	0	0	0	0	0	0	-73	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	-77	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0	-77	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0	-78	0	0	0	0
Dry (24%)	3	0	0	0	0	0	0	-77	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0	-47	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-2. Clear Creek below Whiskeytown, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	277	200	85	85	150
20%	200	200	200	200	200	200	200	277	200	85	85	150
30%	200	200	200	200	200	200	200	277	200	85	85	150
40%	200	200	200	200	200	200	200	277	200	85	85	150
50%	200	200	200	200	200	200	200	277	200	85	85	150
60%	200	200	200	200	200	200	200	277	200	85	85	150
70%	200	200	200	200	200	200	200	277	200	85	85	150
80%	200	200	200	200	200	200	200	277	150	85	85	150
90%	150	150	150	150	150	150	150	237	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	265	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	277	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	277	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	274	191	85	85	150
Dry (24%)	175	184	188	190	190	190	190	267	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	214	111	85	85	133

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	200	200	85	85	150
20%	200	200	200	200	200	200	200	200	200	85	85	150
30%	200	200	200	200	200	200	200	200	200	85	85	150
40%	200	200	200	200	200	200	200	200	200	85	85	150
50%	200	200	200	200	200	200	200	200	200	85	85	150
60%	200	200	200	200	200	200	200	200	200	85	85	150
70%	200	200	200	200	200	200	200	200	200	85	85	150
80%	200	200	200	200	200	200	200	200	150	85	85	150
90%	150	150	150	150	150	150	150	150	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	192	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	200	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	200	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	195	191	85	85	150
Dry (24%)	178	184	188	190	190	190	190	190	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	167	111	85	85	133

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	-77	0	0	0	0
20%	0	0	0	0	0	0	0	-77	0	0	0	0
30%	0	0	0	0	0	0	0	-77	0	0	0	0
40%	0	0	0	0	0	0	0	-77	0	0	0	0
50%	0	0	0	0	0	0	0	-77	0	0	0	0
60%	0	0	0	0	0	0	0	-77	0	0	0	0
70%	0	0	0	0	0	0	0	-77	0	0	0	0
80%	0	0	0	0	0	0	0	-77	0	0	0	0
90%	0	0	0	0	0	0	0	-87	0	0	0	0
Long Term												
Full Simulation Period[b]	1	0	0	0	0	0	0	-73	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	-77	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0	-77	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0	-78	0	0	0	0
Dry (24%)	3	0	0	0	0	0	0	-77	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0	-47	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-3. Clear Creek below Whiskeytown, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	277	200	85	85	150
20%	200	200	200	200	200	200	200	277	200	85	85	150
30%	200	200	200	200	200	200	200	277	200	85	85	150
40%	200	200	200	200	200	200	200	277	200	85	85	150
50%	200	200	200	200	200	200	200	277	200	85	85	150
60%	200	200	200	200	200	200	200	277	200	85	85	150
70%	200	200	200	200	200	200	200	277	200	85	85	150
80%	200	200	200	200	200	200	200	277	150	85	85	150
90%	150	150	150	150	150	150	150	237	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	265	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	277	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	277	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	274	191	85	85	150
Dry (24%)	175	184	188	190	190	190	190	267	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	214	111	85	85	133

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	277	200	85	85	150
20%	200	200	200	200	200	200	200	277	200	85	85	150
30%	200	200	200	200	200	200	200	277	200	85	85	150
40%	200	200	200	200	200	200	200	277	200	85	85	150
50%	200	200	200	200	200	200	200	277	200	85	85	150
60%	200	200	200	200	200	200	200	277	200	85	85	150
70%	200	200	200	200	200	200	200	277	200	85	85	150
80%	200	200	200	200	200	200	200	277	150	85	85	150
90%	150	150	150	150	150	150	150	237	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	265	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	277	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	277	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	274	191	85	85	150
Dry (24%)	177	184	188	190	190	190	190	267	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	214	111	85	85	133

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	1	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (24%)	2	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-4. Clear Creek below Whiskeytown, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	200	200	85	85	150
20%	200	200	200	200	200	200	200	200	200	85	85	150
30%	200	200	200	200	200	200	200	200	200	85	85	150
40%	200	200	200	200	200	200	200	200	200	85	85	150
50%	200	200	200	200	200	200	200	200	200	85	85	150
60%	200	200	200	200	200	200	200	200	200	85	85	150
70%	200	200	200	200	200	200	200	200	200	85	85	150
80%	200	200	200	200	200	200	200	200	150	85	85	150
90%	150	150	150	150	150	150	150	150	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	192	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	200	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	200	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	195	191	85	85	150
Dry (24%)	178	184	188	190	190	190	190	190	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	167	111	85	85	133

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	277	200	85	85	150
20%	200	200	200	200	200	200	200	277	200	85	85	150
30%	200	200	200	200	200	200	200	277	200	85	85	150
40%	200	200	200	200	200	200	200	277	200	85	85	150
50%	200	200	200	200	200	200	200	277	200	85	85	150
60%	200	200	200	200	200	200	200	277	200	85	85	150
70%	200	200	200	200	200	200	200	277	200	85	85	150
80%	200	200	200	200	200	200	200	277	150	85	85	150
90%	150	150	150	150	150	150	150	237	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	265	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	277	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	277	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	274	191	85	85	150
Dry (24%)	175	184	188	190	190	190	190	267	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	214	111	85	85	133

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	77	0	0	0	0
20%	0	0	0	0	0	0	0	77	0	0	0	0
30%	0	0	0	0	0	0	0	77	0	0	0	0
40%	0	0	0	0	0	0	0	77	0	0	0	0
50%	0	0	0	0	0	0	0	77	0	0	0	0
60%	0	0	0	0	0	0	0	77	0	0	0	0
70%	0	0	0	0	0	0	0	77	0	0	0	0
80%	0	0	0	0	0	0	0	77	0	0	0	0
90%	0	0	0	0	0	0	0	87	0	0	0	0
Long Term												
Full Simulation Period[b]	-1	0	0	0	0	0	0	73	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	77	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0	77	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0	78	0	0	0	0
Dry (24%)	-3	0	0	0	0	0	0	77	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0	47	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-5. Clear Creek below Whiskeytown, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	200	200	85	85	150
20%	200	200	200	200	200	200	200	200	200	85	85	150
30%	200	200	200	200	200	200	200	200	200	85	85	150
40%	200	200	200	200	200	200	200	200	200	85	85	150
50%	200	200	200	200	200	200	200	200	200	85	85	150
60%	200	200	200	200	200	200	200	200	200	85	85	150
70%	200	200	200	200	200	200	200	200	200	85	85	150
80%	200	200	200	200	200	200	200	200	150	85	85	150
90%	150	150	150	150	150	150	150	150	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	192	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	200	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	200	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	195	191	85	85	150
Dry (24%)	178	184	188	190	190	190	190	190	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	167	111	85	85	133

Alternative 3

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	200	200	85	85	150
20%	200	200	200	200	200	200	200	200	200	85	85	150
30%	200	200	200	200	200	200	200	200	200	85	85	150
40%	200	200	200	200	200	200	200	200	200	85	85	150
50%	200	200	200	200	200	200	200	200	200	85	85	150
60%	200	200	200	200	200	200	200	200	200	85	85	150
70%	200	200	200	200	200	200	200	200	200	85	85	150
80%	200	200	200	200	200	200	200	200	150	85	85	150
90%	150	150	150	150	150	150	150	150	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	192	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	200	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	200	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	195	191	85	85	150
Dry (24%)	178	184	188	190	190	190	190	190	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	167	111	85	85	133

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-6. Clear Creek below Whiskeytown, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	200	200	85	85	150
20%	200	200	200	200	200	200	200	200	200	85	85	150
30%	200	200	200	200	200	200	200	200	200	85	85	150
40%	200	200	200	200	200	200	200	200	200	85	85	150
50%	200	200	200	200	200	200	200	200	200	85	85	150
60%	200	200	200	200	200	200	200	200	200	85	85	150
70%	200	200	200	200	200	200	200	200	200	85	85	150
80%	200	200	200	200	200	200	200	200	150	85	85	150
90%	150	150	150	150	150	150	150	150	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	192	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	200	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	200	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	195	191	85	85	150
Dry (24%)	178	184	188	190	190	190	190	190	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	167	111	85	85	133

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	200	200	200	200	200	200	200	277	200	85	85	150
20%	200	200	200	200	200	200	200	277	200	85	85	150
30%	200	200	200	200	200	200	200	277	200	85	85	150
40%	200	200	200	200	200	200	200	277	200	85	85	150
50%	200	200	200	200	200	200	200	277	200	85	85	150
60%	200	200	200	200	200	200	200	277	200	85	85	150
70%	200	200	200	200	200	200	200	277	200	85	85	150
80%	200	200	200	200	200	200	200	277	150	85	85	150
90%	150	150	150	150	150	150	150	237	150	85	85	150
Long Term												
Full Simulation Period[b]	185	188	190	225	241	214	191	265	181	85	85	148
Water Year Types[c]												
Wet (32%)	200	200	200	309	356	272	200	277	200	85	85	150
Above Normal (16%)	181	182	188	192	196	196	196	277	200	85	85	150
Below Normal (13%)	195	195	195	195	195	195	195	274	191	85	85	150
Dry (24%)	177	184	188	190	190	190	190	267	183	85	85	150
Critical (15%)	163	167	167	167	167	167	167	214	111	85	85	133

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	77	0	0	0	0
20%	0	0	0	0	0	0	0	77	0	0	0	0
30%	0	0	0	0	0	0	0	77	0	0	0	0
40%	0	0	0	0	0	0	0	77	0	0	0	0
50%	0	0	0	0	0	0	0	77	0	0	0	0
60%	0	0	0	0	0	0	0	77	0	0	0	0
70%	0	0	0	0	0	0	0	77	0	0	0	0
80%	0	0	0	0	0	0	0	77	0	0	0	0
90%	0	0	0	0	0	0	0	87	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	73	0	0	0	0
Water Year Types[c]												
Wet (32%)	0	0	0	0	0	0	0	77	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0	77	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0	78	0	0	0	0
Dry (24%)	-1	0	0	0	0	0	0	77	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0	47	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

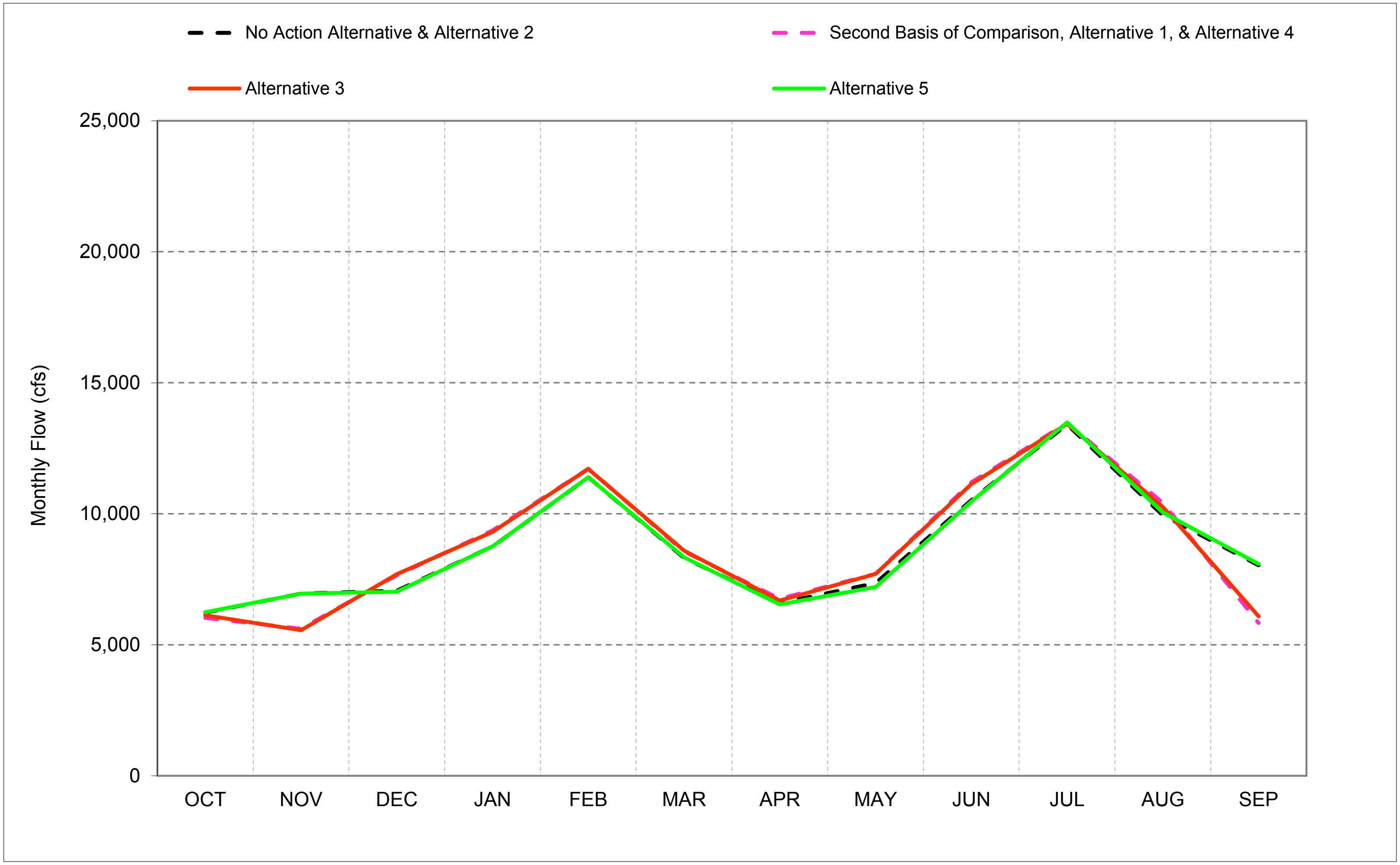
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.23. Sacramento River Flow downstream of Keswick Reservoir

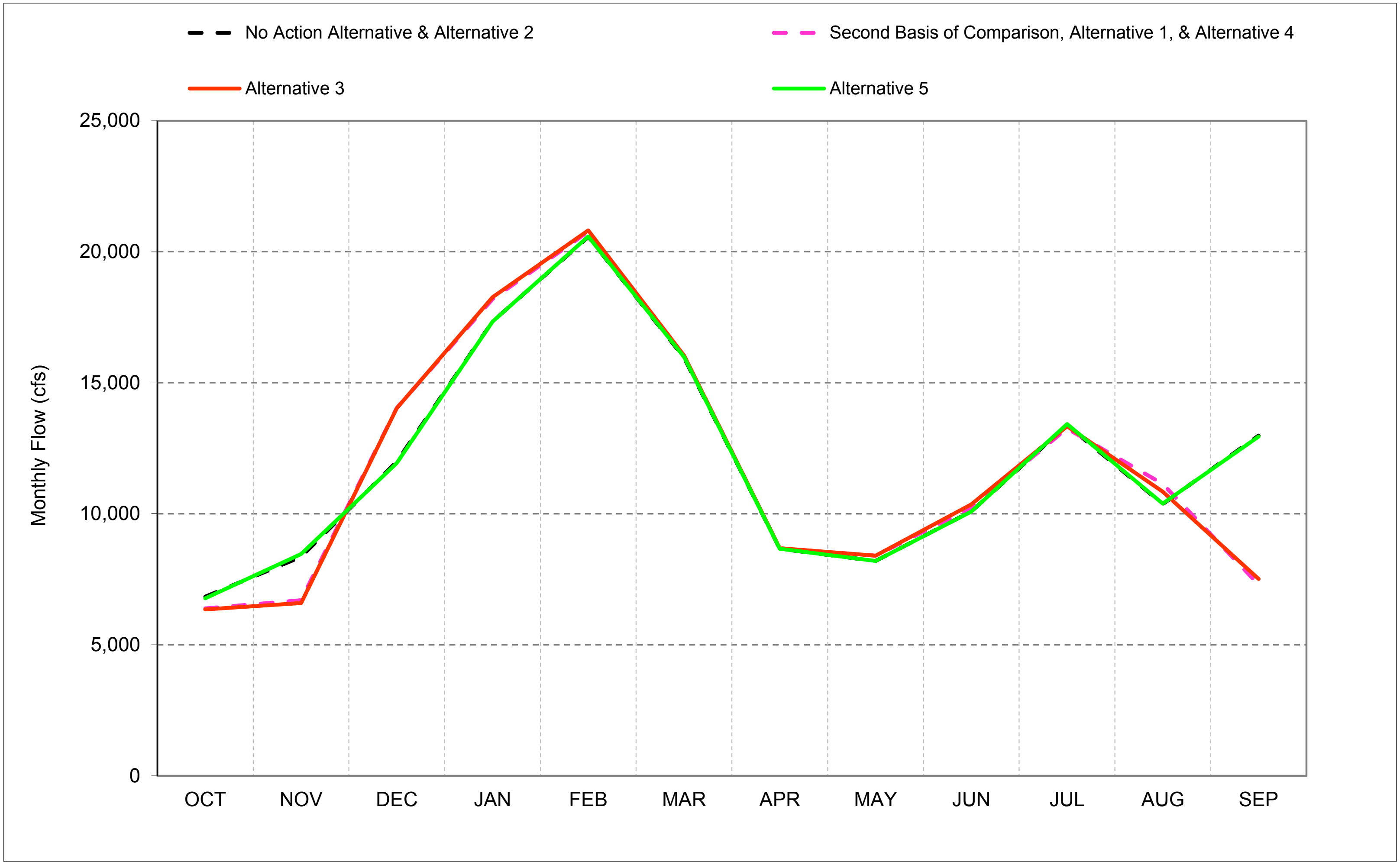
Figure C-23-1. Sacramento River d/s of Keswick Reservoir, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-23-2. Sacramento River d/s of Keswick Reservoir, Wet Year* Long-Term Average Flow**

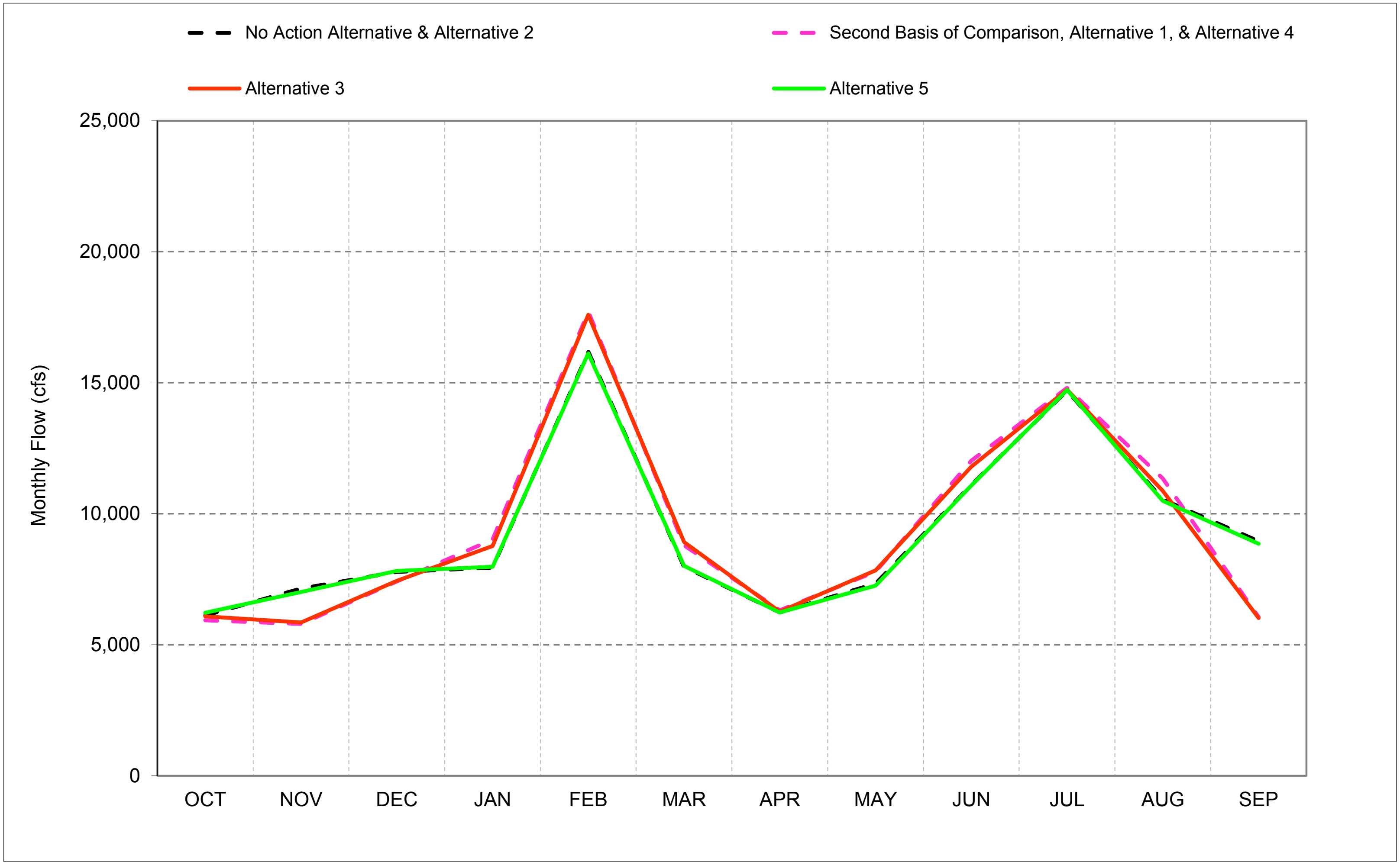


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-23-3. Sacramento River d/s of Keswick Reservoir, Above Normal Year* Long-Term Average Flow**

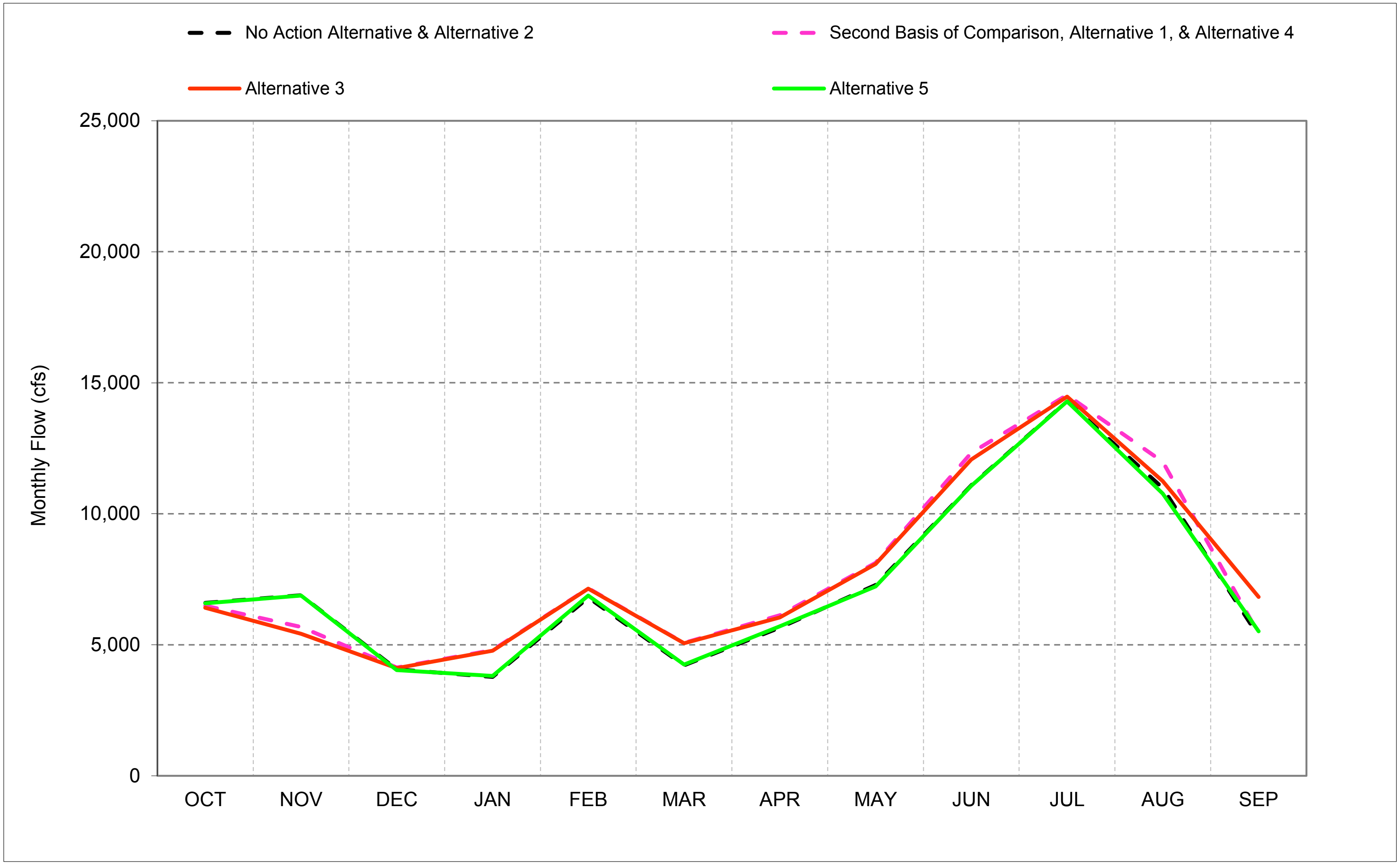


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-23-4. Sacramento River d/s of Keswick Reservoir, Below Normal Year* Long-Term Average Flow**

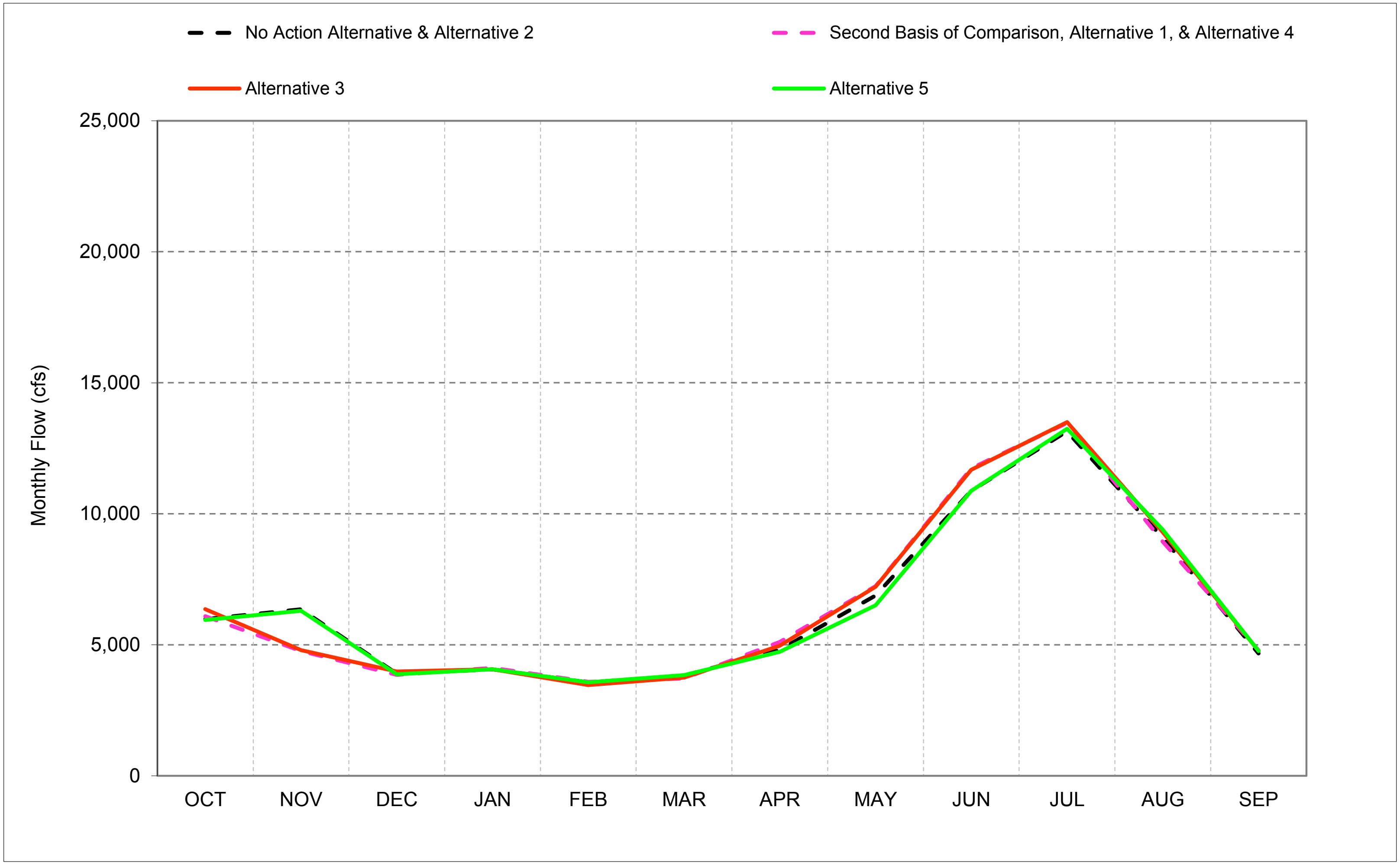


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-23-5. Sacramento River d/s of Keswick Reservoir, Dry Year* Long-Term Average Flow**

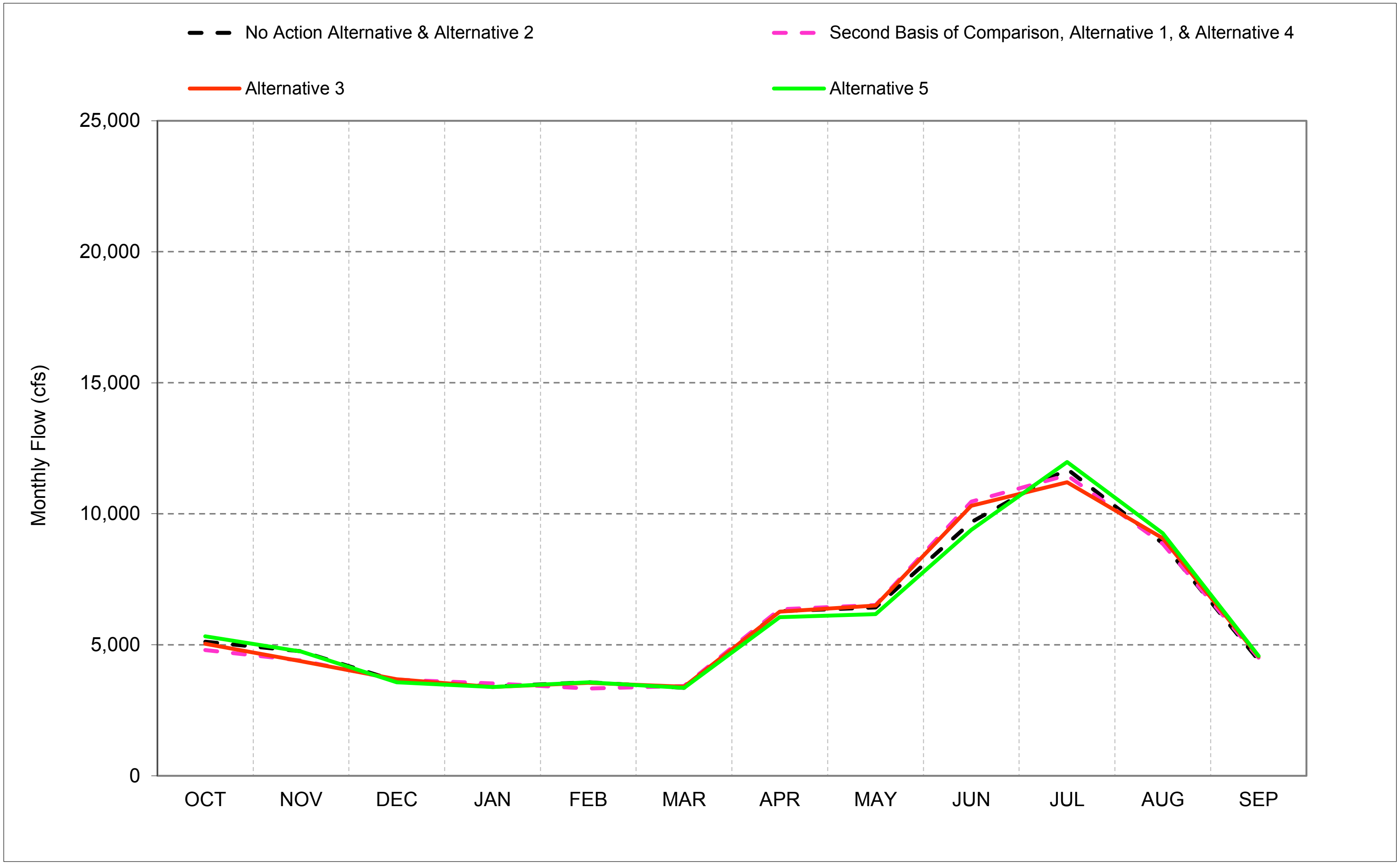


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-23-6. Sacramento River d/s of Keswick Reservoir, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-1. Sacramento River d/s of Keswick Reservoir, Monthly Flow

No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,539	11,351	16,050	19,967	30,773	18,389	10,234	9,624	13,028	15,000	11,592	14,752
20%	7,985	10,020	9,276	12,176	21,412	12,120	7,602	8,744	11,826	15,000	10,909	12,155
30%	7,297	8,317	5,359	7,873	10,878	7,676	6,731	8,256	11,248	15,000	10,724	10,381
40%	6,760	7,008	4,368	4,500	5,039	4,500	5,853	7,615	10,563	14,570	10,286	8,919
50%	5,983	5,888	4,000	4,126	4,500	4,214	5,356	7,192	10,254	13,991	9,978	6,151
60%	5,404	4,822	3,976	3,640	3,565	3,513	5,000	6,503	9,958	13,279	9,568	5,274
70%	5,001	4,379	3,524	3,251	3,250	3,250	4,500	6,168	9,430	12,770	9,152	4,693
80%	4,618	4,000	3,253	3,250	3,250	3,250	4,500	5,666	8,828	11,848	8,861	4,391
90%	4,292	3,502	3,250	3,250	3,250	3,250	3,702	5,145	8,406	10,797	8,089	4,145
Long Term												
Full Simulation Period[b]	6,232	6,954	7,064	8,758	11,392	8,318	6,589	7,361	10,520	13,413	9,951	8,038
Water Year Types[c]												
Wet (32%)	6,837	8,356	11,995	17,343	20,568	15,965	8,669	8,200	10,089	13,385	10,377	12,981
Above Normal (16%)	6,122	7,147	7,783	7,948	16,181	7,984	6,239	7,340	11,102	14,701	10,545	8,958
Below Normal (13%)	6,600	6,895	4,067	3,778	6,800	4,216	5,660	7,283	11,096	14,296	10,988	5,333
Dry (24%)	5,981	6,359	3,899	4,070	3,569	3,827	4,807	6,887	10,885	13,146	9,085	4,673
Critical (15%)	5,119	4,757	3,621	3,410	3,571	3,360	6,285	6,428	9,683	11,714	8,877	4,418

Alternative 1

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,508	7,576	19,509	20,146	30,874	18,571	10,177	10,192	14,534	15,000	12,723	8,971
20%	7,890	6,794	11,462	15,160	21,412	12,718	8,220	9,232	13,041	15,000	11,885	6,409
30%	7,356	5,587	6,088	8,978	13,139	8,359	6,971	8,471	12,242	15,000	11,209	6,029
40%	6,136	5,210	4,329	4,737	5,375	4,500	6,320	7,928	11,433	14,639	10,726	5,666
50%	5,715	4,858	4,000	4,333	4,500	4,500	5,731	7,458	11,014	14,084	10,347	5,475
60%	5,257	4,364	3,949	3,798	3,735	3,668	5,202	7,098	10,374	13,509	9,891	5,246
70%	4,871	4,181	3,674	3,251	3,250	3,250	4,500	6,497	9,974	13,051	9,282	4,637
80%	4,389	4,000	3,275	3,250	3,250	3,250	4,500	6,095	9,209	11,861	8,985	4,312
90%	4,000	3,501	3,250	3,250	3,250	3,250	3,713	5,503	8,402	10,691	8,150	4,147
Long Term												
Full Simulation Period[b]	6,028	5,615	7,660	9,366	11,718	8,569	6,754	7,708	11,203	13,462	10,417	5,836
Water Year Types[c]												
Wet (32%)	6,391	6,705	14,039	18,191	20,773	16,037	8,687	8,398	10,243	13,254	11,143	7,306
Above Normal (16%)	5,940	5,801	7,417	9,024	17,709	8,800	6,317	7,789	12,028	14,804	11,351	6,065
Below Normal (13%)	6,491	5,680	4,134	4,805	7,156	5,076	6,127	8,129	12,334	14,533	11,988	5,429
Dry (24%)	6,092	4,768	3,855	4,123	3,591	3,716	5,107	7,240	11,737	13,465	8,939	4,794
Critical (15%)	4,806	4,404	3,675	3,533	3,335	3,431	6,355	6,519	10,465	11,474	8,854	4,513

Alternative 1 minus No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-31	-3,775	3,459	179	101	182	-58	568	1,506	0	1,131	-5,781
20%	-95	-3,227	2,186	2,985	0	598	618	487	1,215	0	976	-5,746
30%	59	-2,731	728	1,105	2,261	682	240	215	994	0	485	-4,352
40%	-624	-1,798	-39	237	336	0	467	313	870	69	440	-3,252
50%	-268	-1,029	0	207	0	286	375	266	760	93	369	-676
60%	-147	-458	-27	158	170	155	202	595	416	230	323	-27
70%	-130	-198	150	0	0	0	0	328	545	281	129	-57
80%	-229	0	23	0	0	0	0	428	381	14	124	-79
90%	-292	0	0	0	0	0	11	358	-4	-106	62	2
Long Term												
Full Simulation Period[b]	-204	-1,340	596	608	326	251	164	347	684	50	466	-2,202
Water Year Types[c]												
Wet (32%)	-446	-1,651	2,044	848	205	73	17	198	154	-131	766	-5,675
Above Normal (16%)	-182	-1,346	-366	1,076	1,528	816	78	449	926	103	806	-2,893
Below Normal (13%)	-109	-1,215	67	1,027	356	860	467	846	1,238	238	1,000	96
Dry (24%)	111	-1,591	-44	53	22	-111	300	353	852	319	-146	121
Critical (15%)	-314	-353	54	123	-236	71	70	91	782	-239	-23	96

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-2. Sacramento River d/s of Keswick Reservoir, Monthly Flow

No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,539	11,351	16,050	19,967	30,773	18,389	10,234	9,624	13,028	15,000	11,592	14,752
20%	7,985	10,020	9,276	12,176	21,412	12,120	7,602	8,744	11,826	15,000	10,909	12,155
30%	7,297	8,317	5,359	7,873	10,878	7,676	6,731	8,256	11,248	15,000	10,724	10,381
40%	6,760	7,008	4,368	4,500	5,039	4,500	5,853	7,615	10,563	14,570	10,286	8,919
50%	5,983	5,888	4,000	4,126	4,500	4,214	5,356	7,192	10,254	13,991	9,978	6,151
60%	5,404	4,822	3,976	3,640	3,565	3,513	5,000	6,503	9,958	13,279	9,568	5,274
70%	5,001	4,379	3,524	3,251	3,250	3,250	4,500	6,168	9,430	12,770	9,152	4,693
80%	4,618	4,000	3,253	3,250	3,250	3,250	4,500	5,666	8,828	11,848	8,861	4,391
90%	4,292	3,502	3,250	3,250	3,250	3,250	3,702	5,145	8,406	10,797	8,089	4,145
Long Term												
Full Simulation Period[b]	6,232	6,954	7,064	8,758	11,392	8,318	6,589	7,361	10,520	13,413	9,951	8,038
Water Year Types[c]												
Wet (32%)	6,837	8,356	11,995	17,343	20,568	15,965	8,669	8,200	10,089	13,385	10,377	12,981
Above Normal (16%)	6,122	7,147	7,783	7,948	16,181	7,984	6,239	7,340	11,102	14,701	10,545	8,958
Below Normal (13%)	6,600	6,895	4,067	3,778	6,800	4,216	5,660	7,283	11,096	14,296	10,988	5,333
Dry (24%)	5,981	6,359	3,899	4,070	3,569	3,827	4,807	6,887	10,885	13,146	9,085	4,673
Critical (15%)	5,119	4,757	3,621	3,410	3,571	3,360	6,285	6,428	9,683	11,714	8,877	4,418

Alternative 3

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,508	7,587	19,593	21,351	32,017	18,576	10,175	10,159	14,138	15,000	11,998	8,758
20%	8,095	6,362	11,532	15,117	21,412	12,718	8,146	9,311	13,148	15,000	11,420	7,492
30%	7,291	5,638	5,887	8,978	12,526	8,359	6,954	8,617	12,022	15,000	11,107	6,335
40%	6,536	5,073	4,450	4,500	6,142	4,500	6,056	7,930	11,316	14,717	10,669	5,916
50%	5,729	4,755	4,077	4,184	4,500	4,500	5,368	7,437	10,905	14,368	10,087	5,590
60%	5,223	4,361	3,976	3,706	3,565	3,547	5,053	7,055	10,464	13,336	9,838	5,137
70%	4,867	4,160	3,655	3,250	3,250	3,250	4,500	6,478	10,022	12,638	9,556	4,817
80%	4,503	4,000	3,294	3,250	3,250	3,250	4,500	6,060	9,302	11,876	8,943	4,361
90%	4,114	3,501	3,250	3,250	3,250	3,250	3,717	5,503	8,397	10,803	8,489	4,186
Long Term												
Full Simulation Period[b]	6,130	5,556	7,692	9,315	11,713	8,592	6,689	7,706	11,131	13,440	10,268	6,083
Water Year Types[c]												
Wet (32%)	6,352	6,595	14,028	18,268	20,814	16,038	8,692	8,405	10,360	13,341	10,845	7,512
Above Normal (16%)	6,088	5,850	7,442	8,771	17,594	8,923	6,263	7,839	11,793	14,732	10,881	6,029
Below Normal (13%)	6,415	5,424	4,116	4,781	7,144	5,061	6,045	8,088	12,075	14,472	11,247	6,827
Dry (24%)	6,362	4,793	3,982	4,073	3,468	3,755	4,970	7,223	11,682	13,500	9,299	4,770
Critical (15%)	5,047	4,375	3,694	3,396	3,555	3,398	6,266	6,501	10,302	11,206	9,074	4,555

Alternative 3 minus No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-31	-3,764	3,543	1,383	1,245	187	-59	535	1,110	0	406	-5,995
20%	110	-3,659	2,256	2,941	0	598	544	567	1,322	0	510	-4,663
30%	-6	-2,680	528	1,105	1,648	682	223	361	774	0	383	-4,047
40%	-224	-1,935	82	0	1,102	0	203	315	754	147	383	-3,002
50%	-254	-1,133	77	57	0	286	13	246	651	377	109	-561
60%	-181	-461	0	66	0	34	52	552	506	57	270	-137
70%	-134	-219	131	-1	0	0	0	310	592	-132	404	123
80%	-116	0	42	0	0	0	0	393	474	29	81	-29
90%	-178	0	0	0	0	0	15	357	-9	6	401	42
Long Term												
Full Simulation Period[b]	-102	-1,399	628	557	321	273	100	345	612	27	318	-1,954
Water Year Types[c]												
Wet (32%)	-485	-1,760	2,033	925	246	73	23	205	270	-44	468	-5,469
Above Normal (16%)	-34	-1,296	-341	823	1,413	939	24	499	692	32	336	-2,929
Below Normal (13%)	-186	-1,472	49	1,002	344	845	385	805	979	176	258	1,493
Dry (24%)	381	-1,566	84	3	-101	-72	163	337	797	355	215	97
Critical (15%)	-73	-382	73	-14	-16	38	-19	73	618	-508	197	137

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-3. Sacramento River d/s of Keswick Reservoir, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	8,539	11,351	16,050	19,967	30,773	18,389	10,234	9,624	13,028	15,000	11,592	14,752
20%	7,985	10,020	9,276	12,176	21,412	12,120	7,602	8,744	11,826	15,000	10,909	12,155
30%	7,297	8,317	5,359	7,873	10,878	7,676	6,731	8,256	11,248	15,000	10,724	10,381
40%	6,760	7,008	4,368	4,500	5,039	4,500	5,853	7,615	10,563	14,570	10,286	8,919
50%	5,983	5,888	4,000	4,126	4,500	4,214	5,356	7,192	10,254	13,991	9,978	6,151
60%	5,404	4,822	3,976	3,640	3,565	3,513	5,000	6,503	9,958	13,279	9,568	5,274
70%	5,001	4,379	3,524	3,251	3,250	3,250	4,500	6,168	9,430	12,770	9,152	4,693
80%	4,618	4,000	3,253	3,250	3,250	3,250	4,500	5,666	8,828	11,848	8,861	4,391
90%	4,292	3,502	3,250	3,250	3,250	3,250	3,702	5,145	8,406	10,797	8,089	4,145
Long Term												
Full Simulation Period[b]	6,232	6,954	7,064	8,758	11,392	8,318	6,589	7,361	10,520	13,413	9,951	8,038
Water Year Types[c]												
Wet (32%)	6,837	8,356	11,995	17,343	20,568	15,965	8,669	8,200	10,089	13,385	10,377	12,981
Above Normal (16%)	6,122	7,147	7,783	7,948	16,181	7,984	6,239	7,340	11,102	14,701	10,545	8,958
Below Normal (13%)	6,600	6,895	4,067	3,778	6,800	4,216	5,660	7,283	11,096	14,296	10,988	5,333
Dry (24%)	5,981	6,359	3,899	4,070	3,569	3,827	4,807	6,887	10,885	13,146	9,085	4,673
Critical (15%)	5,119	4,757	3,621	3,410	3,571	3,360	6,285	6,428	9,683	11,714	8,877	4,418

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	8,668	11,324	15,764	19,967	30,605	18,389	10,163	9,387	12,940	15,000	11,641	14,750
20%	7,868	10,000	9,191	12,163	21,412	12,271	7,595	8,527	11,910	15,000	11,065	11,992
30%	7,258	8,490	5,272	7,912	10,813	7,676	6,656	7,950	11,187	15,000	10,814	10,346
40%	6,651	7,099	4,275	4,500	5,039	4,500	5,875	7,559	10,628	14,598	10,451	8,736
50%	5,959	5,836	4,000	4,126	4,500	4,214	5,314	7,068	10,168	14,173	10,062	5,933
60%	5,518	4,834	3,975	3,671	3,565	3,547	5,003	6,436	9,875	13,393	9,635	5,357
70%	5,048	4,341	3,522	3,250	3,250	3,250	4,500	6,075	9,405	12,954	9,326	4,944
80%	4,818	4,000	3,253	3,250	3,250	3,250	4,500	5,822	8,795	11,851	8,818	4,505
90%	4,427	3,483	3,250	3,250	3,250	3,250	3,702	5,146	8,384	10,611	8,326	4,231
Long Term												
Full Simulation Period[b]	6,247	6,952	7,033	8,765	11,399	8,336	6,545	7,214	10,464	13,490	10,050	8,082
Water Year Types[c]												
Wet (32%)	6,770	8,471	11,936	17,340	20,582	15,979	8,670	8,203	10,080	13,420	10,387	12,950
Above Normal (16%)	6,222	7,015	7,819	7,984	16,119	8,008	6,238	7,262	11,075	14,723	10,501	8,858
Below Normal (13%)	6,583	6,886	4,038	3,814	6,882	4,245	5,705	7,231	11,063	14,293	10,767	5,512
Dry (24%)	5,947	6,300	3,874	4,070	3,576	3,848	4,737	6,509	10,882	13,247	9,397	4,768
Critical (15%)	5,330	4,741	3,569	3,396	3,569	3,363	6,060	6,177	9,388	11,977	9,259	4,574

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	128	-26	-286	0	-167	0	-71	-237	-88	0	49	-2
20%	-117	-20	-85	-13	0	151	-7	-217	84	0	156	-163
30%	-39	172	-87	39	-65	0	-75	-306	-61	0	90	-36
40%	-108	91	-93	0	0	0	22	-56	65	28	165	-183
50%	-24	-51	0	0	0	0	-42	-124	-86	181	84	-218
60%	114	12	0	30	0	34	3	-67	-83	114	67	84
70%	47	-38	-2	-1	0	0	0	-93	-24	184	173	251
80%	200	0	0	0	0	0	0	156	-33	3	-44	114
90%	136	-19	0	0	0	0	0	0	-22	-187	237	87
Long Term												
Full Simulation Period[b]	15	-2	-31	8	7	18	-44	-147	-56	78	99	44
Water Year Types[c]												
Wet (32%)	-67	115	-59	-3	14	15	0	3	-10	36	10	-31
Above Normal (16%)	100	-132	36	36	-62	24	-1	-78	-27	23	-43	-100
Below Normal (13%)	-18	-10	-29	36	82	29	46	-52	-33	-3	-221	179
Dry (24%)	-33	-59	-25	0	7	21	-70	-378	-3	101	312	94
Critical (15%)	210	-16	-52	-14	-2	3	-225	-251	-295	263	381	157

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-4. Sacramento River d/s of Keswick Reservoir, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	8,508	7,576	19,509	20,146	30,874	18,571	10,177	10,192	14,534	15,000	12,723	8,971
20%	7,890	6,794	11,462	15,160	21,412	12,718	8,220	9,232	13,041	15,000	11,885	6,409
30%	7,356	5,587	6,088	8,978	13,139	8,359	6,971	8,471	12,242	15,000	11,209	6,029
40%	6,136	5,210	4,329	4,737	5,375	4,500	6,320	7,928	11,433	14,639	10,726	5,666
50%	5,715	4,858	4,000	4,333	4,500	4,500	5,731	7,458	11,014	14,084	10,347	5,475
60%	5,257	4,364	3,949	3,798	3,735	3,668	5,202	7,098	10,374	13,509	9,891	5,246
70%	4,871	4,181	3,674	3,251	3,250	3,250	4,500	6,497	9,974	13,051	9,282	4,637
80%	4,389	4,000	3,275	3,250	3,250	3,250	4,500	6,095	9,209	11,861	8,985	4,312
90%	4,000	3,501	3,250	3,250	3,250	3,250	3,713	5,503	8,402	10,691	8,150	4,147
Long Term												
Full Simulation Period[b]	6,028	5,615	7,660	9,366	11,718	8,569	6,754	7,708	11,203	13,462	10,417	5,836
Water Year Types[c]												
Wet (32%)	6,391	6,705	14,039	18,191	20,773	16,037	8,687	8,398	10,243	13,254	11,143	7,306
Above Normal (16%)	5,940	5,801	7,417	9,024	17,709	8,800	6,317	7,789	12,028	14,804	11,351	6,065
Below Normal (13%)	6,491	5,680	4,134	4,805	7,156	5,076	6,127	8,129	12,334	14,533	11,988	5,429
Dry (24%)	6,092	4,768	3,855	4,123	3,591	3,716	5,107	7,240	11,737	13,465	8,939	4,794
Critical (15%)	4,806	4,404	3,675	3,533	3,335	3,431	6,355	6,519	10,465	11,474	8,854	4,513

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	8,539	11,351	16,050	19,967	30,773	18,389	10,234	9,624	13,028	15,000	11,592	14,752
20%	7,985	10,020	9,276	12,176	21,412	12,120	7,602	8,744	11,826	15,000	10,909	12,155
30%	7,297	8,317	5,359	7,873	10,878	7,676	6,731	8,256	11,248	15,000	10,724	10,381
40%	6,760	7,008	4,368	4,500	5,039	4,500	5,853	7,615	10,563	14,570	10,286	8,919
50%	5,983	5,888	4,000	4,126	4,500	4,214	5,356	7,192	10,254	13,991	9,978	6,151
60%	5,404	4,822	3,976	3,640	3,565	3,513	5,000	6,503	9,958	13,279	9,568	5,274
70%	5,001	4,379	3,524	3,251	3,250	3,250	4,500	6,168	9,430	12,770	9,152	4,693
80%	4,618	4,000	3,253	3,250	3,250	3,250	4,500	5,666	8,828	11,848	8,861	4,391
90%	4,292	3,502	3,250	3,250	3,250	3,250	3,702	5,145	8,406	10,797	8,089	4,145
Long Term												
Full Simulation Period[b]	6,232	6,954	7,064	8,758	11,392	8,318	6,589	7,361	10,520	13,413	9,951	8,038
Water Year Types[c]												
Wet (32%)	6,837	8,356	11,995	17,343	20,568	15,965	8,669	8,200	10,089	13,385	10,377	12,981
Above Normal (16%)	6,122	7,147	7,783	7,948	16,181	7,984	6,239	7,340	11,102	14,701	10,545	8,958
Below Normal (13%)	6,600	6,895	4,067	3,778	6,800	4,216	5,660	7,283	11,096	14,296	10,988	5,333
Dry (24%)	5,981	6,359	3,899	4,070	3,569	3,827	4,807	6,887	10,885	13,146	9,085	4,673
Critical (15%)	5,119	4,757	3,621	3,410	3,571	3,360	6,285	6,428	9,683	11,714	8,877	4,418

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	31	3,775	-3,459	-179	-101	-182	58	-568	-1,506	0	-1,131	5,781
20%	95	3,227	-2,186	-2,985	0	-598	-618	-487	-1,215	0	-976	5,746
30%	-59	2,731	-728	-1,105	-2,261	-682	-240	-215	-994	0	-485	4,352
40%	624	1,798	39	-237	-336	0	-467	-313	-870	-69	-440	3,252
50%	268	1,029	0	-207	0	-286	-375	-266	-760	-93	-369	676
60%	147	458	27	-158	-170	-155	-202	-595	-416	-230	-323	27
70%	130	198	-150	0	0	0	0	-328	-545	-281	-129	57
80%	229	0	-23	0	0	0	0	-428	-381	-14	-124	79
90%	292	0	0	0	0	0	-11	-358	4	106	-62	-2
Long Term												
Full Simulation Period[b]	204	1,340	-596	-608	-326	-251	-164	-347	-684	-50	-466	2,202
Water Year Types[c]												
Wet (32%)	446	1,651	-2,044	-848	-205	-73	-17	-198	-154	131	-766	5,675
Above Normal (16%)	182	1,346	366	-1,076	-1,528	-816	-78	-449	-926	-103	-806	2,893
Below Normal (13%)	109	1,215	-67	-1,027	-356	-860	-467	-846	-1,238	-238	-1,000	-96
Dry (24%)	-111	1,591	44	-53	-22	111	-300	-353	-852	-319	146	-121
Critical (15%)	314	353	-54	-123	236	-71	-70	-91	-782	239	23	-96

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-5. Sacramento River d/s of Keswick Reservoir, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,508	7,576	19,509	20,146	30,874	18,571	10,177	10,192	14,534	15,000	12,723	8,971
20%	7,890	6,794	11,462	15,160	21,412	12,718	8,220	9,232	13,041	15,000	11,885	6,409
30%	7,356	5,587	6,088	8,978	13,139	8,359	6,971	8,471	12,242	15,000	11,209	6,029
40%	6,136	5,210	4,329	4,737	5,375	4,500	6,320	7,928	11,433	14,639	10,726	5,666
50%	5,715	4,858	4,000	4,333	4,500	4,500	5,731	7,458	11,014	14,084	10,347	5,475
60%	5,257	4,364	3,949	3,798	3,735	3,668	5,202	7,098	10,374	13,509	9,891	5,246
70%	4,871	4,181	3,674	3,251	3,250	3,250	4,500	6,497	9,974	13,051	9,282	4,637
80%	4,389	4,000	3,275	3,250	3,250	3,250	4,500	6,095	9,209	11,861	8,985	4,312
90%	4,000	3,501	3,250	3,250	3,250	3,250	3,713	5,503	8,402	10,691	8,150	4,147
Long Term												
Full Simulation Period[b]	6,028	5,615	7,660	9,366	11,718	8,569	6,754	7,708	11,203	13,462	10,417	5,836
Water Year Types[c]												
Wet (32%)	6,391	6,705	14,039	18,191	20,773	16,037	8,687	8,398	10,243	13,254	11,143	7,306
Above Normal (16%)	5,940	5,801	7,417	9,024	17,709	8,800	6,317	7,789	12,028	14,804	11,351	6,065
Below Normal (13%)	6,491	5,680	4,134	4,805	7,156	5,076	6,127	8,129	12,334	14,533	11,988	5,429
Dry (24%)	6,092	4,768	3,855	4,123	3,591	3,716	5,107	7,240	11,737	13,465	8,939	4,794
Critical (15%)	4,806	4,404	3,675	3,533	3,335	3,431	6,355	6,519	10,465	11,474	8,854	4,513

Alternative 3

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,508	7,587	19,593	21,351	32,017	18,576	10,175	10,159	14,138	15,000	11,998	8,758
20%	8,095	6,362	11,532	15,117	21,412	12,718	8,146	9,311	13,148	15,000	11,420	7,492
30%	7,291	5,638	5,887	8,978	12,526	8,359	6,954	8,617	12,022	15,000	11,107	6,335
40%	6,536	5,073	4,450	4,500	6,142	4,500	6,056	7,930	11,316	14,717	10,669	5,916
50%	5,729	4,755	4,077	4,184	4,500	4,500	5,368	7,437	10,905	14,368	10,087	5,590
60%	5,223	4,361	3,976	3,706	3,565	3,547	5,053	7,055	10,464	13,336	9,838	5,137
70%	4,867	4,160	3,655	3,250	3,250	3,250	4,500	6,478	10,022	12,638	9,556	4,817
80%	4,503	4,000	3,294	3,250	3,250	3,250	4,500	6,060	9,302	11,876	8,943	4,361
90%	4,114	3,501	3,250	3,250	3,250	3,250	3,717	5,503	8,397	10,803	8,489	4,186
Long Term												
Full Simulation Period[b]	6,130	5,556	7,692	9,315	11,713	8,592	6,689	7,706	11,131	13,440	10,268	6,083
Water Year Types[c]												
Wet (32%)	6,352	6,595	14,028	18,268	20,814	16,038	8,692	8,405	10,360	13,341	10,845	7,512
Above Normal (16%)	6,088	5,850	7,442	8,771	17,594	8,923	6,263	7,839	11,793	14,732	10,881	6,029
Below Normal (13%)	6,415	5,424	4,116	4,781	7,144	5,061	6,045	8,088	12,075	14,472	11,247	6,827
Dry (24%)	6,362	4,793	3,982	4,073	3,468	3,755	4,970	7,223	11,682	13,500	9,299	4,770
Critical (15%)	5,047	4,375	3,694	3,396	3,555	3,398	6,266	6,501	10,302	11,206	9,074	4,555

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	11	84	1,205	1,143	5	-2	-33	-395	0	-725	-213
20%	205	-432	70	-44	0	0	-74	79	107	0	-465	1,083
30%	-65	51	-201	0	-613	0	-17	146	-220	0	-102	305
40%	400	-136	121	-237	766	0	-264	2	-117	78	-56	250
50%	14	-103	77	-150	0	0	-362	-21	-109	284	-260	114
60%	-34	-3	27	-92	-170	-121	-149	-43	90	-173	-53	-109
70%	-4	-20	-19	-1	0	0	0	-18	47	-413	275	180
80%	113	0	19	0	0	0	0	-35	93	15	-42	50
90%	114	0	0	0	0	0	4	0	-6	112	339	39
Long Term												
Full Simulation Period[b]	102	-59	32	-51	-5	22	-64	-2	-72	-23	-148	247
Water Year Types[c]												
Wet (32%)	-38	-109	-11	78	41	0	5	7	116	87	-298	206
Above Normal (16%)	148	50	25	-253	-115	123	-54	50	-235	-72	-470	-36
Below Normal (13%)	-76	-256	-18	-24	-12	-15	-82	-41	-259	-61	-742	1,398
Dry (24%)	270	25	128	-50	-123	39	-137	-16	-55	36	360	-24
Critical (15%)	241	-29	18	-137	220	-33	-89	-18	-164	-269	221	41

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-6. Sacramento River d/s of Keswick Reservoir, Monthly Flow

Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,508	7,576	19,509	20,146	30,874	18,571	10,177	10,192	14,534	15,000	12,723	8,971
20%	7,890	6,794	11,462	15,160	21,412	12,718	8,220	9,232	13,041	15,000	11,885	6,409
30%	7,356	5,587	6,088	8,978	13,139	8,359	6,971	8,471	12,242	15,000	11,209	6,029
40%	6,136	5,210	4,329	4,737	5,375	4,500	6,320	7,928	11,433	14,639	10,726	5,666
50%	5,715	4,858	4,000	4,333	4,500	4,500	5,731	7,458	11,014	14,084	10,347	5,475
60%	5,257	4,364	3,949	3,798	3,735	3,668	5,202	7,098	10,374	13,509	9,891	5,246
70%	4,871	4,181	3,674	3,251	3,250	3,250	4,500	6,497	9,974	13,051	9,282	4,637
80%	4,389	4,000	3,275	3,250	3,250	3,250	4,500	6,095	9,209	11,861	8,985	4,312
90%	4,000	3,501	3,250	3,250	3,250	3,250	3,713	5,503	8,402	10,691	8,150	4,147
Long Term												
Full Simulation Period[b]	6,028	5,615	7,660	9,366	11,718	8,569	6,754	7,708	11,203	13,462	10,417	5,836
Water Year Types[c]												
Wet (32%)	6,391	6,705	14,039	18,191	20,773	16,037	8,687	8,398	10,243	13,254	11,143	7,306
Above Normal (16%)	5,940	5,801	7,417	9,024	17,709	8,800	6,317	7,789	12,028	14,804	11,351	6,065
Below Normal (13%)	6,491	5,680	4,134	4,805	7,156	5,076	6,127	8,129	12,334	14,533	11,988	5,429
Dry (24%)	6,092	4,768	3,855	4,123	3,591	3,716	5,107	7,240	11,737	13,465	8,939	4,794
Critical (15%)	4,806	4,404	3,675	3,533	3,335	3,431	6,355	6,519	10,465	11,474	8,854	4,513

Alternative 5

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	8,668	11,324	15,764	19,967	30,605	18,389	10,163	9,387	12,940	15,000	11,641	14,750
20%	7,868	10,000	9,191	12,163	21,412	12,271	7,595	8,527	11,910	15,000	11,065	11,992
30%	7,258	8,490	5,272	7,912	10,813	7,676	6,656	7,950	11,187	15,000	10,814	10,346
40%	6,651	7,099	4,275	4,500	5,039	4,500	5,875	7,559	10,628	14,598	10,451	8,736
50%	5,959	5,836	4,000	4,126	4,500	4,214	5,314	7,068	10,168	14,173	10,062	5,933
60%	5,518	4,834	3,975	3,671	3,565	3,547	5,003	6,436	9,875	13,393	9,635	5,357
70%	5,048	4,341	3,522	3,250	3,250	3,250	4,500	6,075	9,405	12,954	9,326	4,944
80%	4,818	4,000	3,253	3,250	3,250	3,250	4,500	5,822	8,795	11,851	8,818	4,505
90%	4,427	3,483	3,250	3,250	3,250	3,250	3,702	5,146	8,384	10,611	8,326	4,231
Long Term												
Full Simulation Period[b]	6,247	6,952	7,033	8,765	11,399	8,336	6,545	7,214	10,464	13,490	10,050	8,082
Water Year Types[c]												
Wet (32%)	6,770	8,471	11,936	17,340	20,582	15,979	8,670	8,203	10,080	13,420	10,387	12,950
Above Normal (16%)	6,222	7,015	7,819	7,984	16,119	8,008	6,238	7,262	11,075	14,723	10,501	8,858
Below Normal (13%)	6,583	6,886	4,038	3,814	6,882	4,245	5,705	7,231	11,063	14,293	10,767	5,512
Dry (24%)	5,947	6,300	3,874	4,070	3,576	3,848	4,737	6,509	10,882	13,247	9,397	4,768
Critical (15%)	5,330	4,741	3,569	3,396	3,569	3,363	6,060	6,177	9,388	11,977	9,259	4,574

Alternative 5 minus Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	159	3,749	-3,745	-179	-269	-182	-14	-805	-1,594	0	-1,082	5,779
20%	-22	3,206	-2,271	-2,998	0	-447	-625	-704	-1,131	0	-820	5,583
30%	-98	2,903	-816	-1,065	-2,326	-682	-315	-521	-1,055	0	-395	4,316
40%	515	1,889	-54	-237	-336	0	-445	-369	-805	-41	-275	3,070
50%	244	978	0	-207	0	-286	-417	-390	-845	88	-285	458
60%	261	470	26	-127	-170	-121	-199	-661	-499	-116	-256	111
70%	177	160	-152	-1	0	0	0	-421	-569	-97	44	307
80%	429	0	-23	0	0	0	0	-272	-414	-11	-167	193
90%	427	-19	0	0	0	0	-11	-357	-18	-81	175	84
Long Term												
Full Simulation Period[b]	219	1,337	-627	-600	-319	-233	-208	-494	-740	28	-367	2,246
Water Year Types[c]												
Wet (32%)	380	1,766	-2,103	-850	-191	-58	-17	-195	-164	166	-756	5,644
Above Normal (16%)	283	1,214	403	-1,040	-1,590	-792	-79	-527	-953	-81	-850	2,793
Below Normal (13%)	92	1,206	-96	-991	-274	-831	-422	-897	-1,271	-241	-1,221	83
Dry (24%)	-144	1,532	19	-53	-15	132	-370	-731	-855	-218	458	-26
Critical (15%)	524	337	-107	-137	235	-68	-295	-342	-1,077	502	405	61

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

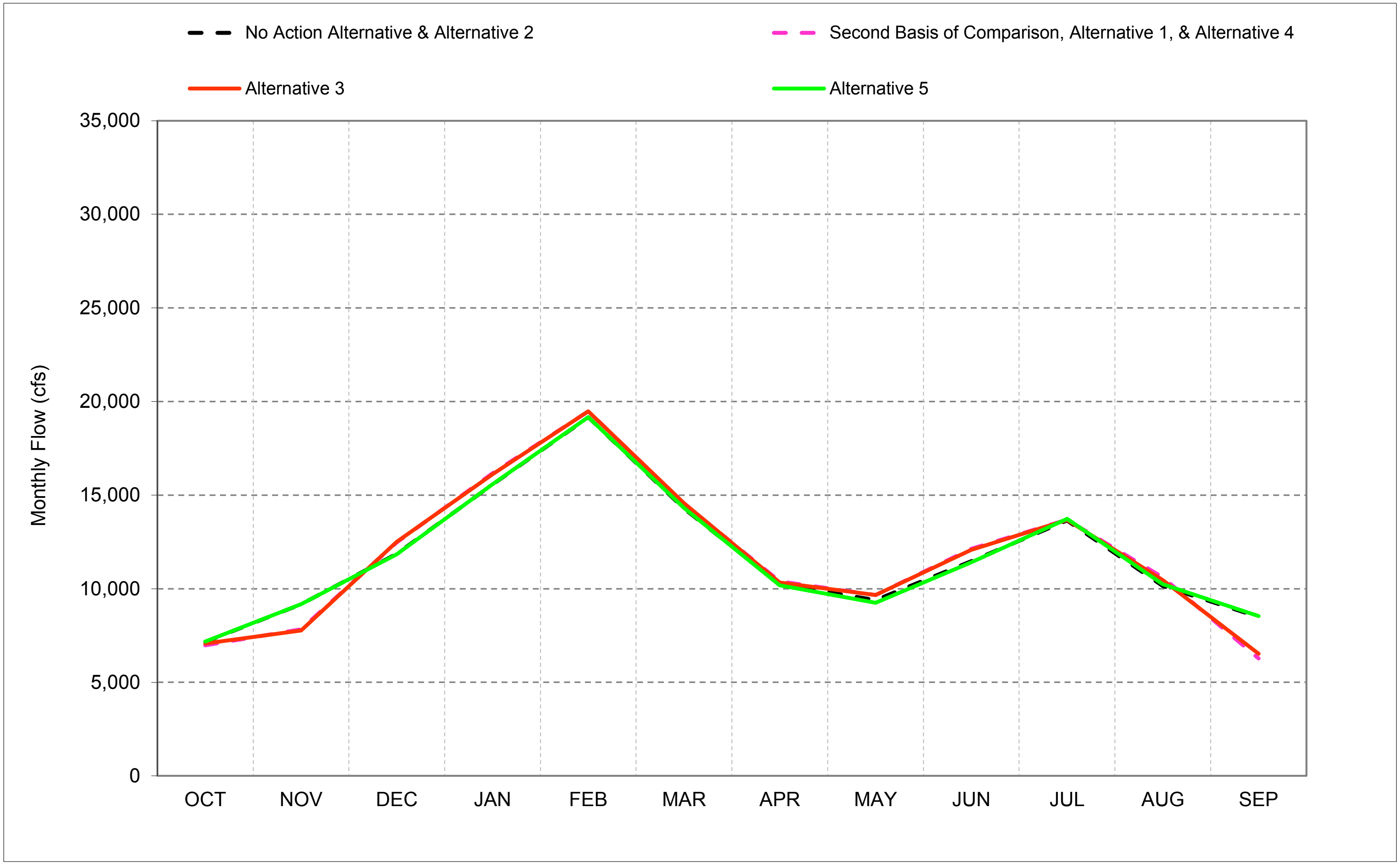
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.24. Sacramento River Flow at Bend Bridge

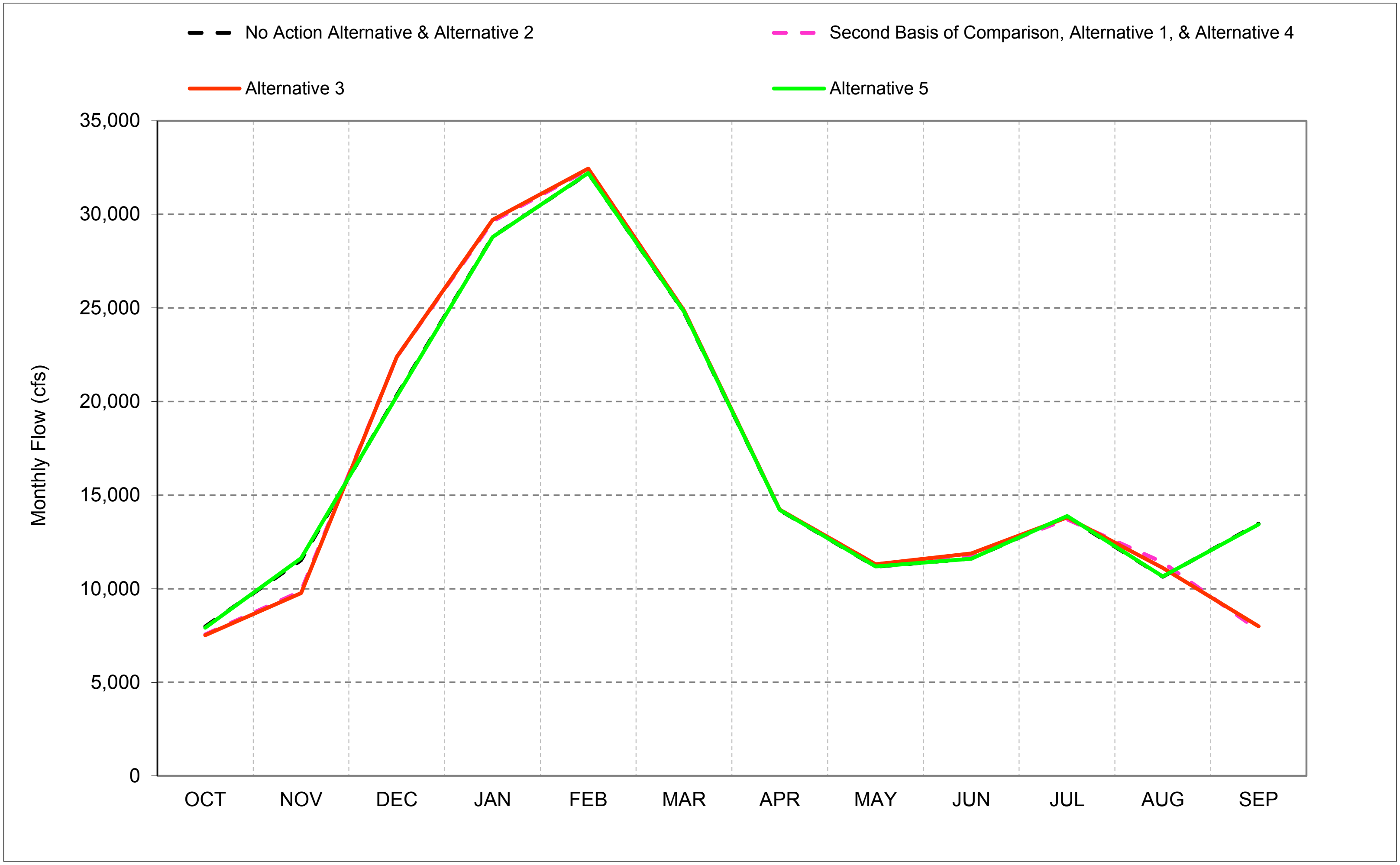
Figure C-24-1. Sacramento River at Bend Bridge, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-24-2. Sacramento River at Bend Bridge, Wet Year* Long-Term Average Flow**

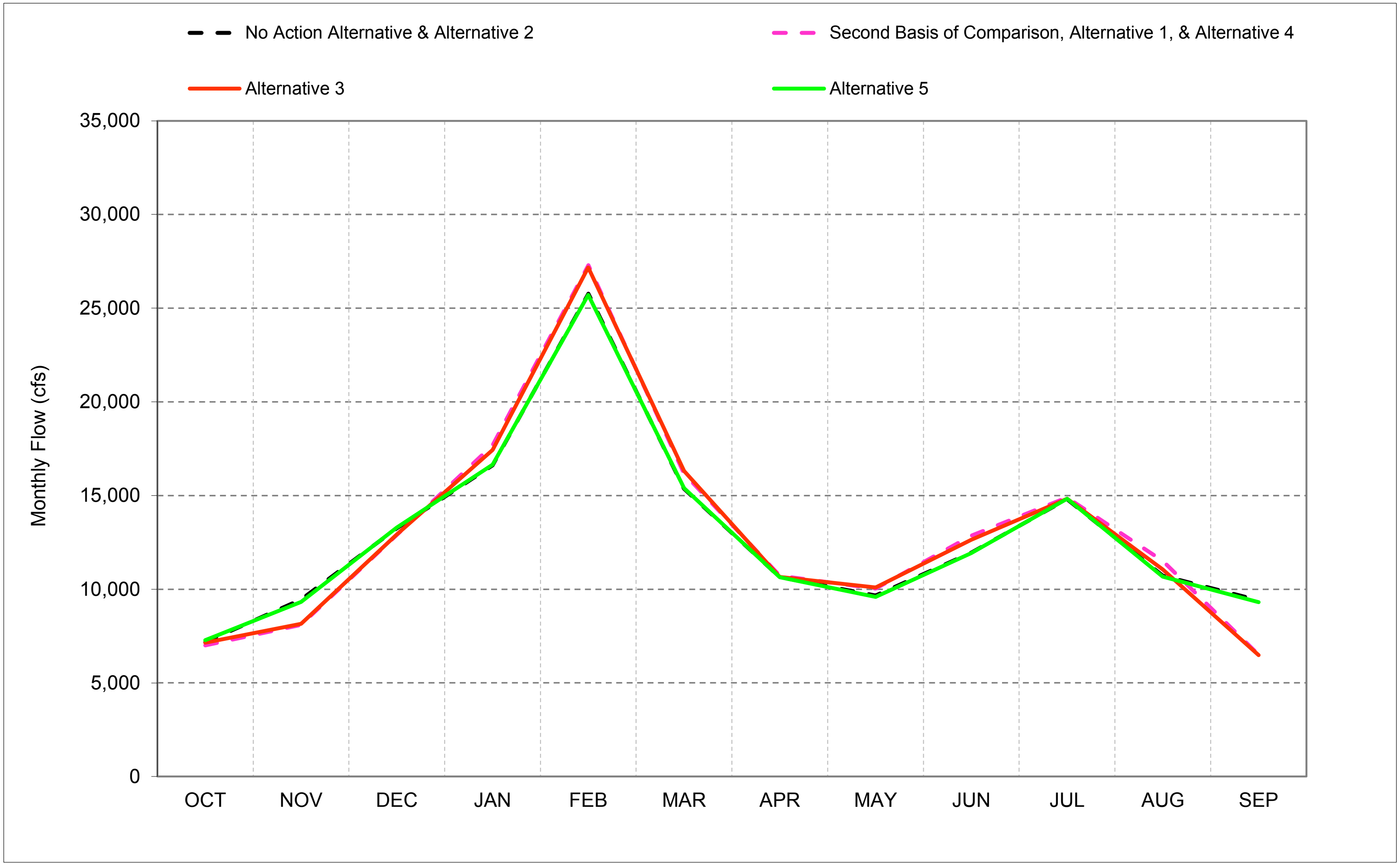


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-24-3. Sacramento River at Bend Bridge, Above Normal Year* Long-Term Average Flow**

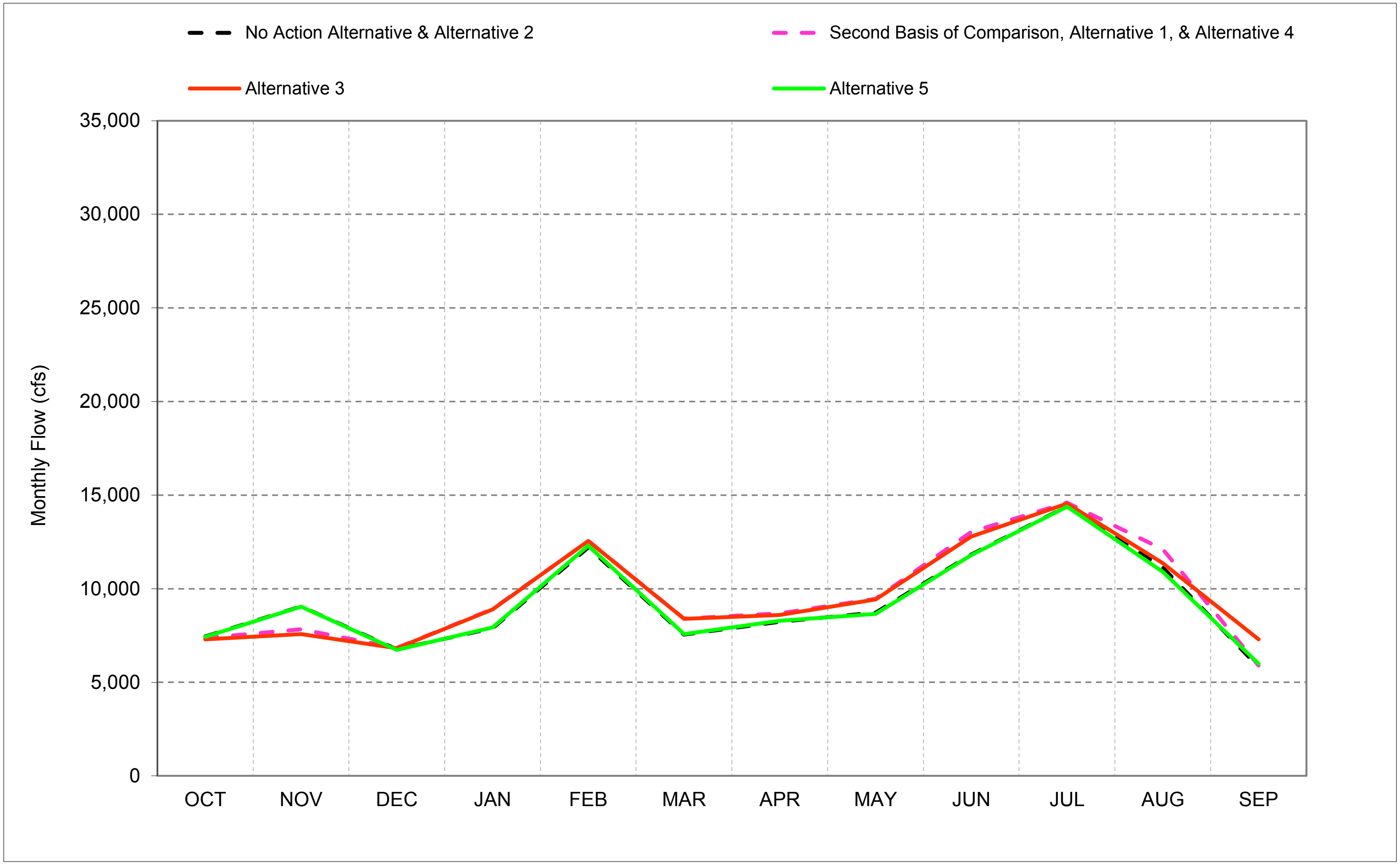


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-24-4. Sacramento River at Bend Bridge, Below Normal Year* Long-Term Average Flow**

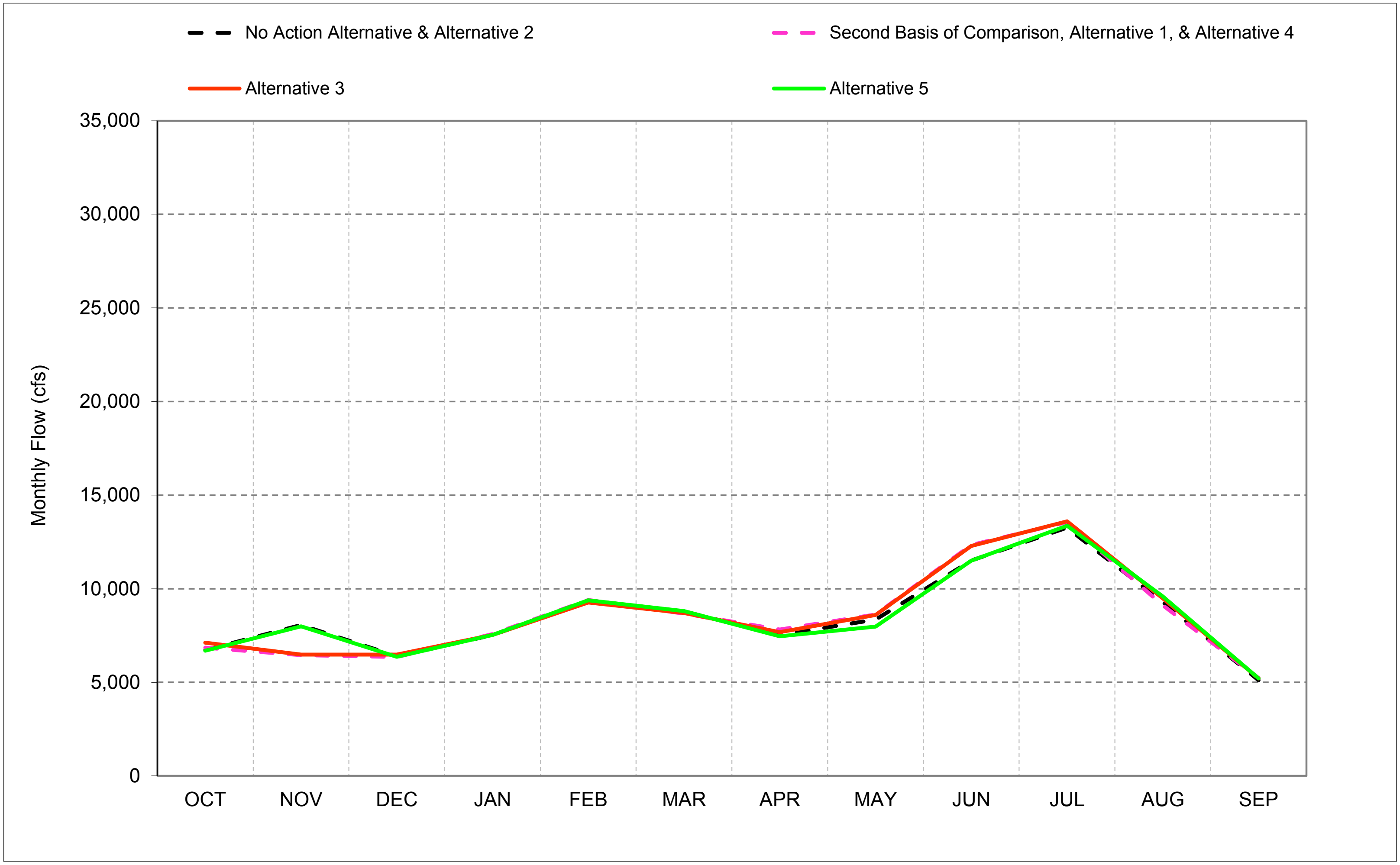


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-24-5. Sacramento River at Bend Bridge, Dry Year* Long-Term Average Flow**

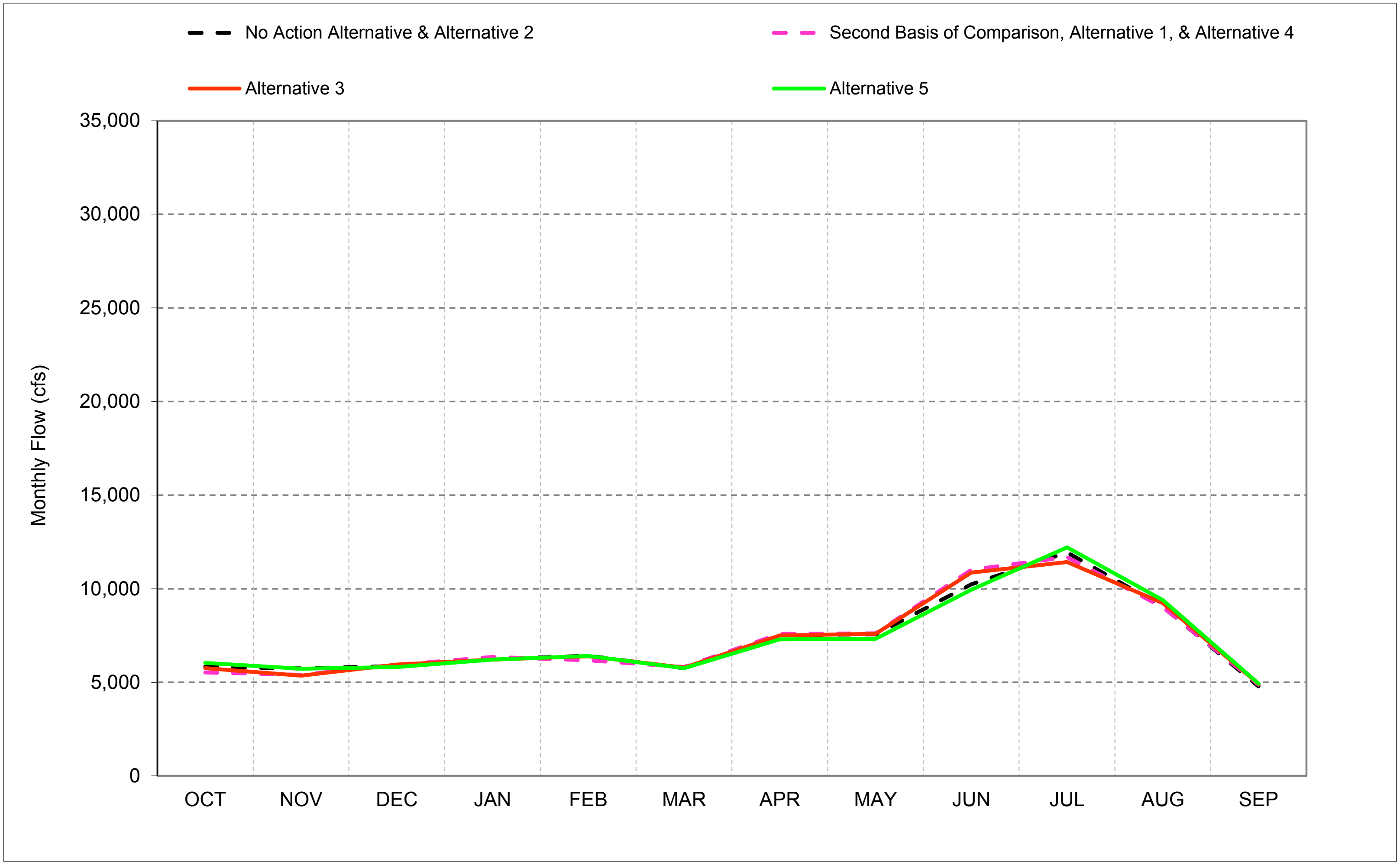


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-24-6. Sacramento River at Bend Bridge, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-1. Sacramento River at Bend Bridge, Monthly Flow

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,666	12,952	25,817	35,635	46,146	29,257	16,364	12,625	13,670	15,334	11,928	15,074
20%	8,705	12,051	16,957	23,582	31,477	19,298	12,989	10,628	12,322	15,096	11,025	12,855
30%	8,311	10,913	11,251	15,985	21,153	13,887	9,331	9,895	12,023	15,004	10,833	10,819
40%	7,595	10,007	8,517	11,441	12,917	10,373	8,599	9,317	11,432	14,799	10,430	9,267
50%	6,667	8,244	7,016	9,051	10,692	8,819	8,344	8,693	11,146	14,437	10,242	6,727
60%	6,367	7,281	6,534	7,486	8,639	7,841	7,824	8,246	10,849	13,548	9,732	5,623
70%	5,897	6,739	6,023	6,528	7,662	7,207	7,219	7,687	10,648	12,954	9,282	5,068
80%	5,567	5,663	5,334	5,902	6,520	5,947	6,917	7,374	10,107	12,203	8,933	4,647
90%	5,271	5,119	5,060	4,956	5,074	4,966	6,354	6,894	9,650	11,155	8,487	4,541
Long Term												
Full Simulation Period[b]	7,162	9,170	11,871	15,570	19,157	14,290	10,232	9,392	11,467	13,652	10,151	8,489
Water Year Types[c]												
Wet (32%)	7,983	11,521	20,328	28,792	32,195	24,782	14,201	11,182	11,611	13,851	10,642	13,466
Above Normal (16%)	7,175	9,450	13,251	16,613	25,773	15,371	10,643	9,666	11,952	14,807	10,718	9,412
Below Normal (13%)	7,451	9,047	6,762	7,891	12,211	7,549	8,235	8,715	11,826	14,395	11,126	5,819
Dry (24%)	6,724	8,054	6,390	7,526	9,373	8,779	7,528	8,354	11,505	13,262	9,276	5,112
Critical (15%)	5,833	5,748	5,872	6,235	6,415	5,750	7,525	7,567	10,241	11,940	9,035	4,780

Alternative 1

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,210	11,246	30,228	37,208	47,106	29,294	16,401	12,695	14,989	15,329	12,928	9,537
20%	8,808	8,825	18,528	25,046	31,478	18,689	12,991	11,024	13,990	15,135	12,090	6,805
30%	8,518	7,602	11,795	16,326	22,727	14,977	9,942	10,267	12,778	14,969	11,260	6,468
40%	7,130	7,155	8,883	13,229	13,125	10,879	9,199	9,671	12,147	14,760	10,984	6,129
50%	6,545	6,725	7,032	9,590	10,802	8,958	8,529	9,034	11,715	14,420	10,409	5,846
60%	6,018	6,351	6,364	7,482	8,684	7,944	7,994	8,497	11,355	13,635	10,207	5,609
70%	5,634	5,821	5,840	6,526	7,561	7,207	7,475	8,070	11,099	13,202	9,502	5,157
80%	5,395	5,462	5,274	5,906	6,519	5,949	7,110	7,596	10,536	12,408	9,024	4,642
90%	4,882	4,940	4,878	4,979	5,147	5,080	6,586	7,102	10,064	11,119	8,382	4,526
Long Term												
Full Simulation Period[b]	6,974	7,830	12,476	16,171	19,478	14,539	10,390	9,657	12,139	13,686	10,606	6,279
Water Year Types[c]												
Wet (32%)	7,555	9,871	22,382	29,625	32,396	24,855	14,217	11,299	11,760	13,714	11,404	7,783
Above Normal (16%)	7,009	8,103	12,892	17,688	27,292	16,180	10,714	10,030	12,864	14,893	11,513	6,508
Below Normal (13%)	7,368	7,826	6,836	8,912	12,557	8,405	8,681	9,459	13,033	14,597	12,101	5,898
Dry (24%)	6,848	6,461	6,360	7,577	9,392	8,666	7,821	8,617	12,341	13,561	9,116	5,227
Critical (15%)	5,523	5,398	5,929	6,357	6,178	5,823	7,592	7,607	11,018	11,691	9,009	4,874

Alternative 1 minus No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-456	-1,706	4,411	1,573	961	37	37	70	1,319	-5	1,000	-5,537
20%	103	-3,226	1,571	1,464	0	-609	2	396	1,668	39	1,066	-6,050
30%	207	-3,311	544	341	1,574	1,090	611	372	754	-34	427	-4,351
40%	-465	-2,852	366	1,788	208	506	599	354	715	-39	553	-3,138
50%	-121	-1,519	16	539	109	139	186	341	569	-17	167	-881
60%	-350	-930	-170	-4	45	102	170	252	506	87	475	-14
70%	-264	-918	-182	-1	-101	0	257	383	451	248	220	89
80%	-172	-201	-60	4	-1	2	194	222	430	205	91	-5
90%	-389	-179	-182	22	73	113	232	208	413	-36	-105	-16
Long Term												
Full Simulation Period[b]	-188	-1,340	605	601	321	250	158	265	671	34	456	-2,210
Water Year Types[c]												
Wet (32%)	-427	-1,650	2,054	832	201	73	17	118	149	-137	763	-5,682
Above Normal (16%)	-166	-1,347	-359	1,076	1,520	809	71	364	912	85	795	-2,904
Below Normal (13%)	-83	-1,221	74	1,020	347	856	446	744	1,207	202	975	79
Dry (24%)	124	-1,593	-31	50	20	-112	294	262	836	299	-160	114
Critical (15%)	-309	-350	57	122	-237	73	66	40	777	-250	-26	94

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-2. Sacramento River at Bend Bridge, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	9,666	12,952	25,817	35,635	46,146	29,257	16,364	12,625	13,670	15,334	11,928	15,074
20%	8,705	12,051	16,957	23,582	31,477	19,298	12,989	10,628	12,322	15,096	11,025	12,855
30%	8,311	10,913	11,251	15,985	21,153	13,887	9,331	9,895	12,023	15,004	10,833	10,819
40%	7,595	10,007	8,517	11,441	12,917	10,373	8,599	9,317	11,432	14,799	10,430	9,267
50%	6,667	8,244	7,016	9,051	10,692	8,819	8,344	8,693	11,146	14,437	10,242	6,727
60%	6,367	7,281	6,534	7,486	8,639	7,841	7,824	8,246	10,849	13,548	9,732	5,623
70%	5,897	6,739	6,023	6,528	7,662	7,207	7,219	7,687	10,648	12,954	9,282	5,068
80%	5,567	5,663	5,334	5,902	6,520	5,947	6,917	7,374	10,107	12,203	8,933	4,647
90%	5,271	5,119	5,060	4,956	5,074	4,966	6,354	6,894	9,650	11,155	8,487	4,541
Long Term												
Full Simulation Period[b]	7,162	9,170	11,871	15,570	19,157	14,290	10,232	9,392	11,467	13,652	10,151	8,489
Water Year Types[c]												
Wet (32%)	7,983	11,521	20,328	28,792	32,195	24,782	14,201	11,182	11,611	13,851	10,642	13,466
Above Normal (16%)	7,175	9,450	13,251	16,613	25,773	15,371	10,643	9,666	11,952	14,807	10,718	9,412
Below Normal (13%)	7,451	9,047	6,762	7,891	12,211	7,549	8,235	8,715	11,826	14,395	11,126	5,819
Dry (24%)	6,724	8,054	6,390	7,526	9,373	8,779	7,528	8,354	11,505	13,262	9,276	5,112
Critical (15%)	5,833	5,748	5,872	6,235	6,415	5,750	7,525	7,567	10,241	11,940	9,035	4,780

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	9,386	11,729	30,238	38,412	47,106	29,297	16,363	12,678	14,680	15,332	12,196	9,287
20%	8,822	8,548	19,566	25,043	31,476	18,693	12,990	10,993	13,862	15,171	11,609	8,174
30%	8,250	7,629	11,041	16,361	22,570	14,976	9,843	10,357	12,690	14,979	11,239	6,799
40%	7,642	7,085	8,883	12,757	12,818	10,771	9,030	9,720	12,023	14,799	10,753	6,356
50%	6,481	6,796	7,033	9,562	10,750	8,962	8,465	9,155	11,717	14,463	10,351	5,959
60%	6,047	6,280	6,540	7,482	8,683	7,944	7,957	8,529	11,338	13,601	10,114	5,491
70%	5,790	5,826	5,947	6,525	7,686	7,207	7,277	8,103	11,119	12,957	9,773	5,224
80%	5,423	5,462	5,360	5,903	6,587	5,951	6,964	7,646	10,568	12,254	9,075	4,828
90%	5,263	5,120	4,897	4,956	5,145	4,977	6,580	6,967	10,057	11,151	8,644	4,543
Long Term												
Full Simulation Period[b]	7,074	7,769	12,509	16,120	19,474	14,561	10,327	9,658	12,070	13,667	10,462	6,529
Water Year Types[c]												
Wet (32%)	7,512	9,763	22,373	29,702	32,436	24,855	14,223	11,307	11,877	13,801	11,107	7,992
Above Normal (16%)	7,153	8,152	12,917	17,436	27,179	16,303	10,662	10,086	12,635	14,830	11,050	6,478
Below Normal (13%)	7,291	7,570	6,819	8,887	12,545	8,390	8,603	9,424	12,780	14,543	11,365	7,301
Dry (24%)	7,120	6,483	6,487	7,525	9,270	8,705	7,686	8,605	12,290	13,602	9,481	5,203
Critical (15%)	5,763	5,362	5,948	6,220	6,399	5,788	7,505	7,592	10,857	11,426	9,234	4,914

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-280	-1,223	4,420	2,777	961	40	-1	53	1,010	-2	268	-5,786
20%	117	-3,503	2,609	1,461	-1	-605	2	365	1,540	75	585	-4,681
30%	-61	-3,284	-210	377	1,417	1,088	512	462	667	-24	406	-4,020
40%	47	-2,922	366	1,316	-99	397	430	403	591	1	322	-2,911
50%	-186	-1,448	17	511	58	143	122	462	571	26	109	-768
60%	-320	-1,001	7	-3	44	103	133	283	488	53	382	-132
70%	-108	-913	-76	-3	24	0	58	416	471	3	491	156
80%	-144	-201	26	1	67	3	47	272	462	52	142	181
90%	-8	2	-162	0	71	11	226	73	406	-4	158	2
Long Term												
Full Simulation Period[b]	-88	-1,401	638	550	317	271	95	266	602	15	311	-1,960
Water Year Types[c]												
Wet (32%)	-471	-1,758	2,044	910	241	73	22	125	266	-50	465	-5,474
Above Normal (16%)	-21	-1,297	-333	823	1,406	932	19	420	683	23	332	-2,934
Below Normal (13%)	-160	-1,477	57	995	334	840	367	709	954	149	239	1,482
Dry (24%)	396	-1,571	96	-1	-103	-73	158	250	785	340	204	90
Critical (15%)	-70	-386	76	-15	-16	38	-20	25	616	-514	199	134

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-3. Sacramento River at Bend Bridge, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	9,666	12,952	25,817	35,635	46,146	29,257	16,364	12,625	13,670	15,334	11,928	15,074
20%	8,705	12,051	16,957	23,582	31,477	19,298	12,989	10,628	12,322	15,096	11,025	12,855
30%	8,311	10,913	11,251	15,985	21,153	13,887	9,331	9,895	12,023	15,004	10,833	10,819
40%	7,595	10,007	8,517	11,441	12,917	10,373	8,599	9,317	11,432	14,799	10,430	9,267
50%	6,667	8,244	7,016	9,051	10,692	8,819	8,344	8,693	11,146	14,437	10,242	6,727
60%	6,367	7,281	6,534	7,486	8,639	7,841	7,824	8,246	10,849	13,548	9,732	5,623
70%	5,897	6,739	6,023	6,528	7,662	7,207	7,219	7,687	10,648	12,954	9,282	5,068
80%	5,567	5,663	5,334	5,902	6,520	5,947	6,917	7,374	10,107	12,203	8,933	4,647
90%	5,271	5,119	5,060	4,956	5,074	4,966	6,354	6,894	9,650	11,155	8,487	4,541
Long Term												
Full Simulation Period[b]	7,162	9,170	11,871	15,570	19,157	14,290	10,232	9,392	11,467	13,652	10,151	8,489
Water Year Types[c]												
Wet (32%)	7,983	11,521	20,328	28,792	32,195	24,782	14,201	11,182	11,611	13,851	10,642	13,466
Above Normal (16%)	7,175	9,450	13,251	16,613	25,773	15,371	10,643	9,666	11,952	14,807	10,718	9,412
Below Normal (13%)	7,451	9,047	6,762	7,891	12,211	7,549	8,235	8,715	11,826	14,395	11,126	5,819
Dry (24%)	6,724	8,054	6,390	7,526	9,373	8,779	7,528	8,354	11,505	13,262	9,276	5,112
Critical (15%)	5,833	5,748	5,872	6,235	6,415	5,750	7,525	7,567	10,241	11,940	9,035	4,780

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	9,789	12,949	24,963	35,641	46,144	29,257	16,362	12,591	13,596	15,332	11,804	15,055
20%	8,691	12,012	16,908	23,582	31,478	19,315	12,989	10,466	12,322	15,055	11,114	12,857
30%	8,252	10,947	11,254	16,024	21,199	13,888	9,226	9,619	11,944	14,998	10,911	10,789
40%	7,661	10,173	8,517	11,441	13,003	10,373	8,599	9,122	11,370	14,799	10,628	9,087
50%	6,707	8,257	7,029	9,051	10,692	8,819	8,223	8,549	11,111	14,479	10,289	6,638
60%	6,317	7,328	6,463	7,486	8,626	7,901	7,672	8,111	10,850	13,795	9,962	5,726
70%	5,926	6,741	5,964	6,528	7,662	7,207	7,203	7,641	10,528	12,962	9,498	5,306
80%	5,589	5,403	5,333	5,966	6,520	5,947	6,917	7,371	10,102	12,211	8,998	4,896
90%	5,372	4,947	4,951	4,959	5,074	4,966	6,519	6,860	9,601	11,095	8,442	4,609
Long Term												
Full Simulation Period[b]	7,177	9,168	11,841	15,578	19,164	14,308	10,188	9,245	11,413	13,730	10,245	8,532
Water Year Types[c]												
Wet (32%)	7,916	11,637	20,268	28,790	32,209	24,797	14,201	11,185	11,601	13,886	10,652	13,435
Above Normal (16%)	7,275	9,317	13,289	16,649	25,711	15,396	10,643	9,588	11,926	14,830	10,675	9,313
Below Normal (13%)	7,434	9,037	6,733	7,928	12,293	7,578	8,281	8,663	11,793	14,391	10,905	5,999
Dry (24%)	6,692	7,996	6,366	7,527	9,380	8,800	7,457	7,977	11,505	13,362	9,588	5,204
Critical (15%)	6,040	5,731	5,820	6,222	6,414	5,753	7,301	7,318	9,947	12,204	9,390	4,933

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	123	-2	-855	6	-1	0	-2	-34	-74	-2	-124	-19
20%	-14	-40	-49	0	1	17	1	-162	0	-41	89	2
30%	-59	34	3	39	45	1	-104	-277	-79	-5	78	-30
40%	67	166	0	0	87	0	0	-195	-61	1	198	-181
50%	41	14	13	0	0	1	-121	-143	-35	42	46	-88
60%	-50	47	-71	1	-13	60	-152	-135	1	247	230	104
70%	28	2	-59	0	0	0	-15	-46	-120	8	216	237
80%	22	-259	-1	64	0	0	0	-2	-4	8	65	249
90%	101	-172	-108	3	0	0	165	-34	-50	-59	-45	68
Long Term												
Full Simulation Period[b]	15	-2	-30	8	7	18	-44	-147	-55	77	95	44
Water Year Types[c]												
Wet (32%)	-66	116	-60	-2	14	15	0	3	-10	35	10	-31
Above Normal (16%)	100	-132	38	36	-62	25	-1	-78	-26	23	-43	-99
Below Normal (13%)	-17	-10	-29	36	82	29	45	-52	-33	-3	-221	180
Dry (24%)	-32	-58	-24	0	7	21	-70	-377	-1	101	311	92
Critical (15%)	207	-17	-52	-13	-2	3	-225	-249	-293	264	355	153

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-4. Sacramento River at Bend Bridge, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,210	11,246	30,228	37,208	47,106	29,294	16,401	12,695	14,989	15,329	12,928	9,537
20%	8,808	8,825	18,528	25,046	31,478	18,689	12,991	11,024	13,990	15,135	12,090	6,805
30%	8,518	7,602	11,795	16,326	22,727	14,977	9,942	10,267	12,778	14,969	11,260	6,468
40%	7,130	7,155	8,883	13,229	13,125	10,879	9,199	9,671	12,147	14,760	10,984	6,129
50%	6,545	6,725	7,032	9,590	10,802	8,958	8,529	9,034	11,715	14,420	10,409	5,846
60%	6,018	6,351	6,364	7,482	8,684	7,944	7,994	8,497	11,355	13,635	10,207	5,609
70%	5,634	5,821	5,840	6,526	7,561	7,207	7,475	8,070	11,099	13,202	9,502	5,157
80%	5,395	5,462	5,274	5,906	6,519	5,949	7,110	7,596	10,536	12,408	9,024	4,642
90%	4,882	4,940	4,878	4,979	5,147	5,080	6,586	7,102	10,064	11,119	8,382	4,526
Long Term												
Full Simulation Period[b]	6,974	7,830	12,476	16,171	19,478	14,539	10,390	9,657	12,139	13,686	10,606	6,279
Water Year Types[c]												
Wet (32%)	7,555	9,871	22,382	29,625	32,396	24,855	14,217	11,299	11,760	13,714	11,404	7,783
Above Normal (16%)	7,009	8,103	12,892	17,688	27,292	16,180	10,714	10,030	12,864	14,893	11,513	6,508
Below Normal (13%)	7,368	7,826	6,836	8,912	12,557	8,405	8,681	9,459	13,033	14,597	12,101	5,898
Dry (24%)	6,848	6,461	6,360	7,577	9,392	8,666	7,821	8,617	12,341	13,561	9,116	5,227
Critical (15%)	5,523	5,398	5,929	6,357	6,178	5,823	7,592	7,607	11,018	11,691	9,009	4,874

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,666	12,952	25,817	35,635	46,146	29,257	16,364	12,625	13,670	15,334	11,928	15,074
20%	8,705	12,051	16,957	23,582	31,477	19,298	12,989	10,628	12,322	15,096	11,025	12,855
30%	8,311	10,913	11,251	15,985	21,153	13,887	9,331	9,895	12,023	15,004	10,833	10,819
40%	7,595	10,007	8,517	11,441	12,917	10,373	8,599	9,317	11,432	14,799	10,430	9,267
50%	6,667	8,244	7,016	9,051	10,692	8,819	8,344	8,693	11,146	14,437	10,242	6,727
60%	6,367	7,281	6,534	7,486	8,639	7,841	7,824	8,246	10,849	13,548	9,732	5,623
70%	5,897	6,739	6,023	6,528	7,662	7,207	7,219	7,687	10,648	12,954	9,282	5,068
80%	5,567	5,663	5,334	5,902	6,520	5,947	6,917	7,374	10,107	12,203	8,933	4,647
90%	5,271	5,119	5,060	4,956	5,074	4,966	6,354	6,894	9,650	11,155	8,487	4,541
Long Term												
Full Simulation Period[b]	7,162	9,170	11,871	15,570	19,157	14,290	10,232	9,392	11,467	13,652	10,151	8,489
Water Year Types[c]												
Wet (32%)	7,983	11,521	20,328	28,792	32,195	24,782	14,201	11,182	11,611	13,851	10,642	13,466
Above Normal (16%)	7,175	9,450	13,251	16,613	25,773	15,371	10,643	9,666	11,952	14,807	10,718	9,412
Below Normal (13%)	7,451	9,047	6,762	7,891	12,211	7,549	8,235	8,715	11,826	14,395	11,126	5,819
Dry (24%)	6,724	8,054	6,390	7,526	9,373	8,779	7,528	8,354	11,505	13,262	9,276	5,112
Critical (15%)	5,833	5,748	5,872	6,235	6,415	5,750	7,525	7,567	10,241	11,940	9,035	4,780

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	456	1,706	-4,411	-1,573	-961	-37	-37	-70	-1,319	5	-1,000	5,537
20%	-103	3,226	-1,571	-1,464	0	609	-2	-396	-1,668	-39	-1,066	6,050
30%	-207	3,311	-544	-341	-1,574	-1,090	-611	-372	-754	34	-427	4,351
40%	465	2,852	-366	-1,788	-208	-506	-599	-354	-715	39	-553	3,138
50%	121	1,519	-16	-539	-109	-139	-186	-341	-569	17	-167	881
60%	350	930	170	4	-45	-102	-170	-252	-506	-87	-475	14
70%	264	918	182	1	101	0	-257	-383	-451	-248	-220	-89
80%	172	201	60	-4	1	-2	-194	-222	-430	-205	-91	5
90%	389	179	182	-22	-73	-113	-232	-208	-413	36	105	16
Long Term												
Full Simulation Period[b]	188	1,340	-605	-601	-321	-250	-158	-265	-671	-34	-456	2,210
Water Year Types[c]												
Wet (32%)	427	1,650	-2,054	-832	-201	-73	-17	-118	-149	137	-763	5,682
Above Normal (16%)	166	1,347	359	-1,076	-1,520	-809	-71	-364	-912	-85	-795	2,904
Below Normal (13%)	83	1,221	-74	-1,020	-347	-856	-446	-744	-1,207	-202	-975	-79
Dry (24%)	-124	1,593	31	-50	-20	112	-294	-262	-836	-299	160	-114
Critical (15%)	309	350	-57	-122	237	-73	-66	-40	-777	250	26	-94

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-5. Sacramento River at Bend Bridge, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,210	11,246	30,228	37,208	47,106	29,294	16,401	12,695	14,989	15,329	12,928	9,537
20%	8,808	8,825	18,528	25,046	31,478	18,689	12,991	11,024	13,990	15,135	12,090	6,805
30%	8,518	7,602	11,795	16,326	22,727	14,977	9,942	10,267	12,778	14,969	11,260	6,468
40%	7,130	7,155	8,883	13,229	13,125	10,879	9,199	9,671	12,147	14,760	10,984	6,129
50%	6,545	6,725	7,032	9,590	10,802	8,958	8,529	9,034	11,715	14,420	10,409	5,846
60%	6,018	6,351	6,364	7,482	8,684	7,944	7,994	8,497	11,355	13,635	10,207	5,609
70%	5,634	5,821	5,840	6,526	7,561	7,207	7,475	8,070	11,099	13,202	9,502	5,157
80%	5,395	5,462	5,274	5,906	6,519	5,949	7,110	7,596	10,536	12,408	9,024	4,642
90%	4,882	4,940	4,878	4,979	5,147	5,080	6,586	7,102	10,064	11,119	8,382	4,526
Long Term												
Full Simulation Period[b]	6,974	7,830	12,476	16,171	19,478	14,539	10,390	9,657	12,139	13,686	10,606	6,279
Water Year Types[c]												
Wet (32%)	7,555	9,871	22,382	29,625	32,396	24,855	14,217	11,299	11,760	13,714	11,404	7,783
Above Normal (16%)	7,009	8,103	12,892	17,688	27,292	16,180	10,714	10,030	12,864	14,893	11,513	6,508
Below Normal (13%)	7,368	7,826	6,836	8,912	12,557	8,405	8,681	9,459	13,033	14,597	12,101	5,898
Dry (24%)	6,848	6,461	6,360	7,577	9,392	8,666	7,821	8,617	12,341	13,561	9,116	5,227
Critical (15%)	5,523	5,398	5,929	6,357	6,178	5,823	7,592	7,607	11,018	11,691	9,009	4,874

Alternative 3

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,386	11,729	30,238	38,412	47,106	29,297	16,363	12,678	14,680	15,332	12,196	9,287
20%	8,822	8,548	19,566	25,043	31,476	18,693	12,990	10,993	13,862	15,171	11,609	8,174
30%	8,250	7,629	11,041	16,361	22,570	14,976	9,843	10,357	12,690	14,979	11,239	6,799
40%	7,642	7,085	8,883	12,757	12,818	10,771	9,030	9,720	12,023	14,799	10,753	6,356
50%	6,481	6,796	7,033	9,562	10,750	8,962	8,465	9,155	11,717	14,463	10,351	5,959
60%	6,047	6,280	6,540	7,482	8,683	7,944	7,957	8,529	11,338	13,601	10,114	5,491
70%	5,790	5,826	5,947	6,525	7,686	7,207	7,277	8,103	11,119	12,957	9,773	5,224
80%	5,423	5,462	5,360	5,903	6,587	5,951	6,964	7,646	10,568	12,254	9,075	4,828
90%	5,263	5,120	4,897	4,956	5,145	4,977	6,580	6,967	10,057	11,151	8,644	4,543
Long Term												
Full Simulation Period[b]	7,074	7,769	12,509	16,120	19,474	14,561	10,327	9,658	12,070	13,667	10,462	6,529
Water Year Types[c]												
Wet (32%)	7,512	9,763	22,373	29,702	32,436	24,855	14,223	11,307	11,877	13,801	11,107	7,992
Above Normal (16%)	7,153	8,152	12,917	17,436	27,179	16,303	10,662	10,086	12,635	14,830	11,050	6,478
Below Normal (13%)	7,291	7,570	6,819	8,887	12,545	8,390	8,603	9,424	12,780	14,543	11,365	7,301
Dry (24%)	7,120	6,483	6,487	7,525	9,270	8,705	7,686	8,605	12,290	13,602	9,481	5,203
Critical (15%)	5,763	5,362	5,948	6,220	6,399	5,788	7,505	7,592	10,857	11,426	9,234	4,914

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	176	483	10	1,204	0	4	-38	-17	-309	3	-732	-249
20%	14	-277	1,038	-3	-2	4	-1	-31	-129	36	-481	1,369
30%	-268	28	-754	36	-157	-1	-99	90	-87	10	-21	331
40%	512	-71	0	-472	-307	-109	-169	49	-125	39	-231	227
50%	-64	71	1	-27	-51	4	-64	121	2	43	-58	113
60%	29	-71	177	1	-1	0	-36	32	-18	-34	-93	-118
70%	156	5	106	-2	124	0	-198	33	20	-245	271	67
80%	28	0	87	-3	67	2	-146	50	32	-153	51	186
90%	380	180	20	-22	-2	-103	-6	-135	-7	32	262	17
Long Term												
Full Simulation Period[b]	100	-61	33	-52	-5	22	-63	1	-69	-18	-145	250
Water Year Types[c]												
Wet (32%)	-44	-108	-10	77	40	0	5	8	117	87	-297	209
Above Normal (16%)	145	50	25	-252	-113	124	-52	56	-228	-63	-463	-30
Below Normal (13%)	-77	-256	-17	-25	-13	-16	-79	-36	-253	-54	-736	1,403
Dry (24%)	272	22	127	-52	-123	39	-136	-12	-50	41	364	-24
Critical (15%)	240	-35	19	-137	221	-35	-87	-15	-161	-265	225	41

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-6. Sacramento River at Bend Bridge, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,210	11,246	30,228	37,208	47,106	29,294	16,401	12,695	14,989	15,329	12,928	9,537
20%	8,808	8,825	18,528	25,046	31,478	18,689	12,991	11,024	13,990	15,135	12,090	6,805
30%	8,518	7,602	11,795	16,326	22,727	14,977	9,942	10,267	12,778	14,969	11,260	6,468
40%	7,130	7,155	8,883	13,229	13,125	10,879	9,199	9,671	12,147	14,760	10,984	6,129
50%	6,545	6,725	7,032	9,590	10,802	8,958	8,529	9,034	11,715	14,420	10,409	5,846
60%	6,018	6,351	6,364	7,482	8,684	7,944	7,994	8,497	11,355	13,635	10,207	5,609
70%	5,634	5,821	5,840	6,526	7,561	7,207	7,475	8,070	11,099	13,202	9,502	5,157
80%	5,395	5,462	5,274	5,906	6,519	5,949	7,110	7,596	10,536	12,408	9,024	4,642
90%	4,882	4,940	4,878	4,979	5,147	5,080	6,586	7,102	10,064	11,119	8,382	4,526
Long Term												
Full Simulation Period[b]	6,974	7,830	12,476	16,171	19,478	14,539	10,390	9,657	12,139	13,686	10,606	6,279
Water Year Types[c]												
Wet (32%)	7,555	9,871	22,382	29,625	32,396	24,855	14,217	11,299	11,760	13,714	11,404	7,783
Above Normal (16%)	7,009	8,103	12,892	17,688	27,292	16,180	10,714	10,030	12,864	14,893	11,513	6,508
Below Normal (13%)	7,368	7,826	6,836	8,912	12,557	8,405	8,681	9,459	13,033	14,597	12,101	5,898
Dry (24%)	6,848	6,461	6,360	7,577	9,392	8,666	7,821	8,617	12,341	13,561	9,116	5,227
Critical (15%)	5,523	5,398	5,929	6,357	6,178	5,823	7,592	7,607	11,018	11,691	9,009	4,874

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	9,789	12,949	24,963	35,641	46,144	29,257	16,362	12,591	13,596	15,332	11,804	15,055
20%	8,691	12,012	16,908	23,582	31,478	19,315	12,989	10,466	12,322	15,055	11,114	12,857
30%	8,252	10,947	11,254	16,024	21,199	13,888	9,226	9,619	11,944	14,998	10,911	10,789
40%	7,661	10,173	8,517	11,441	13,003	10,373	8,599	9,122	11,370	14,799	10,628	9,087
50%	6,707	8,257	7,029	9,051	10,692	8,819	8,223	8,549	11,111	14,479	10,289	6,638
60%	6,317	7,328	6,463	7,486	8,626	7,901	7,672	8,111	10,850	13,795	9,962	5,726
70%	5,926	6,741	5,964	6,528	7,662	7,207	7,203	7,641	10,528	12,962	9,498	5,306
80%	5,589	5,403	5,333	5,966	6,520	5,947	6,917	7,371	10,102	12,211	8,998	4,896
90%	5,372	4,947	4,951	4,959	5,074	4,966	6,519	6,860	9,601	11,095	8,442	4,609
Long Term												
Full Simulation Period[b]	7,177	9,168	11,841	15,578	19,164	14,308	10,188	9,245	11,413	13,730	10,245	8,532
Water Year Types[c]												
Wet (32%)	7,916	11,637	20,268	28,790	32,209	24,797	14,201	11,185	11,601	13,886	10,652	13,435
Above Normal (16%)	7,275	9,317	13,289	16,649	25,711	15,396	10,643	9,588	11,926	14,830	10,675	9,313
Below Normal (13%)	7,434	9,037	6,733	7,928	12,293	7,578	8,281	8,663	11,793	14,391	10,905	5,999
Dry (24%)	6,692	7,996	6,366	7,527	9,380	8,800	7,457	7,977	11,505	13,362	9,588	5,204
Critical (15%)	6,040	5,731	5,820	6,222	6,414	5,753	7,301	7,318	9,947	12,204	9,390	4,933

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	579	1,703	-5,266	-1,567	-962	-37	-39	-104	-1,393	3	-1,124	5,519
20%	-117	3,187	-1,620	-1,465	0	626	-2	-557	-1,668	-80	-976	6,052
30%	-266	3,345	-541	-301	-1,528	-1,089	-715	-649	-833	29	-349	4,321
40%	532	3,018	-366	-1,788	-121	-506	-600	-549	-777	39	-355	2,958
50%	162	1,533	-3	-539	-109	-139	-306	-484	-604	59	-120	792
60%	299	977	99	5	-58	-42	-322	-386	-505	160	-246	118
70%	292	920	123	1	100	0	-272	-429	-571	-240	-4	148
80%	194	-59	59	60	1	-2	-194	-225	-434	-197	-26	254
90%	490	7	74	-20	-72	-114	-66	-242	-463	-23	60	83
Long Term												
Full Simulation Period[b]	203	1,338	-635	-593	-314	-232	-202	-411	-726	44	-361	2,254
Water Year Types[c]												
Wet (32%)	361	1,766	-2,114	-835	-187	-59	-16	-114	-159	172	-753	5,652
Above Normal (16%)	266	1,215	397	-1,039	-1,582	-784	-71	-442	-937	-62	-838	2,805
Below Normal (13%)	66	1,211	-103	-984	-265	-827	-401	-797	-1,240	-206	-1,196	101
Dry (24%)	-156	1,535	6	-50	-12	134	-364	-640	-836	-198	471	-22
Critical (15%)	517	333	-108	-135	236	-71	-291	-290	-1,071	513	381	60

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

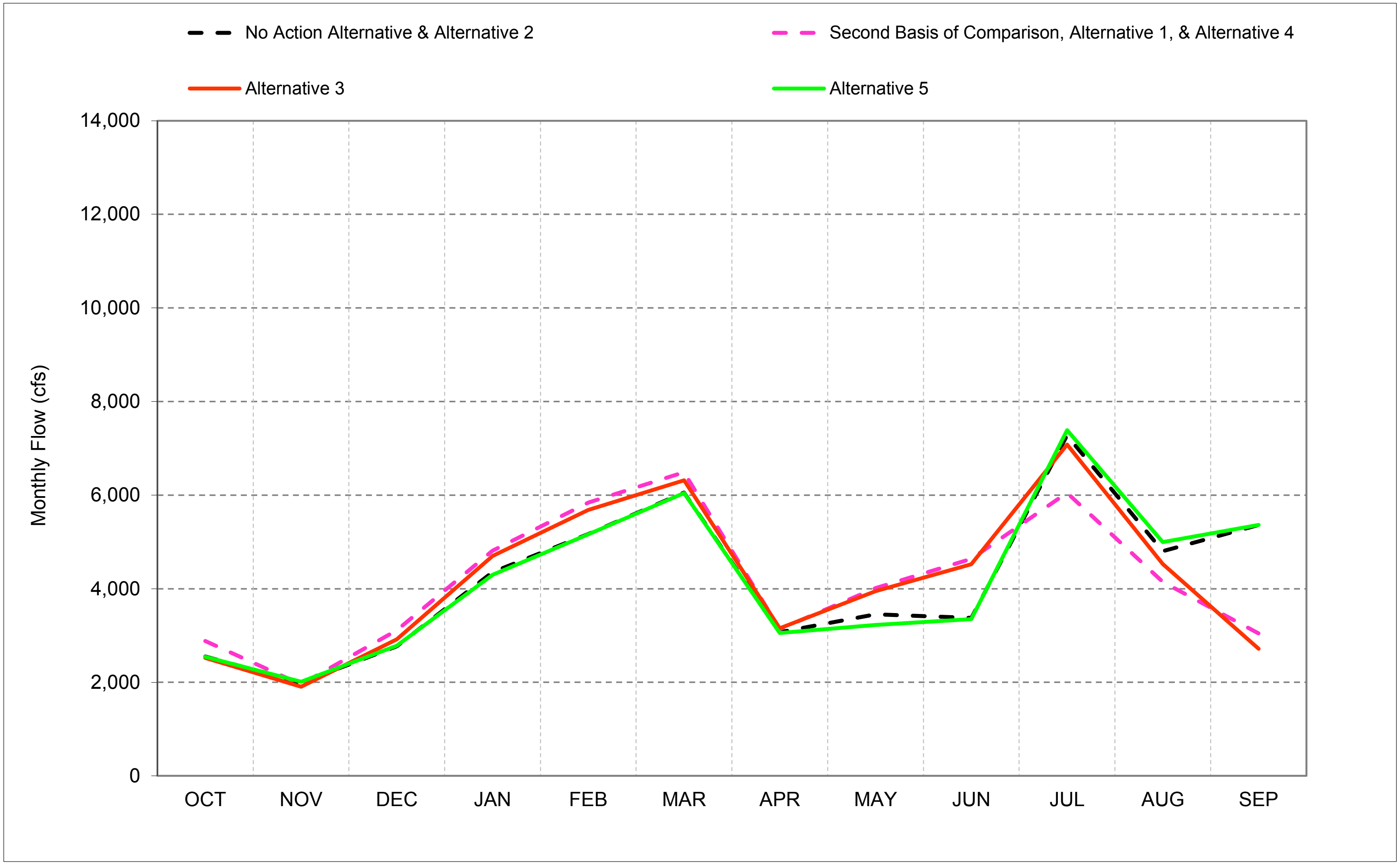
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.25. Feather River Flow downstream of Thermalito

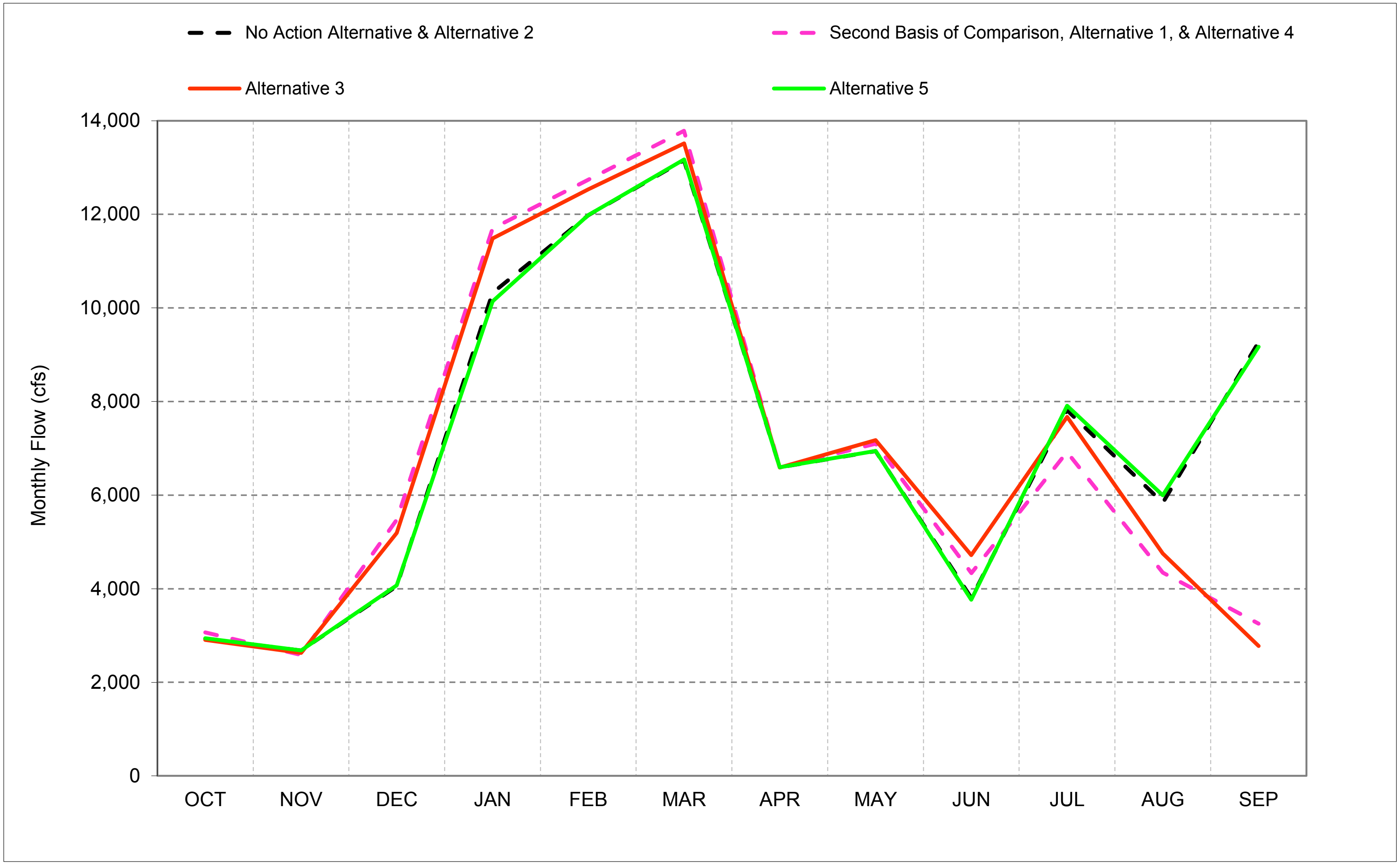
Figure C-25-1. Feather River d/s of Thermalito, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-25-2. Feather River d/s of Thermalito, Wet Year* Long-Term Average Flow**

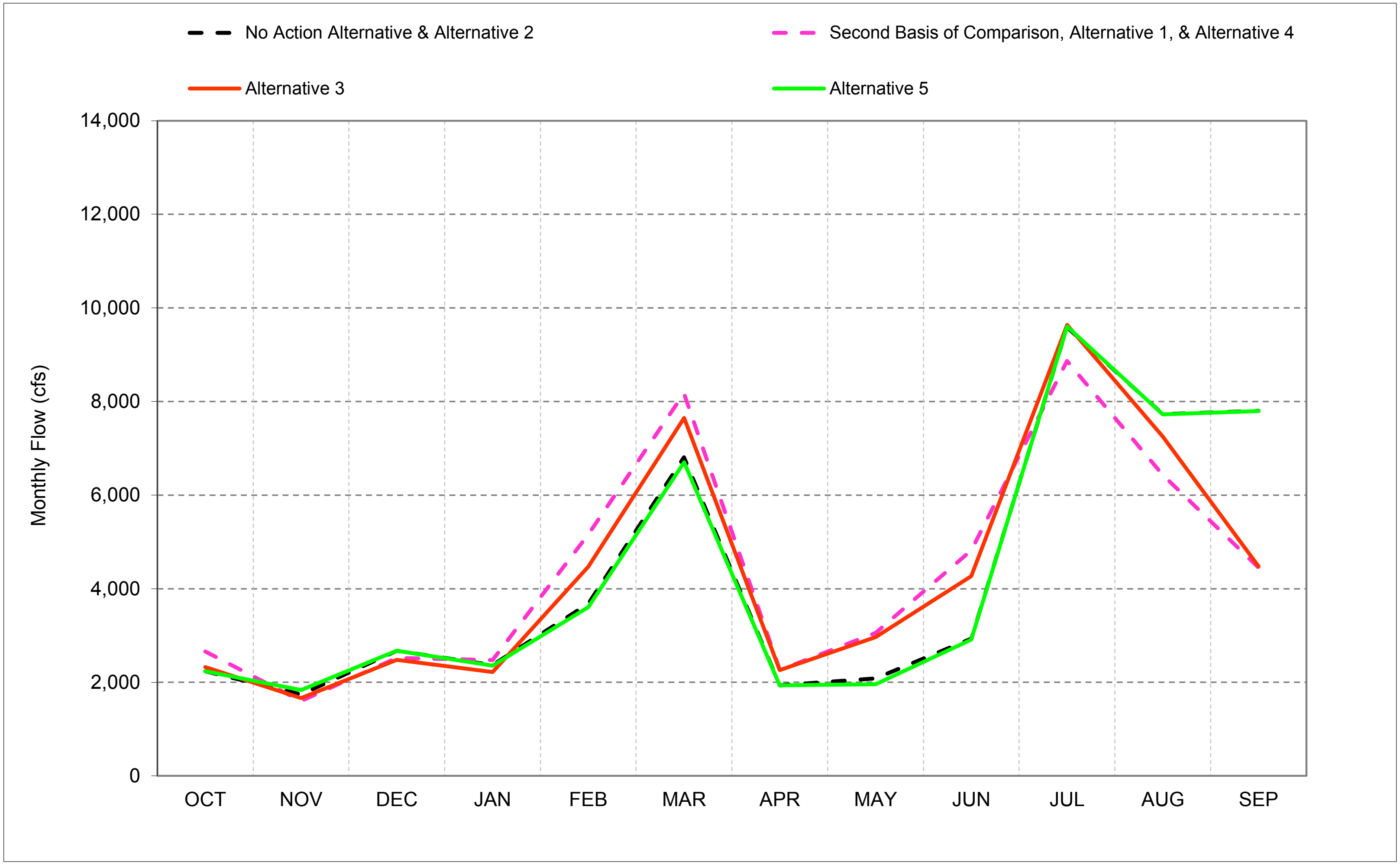


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-25-3. Feather River d/s of Thermalito, Above Normal Year* Long-Term Average Flow**

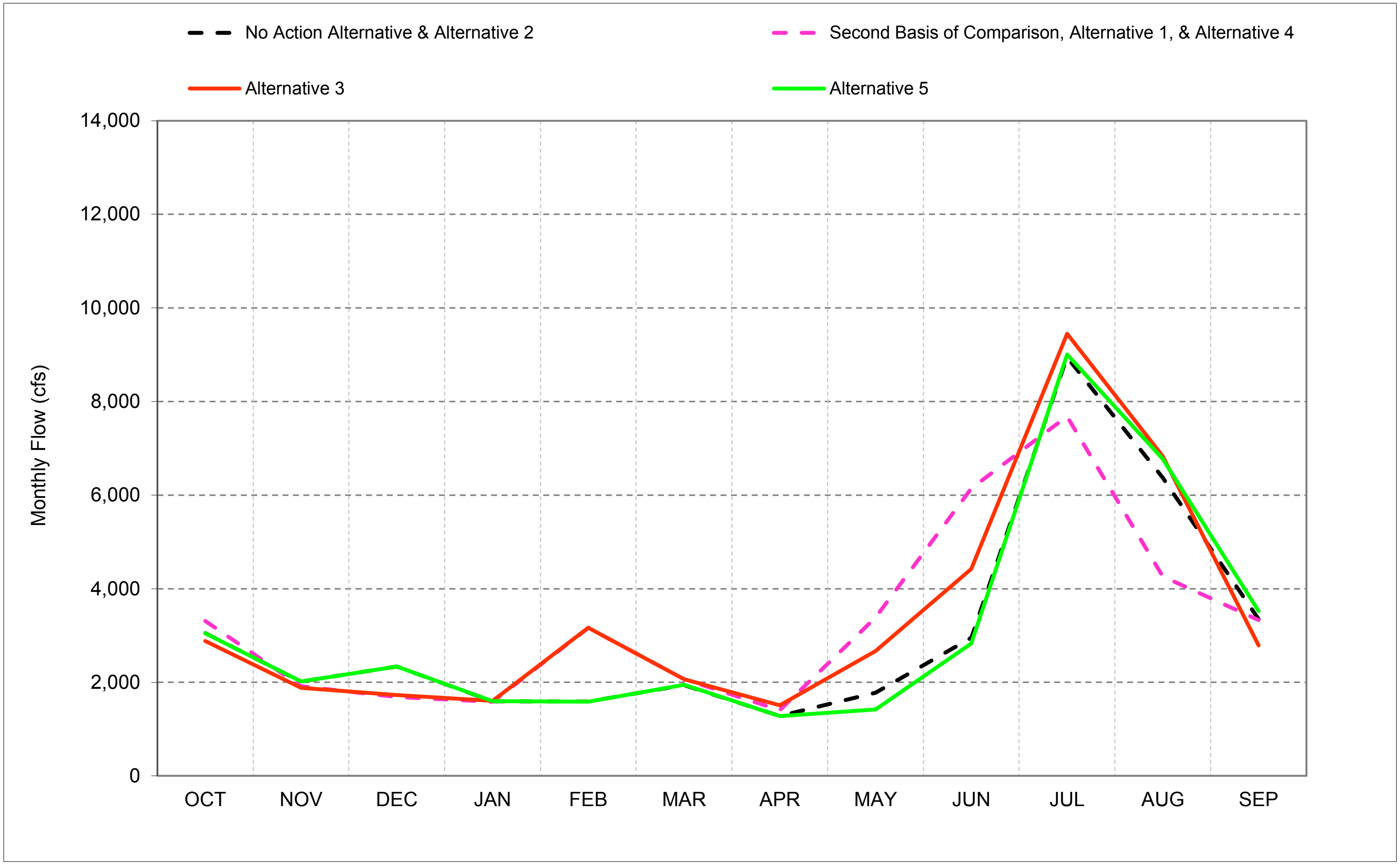


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-25-4. Feather River d/s of Thermalito, Below Normal Year* Long-Term Average Flow**

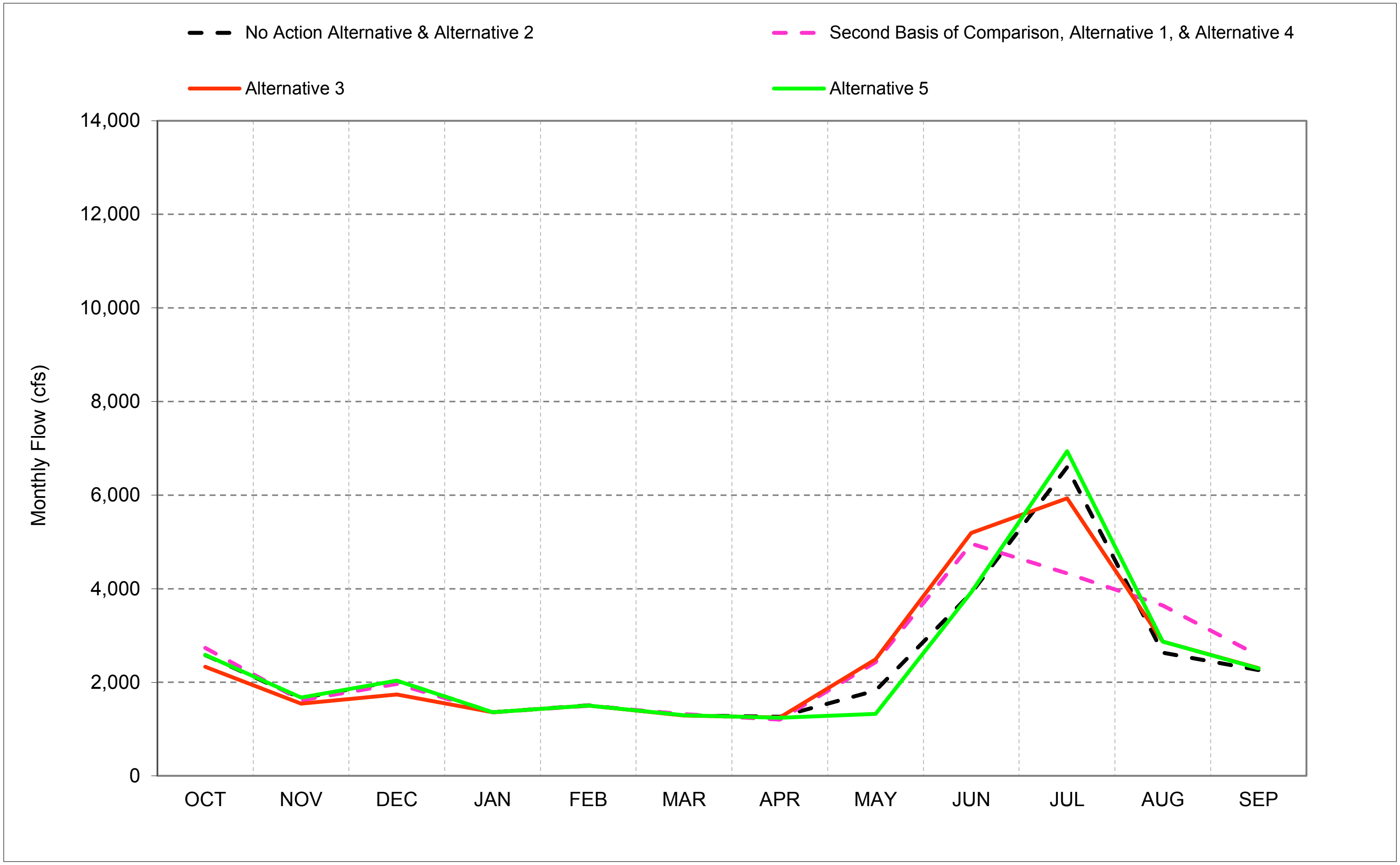


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-25-5. Feather River d/s of Thermalito, Dry Year* Long-Term Average Flow**

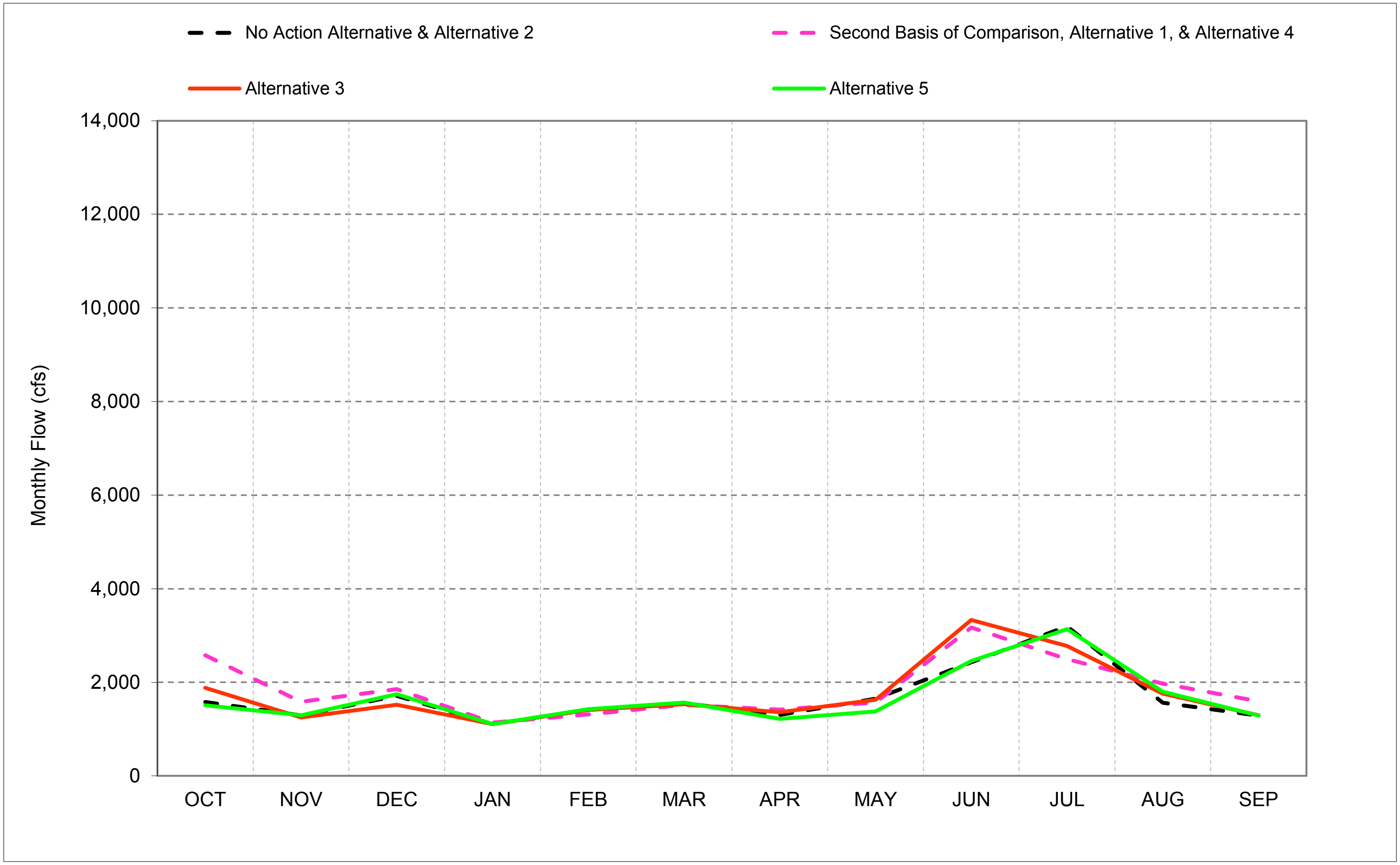


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-25-6. Feather River d/s of Thermalito, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-1. Feather River d/s of Thermalito, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	4,000	2,500	5,220	13,743	14,312	13,576	8,403	8,298	5,577	10,000	8,144	10,000
20%	4,000	2,500	3,630	2,003	9,837	9,026	3,608	5,429	4,391	9,787	7,695	9,593
30%	4,000	2,500	1,823	1,700	3,741	6,580	2,690	2,791	3,939	9,427	7,343	8,157
40%	4,000	1,972	1,700	1,700	1,700	4,666	1,806	2,430	3,712	8,907	6,401	7,651
50%	1,898	1,700	1,700	1,700	1,700	1,700	1,104	1,920	3,311	8,572	4,991	5,642
60%	1,700	1,700	1,700	1,700	1,700	1,700	1,000	1,427	2,787	8,170	3,941	3,548
70%	1,700	1,200	1,700	1,200	1,700	1,700	1,000	1,000	2,524	6,244	2,167	1,424
80%	1,200	1,200	1,200	960	1,200	1,000	1,000	1,000	1,922	4,207	1,665	1,170
90%	902	900	901	900	900	800	759	1,000	1,378	2,246	1,229	1,000
Long Term												
Full Simulation Period[b]	2,553	1,991	2,769	4,356	5,170	6,055	3,069	3,455	3,376	7,275	4,802	5,364
Water Year Types[c]												
Wet (32%)	2,929	2,680	4,053	10,322	11,983	13,155	6,595	6,942	3,800	7,817	5,835	9,265
Above Normal (16%)	2,235	1,740	2,676	2,369	3,681	6,808	1,938	2,081	2,935	9,586	7,727	7,802
Below Normal (13%)	3,050	2,018	2,338	1,595	1,589	1,941	1,281	1,778	2,954	8,948	6,371	3,350
Dry (24%)	2,583	1,662	2,032	1,360	1,505	1,296	1,264	1,821	3,909	6,594	2,635	2,261
Critical (15%)	1,578	1,295	1,709	1,108	1,413	1,555	1,305	1,650	2,431	3,196	1,566	1,290

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	4,000	2,500	5,073	13,890	19,393	14,789	8,389	8,275	7,910	9,420	7,729	5,580
20%	4,000	2,500	3,420	2,988	11,501	11,022	3,686	6,352	6,635	9,054	6,656	5,247
30%	4,000	2,054	2,218	1,700	6,252	7,843	2,757	5,334	6,248	8,621	5,681	4,554
40%	3,974	1,700	1,700	1,700	2,379	5,528	1,853	3,369	5,222	8,022	4,745	3,796
50%	3,439	1,700	1,700	1,700	1,700	2,535	1,254	2,495	4,272	6,164	3,646	2,481
60%	2,492	1,700	1,700	1,700	1,700	1,700	1,000	1,956	3,834	4,837	2,691	1,904
70%	1,846	1,700	1,700	1,200	1,700	1,700	1,000	1,334	3,356	3,641	2,363	1,244
80%	1,700	1,200	1,374	1,200	1,200	1,000	1,000	1,000	2,525	3,030	1,955	1,051
90%	1,200	900	948	900	900	800	968	1,000	1,714	2,044	1,223	1,000
Long Term												
Full Simulation Period[b]	2,883	1,956	3,113	4,812	5,841	6,488	3,136	4,013	4,637	6,050	4,145	3,045
Water Year Types[c]												
Wet (32%)	3,068	2,585	5,476	11,696	12,740	13,784	6,587	7,101	4,333	6,920	4,346	3,254
Above Normal (16%)	2,660	1,600	2,519	2,477	5,166	8,173	2,259	3,058	4,823	8,866	6,433	4,449
Below Normal (13%)	3,311	1,913	1,687	1,582	3,161	2,066	1,405	3,388	6,145	7,681	4,260	3,333
Dry (24%)	2,736	1,615	1,966	1,360	1,497	1,321	1,203	2,431	4,961	4,326	3,639	2,574
Critical (15%)	2,577	1,582	1,853	1,139	1,317	1,520	1,414	1,569	3,170	2,495	1,969	1,595

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	-147	146	5,081	1,214	-14	-23	2,333	-580	-415	-4,420
20%	0	0	-210	985	1,663	1,996	78	924	2,244	-733	-1,039	-4,346
30%	0	-446	395	0	2,510	1,263	67	2,543	2,309	-806	-1,662	-3,603
40%	-26	-272	0	0	679	862	47	939	1,510	-885	-1,656	-3,856
50%	1,541	0	0	0	0	835	150	575	961	-2,408	-1,345	-3,160
60%	792	0	0	0	0	0	0	529	1,047	-3,333	-1,250	-1,644
70%	146	500	0	0	0	0	0	334	832	-2,604	196	-181
80%	500	0	174	240	0	0	0	0	604	-1,177	290	-119
90%	298	0	47	0	0	0	209	0	336	-202	-6	0
Long Term												
Full Simulation Period[b]	330	-36	344	455	671	433	66	558	1,261	-1,224	-657	-2,319
Water Year Types[c]												
Wet (32%)	139	-94	1,423	1,373	757	628	-8	159	533	-897	-1,490	-6,011
Above Normal (16%)	425	-140	-157	107	1,485	1,365	322	977	1,888	-720	-1,294	-3,354
Below Normal (13%)	262	-105	-651	-13	1,573	125	125	1,611	3,192	-1,267	-2,111	-17
Dry (24%)	154	-46	-66	0	-8	24	-61	610	1,052	-2,268	1,004	313
Critical (15%)	999	287	144	31	-96	-36	109	-81	739	-701	403	305

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-2. Feather River d/s of Thermalito, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	4,000	2,500	5,220	13,743	14,312	13,576	8,403	8,298	5,577	10,000	8,144	10,000
20%	4,000	2,500	3,630	2,003	9,837	9,026	3,608	5,429	4,391	9,787	7,695	9,593
30%	4,000	2,500	1,823	1,700	3,741	6,580	2,690	2,791	3,939	9,427	7,343	8,157
40%	4,000	1,972	1,700	1,700	1,700	4,666	1,806	2,430	3,712	8,907	6,401	7,651
50%	1,898	1,700	1,700	1,700	1,700	1,700	1,104	1,920	3,311	8,572	4,991	5,642
60%	1,700	1,700	1,700	1,700	1,700	1,700	1,000	1,427	2,787	8,170	3,941	3,548
70%	1,700	1,200	1,700	1,200	1,700	1,700	1,000	1,000	2,524	6,244	2,167	1,424
80%	1,200	1,200	1,200	960	1,200	1,000	1,000	1,000	1,922	4,207	1,665	1,170
90%	902	900	901	900	900	800	759	1,000	1,378	2,246	1,229	1,000
Long Term												
Full Simulation Period[b]	2,553	1,991	2,769	4,356	5,170	6,055	3,069	3,455	3,376	7,275	4,802	5,364
Water Year Types[c]												
Wet (32%)	2,929	2,680	4,053	10,322	11,983	13,155	6,595	6,942	3,800	7,817	5,835	9,265
Above Normal (16%)	2,235	1,740	2,676	2,369	3,681	6,808	1,938	2,081	2,935	9,586	7,727	7,802
Below Normal (13%)	3,050	2,018	2,338	1,595	1,589	1,941	1,281	1,778	2,954	8,948	6,371	3,350
Dry (24%)	2,583	1,662	2,032	1,360	1,505	1,296	1,264	1,821	3,909	6,594	2,635	2,261
Critical (15%)	1,578	1,295	1,709	1,108	1,413	1,555	1,305	1,650	2,431	3,196	1,566	1,290

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	4,000	2,500	5,285	14,314	16,714	13,573	8,396	8,298	6,837	10,000	8,031	5,388
20%	4,000	2,500	3,006	1,816	11,330	9,458	3,706	6,213	5,940	9,849	7,592	4,833
30%	4,000	1,700	1,755	1,700	5,977	7,640	2,833	4,432	5,428	9,452	6,512	3,781
40%	3,443	1,700	1,700	1,700	1,894	5,140	1,854	3,105	5,005	9,028	5,444	2,799
50%	2,035	1,700	1,700	1,700	1,700	2,508	1,230	2,641	4,563	8,667	4,544	2,222
60%	1,700	1,700	1,700	1,700	1,700	1,700	1,000	2,157	4,262	8,162	3,199	1,345
70%	1,700	1,200	1,700	1,200	1,700	1,700	1,000	1,669	3,798	5,497	2,312	1,197
80%	1,200	1,200	1,200	960	1,200	1,000	1,000	1,000	2,837	3,032	1,710	1,009
90%	902	900	904	900	900	800	853	1,000	2,107	2,030	1,231	1,000
Long Term												
Full Simulation Period[b]	2,522	1,908	2,918	4,703	5,682	6,314	3,153	3,950	4,520	7,081	4,530	2,715
Water Year Types[c]												
Wet (32%)	2,908	2,630	5,192	11,483	12,535	13,516	6,589	7,176	4,718	7,672	4,754	2,778
Above Normal (16%)	2,325	1,662	2,480	2,222	4,471	7,646	2,262	2,966	4,267	9,637	7,249	4,476
Below Normal (13%)	2,884	1,880	1,730	1,606	3,168	2,067	1,509	2,669	4,424	9,449	6,830	2,788
Dry (24%)	2,330	1,542	1,738	1,362	1,505	1,290	1,247	2,494	5,190	5,932	2,869	2,301
Critical (15%)	1,885	1,251	1,524	1,108	1,410	1,533	1,360	1,627	3,335	2,775	1,757	1,296

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	65	571	2,402	-3	-7	0	1,260	0	-113	-4,612
20%	0	0	-624	-187	1,493	432	98	784	1,550	63	-103	-4,760
30%	0	-800	-68	0	2,236	1,060	143	1,641	1,489	25	-830	-4,376
40%	-557	-272	0	0	194	474	48	675	1,294	121	-956	-4,853
50%	137	0	0	0	0	808	126	721	1,252	95	-447	-3,419
60%	0	0	0	0	0	0	0	731	1,474	-8	-742	-2,202
70%	0	0	0	0	0	0	0	669	1,274	-747	146	-227
80%	0	0	0	0	0	0	0	0	916	-1,174	45	-161
90%	0	0	3	0	0	0	94	0	729	-216	2	0
Long Term												
Full Simulation Period[b]	-31	-83	150	346	512	259	84	495	1,144	-194	-272	-2,649
Water Year Types[c]												
Wet (32%)	-20	-50	1,139	1,161	552	360	-6	235	918	-145	-1,082	-6,487
Above Normal (16%)	90	-79	-195	-148	790	838	324	885	1,332	50	-478	-3,326
Below Normal (13%)	-166	-139	-608	11	1,580	125	228	891	1,470	501	459	-562
Dry (24%)	-253	-120	-294	2	0	-6	-17	673	1,281	-661	234	40
Critical (15%)	307	-44	-186	0	-2	-22	55	-22	904	-421	191	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-3. Feather River d/s of Thermalito, Monthly Flow

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,000	2,500	5,220	13,743	14,312	13,576	8,403	8,298	5,577	10,000	8,144	10,000
20%	4,000	2,500	3,630	2,003	9,837	9,026	3,608	5,429	4,391	9,787	7,695	9,593
30%	4,000	2,500	1,823	1,700	3,741	6,580	2,690	2,791	3,939	9,427	7,343	8,157
40%	4,000	1,972	1,700	1,700	1,700	4,666	1,806	2,430	3,712	8,907	6,401	7,651
50%	1,898	1,700	1,700	1,700	1,700	1,700	1,104	1,920	3,311	8,572	4,991	5,642
60%	1,700	1,700	1,700	1,700	1,700	1,700	1,000	1,427	2,787	8,170	3,941	3,548
70%	1,700	1,200	1,700	1,200	1,700	1,700	1,000	1,000	2,524	6,244	2,167	1,424
80%	1,200	1,200	1,200	960	1,200	1,000	1,000	1,000	1,922	4,207	1,665	1,170
90%	902	900	901	900	900	800	759	1,000	1,378	2,246	1,229	1,000
Long Term												
Full Simulation Period[b]	2,553	1,991	2,769	4,356	5,170	6,055	3,069	3,455	3,376	7,275	4,802	5,364
Water Year Types[c]												
Wet (32%)	2,929	2,680	4,053	10,322	11,983	13,155	6,595	6,942	3,800	7,817	5,835	9,265
Above Normal (16%)	2,235	1,740	2,676	2,369	3,681	6,808	1,938	2,081	2,935	9,586	7,727	7,802
Below Normal (13%)	3,050	2,018	2,338	1,595	1,589	1,941	1,281	1,778	2,954	8,948	6,371	3,350
Dry (24%)	2,583	1,662	2,032	1,360	1,505	1,296	1,264	1,821	3,909	6,594	2,635	2,261
Critical (15%)	1,578	1,295	1,709	1,108	1,413	1,555	1,305	1,650	2,431	3,196	1,566	1,290

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,000	2,500	5,231	13,726	14,296	13,578	8,400	8,302	5,058	10,000	8,153	10,000
20%	4,000	2,500	3,623	2,007	10,475	9,029	3,609	5,429	4,304	9,954	7,732	9,613
30%	4,000	2,500	1,829	1,700	3,773	6,115	2,576	2,423	4,000	9,417	7,482	8,113
40%	4,000	2,031	1,700	1,700	1,700	4,669	1,805	1,708	3,726	8,981	6,683	7,599
50%	1,898	1,700	1,700	1,700	1,700	1,700	1,062	1,434	3,282	8,651	5,737	5,685
60%	1,700	1,700	1,700	1,700	1,700	1,700	1,000	1,156	2,772	8,291	3,988	3,116
70%	1,700	1,222	1,700	1,200	1,700	1,700	1,000	1,000	2,483	6,076	2,503	1,553
80%	1,200	1,200	1,200	960	1,200	1,000	1,000	1,000	1,915	4,810	1,766	1,190
90%	900	900	901	900	900	800	751	1,000	1,313	2,253	1,284	1,000
Long Term												
Full Simulation Period[b]	2,547	2,010	2,781	4,298	5,160	6,046	3,051	3,229	3,351	7,389	4,998	5,365
Water Year Types[c]												
Wet (32%)	2,942	2,681	4,073	10,143	11,984	13,175	6,596	6,943	3,764	7,907	5,996	9,171
Above Normal (16%)	2,237	1,834	2,674	2,357	3,602	6,700	1,937	1,959	2,913	9,601	7,728	7,796
Below Normal (13%)	3,049	2,018	2,338	1,595	1,589	1,946	1,281	1,420	2,828	9,007	6,773	3,521
Dry (24%)	2,584	1,675	2,038	1,360	1,505	1,296	1,242	1,328	3,924	6,938	2,869	2,298
Critical (15%)	1,507	1,295	1,743	1,108	1,426	1,566	1,218	1,382	2,459	3,139	1,798	1,287

Alternative 5 minus No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	11	-18	-16	3	-3	5	-519	0	9	0
20%	0	0	-7	4	638	3	1	1	-87	168	37	20
30%	0	0	6	0	32	-465	-114	-368	62	-9	139	-44
40%	0	59	0	0	0	3	-1	-722	15	74	282	-52
50%	0	0	0	0	0	0	-42	-486	-29	79	746	43
60%	0	0	0	0	0	0	0	-270	-16	121	46	-431
70%	0	22	0	0	0	0	0	0	-40	-168	336	128
80%	0	0	0	0	0	0	0	0	-6	604	101	21
90%	-2	0	0	0	0	0	-8	0	-65	7	55	0
Long Term												
Full Simulation Period[b]	-5	19	13	-59	-10	-9	-18	-226	-24	114	196	1
Water Year Types[c]												
Wet (32%)	13	1	20	-180	2	20	1	1	-36	90	161	-94
Above Normal (16%)	2	94	-2	-12	-79	-108	-1	-122	-23	15	1	-6
Below Normal (13%)	0	0	-1	0	0	4	0	-358	-126	58	401	171
Dry (24%)	1	14	6	0	0	0	-22	-493	15	344	234	37
Critical (15%)	-71	-1	34	0	13	11	-87	-268	27	-57	232	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-4. Feather River d/s of Thermalito, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,000	2,500	5,073	13,890	19,393	14,789	8,389	8,275	7,910	9,420	7,729	5,580
20%	4,000	2,500	3,420	2,988	11,501	11,022	3,686	6,352	6,635	9,054	6,656	5,247
30%	4,000	2,054	2,218	1,700	6,252	7,843	2,757	5,334	6,248	8,621	5,681	4,554
40%	3,974	1,700	1,700	1,700	2,379	5,528	1,853	3,369	5,222	8,022	4,745	3,796
50%	3,439	1,700	1,700	1,700	1,700	2,535	1,254	2,495	4,272	6,164	3,646	2,481
60%	2,492	1,700	1,700	1,700	1,700	1,700	1,000	1,956	3,834	4,837	2,691	1,904
70%	1,846	1,700	1,700	1,200	1,700	1,700	1,000	1,334	3,356	3,641	2,363	1,244
80%	1,700	1,200	1,374	1,200	1,200	1,000	1,000	1,000	2,525	3,030	1,955	1,051
90%	1,200	900	948	900	900	800	968	1,000	1,714	2,044	1,223	1,000
Long Term												
Full Simulation Period[b]	2,883	1,956	3,113	4,812	5,841	6,488	3,136	4,013	4,637	6,050	4,145	3,045
Water Year Types[c]												
Wet (32%)	3,068	2,585	5,476	11,696	12,740	13,784	6,587	7,101	4,333	6,920	4,346	3,254
Above Normal (16%)	2,660	1,600	2,519	2,477	5,166	8,173	2,259	3,058	4,823	8,866	6,433	4,449
Below Normal (13%)	3,311	1,913	1,687	1,582	3,161	2,066	1,405	3,388	6,145	7,681	4,260	3,333
Dry (24%)	2,736	1,615	1,966	1,360	1,497	1,321	1,203	2,431	4,961	4,326	3,639	2,574
Critical (15%)	2,577	1,582	1,853	1,139	1,317	1,520	1,414	1,569	3,170	2,495	1,969	1,595

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,000	2,500	5,220	13,743	14,312	13,576	8,403	8,298	5,577	10,000	8,144	10,000
20%	4,000	2,500	3,630	2,003	9,837	9,026	3,608	5,429	4,391	9,787	7,695	9,593
30%	4,000	2,500	1,823	1,700	3,741	6,580	2,690	2,791	3,939	9,427	7,343	8,157
40%	4,000	1,972	1,700	1,700	1,700	4,666	1,806	2,430	3,712	8,907	6,401	7,651
50%	1,898	1,700	1,700	1,700	1,700	1,700	1,104	1,920	3,311	8,572	4,991	5,642
60%	1,700	1,700	1,700	1,700	1,700	1,700	1,000	1,427	2,787	8,170	3,941	3,548
70%	1,700	1,200	1,700	1,200	1,700	1,700	1,000	1,000	2,524	6,244	2,167	1,424
80%	1,200	1,200	1,200	960	1,200	1,000	1,000	1,000	1,922	4,207	1,665	1,170
90%	902	900	901	900	900	800	759	1,000	1,378	2,246	1,229	1,000
Long Term												
Full Simulation Period[b]	2,553	1,991	2,769	4,356	5,170	6,055	3,069	3,455	3,376	7,275	4,802	5,364
Water Year Types[c]												
Wet (32%)	2,929	2,680	4,053	10,322	11,983	13,155	6,595	6,942	3,800	7,817	5,835	9,265
Above Normal (16%)	2,235	1,740	2,676	2,369	3,681	6,808	1,938	2,081	2,935	9,586	7,727	7,802
Below Normal (13%)	3,050	2,018	2,338	1,595	1,589	1,941	1,281	1,778	2,954	8,948	6,371	3,350
Dry (24%)	2,583	1,662	2,032	1,360	1,505	1,296	1,264	1,821	3,909	6,594	2,635	2,261
Critical (15%)	1,578	1,295	1,709	1,108	1,413	1,555	1,305	1,650	2,431	3,196	1,566	1,290

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	147	-146	-5,081	-1,214	14	23	-2,333	580	415	4,420
20%	0	0	210	-985	-1,663	-1,996	-78	-924	-2,244	733	1,039	4,346
30%	0	446	-395	0	-2,510	-1,263	-67	-2,543	-2,309	806	1,662	3,603
40%	26	272	0	0	-679	-862	-47	-939	-1,510	885	1,656	3,856
50%	-1,541	0	0	0	0	-835	-150	-575	-961	2,408	1,345	3,160
60%	-792	0	0	0	0	0	0	-529	-1,047	3,333	1,250	1,644
70%	-146	-500	0	0	0	0	0	-334	-832	2,604	-196	181
80%	-500	0	-174	-240	0	0	0	0	-604	1,177	-290	119
90%	-298	0	-47	0	0	0	-209	0	-336	202	6	0
Long Term												
Full Simulation Period[b]	-330	36	-344	-455	-671	-433	-66	-558	-1,261	1,224	657	2,319
Water Year Types[c]												
Wet (32%)	-139	94	-1,423	-1,373	-757	-628	8	-159	-533	897	1,490	6,011
Above Normal (16%)	-425	140	157	-107	-1,485	-1,365	-322	-977	-1,888	720	1,294	3,354
Below Normal (13%)	-262	105	651	13	-1,573	-125	-125	-1,611	-3,192	1,267	2,111	17
Dry (24%)	-154	46	66	0	8	-24	61	-610	-1,052	2,268	-1,004	-313
Critical (15%)	-999	-287	-144	-31	96	36	-109	81	-739	701	-403	-305

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-5. Feather River d/s of Thermalito, Monthly Flow

Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	4,000	2,500	5,073	13,890	19,393	14,789	8,389	8,275	7,910	9,420	7,729	5,580
20%	4,000	2,500	3,420	2,988	11,501	11,022	3,686	6,352	6,635	9,054	6,656	5,247
30%	4,000	2,054	2,218	1,700	6,252	7,843	2,757	5,334	6,248	8,621	5,681	4,554
40%	3,974	1,700	1,700	1,700	2,379	5,528	1,853	3,369	5,222	8,022	4,745	3,796
50%	3,439	1,700	1,700	1,700	1,700	2,535	1,254	2,495	4,272	6,164	3,646	2,481
60%	2,492	1,700	1,700	1,700	1,700	1,700	1,000	1,956	3,834	4,837	2,691	1,904
70%	1,846	1,700	1,700	1,200	1,700	1,700	1,000	1,334	3,356	3,641	2,363	1,244
80%	1,700	1,200	1,374	1,200	1,200	1,000	1,000	1,000	2,525	3,030	1,955	1,051
90%	1,200	900	948	900	900	800	968	1,000	1,714	2,044	1,223	1,000
Long Term												
Full Simulation Period[b]	2,883	1,956	3,113	4,812	5,841	6,488	3,136	4,013	4,637	6,050	4,145	3,045
Water Year Types[c]												
Wet (32%)	3,068	2,585	5,476	11,696	12,740	13,784	6,587	7,101	4,333	6,920	4,346	3,254
Above Normal (16%)	2,660	1,600	2,519	2,477	5,166	8,173	2,259	3,058	4,823	8,866	6,433	4,449
Below Normal (13%)	3,311	1,913	1,687	1,582	3,161	2,066	1,405	3,388	6,145	7,681	4,260	3,333
Dry (24%)	2,736	1,615	1,966	1,360	1,497	1,321	1,203	2,431	4,961	4,326	3,639	2,574
Critical (15%)	2,577	1,582	1,853	1,139	1,317	1,520	1,414	1,569	3,170	2,495	1,969	1,595

Alternative 3

	Monthly Flow (cfs)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	4,000	2,500	5,285	14,314	16,714	13,573	8,396	8,298	6,837	10,000	8,031	5,388
20%	4,000	2,500	3,006	1,816	11,330	9,458	3,706	6,213	5,940	9,849	7,592	4,833
30%	4,000	1,700	1,755	1,700	5,977	7,640	2,833	4,432	5,428	9,452	6,512	3,781
40%	3,443	1,700	1,700	1,700	1,894	5,140	1,854	3,105	5,005	9,028	5,444	2,799
50%	2,035	1,700	1,700	1,700	1,700	2,508	1,230	2,641	4,563	8,667	4,544	2,222
60%	1,700	1,700	1,700	1,700	1,700	1,700	1,000	2,157	4,262	8,162	3,199	1,345
70%	1,700	1,200	1,700	1,200	1,700	1,700	1,000	1,669	3,798	5,497	2,312	1,197
80%	1,200	1,200	1,200	960	1,200	1,000	1,000	1,000	2,837	3,032	1,710	1,009
90%	902	900	904	900	900	800	853	1,000	2,107	2,030	1,231	1,000
Long Term												
Full Simulation Period[b]	2,522	1,908	2,918	4,703	5,682	6,314	3,153	3,950	4,520	7,081	4,530	2,715
Water Year Types[c]												
Wet (32%)	2,908	2,630	5,192	11,483	12,535	13,516	6,589	7,176	4,718	7,672	4,754	2,778
Above Normal (16%)	2,325	1,662	2,480	2,222	4,471	7,646	2,262	2,966	4,267	9,637	7,249	4,476
Below Normal (13%)	2,884	1,880	1,730	1,606	3,168	2,067	1,509	2,669	4,424	9,449	6,830	2,788
Dry (24%)	2,330	1,542	1,738	1,362	1,505	1,290	1,247	2,494	5,190	5,932	2,869	2,301
Critical (15%)	1,885	1,251	1,524	1,108	1,410	1,533	1,360	1,627	3,335	2,775	1,757	1,296

Alternative 3 minus Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	0	0	212	424	-2,679	-1,216	8	23	-1,073	580	302	-192
20%	0	0	-414	-1,172	-171	-1,564	21	-140	-695	796	936	-415
30%	0	-354	-463	0	-275	-203	76	-901	-820	831	832	-773
40%	-531	0	0	0	-485	-387	1	-264	-216	1,005	700	-997
50%	-1,403	0	0	0	0	-27	-24	146	291	2,503	898	-259
60%	-792	0	0	0	0	0	0	202	428	3,325	508	-559
70%	-146	-500	0	0	0	0	0	335	442	1,857	-50	-47
80%	-500	0	-174	-240	0	0	0	0	312	2	-245	-42
90%	-298	0	-44	0	0	0	-114	0	393	-14	8	0
Long Term												
Full Simulation Period[b]	-361	-47	-194	-109	-159	-174	18	-63	-117	1,031	385	-330
Water Year Types[c]												
Wet (32%)	-159	44	-284	-213	-205	-268	2	75	385	753	408	-476
Above Normal (16%)	-335	62	-39	-255	-695	-528	3	-92	-556	770	816	27
Below Normal (13%)	-428	-33	43	24	7	0	103	-719	-1,722	1,768	2,569	-545
Dry (24%)	-407	-73	-228	2	8	-31	44	63	228	1,606	-770	-274
Critical (15%)	-692	-331	-329	-31	94	13	-54	59	165	280	-212	-299

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-6. Feather River d/s of Thermalito, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	4,000	2,500	5,073	13,890	19,393	14,789	8,389	8,275	7,910	9,420	7,729	5,580
20%	4,000	2,500	3,420	2,988	11,501	11,022	3,686	6,352	6,635	9,054	6,656	5,247
30%	4,000	2,054	2,218	1,700	6,252	7,843	2,757	5,334	6,248	8,621	5,681	4,554
40%	3,974	1,700	1,700	1,700	2,379	5,528	1,853	3,369	5,222	8,022	4,745	3,796
50%	3,439	1,700	1,700	1,700	1,700	2,535	1,254	2,495	4,272	6,164	3,646	2,481
60%	2,492	1,700	1,700	1,700	1,700	1,700	1,000	1,956	3,834	4,837	2,691	1,904
70%	1,846	1,700	1,700	1,200	1,700	1,700	1,000	1,334	3,356	3,641	2,363	1,244
80%	1,700	1,200	1,374	1,200	1,200	1,000	1,000	1,000	2,525	3,030	1,955	1,051
90%	1,200	900	948	900	900	800	968	1,000	1,714	2,044	1,223	1,000
Long Term												
Full Simulation Period[b]	2,883	1,956	3,113	4,812	5,841	6,488	3,136	4,013	4,637	6,050	4,145	3,045
Water Year Types[c]												
Wet (32%)	3,068	2,585	5,476	11,696	12,740	13,784	6,587	7,101	4,333	6,920	4,346	3,254
Above Normal (16%)	2,660	1,600	2,519	2,477	5,166	8,173	2,259	3,058	4,823	8,866	6,433	4,449
Below Normal (13%)	3,311	1,913	1,687	1,582	3,161	2,066	1,405	3,388	6,145	7,681	4,260	3,333
Dry (24%)	2,736	1,615	1,966	1,360	1,497	1,321	1,203	2,431	4,961	4,326	3,639	2,574
Critical (15%)	2,577	1,582	1,853	1,139	1,317	1,520	1,414	1,569	3,170	2,495	1,969	1,595

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	4,000	2,500	5,231	13,726	14,296	13,578	8,400	8,302	5,058	10,000	8,153	10,000
20%	4,000	2,500	3,623	2,007	10,475	9,029	3,609	5,429	4,304	9,954	7,732	9,613
30%	4,000	2,500	1,829	1,700	3,773	6,115	2,576	2,423	4,000	9,417	7,482	8,113
40%	4,000	2,031	1,700	1,700	1,700	4,669	1,805	1,708	3,726	8,981	6,683	7,599
50%	1,898	1,700	1,700	1,700	1,700	1,700	1,062	1,434	3,282	8,651	5,737	5,685
60%	1,700	1,700	1,700	1,700	1,700	1,700	1,000	1,156	2,772	8,291	3,988	3,116
70%	1,700	1,222	1,700	1,200	1,700	1,700	1,000	1,000	2,483	6,076	2,503	1,553
80%	1,200	1,200	1,200	960	1,200	1,000	1,000	1,000	1,915	4,810	1,766	1,190
90%	900	900	901	900	900	800	751	1,000	1,313	2,253	1,284	1,000
Long Term												
Full Simulation Period[b]	2,547	2,010	2,781	4,298	5,160	6,046	3,051	3,229	3,351	7,389	4,998	5,365
Water Year Types[c]												
Wet (32%)	2,942	2,681	4,073	10,143	11,984	13,175	6,596	6,943	3,764	7,907	5,996	9,171
Above Normal (16%)	2,237	1,834	2,674	2,357	3,602	6,700	1,937	1,959	2,913	9,601	7,728	7,796
Below Normal (13%)	3,049	2,018	2,338	1,595	1,589	1,946	1,281	1,420	2,828	9,007	6,773	3,521
Dry (24%)	2,584	1,675	2,038	1,360	1,505	1,296	1,242	1,328	3,924	6,938	2,869	2,298
Critical (15%)	1,507	1,295	1,743	1,108	1,426	1,566	1,218	1,382	2,459	3,139	1,798	1,287

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	158	-164	-5,097	-1,211	11	27	-2,852	580	425	4,420
20%	0	0	203	-981	-1,026	-1,993	-77	-923	-2,331	901	1,076	4,366
30%	0	446	-389	0	-2,478	-1,728	-181	-2,911	-2,247	797	1,801	3,559
40%	26	331	0	0	-679	-859	-48	-1,661	-1,495	958	1,938	3,803
50%	-1,541	0	0	0	0	-835	-192	-1,061	-990	2,488	2,091	3,203
60%	-792	0	0	0	0	0	0	-800	-1,062	3,454	1,297	1,212
70%	-146	-478	0	0	0	0	0	-334	-872	2,436	140	309
80%	-500	0	-174	-240	0	0	0	0	-610	1,781	-189	139
90%	-300	0	-47	0	0	0	-217	0	-400	209	61	0
Long Term												
Full Simulation Period[b]	-336	54	-331	-514	-681	-442	-84	-785	-1,286	1,339	853	2,320
Water Year Types[c]												
Wet (32%)	-126	95	-1,403	-1,553	-756	-609	9	-158	-569	988	1,651	5,917
Above Normal (16%)	-423	234	155	-119	-1,564	-1,474	-322	-1,099	-1,911	735	1,295	3,348
Below Normal (13%)	-262	105	650	13	-1,573	-121	-125	-1,969	-3,317	1,325	2,512	188
Dry (24%)	-152	60	72	0	8	-25	39	-1,103	-1,038	2,612	-770	-276
Critical (15%)	-1,070	-287	-110	-31	109	47	-196	-187	-712	644	-171	-307

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

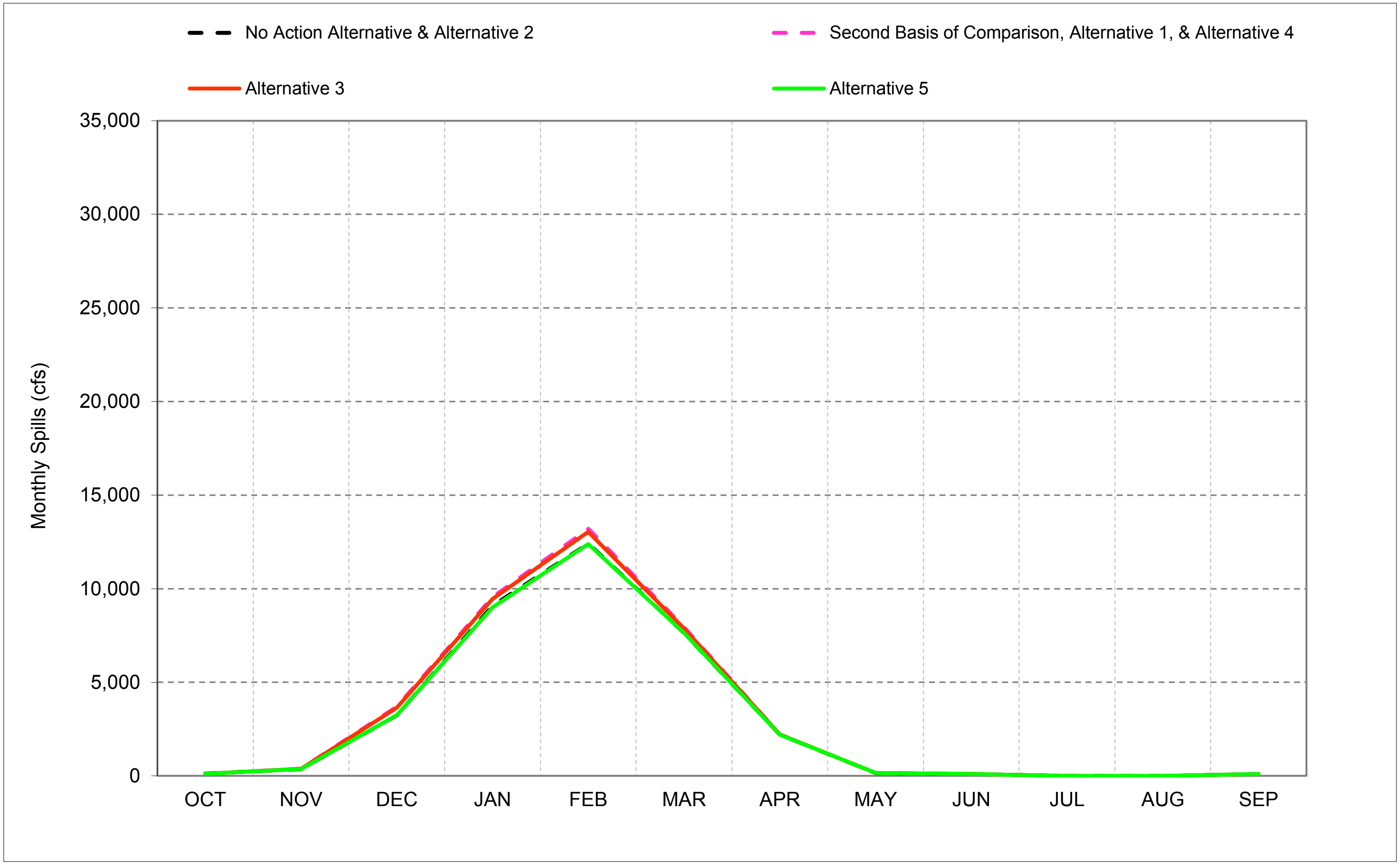
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.26. Fremont Weir Spills

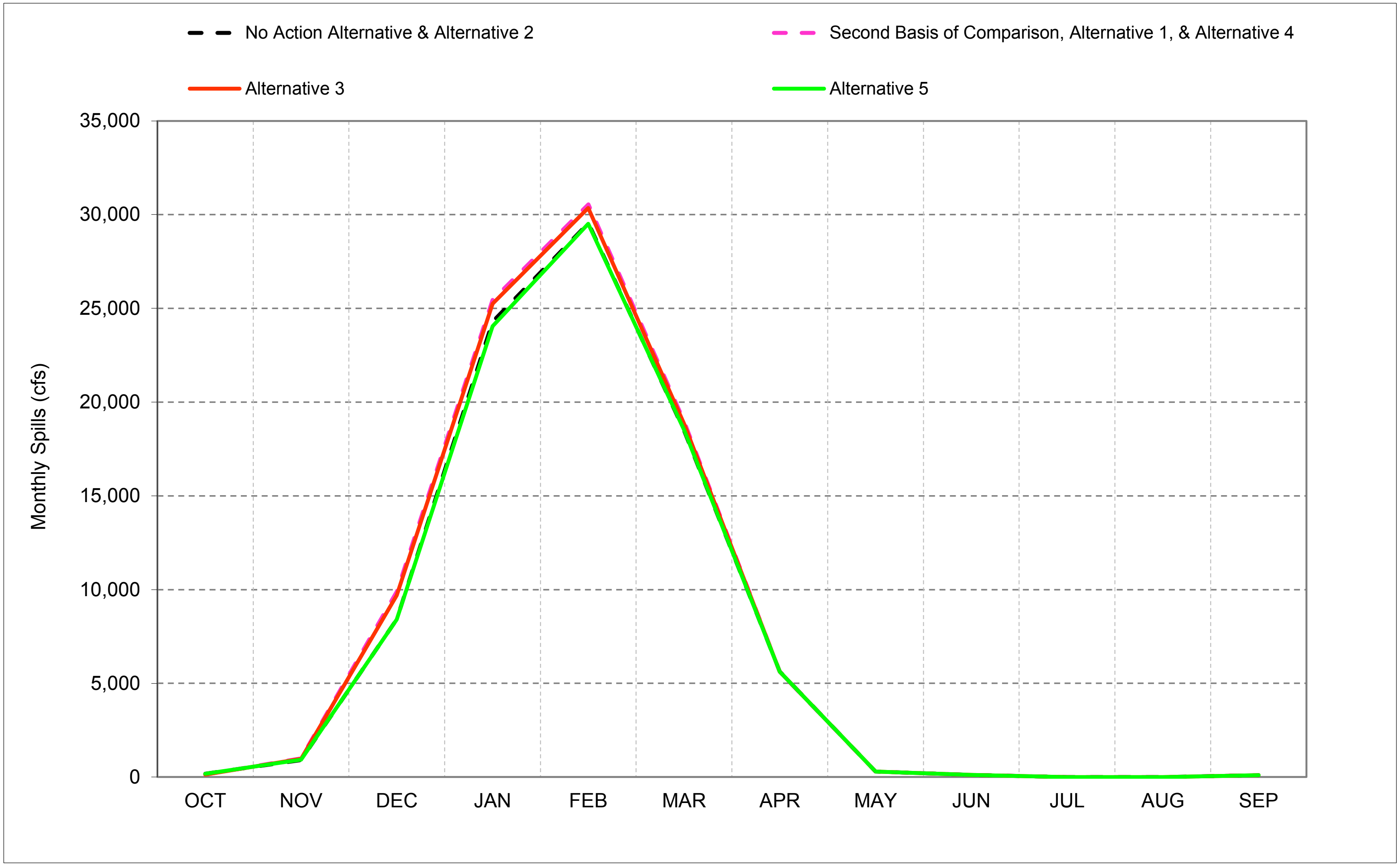
Figure C-26-1. Fremont Weir, Long-Term* Average Spills



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-26-2. Fremont Weir, Wet Year* Long-Term Average Spills**

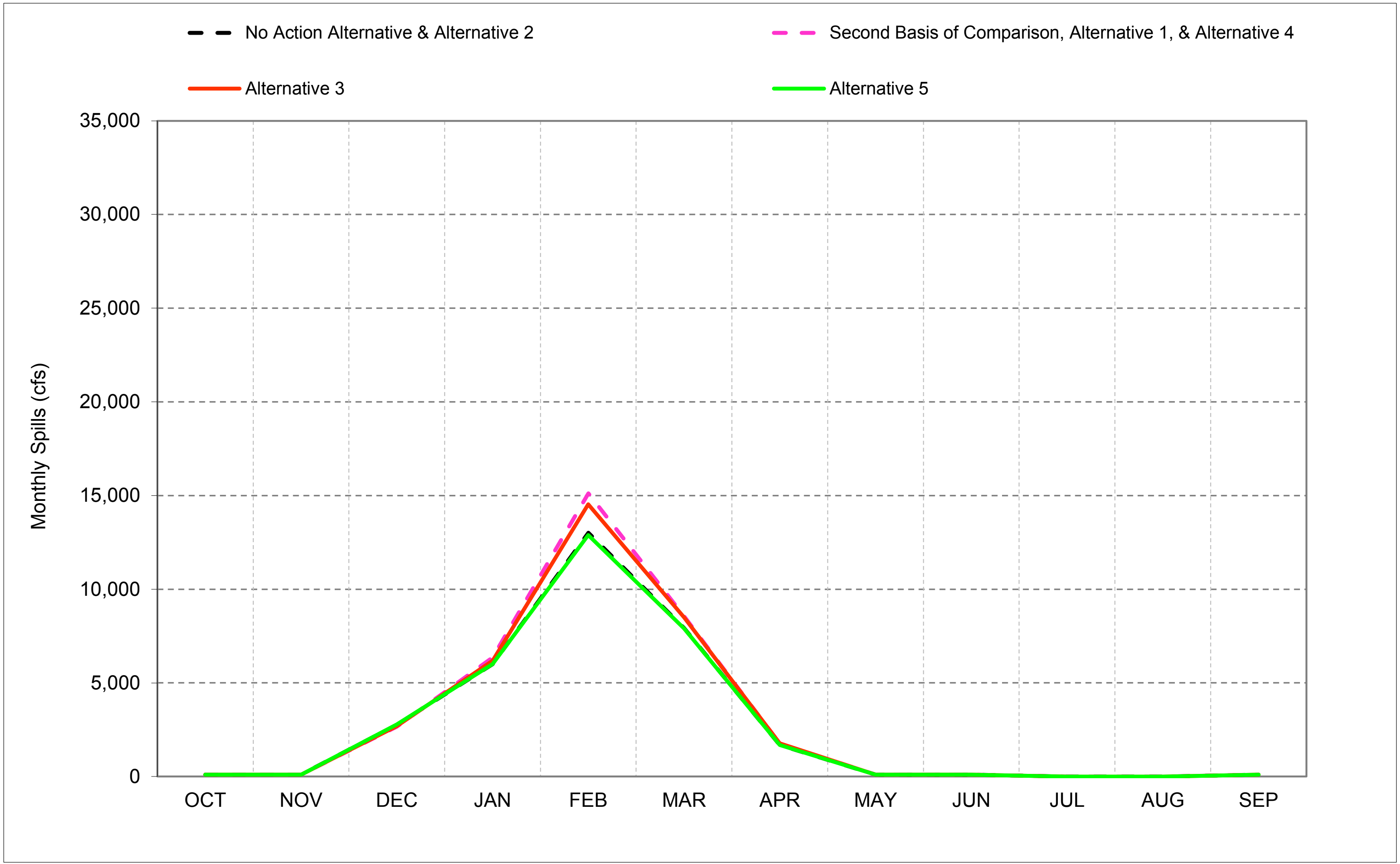


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-26-3. Fremont Weir, Above Normal Year* Long-Term Average Spills**

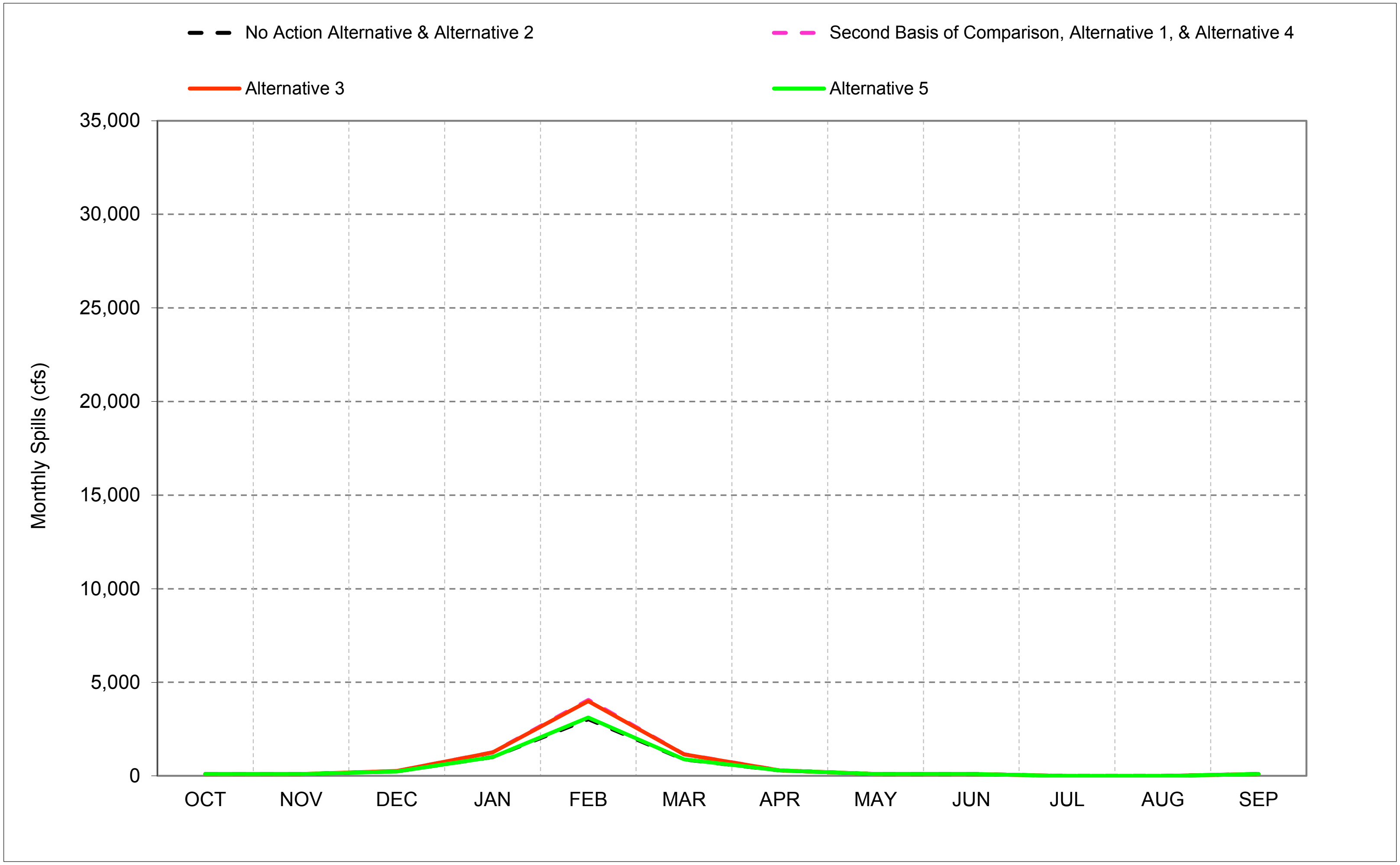


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-26-4. Fremont Weir, Below Normal Year* Long-Term Average Spills**

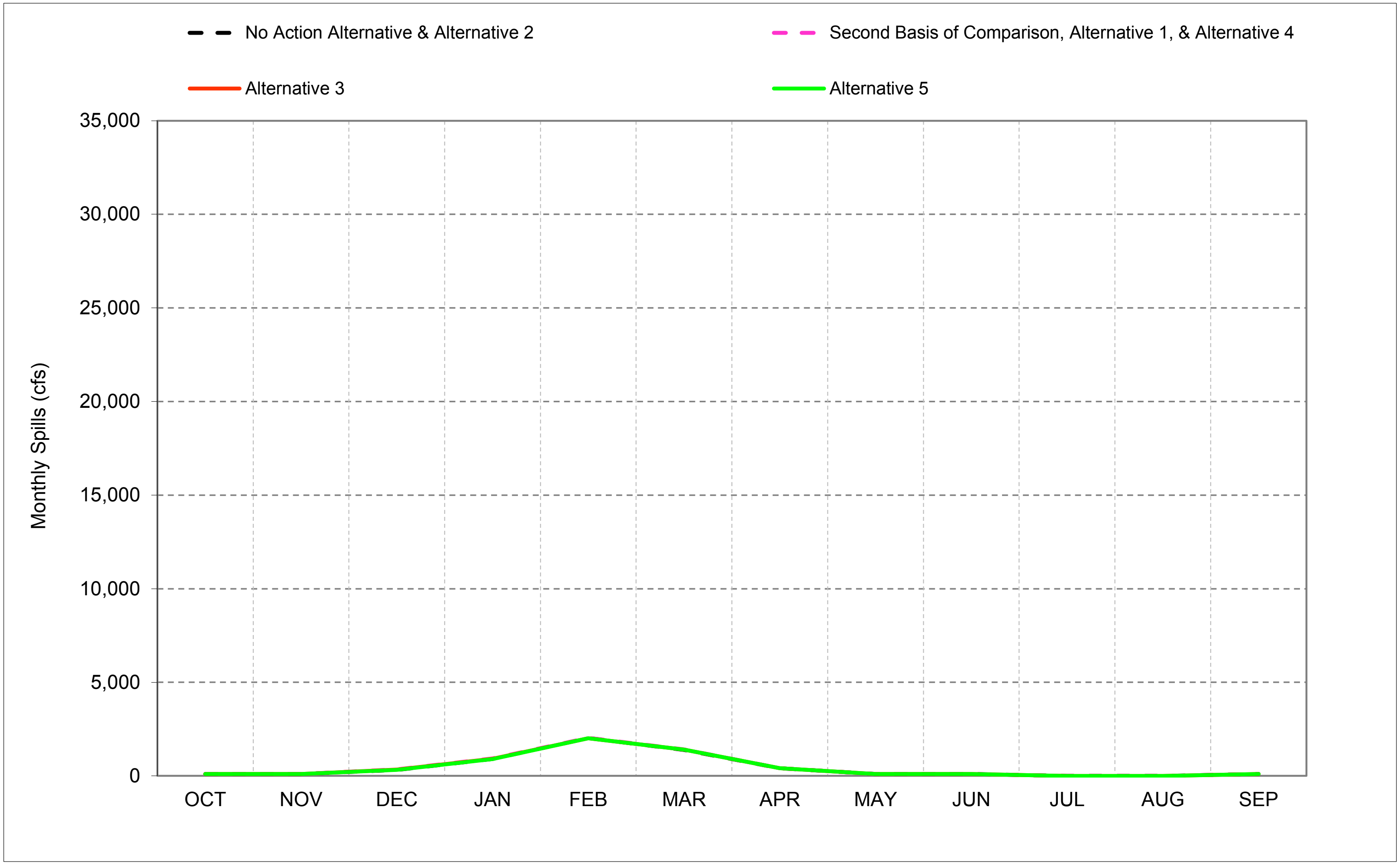


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-26-5. Fremont Weir, Dry Year* Long-Term Average Spills**

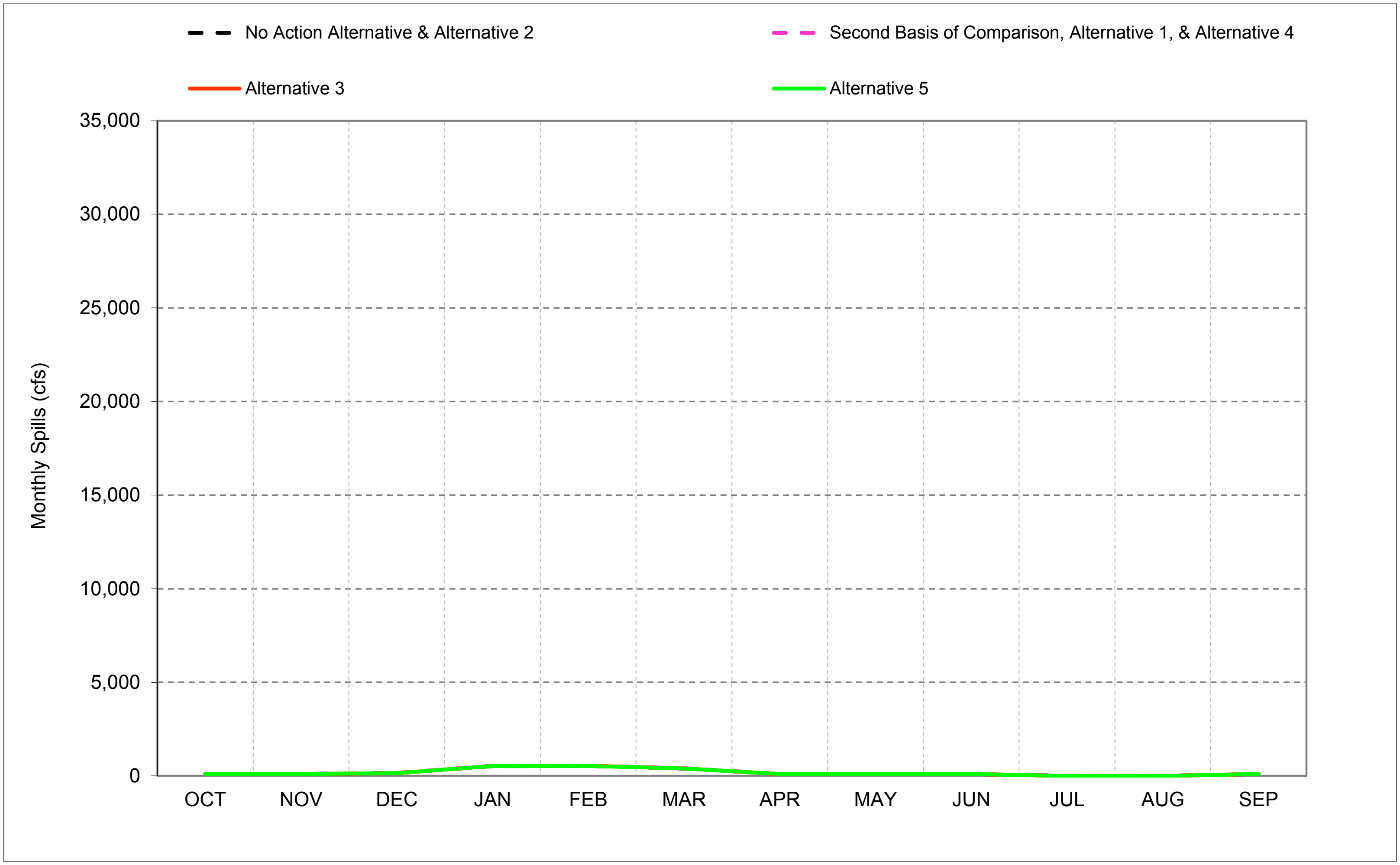


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-26-6. Fremont Weir, Critical Year* Long-Term Average Spills**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-1. Fremont Weir, Monthly Spills

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	7,229	23,972	40,788	16,077	5,836	100	100	0	0	100
20%	100	100	3,479	10,411	12,582	6,630	3,995	100	100	0	0	100
30%	100	100	1,219	5,246	7,068	4,531	884	100	100	0	0	100
40%	100	100	507	2,721	5,249	3,462	340	100	100	0	0	100
50%	100	100	185	1,412	3,305	1,749	114	100	100	0	0	100
60%	100	100	100	683	2,173	975	100	100	100	0	0	100
70%	100	100	100	145	932	321	100	100	100	0	0	100
80%	100	100	100	100	187	176	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	126	357	3,241	9,085	12,410	7,637	2,206	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	183	910	8,420	24,291	29,547	18,493	5,627	289	113	0	0	100
Above Normal (16%)	100	100	2,765	5,997	13,013	7,928	1,688	100	100	0	0	100
Below Normal (13%)	100	100	242	1,004	3,031	883	293	100	100	0	0	100
Dry (24%)	100	100	322	902	2,024	1,393	407	100	100	0	0	100
Critical (15%)	100	100	149	528	534	396	106	100	100	0	0	100

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	10,543	30,193	44,709	18,331	5,859	100	100	0	0	100
20%	100	100	3,673	10,516	13,894	7,379	4,169	100	100	0	0	100
30%	100	100	1,561	5,231	8,342	5,266	966	100	100	0	0	100
40%	100	100	533	2,826	5,470	3,433	341	100	100	0	0	100
50%	100	100	186	1,630	3,269	2,065	119	100	100	0	0	100
60%	100	100	100	851	2,291	1,101	100	100	100	0	0	100
70%	100	100	100	153	1,008	481	100	100	100	0	0	100
80%	100	100	100	100	184	201	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	115	384	3,697	9,549	13,200	7,942	2,211	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	147	996	9,888	25,442	30,547	18,997	5,602	289	113	0	0	100
Above Normal (16%)	100	100	2,659	6,349	15,114	8,566	1,765	100	100	0	0	100
Below Normal (13%)	100	100	262	1,256	4,057	1,166	292	100	100	0	0	100
Dry (24%)	100	100	342	932	2,032	1,411	411	100	100	0	0	100
Critical (15%)	100	100	149	542	533	408	106	100	100	0	0	100

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	0	0	3,314	6,220	3,920	2,254	23	0	0	0	0	0
20%	0	0	194	105	1,312	749	174	0	0	0	0	0
30%	0	0	341	-15	1,273	735	82	0	0	0	0	0
40%	0	0	26	105	221	-29	1	0	0	0	0	0
50%	0	0	1	218	-36	316	5	0	0	0	0	0
60%	0	0	0	168	118	126	0	0	0	0	0	0
70%	0	0	0	8	76	161	0	0	0	0	0	0
80%	0	0	0	0	-2	25	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	-12	27	456	464	790	305	5	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	-37	86	1,468	1,151	1,000	504	-25	0	0	0	0	0
Above Normal (16%)	0	0	-106	352	2,102	638	77	0	0	0	0	0
Below Normal (13%)	0	0	20	253	1,026	283	-1	0	0	0	0	0
Dry (24%)	0	0	20	30	7	17	4	0	0	0	0	0
Critical (15%)	0	0	1	15	-1	12	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-2. Fremont Weir, Monthly Spills

No Action Alternative

Statistic	Monthly Spills (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	100	100	7,229	23,972	40,788	16,077	5,836	100	100	0	0	100
20%	100	100	3,479	10,411	12,582	6,630	3,995	100	100	0	0	100
30%	100	100	1,219	5,246	7,068	4,531	884	100	100	0	0	100
40%	100	100	507	2,721	5,249	3,462	340	100	100	0	0	100
50%	100	100	185	1,412	3,305	1,749	114	100	100	0	0	100
60%	100	100	100	683	2,173	975	100	100	100	0	0	100
70%	100	100	100	145	932	321	100	100	100	0	0	100
80%	100	100	100	100	187	176	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	126	357	3,241	9,085	12,410	7,637	2,206	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	183	910	8,420	24,291	29,547	18,493	5,627	289	113	0	0	100
Above Normal (16%)	100	100	2,765	5,997	13,013	7,928	1,688	100	100	0	0	100
Below Normal (13%)	100	100	242	1,004	3,031	883	293	100	100	0	0	100
Dry (24%)	100	100	322	902	2,024	1,393	407	100	100	0	0	100
Critical (15%)	100	100	149	528	534	396	106	100	100	0	0	100

Alternative 3

Statistic	Monthly Spills (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	100	100	10,562	27,452	43,972	18,326	5,842	100	100	0	0	100
20%	100	100	3,657	10,624	13,753	6,816	4,163	100	100	0	0	100
30%	100	100	1,554	5,215	8,000	4,697	961	100	100	0	0	100
40%	100	100	535	2,831	5,471	3,406	341	100	100	0	0	100
50%	100	100	215	1,519	3,328	2,006	114	100	100	0	0	100
60%	100	100	100	789	2,202	1,123	100	100	100	0	0	100
70%	100	100	100	152	1,089	440	100	100	100	0	0	100
80%	100	100	100	100	203	179	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	112	377	3,640	9,456	13,036	7,875	2,216	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	139	973	9,693	25,241	30,361	18,837	5,617	289	113	0	0	100
Above Normal (16%)	100	100	2,686	6,188	14,531	8,490	1,768	100	100	0	0	100
Below Normal (13%)	100	100	262	1,250	4,001	1,153	293	100	100	0	0	100
Dry (24%)	100	100	342	923	2,007	1,406	410	100	100	0	0	100
Critical (15%)	100	100	150	534	545	397	106	100	100	0	0	100

Alternative 3 minus No Action Alternative

Statistic	Monthly Spills (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	3,333	3,480	3,184	2,249	6	0	0	0	0	0
20%	0	0	178	213	1,170	186	168	0	0	0	0	0
30%	0	0	335	-32	932	166	78	0	0	0	0	0
40%	0	0	28	110	221	-55	2	0	0	0	0	0
50%	0	0	29	107	23	256	0	0	0	0	0	0
60%	0	0	0	106	29	147	0	0	0	0	0	0
70%	0	0	0	7	157	119	0	0	0	0	0	0
80%	0	0	0	0	16	3	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	-14	20	399	371	626	238	10	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	-45	64	1,273	950	813	344	-10	1	0	0	0	0
Above Normal (16%)	0	0	-78	192	1,519	562	80	0	0	0	0	0
Below Normal (13%)	0	0	20	247	970	271	-1	0	0	0	0	0
Dry (24%)	0	0	19	22	-17	13	3	0	0	0	0	0
Critical (15%)	0	0	1	7	11	1	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-3. Fremont Weir, Monthly Spills

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	7,229	23,972	40,788	16,077	5,836	100	100	0	0	100
20%	100	100	3,479	10,411	12,582	6,630	3,995	100	100	0	0	100
30%	100	100	1,219	5,246	7,068	4,531	884	100	100	0	0	100
40%	100	100	507	2,721	5,249	3,462	340	100	100	0	0	100
50%	100	100	185	1,412	3,305	1,749	114	100	100	0	0	100
60%	100	100	100	683	2,173	975	100	100	100	0	0	100
70%	100	100	100	145	932	321	100	100	100	0	0	100
80%	100	100	100	100	187	176	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	126	357	3,241	9,085	12,410	7,637	2,206	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	183	910	8,420	24,291	29,547	18,493	5,627	289	113	0	0	100
Above Normal (16%)	100	100	2,765	5,997	13,013	7,928	1,688	100	100	0	0	100
Below Normal (13%)	100	100	242	1,004	3,031	883	293	100	100	0	0	100
Dry (24%)	100	100	322	902	2,024	1,393	407	100	100	0	0	100
Critical (15%)	100	100	149	528	534	396	106	100	100	0	0	100

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	7,431	23,953	40,288	16,133	5,836	100	100	0	0	100
20%	100	100	3,445	10,420	12,539	6,538	3,992	100	100	0	0	100
30%	100	100	1,217	5,246	7,057	4,576	884	100	100	0	0	100
40%	100	100	507	2,676	5,250	3,467	341	100	100	0	0	100
50%	100	100	198	1,412	3,305	1,717	114	100	100	0	0	100
60%	100	100	100	683	2,148	963	100	100	100	0	0	100
70%	100	100	100	144	932	336	100	100	100	0	0	100
80%	100	100	100	100	187	176	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	122	364	3,237	9,006	12,386	7,638	2,206	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	170	933	8,400	24,048	29,507	18,512	5,627	289	113	0	0	100
Above Normal (16%)	100	100	2,786	6,000	12,885	7,895	1,688	100	100	0	0	100
Below Normal (13%)	100	100	242	1,004	3,115	886	293	100	100	0	0	100
Dry (24%)	100	100	317	896	2,015	1,398	407	100	100	0	0	100
Critical (15%)	100	100	151	525	531	393	106	100	100	0	0	100

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	0	0	202	-19	-501	56	0	0	0	0	0	0
20%	0	0	-34	10	-43	-92	-3	0	0	0	0	0
30%	0	0	-2	-1	-11	45	0	0	0	0	0	0
40%	0	0	0	-44	1	6	1	0	0	0	0	0
50%	0	0	13	0	0	-32	0	0	0	0	0	0
60%	0	0	0	0	-25	-12	0	0	0	0	0	0
70%	0	0	0	-1	0	15	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	-4	7	-4	-78	-24	2	0	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	-13	23	-20	-243	-40	18	0	0	0	0	0	0
Above Normal (16%)	0	0	22	4	-128	-34	0	0	0	0	0	0
Below Normal (13%)	0	0	-1	0	84	3	0	0	0	0	0	0
Dry (24%)	0	0	-5	-6	-10	4	0	0	0	0	0	0
Critical (15%)	0	0	2	-3	-3	-3	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-4. Fremont Weir, Monthly Spills

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	10,543	30,193	44,709	18,331	5,859	100	100	0	0	100
20%	100	100	3,673	10,516	13,894	7,379	4,169	100	100	0	0	100
30%	100	100	1,561	5,231	8,342	5,266	966	100	100	0	0	100
40%	100	100	533	2,826	5,470	3,433	341	100	100	0	0	100
50%	100	100	186	1,630	3,269	2,065	119	100	100	0	0	100
60%	100	100	100	851	2,291	1,101	100	100	100	0	0	100
70%	100	100	100	153	1,008	481	100	100	100	0	0	100
80%	100	100	100	100	184	201	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	115	384	3,697	9,549	13,200	7,942	2,211	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	147	996	9,888	25,442	30,547	18,997	5,602	289	113	0	0	100
Above Normal (16%)	100	100	2,659	6,349	15,114	8,566	1,765	100	100	0	0	100
Below Normal (13%)	100	100	262	1,256	4,057	1,166	292	100	100	0	0	100
Dry (24%)	100	100	342	932	2,032	1,411	411	100	100	0	0	100
Critical (15%)	100	100	149	542	533	408	106	100	100	0	0	100

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	7,229	23,972	40,788	16,077	5,836	100	100	0	0	100
20%	100	100	3,479	10,411	12,582	6,630	3,995	100	100	0	0	100
30%	100	100	1,219	5,246	7,068	4,531	884	100	100	0	0	100
40%	100	100	507	2,721	5,249	3,462	340	100	100	0	0	100
50%	100	100	185	1,412	3,305	1,749	114	100	100	0	0	100
60%	100	100	100	683	2,173	975	100	100	100	0	0	100
70%	100	100	100	145	932	321	100	100	100	0	0	100
80%	100	100	100	100	187	176	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	126	357	3,241	9,085	12,410	7,637	2,206	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	183	910	8,420	24,291	29,547	18,493	5,627	289	113	0	0	100
Above Normal (16%)	100	100	2,765	5,997	13,013	7,928	1,688	100	100	0	0	100
Below Normal (13%)	100	100	242	1,004	3,031	883	293	100	100	0	0	100
Dry (24%)	100	100	322	902	2,024	1,393	407	100	100	0	0	100
Critical (15%)	100	100	149	528	534	396	106	100	100	0	0	100

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	0	0	-3,314	-6,220	-3,920	-2,254	-23	0	0	0	0	0
20%	0	0	-194	-105	-1,312	-749	-174	0	0	0	0	0
30%	0	0	-341	15	-1,273	-735	-82	0	0	0	0	0
40%	0	0	-26	-105	-221	29	-1	0	0	0	0	0
50%	0	0	-1	-218	36	-316	-5	0	0	0	0	0
60%	0	0	0	-168	-118	-126	0	0	0	0	0	0
70%	0	0	0	-8	-76	-161	0	0	0	0	0	0
80%	0	0	0	0	2	-25	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	12	-27	-456	-464	-790	-305	-5	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	37	-86	-1,468	-1,151	-1,000	-504	25	0	0	0	0	0
Above Normal (16%)	0	0	106	-352	-2,102	-638	-77	0	0	0	0	0
Below Normal (13%)	0	0	-20	-253	-1,026	-283	1	0	0	0	0	0
Dry (24%)	0	0	-20	-30	-7	-17	-4	0	0	0	0	0
Critical (15%)	0	0	-1	-15	1	-12	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-5. Fremont Weir, Monthly Spills

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	10,543	30,193	44,709	18,331	5,859	100	100	0	0	100
20%	100	100	3,673	10,516	13,894	7,379	4,169	100	100	0	0	100
30%	100	100	1,561	5,231	8,342	5,266	966	100	100	0	0	100
40%	100	100	533	2,826	5,470	3,433	341	100	100	0	0	100
50%	100	100	186	1,630	3,269	2,065	119	100	100	0	0	100
60%	100	100	100	851	2,291	1,101	100	100	100	0	0	100
70%	100	100	100	153	1,008	481	100	100	100	0	0	100
80%	100	100	100	100	184	201	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	115	384	3,697	9,549	13,200	7,942	2,211	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	147	996	9,888	25,442	30,547	18,997	5,602	289	113	0	0	100
Above Normal (16%)	100	100	2,659	6,349	15,114	8,566	1,765	100	100	0	0	100
Below Normal (13%)	100	100	262	1,256	4,057	1,166	292	100	100	0	0	100
Dry (24%)	100	100	342	932	2,032	1,411	411	100	100	0	0	100
Critical (15%)	100	100	149	542	533	408	106	100	100	0	0	100

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	10,562	27,452	43,972	18,326	5,842	100	100	0	0	100
20%	100	100	3,657	10,624	13,753	6,816	4,163	100	100	0	0	100
30%	100	100	1,554	5,215	8,000	4,697	961	100	100	0	0	100
40%	100	100	535	2,831	5,471	3,406	341	100	100	0	0	100
50%	100	100	215	1,519	3,328	2,006	114	100	100	0	0	100
60%	100	100	100	789	2,202	1,123	100	100	100	0	0	100
70%	100	100	100	152	1,089	440	100	100	100	0	0	100
80%	100	100	100	100	203	179	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	112	377	3,640	9,456	13,036	7,875	2,216	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	139	973	9,693	25,241	30,361	18,837	5,617	289	113	0	0	100
Above Normal (16%)	100	100	2,686	6,188	14,531	8,490	1,768	100	100	0	0	100
Below Normal (13%)	100	100	262	1,250	4,001	1,153	293	100	100	0	0	100
Dry (24%)	100	100	342	923	2,007	1,406	410	100	100	0	0	100
Critical (15%)	100	100	150	534	545	397	106	100	100	0	0	100

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	0	0	19	-2,740	-736	-5	-17	0	0	0	0	0
20%	0	0	-16	108	-141	-563	-7	0	0	0	0	0
30%	0	0	-6	-16	-342	-569	-5	0	0	0	0	0
40%	0	0	2	5	1	-26	1	0	0	0	0	0
50%	0	0	29	-111	59	-59	-5	0	0	0	0	0
60%	0	0	0	-61	-89	22	0	0	0	0	0	0
70%	0	0	0	-1	81	-42	0	0	0	0	0	0
80%	0	0	0	0	19	-21	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	-3	-7	-58	-93	-163	-67	5	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	-8	-23	-195	-201	-187	-160	15	0	0	0	0	0
Above Normal (16%)	0	0	28	-161	-583	-76	4	0	0	0	0	0
Below Normal (13%)	0	0	0	-6	-56	-13	0	0	0	0	0	0
Dry (24%)	0	0	-1	-9	-24	-4	-2	0	0	0	0	0
Critical (15%)	0	0	0	-8	12	-11	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-6. Fremont Weir, Monthly Spills

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	10,543	30,193	44,709	18,331	5,859	100	100	0	0	100
20%	100	100	3,673	10,516	13,894	7,379	4,169	100	100	0	0	100
30%	100	100	1,561	5,231	8,342	5,266	966	100	100	0	0	100
40%	100	100	533	2,826	5,470	3,433	341	100	100	0	0	100
50%	100	100	186	1,630	3,269	2,065	119	100	100	0	0	100
60%	100	100	100	851	2,291	1,101	100	100	100	0	0	100
70%	100	100	100	153	1,008	481	100	100	100	0	0	100
80%	100	100	100	100	184	201	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	115	384	3,697	9,549	13,200	7,942	2,211	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	147	996	9,888	25,442	30,547	18,997	5,602	289	113	0	0	100
Above Normal (16%)	100	100	2,659	6,349	15,114	8,566	1,765	100	100	0	0	100
Below Normal (13%)	100	100	262	1,256	4,057	1,166	292	100	100	0	0	100
Dry (24%)	100	100	342	932	2,032	1,411	411	100	100	0	0	100
Critical (15%)	100	100	149	542	533	408	106	100	100	0	0	100

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	100	100	7,431	23,953	40,288	16,133	5,836	100	100	0	0	100
20%	100	100	3,445	10,420	12,539	6,538	3,992	100	100	0	0	100
30%	100	100	1,217	5,246	7,057	4,576	884	100	100	0	0	100
40%	100	100	507	2,676	5,250	3,467	341	100	100	0	0	100
50%	100	100	198	1,412	3,305	1,717	114	100	100	0	0	100
60%	100	100	100	683	2,148	963	100	100	100	0	0	100
70%	100	100	100	144	932	336	100	100	100	0	0	100
80%	100	100	100	100	187	176	100	100	100	0	0	100
90%	100	100	100	100	100	100	100	100	100	0	0	100
Long Term												
Full Simulation Period[b]	122	364	3,237	9,006	12,386	7,638	2,206	160	104	0	0	100
Water Year Types[c]												
Wet (32%)	170	933	8,400	24,048	29,507	18,512	5,627	289	113	0	0	100
Above Normal (16%)	100	100	2,786	6,000	12,885	7,895	1,688	100	100	0	0	100
Below Normal (13%)	100	100	242	1,004	3,115	886	293	100	100	0	0	100
Dry (24%)	100	100	317	896	2,015	1,398	407	100	100	0	0	100
Critical (15%)	100	100	151	525	531	393	106	100	100	0	0	100

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Spills (cfs)											
Probability of Exceedance[a]												
10%	0	0	-3,112	-6,239	-4,421	-2,197	-23	0	0	0	0	0
20%	0	0	-228	-96	-1,355	-841	-177	0	0	0	0	0
30%	0	0	-343	15	-1,284	-690	-82	0	0	0	0	0
40%	0	0	-26	-149	-220	34	0	0	0	0	0	0
50%	0	0	12	-219	36	-347	-5	0	0	0	0	0
60%	0	0	0	-168	-143	-138	0	0	0	0	0	0
70%	0	0	0	-9	-76	-145	0	0	0	0	0	0
80%	0	0	0	0	2	-25	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	7	-20	-460	-542	-814	-303	-5	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	23	-63	-1,488	-1,394	-1,040	-486	25	0	0	0	0	0
Above Normal (16%)	0	0	128	-349	-2,230	-671	-77	0	0	0	0	0
Below Normal (13%)	0	0	-20	-252	-942	-280	1	0	0	0	0	0
Dry (24%)	0	0	-25	-36	-17	-13	-4	0	0	0	0	0
Critical (15%)	0	0	2	-17	-2	-15	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

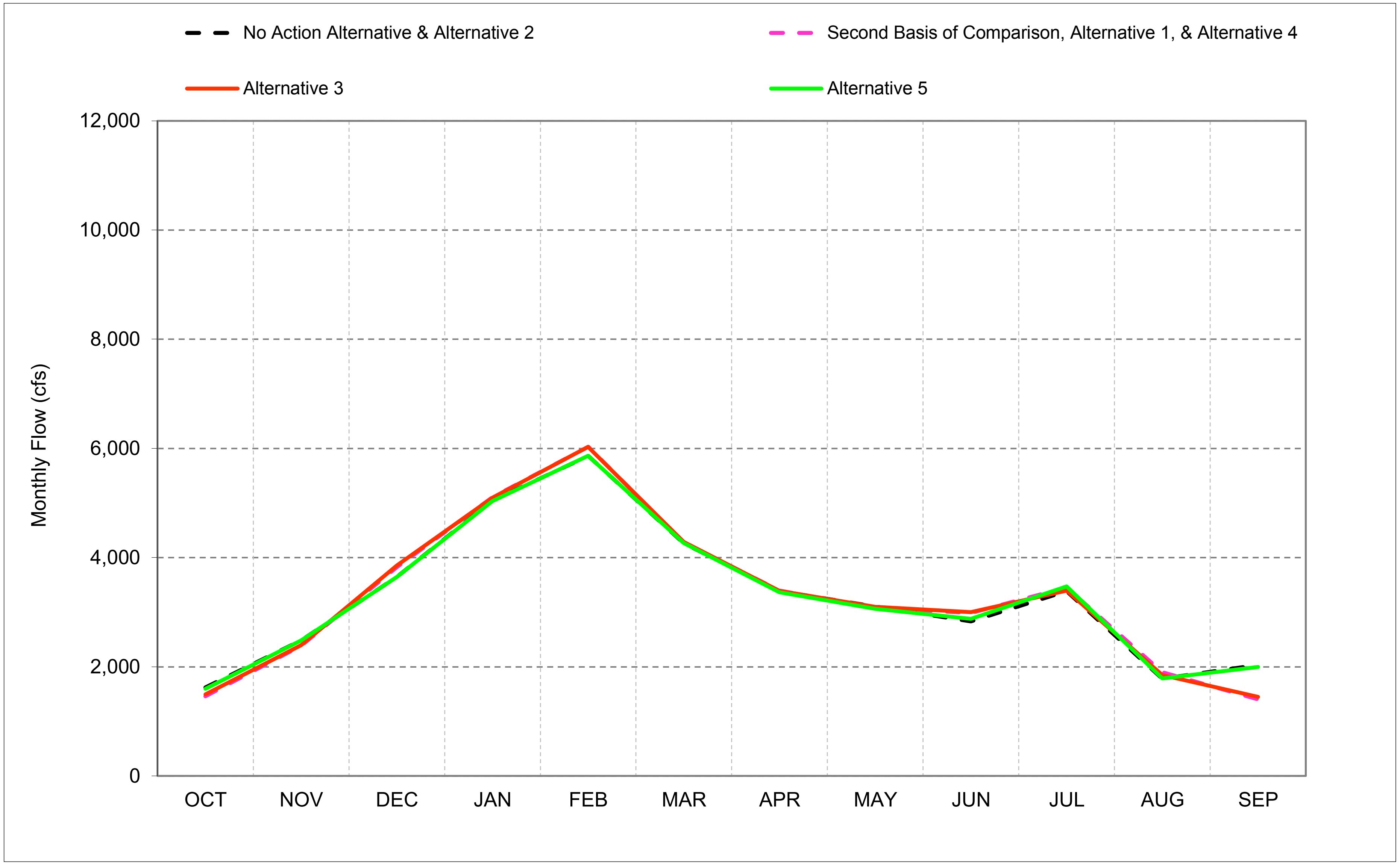
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1 ## C.27. American River Flow downstream of Nimbus

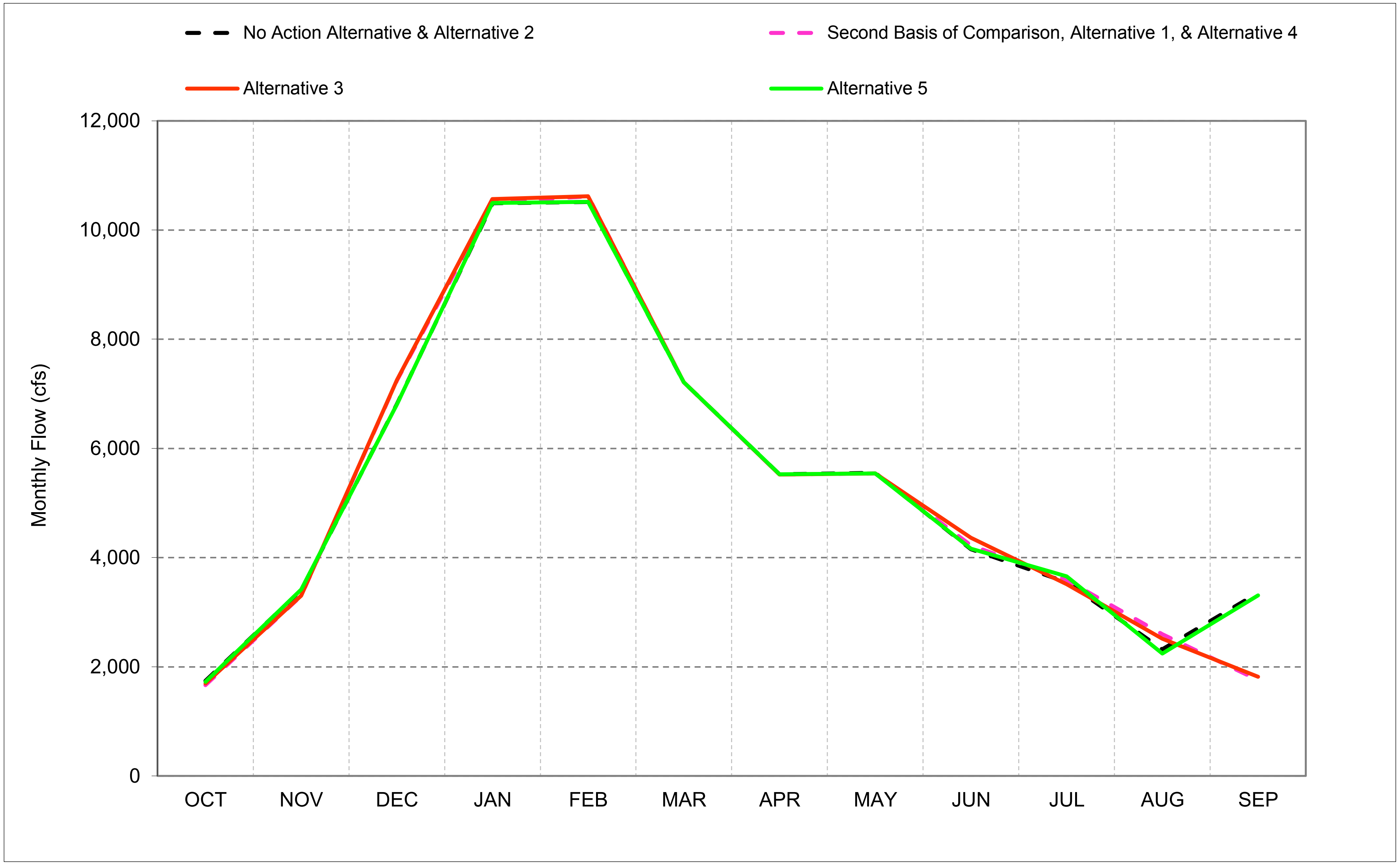
Figure C-27-1. American River d/s of Nimbus Dam, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-27-2. American River d/s of Nimbus Dam, Wet Year* Long-Term Average Flow**

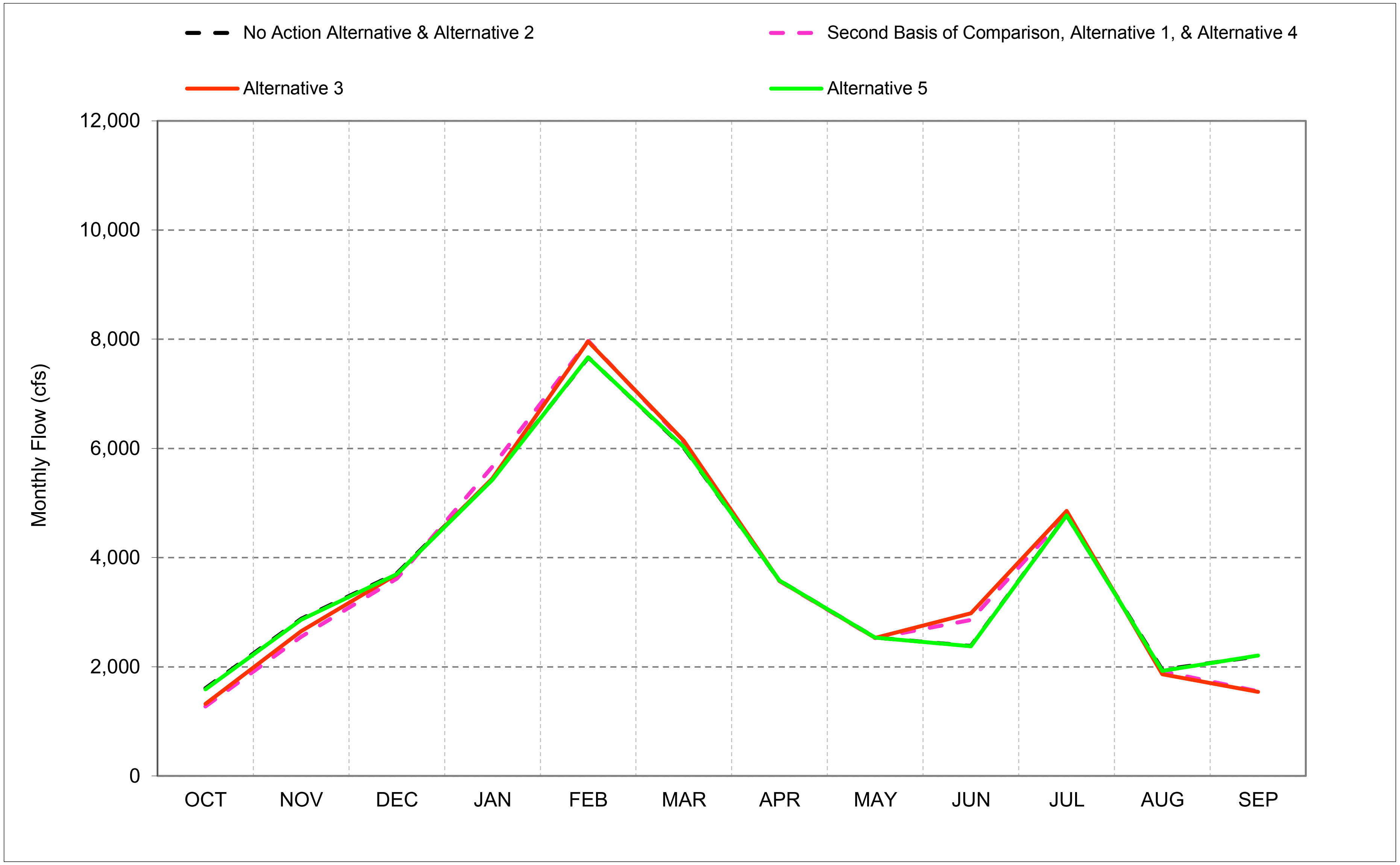


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-27-3. American River d/s of Nimbus Dam, Above Normal Year* Long-Term Average Flow**

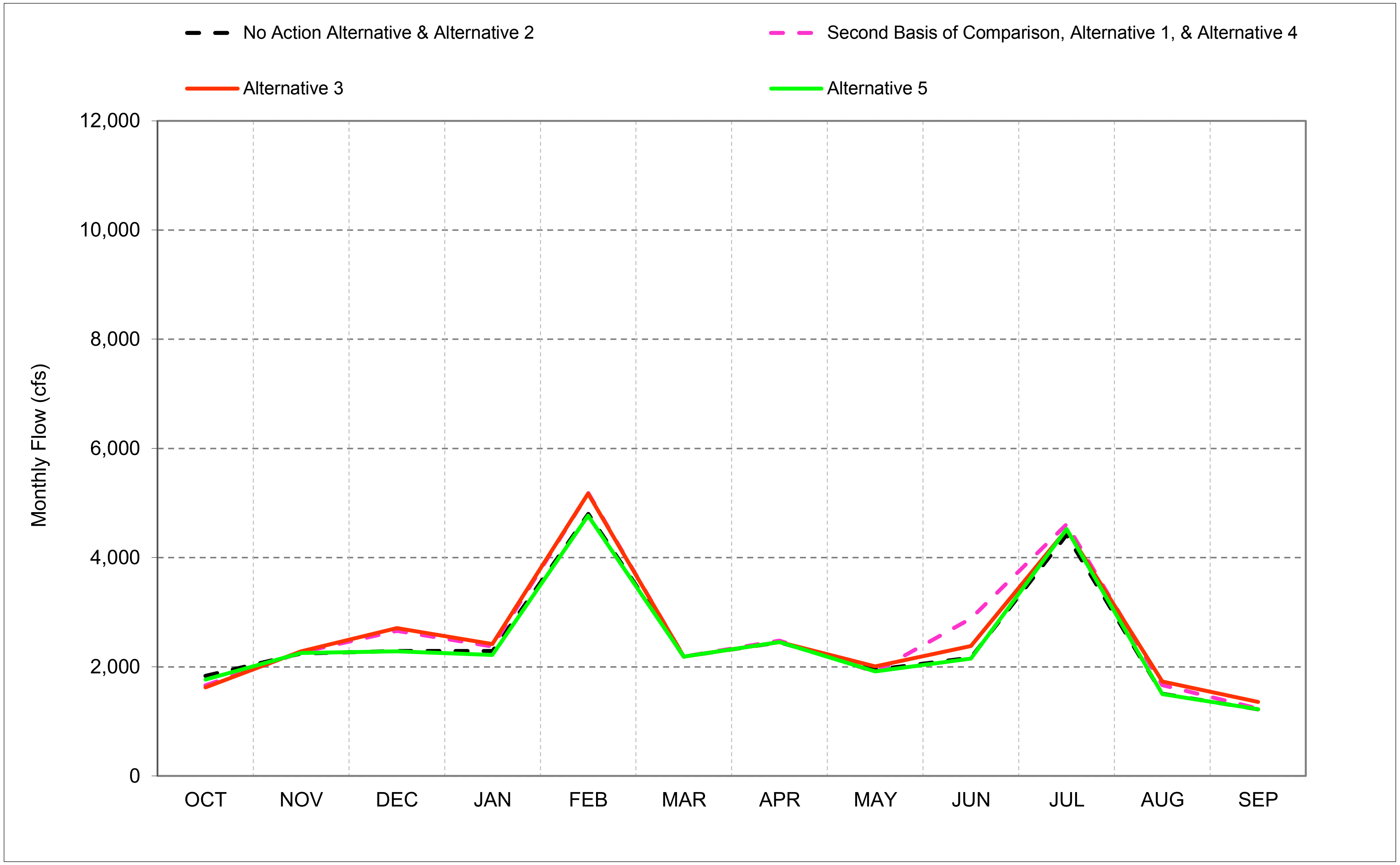


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-27-4. American River d/s of Nimbus Dam, Below Normal Year* Long-Term Average Flow**

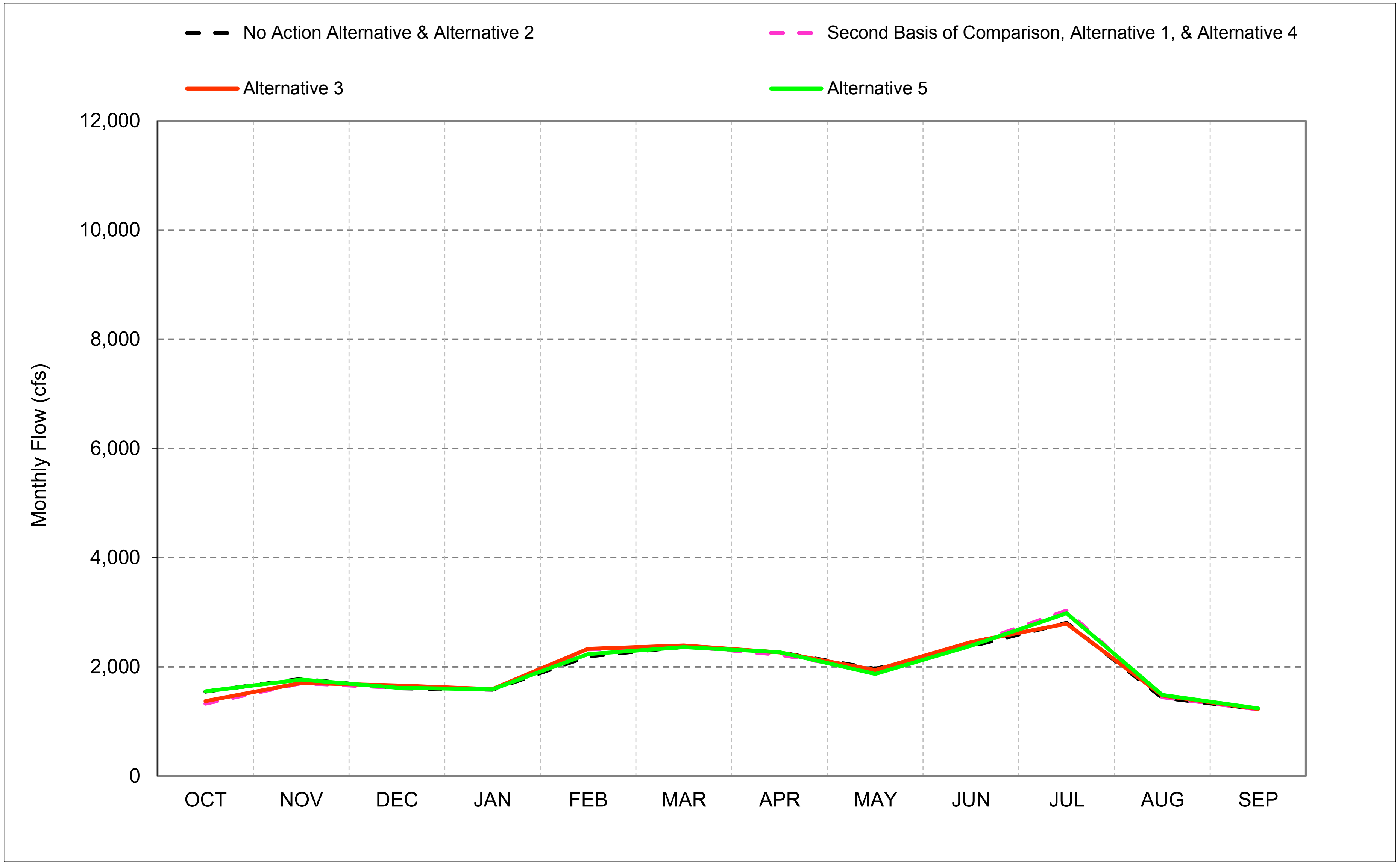


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-27-5. American River d/s of Nimbus Dam, Dry Year* Long-Term Average Flow**

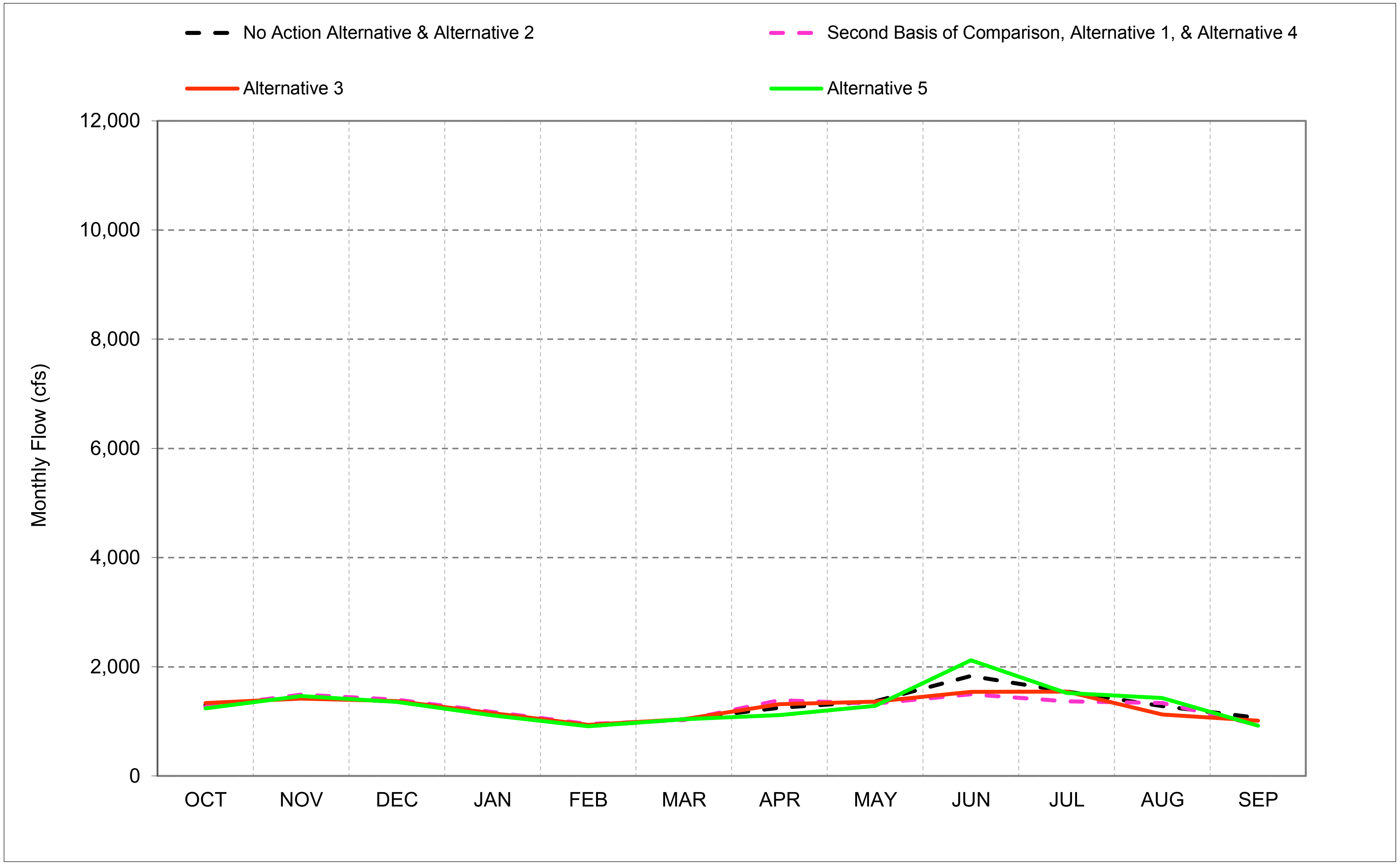


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-27-6. American River d/s of Nimbus Dam, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-27-1. American River d/s of Nimbus Dam, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,600	3,783	8,379	12,160	14,655	9,756	6,737	7,450	4,753	5,000	3,083	3,957
20%	1,962	3,343	3,880	7,656	10,890	6,820	5,085	4,489	3,837	5,000	2,265	3,182
30%	1,639	2,565	2,076	5,303	7,117	5,044	4,494	3,543	3,507	4,916	1,967	2,426
40%	1,500	1,981	2,000	3,583	5,759	4,176	3,491	2,861	2,722	3,856	1,768	1,932
50%	1,500	1,925	2,000	1,750	3,087	3,057	2,544	2,268	2,293	3,567	1,750	1,565
60%	1,500	1,683	1,845	1,700	1,796	2,022	2,111	1,750	1,951	2,854	1,750	1,533
70%	1,500	1,515	1,595	1,700	1,445	1,747	1,747	1,609	1,750	2,510	1,630	1,480
80%	1,182	1,226	1,368	1,362	1,264	854	1,021	1,119	1,401	2,350	895	808
90%	800	800	800	985	901	800	800	800	904	1,137	800	800
Long Term												
Full Simulation Period[b]	1,622	2,483	3,648	5,045	5,861	4,263	3,384	3,103	2,833	3,385	1,783	2,031
Water Year Types[c]												
Wet (32%)	1,743	3,407	6,812	10,489	10,512	7,212	5,524	5,554	4,155	3,549	2,319	3,356
Above Normal (16%)	1,607	2,879	3,712	5,445	7,665	6,015	3,579	2,534	2,383	4,775	1,946	2,193
Below Normal (13%)	1,834	2,246	2,291	2,288	4,800	2,188	2,451	1,946	2,168	4,416	1,508	1,222
Dry (24%)	1,547	1,778	1,608	1,582	2,193	2,366	2,266	1,962	2,375	2,806	1,432	1,230
Critical (15%)	1,303	1,443	1,365	1,114	914	1,042	1,251	1,369	1,832	1,545	1,280	1,064

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,967	3,834	9,336	12,160	14,655	9,754	6,737	7,450	4,650	5,000	3,236	1,837
20%	1,500	3,218	4,325	7,873	10,806	6,805	5,083	4,486	3,799	5,000	2,678	1,604
30%	1,500	2,070	2,528	5,813	7,391	5,044	4,483	3,543	3,623	4,957	2,299	1,533
40%	1,500	1,925	2,000	3,587	5,755	4,172	3,491	2,836	3,223	4,250	1,912	1,533
50%	1,500	1,818	2,000	1,776	3,753	3,039	2,499	2,021	2,835	3,591	1,750	1,533
60%	1,500	1,683	1,936	1,700	2,602	2,015	2,089	1,750	2,245	2,935	1,750	1,533
70%	1,449	1,500	1,701	1,700	1,445	1,747	1,750	1,625	1,832	2,589	1,681	1,493
80%	991	1,136	1,146	1,440	1,264	921	1,162	1,074	1,727	2,373	957	800
90%	800	800	800	819	1,032	800	800	800	1,061	1,327	800	780
Long Term												
Full Simulation Period[b]	1,461	2,386	3,826	5,109	6,030	4,279	3,395	3,077	2,987	3,454	1,899	1,404
Water Year Types[c]												
Wet (32%)	1,664	3,300	7,242	10,514	10,615	7,209	5,521	5,541	4,226	3,591	2,597	1,756
Above Normal (16%)	1,274	2,549	3,614	5,670	7,969	6,116	3,572	2,527	2,860	4,782	1,913	1,553
Below Normal (13%)	1,661	2,262	2,660	2,370	5,181	2,187	2,477	1,907	2,881	4,610	1,666	1,236
Dry (24%)	1,329	1,698	1,619	1,587	2,322	2,377	2,222	1,925	2,413	3,028	1,446	1,222
Critical (15%)	1,263	1,492	1,400	1,171	951	1,027	1,391	1,327	1,496	1,368	1,336	935

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-633	52	957	0	0	-2	0	0	-103	0	152	-2,120
20%	-462	-125	444	217	-84	-15	-1	-3	-38	0	413	-1,579
30%	-139	-495	452	510	274	-1	-11	0	116	41	333	-893
40%	0	-56	0	4	-3	-4	0	-26	501	394	145	-399
50%	0	-107	0	26	665	-18	-45	-247	541	24	0	-32
60%	0	0	91	0	806	-7	-22	0	294	82	0	0
70%	-51	-15	107	0	0	0	3	16	82	79	51	13
80%	-191	-90	-222	78	0	67	141	-45	326	23	62	-8
90%	0	0	0	-166	132	0	0	0	156	190	0	-20
Long Term												
Full Simulation Period[b]	-160	-96	178	64	169	15	11	-26	154	69	116	-628
Water Year Types[c]												
Wet (32%)	-79	-107	430	25	102	-3	-3	-13	72	42	278	-1,600
Above Normal (16%)	-332	-330	-98	225	304	101	-8	-7	477	6	-33	-640
Below Normal (13%)	-173	17	369	82	381	-1	27	-39	713	194	159	14
Dry (24%)	-219	-80	11	5	128	12	-43	-38	37	222	14	-8
Critical (15%)	-40	49	35	56	38	-15	140	-42	-336	-177	56	-129

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-27-2. American River d/s of Nimbus Dam, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,600	3,783	8,379	12,160	14,655	9,756	6,737	7,450	4,753	5,000	3,083	3,957
20%	1,962	3,343	3,880	7,656	10,890	6,820	5,085	4,489	3,837	5,000	2,265	3,182
30%	1,639	2,565	2,076	5,303	7,117	5,044	4,494	3,543	3,507	4,916	1,967	2,426
40%	1,500	1,981	2,000	3,583	5,759	4,176	3,491	2,861	2,722	3,856	1,768	1,932
50%	1,500	1,925	2,000	1,750	3,087	3,057	2,544	2,268	2,293	3,567	1,750	1,565
60%	1,500	1,683	1,845	1,700	1,796	2,022	2,111	1,750	1,951	2,854	1,750	1,533
70%	1,500	1,515	1,595	1,700	1,445	1,747	1,747	1,609	1,750	2,510	1,630	1,480
80%	1,182	1,226	1,368	1,362	1,264	854	1,021	1,119	1,401	2,350	895	808
90%	800	800	800	985	901	800	800	800	904	1,137	800	800
Long Term												
Full Simulation Period[b]	1,622	2,483	3,648	5,045	5,861	4,263	3,384	3,103	2,833	3,385	1,783	2,031
Water Year Types[c]												
Wet (32%)	1,743	3,407	6,812	10,489	10,512	7,212	5,524	5,554	4,155	3,549	2,319	3,356
Above Normal (16%)	1,607	2,879	3,712	5,445	7,665	6,015	3,579	2,534	2,383	4,775	1,946	2,193
Below Normal (13%)	1,834	2,246	2,291	2,288	4,800	2,188	2,451	1,946	2,168	4,416	1,508	1,222
Dry (24%)	1,547	1,778	1,608	1,582	2,193	2,366	2,266	1,962	2,375	2,806	1,432	1,230
Critical (15%)	1,303	1,443	1,365	1,114	914	1,042	1,251	1,369	1,832	1,545	1,280	1,064

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,022	3,873	9,622	12,160	14,655	9,756	6,737	7,450	4,944	5,000	3,092	1,949
20%	1,714	3,207	4,325	7,873	10,797	6,816	5,085	4,486	4,005	5,000	2,542	1,687
30%	1,500	2,069	2,733	5,563	7,391	5,044	4,484	3,543	3,661	4,999	2,018	1,533
40%	1,500	1,925	2,000	3,579	5,756	4,172	3,491	2,838	3,200	3,840	1,875	1,533
50%	1,500	1,893	2,000	1,890	3,718	3,047	2,548	2,240	2,664	3,535	1,750	1,533
60%	1,500	1,683	1,960	1,700	2,605	2,017	2,152	1,750	2,230	2,900	1,750	1,533
70%	1,425	1,448	1,596	1,700	1,445	1,747	1,747	1,616	1,851	2,579	1,648	1,493
80%	1,150	1,150	1,244	1,374	1,264	1,059	1,073	1,112	1,598	2,013	1,081	800
90%	800	800	800	825	982	800	800	804	1,011	1,250	800	800
Long Term												
Full Simulation Period[b]	1,496	2,397	3,855	5,095	6,027	4,288	3,390	3,100	2,999	3,396	1,849	1,449
Water Year Types[c]												
Wet (32%)	1,696	3,301	7,254	10,565	10,615	7,210	5,522	5,541	4,361	3,511	2,516	1,815
Above Normal (16%)	1,323	2,651	3,693	5,447	7,960	6,141	3,574	2,529	2,982	4,854	1,863	1,539
Below Normal (13%)	1,622	2,285	2,711	2,417	5,174	2,188	2,454	2,009	2,380	4,514	1,728	1,354
Dry (24%)	1,374	1,704	1,661	1,593	2,327	2,389	2,262	1,942	2,453	2,792	1,476	1,229
Critical (15%)	1,336	1,419	1,371	1,153	938	1,041	1,313	1,362	1,542	1,546	1,125	1,012

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-578	91	1,244	0	0	0	0	0	191	0	8	-2,008
20%	-248	-136	445	217	-93	-4	0	-3	168	0	277	-1,495
30%	-139	-496	657	261	274	-1	-10	0	154	83	52	-893
40%	0	-56	0	-4	-3	-4	0	-24	479	-15	108	-399
50%	0	-32	0	140	631	-10	4	-28	371	-32	0	-32
60%	0	0	115	0	809	-5	41	0	279	46	0	0
70%	-75	-67	2	0	0	0	0	7	101	69	18	13
80%	-32	-75	-125	12	0	206	52	-7	198	-338	186	-8
90%	0	0	0	-160	81	0	0	4	106	113	0	0
Long Term												
Full Simulation Period[b]	-126	-86	207	50	166	25	7	-2	165	10	67	-583
Water Year Types[c]												
Wet (32%)	-47	-106	442	76	103	-3	-3	-13	207	-38	197	-1,541
Above Normal (16%)	-284	-228	-19	2	296	126	-5	-5	600	79	-83	-654
Below Normal (13%)	-213	39	420	128	374	0	3	63	212	98	221	133
Dry (24%)	-174	-73	53	11	134	23	-4	-21	77	-14	44	-1
Critical (15%)	33	-24	6	39	24	-1	62	-7	-290	1	-155	-52

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-27-3. American River d/s of Nimbus Dam, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,600	3,783	8,379	12,160	14,655	9,756	6,737	7,450	4,753	5,000	3,083	3,957
20%	1,962	3,343	3,880	7,656	10,890	6,820	5,085	4,489	3,837	5,000	2,265	3,182
30%	1,639	2,565	2,076	5,303	7,117	5,044	4,494	3,543	3,507	4,916	1,967	2,426
40%	1,500	1,981	2,000	3,583	5,759	4,176	3,491	2,861	2,722	3,856	1,768	1,932
50%	1,500	1,925	2,000	1,750	3,087	3,057	2,544	2,268	2,293	3,567	1,750	1,565
60%	1,500	1,683	1,845	1,700	1,796	2,022	2,111	1,750	1,951	2,854	1,750	1,533
70%	1,500	1,515	1,595	1,700	1,445	1,747	1,747	1,609	1,750	2,510	1,630	1,480
80%	1,182	1,226	1,368	1,362	1,264	854	1,021	1,119	1,401	2,350	895	808
90%	800	800	800	985	901	800	800	800	904	1,137	800	800
Long Term												
Full Simulation Period[b]	1,622	2,483	3,648	5,045	5,861	4,263	3,384	3,103	2,833	3,385	1,783	2,031
Water Year Types[c]												
Wet (32%)	1,743	3,407	6,812	10,489	10,512	7,212	5,524	5,554	4,155	3,549	2,319	3,356
Above Normal (16%)	1,607	2,879	3,712	5,445	7,665	6,015	3,579	2,534	2,383	4,775	1,946	2,193
Below Normal (13%)	1,834	2,246	2,291	2,288	4,800	2,188	2,451	1,946	2,168	4,416	1,508	1,222
Dry (24%)	1,547	1,778	1,608	1,582	2,193	2,366	2,266	1,962	2,375	2,806	1,432	1,230
Critical (15%)	1,303	1,443	1,365	1,114	914	1,042	1,251	1,369	1,832	1,545	1,280	1,064

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,591	3,790	8,385	12,160	14,655	9,756	6,737	7,450	4,997	5,000	2,981	3,872
20%	1,858	3,384	3,894	7,653	10,889	6,820	5,085	4,492	3,883	5,000	2,354	3,145
30%	1,544	2,539	2,092	5,303	7,315	5,044	4,490	3,543	3,613	4,903	1,895	2,423
40%	1,500	1,961	2,000	3,582	5,758	4,175	3,491	2,733	2,886	4,084	1,750	1,910
50%	1,500	1,925	2,000	1,750	3,095	3,057	2,524	2,009	2,330	3,616	1,750	1,533
60%	1,500	1,683	1,823	1,700	1,796	2,022	2,038	1,750	1,965	2,944	1,750	1,533
70%	1,437	1,498	1,608	1,700	1,445	1,747	1,634	1,609	1,750	2,671	1,631	1,356
80%	1,188	1,219	1,262	1,356	1,264	845	1,024	992	1,508	2,392	965	800
90%	800	800	800	992	906	800	800	800	1,006	1,133	800	800
Long Term												
Full Simulation Period[b]	1,596	2,484	3,644	5,034	5,866	4,263	3,364	3,060	2,878	3,473	1,789	1,998
Water Year Types[c]												
Wet (32%)	1,728	3,416	6,805	10,493	10,513	7,212	5,524	5,544	4,165	3,654	2,242	3,306
Above Normal (16%)	1,588	2,861	3,698	5,425	7,666	6,024	3,580	2,535	2,374	4,775	1,927	2,204
Below Normal (13%)	1,768	2,251	2,282	2,218	4,766	2,184	2,450	1,916	2,151	4,524	1,499	1,222
Dry (24%)	1,550	1,768	1,619	1,587	2,233	2,363	2,267	1,867	2,384	2,983	1,485	1,239
Critical (15%)	1,239	1,462	1,358	1,111	912	1,041	1,117	1,285	2,121	1,523	1,430	919

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-9	7	6	0	0	0	0	0	245	0	-102	-85
20%	-104	41	13	-3	-1	0	1	2	46	0	89	-37
30%	-96	-26	16	0	198	0	-4	0	106	-12	-71	-3
40%	0	-20	0	0	0	0	0	-128	164	228	-18	-23
50%	0	0	0	0	7	0	-20	-260	36	49	0	-32
60%	0	0	-22	0	0	0	-73	0	14	90	0	0
70%	-63	-17	13	0	0	0	-112	0	0	161	1	-124
80%	6	-7	-106	-6	0	-8	3	-127	107	41	70	-8
90%	0	0	0	7	6	0	0	0	101	-4	0	0
Long Term												
Full Simulation Period[b]	-26	1	-4	-11	5	0	-19	-43	44	88	6	-33
Water Year Types[c]												
Wet (32%)	-16	8	-7	4	0	0	0	-11	10	105	-77	-50
Above Normal (16%)	-19	-18	-14	-20	1	9	1	1	-9	-1	-19	11
Below Normal (13%)	-66	5	-9	-70	-34	-4	0	-29	-17	108	-9	0
Dry (24%)	3	-10	11	5	39	-3	1	-96	9	176	53	9
Critical (15%)	-64	19	-7	-4	-2	-1	-134	-85	289	-22	150	-145

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-27-4. American River d/s of Nimbus Dam, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,967	3,834	9,336	12,160	14,655	9,754	6,737	7,450	4,650	5,000	3,236	1,837
20%	1,500	3,218	4,325	7,873	10,806	6,805	5,083	4,486	3,799	5,000	2,678	1,604
30%	1,500	2,070	2,528	5,813	7,391	5,044	4,483	3,543	3,623	4,957	2,299	1,533
40%	1,500	1,925	2,000	3,587	5,755	4,172	3,491	2,836	3,223	4,250	1,912	1,533
50%	1,500	1,818	2,000	1,776	3,753	3,039	2,499	2,021	2,835	3,591	1,750	1,533
60%	1,500	1,683	1,936	1,700	2,602	2,015	2,089	1,750	2,245	2,935	1,750	1,533
70%	1,449	1,500	1,701	1,700	1,445	1,747	1,750	1,625	1,832	2,589	1,681	1,493
80%	991	1,136	1,146	1,440	1,264	921	1,162	1,074	1,727	2,373	957	800
90%	800	800	800	819	1,032	800	800	800	1,061	1,327	800	780
Long Term												
Full Simulation Period[b]	1,461	2,386	3,826	5,109	6,030	4,279	3,395	3,077	2,987	3,454	1,899	1,404
Water Year Types[c]												
Wet (32%)	1,664	3,300	7,242	10,514	10,615	7,209	5,521	5,541	4,226	3,591	2,597	1,756
Above Normal (16%)	1,274	2,549	3,614	5,670	7,969	6,116	3,572	2,527	2,860	4,782	1,913	1,553
Below Normal (13%)	1,661	2,262	2,660	2,370	5,181	2,187	2,477	1,907	2,881	4,610	1,666	1,236
Dry (24%)	1,329	1,698	1,619	1,587	2,322	2,377	2,222	1,925	2,413	3,028	1,446	1,222
Critical (15%)	1,263	1,492	1,400	1,171	951	1,027	1,391	1,327	1,496	1,368	1,336	935

No Action Alternative

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,600	3,783	8,379	12,160	14,655	9,756	6,737	7,450	4,753	5,000	3,083	3,957
20%	1,962	3,343	3,880	7,656	10,890	6,820	5,085	4,489	3,837	5,000	2,265	3,182
30%	1,639	2,565	2,076	5,303	7,117	5,044	4,494	3,543	3,507	4,916	1,967	2,426
40%	1,500	1,981	2,000	3,583	5,759	4,176	3,491	2,861	2,722	3,856	1,768	1,932
50%	1,500	1,925	2,000	1,750	3,087	3,057	2,544	2,268	2,293	3,567	1,750	1,565
60%	1,500	1,683	1,845	1,700	1,796	2,022	2,111	1,750	1,951	2,854	1,750	1,533
70%	1,500	1,515	1,595	1,700	1,445	1,747	1,747	1,609	1,750	2,510	1,630	1,480
80%	1,182	1,226	1,368	1,362	1,264	854	1,021	1,119	1,401	2,350	895	808
90%	800	800	800	985	901	800	800	800	904	1,137	800	800
Long Term												
Full Simulation Period[b]	1,622	2,483	3,648	5,045	5,861	4,263	3,384	3,103	2,833	3,385	1,783	2,031
Water Year Types[c]												
Wet (32%)	1,743	3,407	6,812	10,489	10,512	7,212	5,524	5,554	4,155	3,549	2,319	3,356
Above Normal (16%)	1,607	2,879	3,712	5,445	7,665	6,015	3,579	2,534	2,383	4,775	1,946	2,193
Below Normal (13%)	1,834	2,246	2,291	2,288	4,800	2,188	2,451	1,946	2,168	4,416	1,508	1,222
Dry (24%)	1,547	1,778	1,608	1,582	2,193	2,366	2,266	1,962	2,375	2,806	1,432	1,230
Critical (15%)	1,303	1,443	1,365	1,114	914	1,042	1,251	1,369	1,832	1,545	1,280	1,064

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	633	-52	-957	0	0	2	0	0	103	0	-152	2,120
20%	462	125	-444	-217	84	15	1	3	38	0	-413	1,579
30%	139	495	-452	-510	-274	1	11	0	-116	-41	-333	893
40%	0	56	0	-4	3	4	0	26	-501	-394	-145	399
50%	0	107	0	-26	-665	18	45	247	-541	-24	0	32
60%	0	0	-91	0	-806	7	22	0	-294	-82	0	0
70%	51	15	-107	0	0	0	-3	-16	-82	-79	-51	-13
80%	191	90	222	-78	0	-67	-141	45	-326	-23	-62	8
90%	0	0	0	166	-132	0	0	0	-156	-190	0	20
Long Term												
Full Simulation Period[b]	160	96	-178	-64	-169	-15	-11	26	-154	-69	-116	628
Water Year Types[c]												
Wet (32%)	79	107	-430	-25	-102	3	3	13	-72	-42	-278	1,600
Above Normal (16%)	332	330	98	-225	-304	-101	8	7	-477	-6	33	640
Below Normal (13%)	173	-17	-369	-82	-381	1	-27	39	-713	-194	-159	-14
Dry (24%)	219	80	-11	-5	-128	-12	43	38	-37	-222	-14	8
Critical (15%)	40	-49	-35	-56	-38	15	-140	42	336	177	-56	129

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-27-5. American River d/s of Nimbus Dam, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,967	3,834	9,336	12,160	14,655	9,754	6,737	7,450	4,650	5,000	3,236	1,837
20%	1,500	3,218	4,325	7,873	10,806	6,805	5,083	4,486	3,799	5,000	2,678	1,604
30%	1,500	2,070	2,528	5,813	7,391	5,044	4,483	3,543	3,623	4,957	2,299	1,533
40%	1,500	1,925	2,000	3,587	5,755	4,172	3,491	2,836	3,223	4,250	1,912	1,533
50%	1,500	1,818	2,000	1,776	3,753	3,039	2,499	2,021	2,835	3,591	1,750	1,533
60%	1,500	1,683	1,936	1,700	2,602	2,015	2,089	1,750	2,245	2,935	1,750	1,533
70%	1,449	1,500	1,701	1,700	1,445	1,747	1,750	1,625	1,832	2,589	1,681	1,493
80%	991	1,136	1,146	1,440	1,264	921	1,162	1,074	1,727	2,373	957	800
90%	800	800	800	819	1,032	800	800	800	1,061	1,327	800	780
Long Term												
Full Simulation Period[b]	1,461	2,386	3,826	5,109	6,030	4,279	3,395	3,077	2,987	3,454	1,899	1,404
Water Year Types[c]												
Wet (32%)	1,664	3,300	7,242	10,514	10,615	7,209	5,521	5,541	4,226	3,591	2,597	1,756
Above Normal (16%)	1,274	2,549	3,614	5,670	7,969	6,116	3,572	2,527	2,860	4,782	1,913	1,553
Below Normal (13%)	1,661	2,262	2,660	2,370	5,181	2,187	2,477	1,907	2,881	4,610	1,666	1,236
Dry (24%)	1,329	1,698	1,619	1,587	2,322	2,377	2,222	1,925	2,413	3,028	1,446	1,222
Critical (15%)	1,263	1,492	1,400	1,171	951	1,027	1,391	1,327	1,496	1,368	1,336	935

Alternative 3

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,022	3,873	9,622	12,160	14,655	9,756	6,737	7,450	4,944	5,000	3,092	1,949
20%	1,714	3,207	4,325	7,873	10,797	6,816	5,085	4,486	4,005	5,000	2,542	1,687
30%	1,500	2,069	2,733	5,563	7,391	5,044	4,484	3,543	3,661	4,999	2,018	1,533
40%	1,500	1,925	2,000	3,579	5,756	4,172	3,491	2,838	3,200	3,840	1,875	1,533
50%	1,500	1,893	2,000	1,890	3,718	3,047	2,548	2,240	2,664	3,535	1,750	1,533
60%	1,500	1,683	1,960	1,700	2,605	2,017	2,152	1,750	2,230	2,900	1,750	1,533
70%	1,425	1,448	1,596	1,700	1,445	1,747	1,747	1,616	1,851	2,579	1,648	1,493
80%	1,150	1,150	1,244	1,374	1,264	1,059	1,073	1,112	1,598	2,013	1,081	800
90%	800	800	800	825	982	800	800	804	1,011	1,250	800	800
Long Term												
Full Simulation Period[b]	1,496	2,397	3,855	5,095	6,027	4,288	3,390	3,100	2,999	3,396	1,849	1,449
Water Year Types[c]												
Wet (32%)	1,696	3,301	7,254	10,565	10,615	7,210	5,522	5,541	4,361	3,511	2,516	1,815
Above Normal (16%)	1,323	2,651	3,693	5,447	7,960	6,141	3,574	2,529	2,982	4,854	1,863	1,539
Below Normal (13%)	1,622	2,285	2,711	2,417	5,174	2,188	2,454	2,009	2,380	4,514	1,728	1,354
Dry (24%)	1,374	1,704	1,661	1,593	2,327	2,389	2,262	1,942	2,453	2,792	1,476	1,229
Critical (15%)	1,336	1,419	1,371	1,153	938	1,041	1,313	1,362	1,542	1,546	1,125	1,012

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	55	39	286	0	0	2	0	0	294	0	**-144**	112
20%	214	**-11**	1	0	**-9**	11	1	0	206	0	**-137**	84
30%	0	**-1**	205	**-250**	0	0	1	0	38	42	**-281**	0
40%	0	0	0	**-8**	0	0	**0**	2	**-22**	**-410**	**-37**	0
50%	0	75	0	113	**-34**	7	49	219	**-171**	**-56**	0	0
60%	0	0	24	0	3	2	63	0	**-14**	**-35**	0	0
70%	**-24**	**-52**	**-105**	0	0	0	**-3**	**-9**	18	**-10**	**-33**	0
80%	159	15	98	**-66**	0	138	**-89**	38	**-129**	**-360**	124	0
90%	0	0	0	6	**-51**	0	0	4	**-50**	**-77**	0	20
Long Term												
Full Simulation Period[b]	34	10	29	**-14**	**-3**	9	**-4**	23	11	**-58**	**-49**	45
Water Year Types[c]												
Wet (32%)	32	1	12	51	1	0	1	0	135	**-80**	**-82**	59
Above Normal (16%)	49	103	79	**-223**	**-8**	25	2	2	123	72	**-50**	**-14**
Below Normal (13%)	**-39**	22	51	46	**-7**	1	**-23**	102	**-501**	**-96**	62	119
Dry (24%)	45	6	42	6	6	12	39	17	40	**-236**	29	7
Critical (15%)	73	**-73**	**-29**	**-18**	**-14**	14	**-77**	34	46	178	**-211**	76

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-27-6. American River d/s of Nimbus Dam, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,967	3,834	9,336	12,160	14,655	9,754	6,737	7,450	4,650	5,000	3,236	1,837
20%	1,500	3,218	4,325	7,873	10,806	6,805	5,083	4,486	3,799	5,000	2,678	1,604
30%	1,500	2,070	2,528	5,813	7,391	5,044	4,483	3,543	3,623	4,957	2,299	1,533
40%	1,500	1,925	2,000	3,587	5,755	4,172	3,491	2,836	3,223	4,250	1,912	1,533
50%	1,500	1,818	2,000	1,776	3,753	3,039	2,499	2,021	2,835	3,591	1,750	1,533
60%	1,500	1,683	1,936	1,700	2,602	2,015	2,089	1,750	2,245	2,935	1,750	1,533
70%	1,449	1,500	1,701	1,700	1,445	1,747	1,750	1,625	1,832	2,589	1,681	1,493
80%	991	1,136	1,146	1,440	1,264	921	1,162	1,074	1,727	2,373	957	800
90%	800	800	800	819	1,032	800	800	800	1,061	1,327	800	780
Long Term												
Full Simulation Period[b]	1,461	2,386	3,826	5,109	6,030	4,279	3,395	3,077	2,987	3,454	1,899	1,404
Water Year Types[c]												
Wet (32%)	1,664	3,300	7,242	10,514	10,615	7,209	5,521	5,541	4,226	3,591	2,597	1,756
Above Normal (16%)	1,274	2,549	3,614	5,670	7,969	6,116	3,572	2,527	2,860	4,782	1,913	1,553
Below Normal (13%)	1,661	2,262	2,660	2,370	5,181	2,187	2,477	1,907	2,881	4,610	1,666	1,236
Dry (24%)	1,329	1,698	1,619	1,587	2,322	2,377	2,222	1,925	2,413	3,028	1,446	1,222
Critical (15%)	1,263	1,492	1,400	1,171	951	1,027	1,391	1,327	1,496	1,368	1,336	935

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,591	3,790	8,385	12,160	14,655	9,756	6,737	7,450	4,997	5,000	2,981	3,872
20%	1,858	3,384	3,894	7,653	10,889	6,820	5,085	4,492	3,883	5,000	2,354	3,145
30%	1,544	2,539	2,092	5,303	7,315	5,044	4,490	3,543	3,613	4,903	1,895	2,423
40%	1,500	1,961	2,000	3,582	5,758	4,175	3,491	2,733	2,886	4,084	1,750	1,910
50%	1,500	1,925	2,000	1,750	3,095	3,057	2,524	2,009	2,330	3,616	1,750	1,533
60%	1,500	1,683	1,823	1,700	1,796	2,022	2,038	1,750	1,965	2,944	1,750	1,533
70%	1,437	1,498	1,608	1,700	1,445	1,747	1,634	1,609	1,750	2,671	1,631	1,356
80%	1,188	1,219	1,262	1,356	1,264	845	1,024	992	1,508	2,392	965	800
90%	800	800	800	992	906	800	800	800	1,006	1,133	800	800
Long Term												
Full Simulation Period[b]	1,596	2,484	3,644	5,034	5,866	4,263	3,364	3,060	2,878	3,473	1,789	1,998
Water Year Types[c]												
Wet (32%)	1,728	3,416	6,805	10,493	10,513	7,212	5,524	5,544	4,165	3,654	2,242	3,306
Above Normal (16%)	1,588	2,861	3,698	5,425	7,666	6,024	3,580	2,535	2,374	4,775	1,927	2,204
Below Normal (13%)	1,768	2,251	2,282	2,218	4,766	2,184	2,450	1,916	2,151	4,524	1,499	1,222
Dry (24%)	1,550	1,768	1,619	1,587	2,233	2,363	2,267	1,867	2,384	2,983	1,485	1,239
Critical (15%)	1,239	1,462	1,358	1,111	912	1,041	1,117	1,285	2,121	1,523	1,430	919

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	624	-44	-951	0	0	2	0	0	347	0	-255	2,035
20%	358	166	-431	-220	83	15	2	6	84	0	-324	1,541
30%	44	469	-435	-510	-76	0	7	0	-10	-54	-404	890
40%	0	36	0	-5	3	3	0	-102	-336	-166	-162	376
50%	0	107	0	-26	-658	18	25	-12	-505	25	0	0
60%	0	0	-113	0	-806	7	-51	0	-279	8	0	0
70%	-12	-2	-93	0	0	0	-116	-16	-82	82	-50	-137
80%	197	83	116	-84	0	-76	-138	-82	-219	19	8	0
90%	0	0	0	173	-126	0	0	0	-55	-194	0	20
Long Term												
Full Simulation Period[b]	135	97	-182	-75	-164	-15	-30	-17	-110	19	-110	595
Water Year Types[c]												
Wet (32%)	63	115	-437	-21	-102	3	3	2	-61	63	-355	1,550
Above Normal (16%)	314	312	84	-245	-303	-92	9	8	-486	-7	13	651
Below Normal (13%)	107	-12	-378	-152	-416	-3	-27	10	-730	-86	-167	-14
Dry (24%)	221	70	-1	0	-89	-14	44	-58	-28	-45	39	17
Critical (15%)	-24	-29	-42	-60	-40	14	-273	-43	625	155	93	-16

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

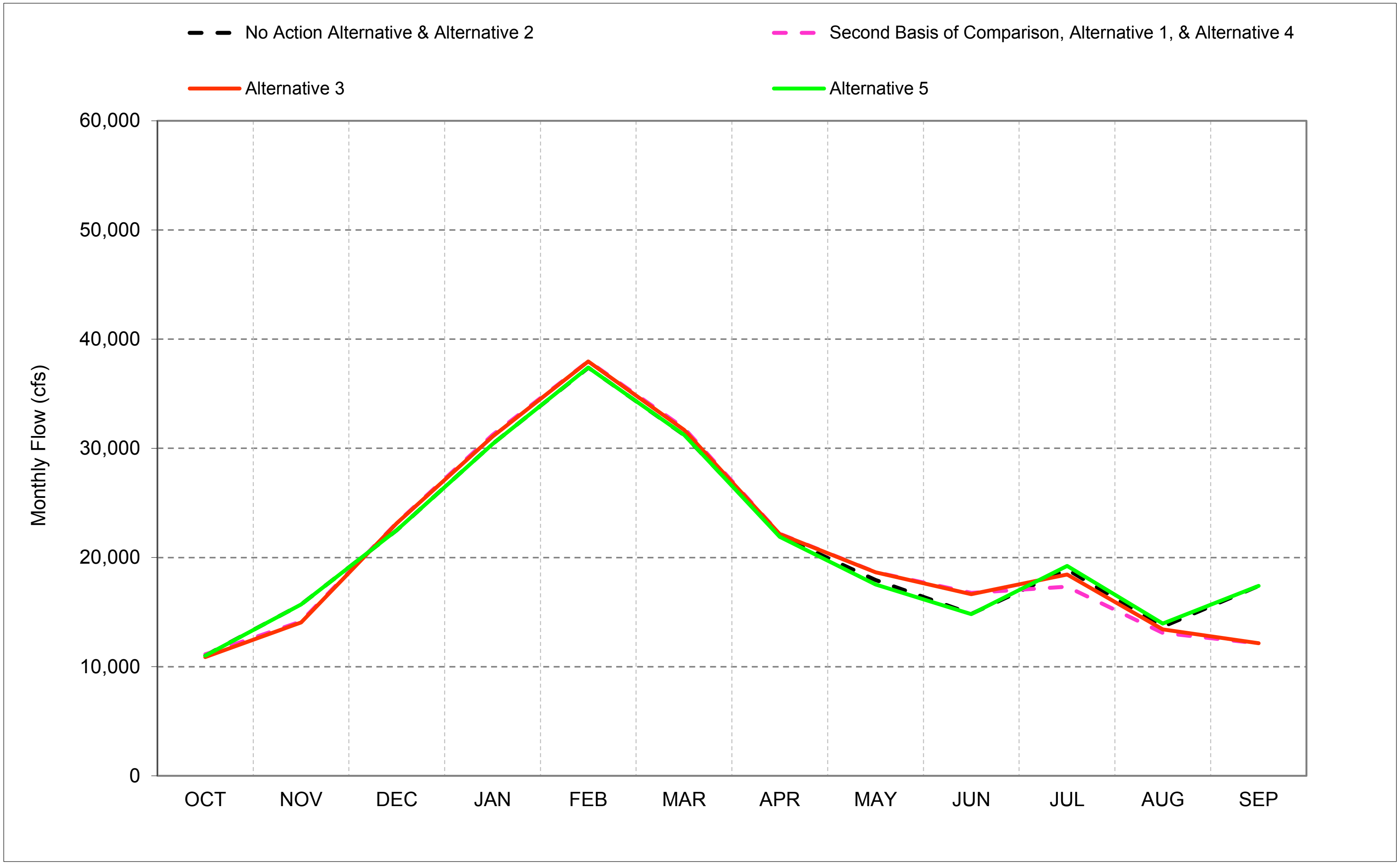
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.28. Sacramento River Flow at Freeport

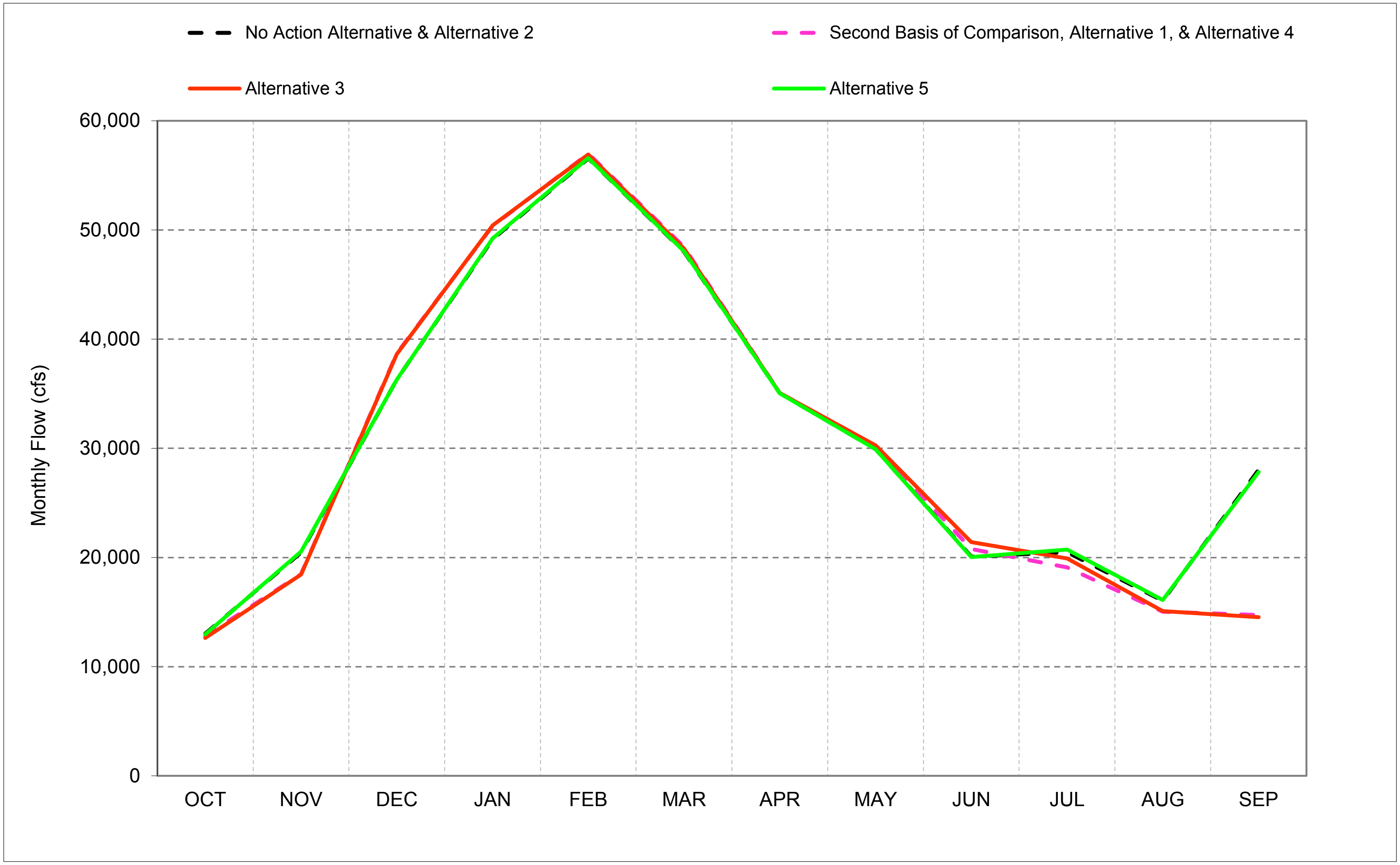
Figure C-28-1. Sacramento River at Freeport, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-28-2. Sacramento River at Freeport, Wet Year* Long-Term Average Flow**

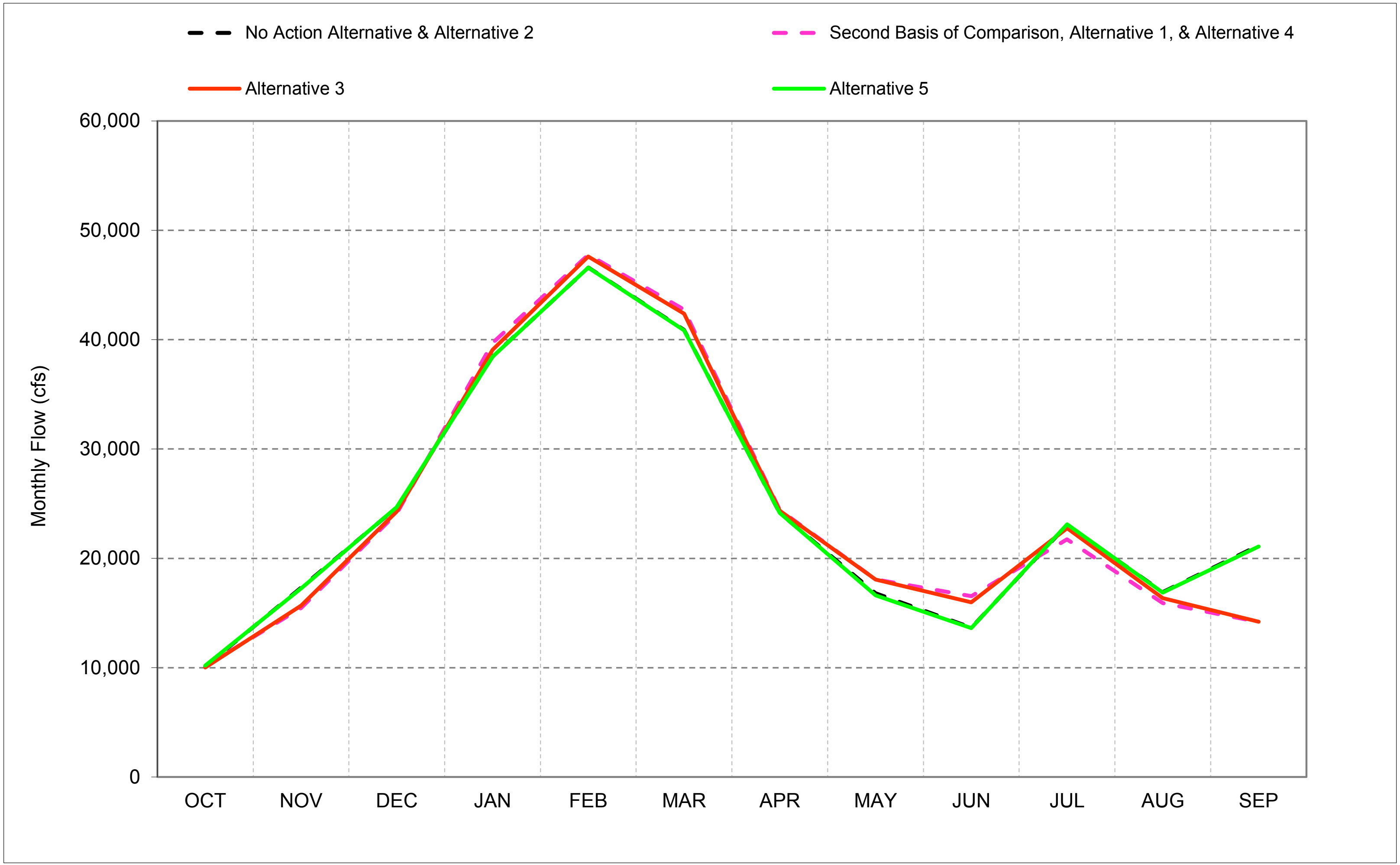


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-28-3. Sacramento River at Freeport, Above Normal Year* Long-Term Average Flow**

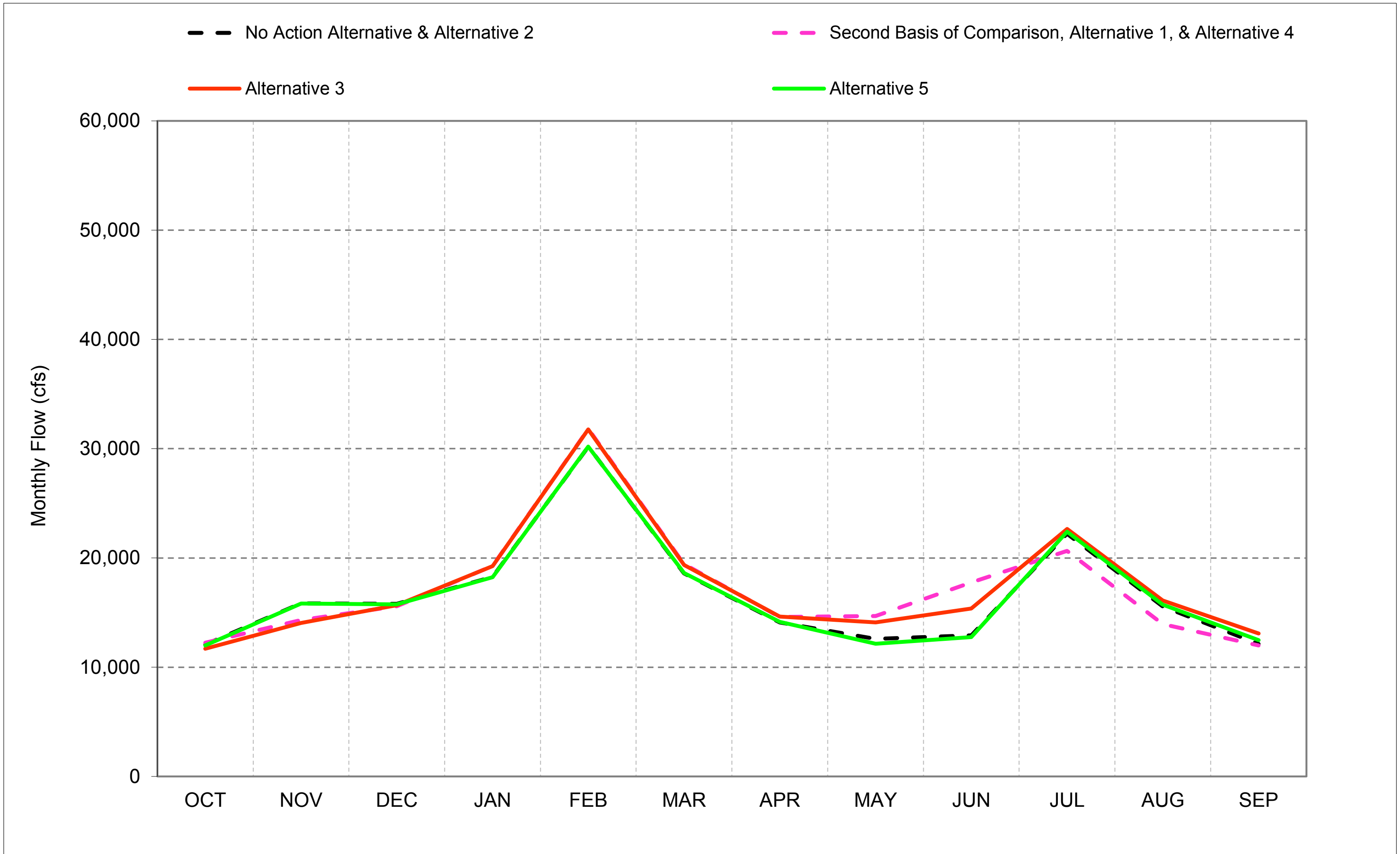


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-28-4. Sacramento River at Freeport, Below Normal Year* Long-Term Average Flow**

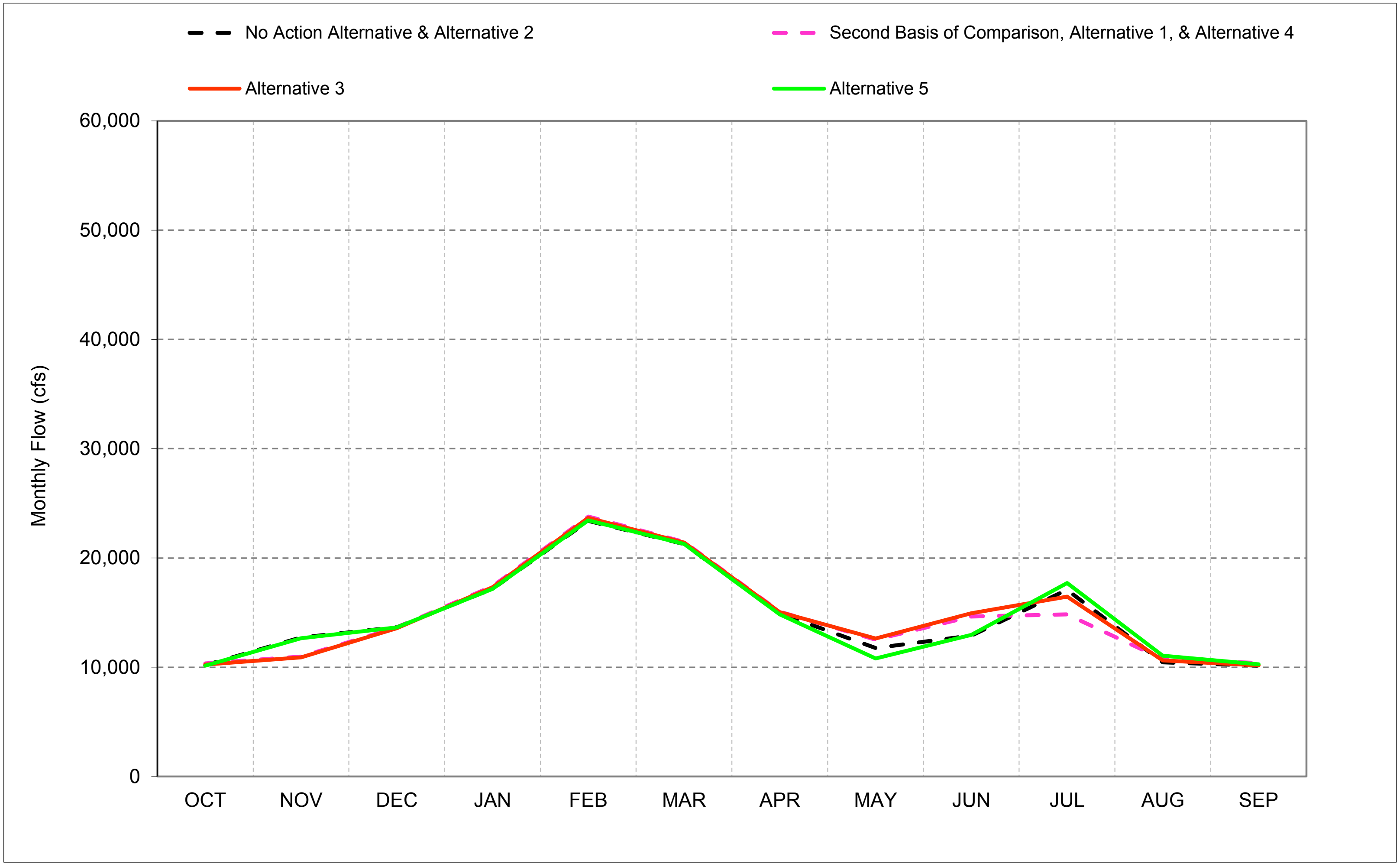


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-28-5. Sacramento River at Freeport, Dry Year* Long-Term Average Flow**

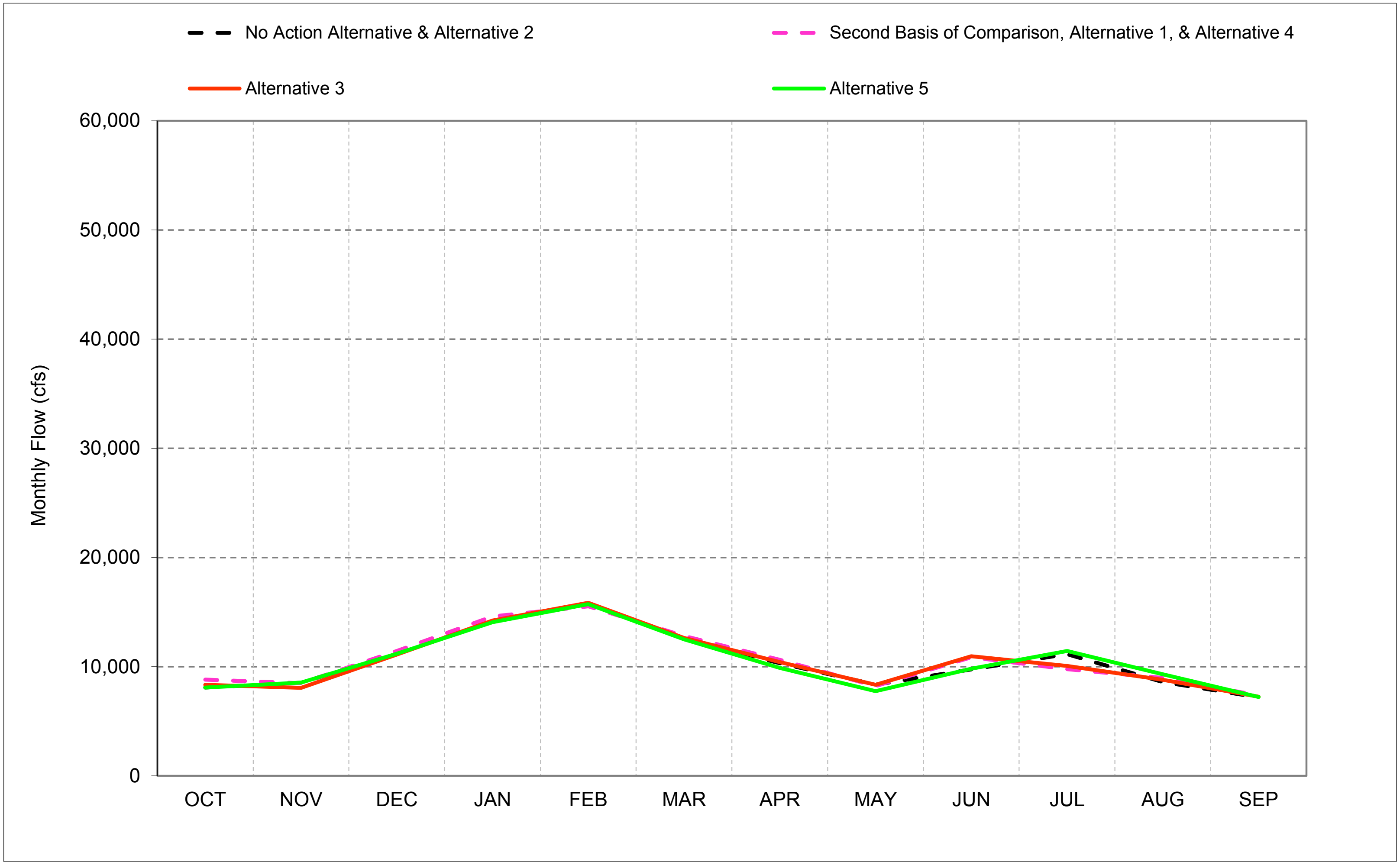


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-28-6. Sacramento River at Freeport, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-28-1. Sacramento River at Freeport, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	14,943	22,413	49,061	63,978	70,378	62,016	46,176	38,567	19,878	24,622	17,168	29,174
20%	14,024	18,968	32,387	52,720	61,625	51,028	32,558	25,925	16,015	24,044	16,812	28,630
30%	13,242	18,223	21,284	38,363	49,339	37,119	22,938	16,497	13,891	22,798	16,216	22,285
40%	12,114	16,756	17,972	24,564	42,829	29,446	19,999	13,452	13,365	20,928	15,920	21,314
50%	10,960	15,237	15,541	20,767	32,462	24,475	15,899	12,324	13,076	19,016	14,837	14,553
60%	9,175	13,091	15,097	18,151	24,481	20,699	12,818	11,385	12,593	17,772	13,961	12,554
70%	8,278	10,048	13,503	14,788	19,200	18,284	11,560	11,000	12,084	16,743	11,450	10,186
80%	7,916	8,600	10,754	13,471	16,242	14,866	10,757	10,413	11,011	15,241	9,408	8,418
90%	6,406	7,499	9,330	11,750	13,930	11,376	9,707	8,994	10,151	11,748	8,218	6,959
Long Term												
Full Simulation Period[b]	11,027	15,700	22,511	30,389	37,384	31,227	21,984	17,938	14,845	18,927	13,660	17,395
Water Year Types[c]												
Wet (32%)	13,028	20,442	36,300	49,140	56,543	48,019	35,045	29,928	20,087	20,487	16,031	28,019
Above Normal (16%)	10,118	17,302	24,668	38,462	46,588	40,888	24,137	16,812	13,665	23,051	16,920	21,159
Below Normal (13%)	12,085	15,834	15,808	18,273	30,185	18,600	14,108	12,602	12,927	22,211	15,563	12,132
Dry (24%)	10,191	12,717	13,654	17,185	23,392	21,285	14,927	11,770	12,904	17,081	10,453	10,150
Critical (15%)	8,102	8,539	11,205	14,132	15,821	12,526	10,333	8,354	9,755	11,143	8,590	7,198

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	14,535	22,483	54,532	64,835	70,451	63,654	46,241	38,579	21,089	23,075	16,647	15,053
20%	14,097	14,990	34,381	56,263	62,040	51,425	32,543	27,633	18,924	21,676	15,939	14,645
30%	13,025	13,727	22,366	41,579	51,549	41,505	22,929	17,142	17,961	20,420	15,394	14,129
40%	11,580	13,241	18,580	26,629	45,721	29,974	20,054	15,174	16,521	19,429	14,779	13,931
50%	10,818	12,087	15,606	23,009	33,290	24,771	16,394	13,624	15,588	18,340	13,795	13,397
60%	10,029	11,225	14,369	18,466	24,734	20,966	12,916	12,737	14,567	16,653	12,006	11,957
70%	9,019	10,194	12,581	15,005	19,838	18,448	11,708	11,915	13,085	14,599	10,893	9,897
80%	8,009	8,857	10,799	13,486	16,580	15,217	11,229	10,874	12,353	12,878	9,767	8,646
90%	6,709	7,537	9,360	11,871	14,217	11,487	10,200	8,922	11,289	10,339	8,546	7,115
Long Term												
Full Simulation Period[b]	11,135	14,147	23,180	31,236	37,980	31,862	22,179	18,663	16,752	17,326	13,094	12,141
Water Year Types[c]												
Wet (32%)	12,828	18,463	38,689	50,375	56,977	48,450	35,060	30,181	20,772	19,106	15,038	14,726
Above Normal (16%)	10,150	15,450	24,122	39,692	47,763	42,758	24,410	18,064	16,533	21,746	15,907	14,192
Below Normal (13%)	12,254	14,318	15,586	19,280	31,808	19,442	14,599	14,690	17,758	20,643	13,951	12,000
Dry (24%)	10,354	10,984	13,633	17,418	23,789	21,475	15,084	12,519	14,646	14,838	10,740	10,387
Critical (15%)	8,809	8,499	11,430	14,601	15,535	12,818	10,626	8,240	10,863	9,787	8,969	7,370

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-408	69	5,471	857	73	1,638	65	12	1,211	-1,546	-521	-14,121
20%	73	-3,978	1,994	3,543	414	397	-16	1,708	2,910	-2,368	-873	-13,985
30%	-218	-4,496	1,083	3,216	2,211	4,386	-9	645	4,070	-2,378	-821	-8,157
40%	-534	-3,515	608	2,066	2,892	528	55	1,722	3,156	-1,498	-1,142	-7,383
50%	-142	-3,150	65	2,242	828	296	495	1,300	2,512	-676	-1,042	-1,156
60%	855	-1,866	-728	316	253	267	98	1,352	1,974	-1,119	-1,954	-597
70%	741	146	-923	217	638	164	148	916	1,000	-2,145	-557	-289
80%	94	257	45	15	339	350	472	461	1,343	-2,363	360	228
90%	303	38	30	121	288	111	493	-72	1,138	-1,409	327	157
Long Term												
Full Simulation Period[b]	108	-1,553	669	847	596	635	195	725	1,907	-1,601	-566	-5,254
Water Year Types[c]												
Wet (32%)	-200	-1,979	2,389	1,235	433	431	15	253	685	-1,381	-993	-13,293
Above Normal (16%)	32	-1,852	-547	1,230	1,175	1,870	273	1,252	2,868	-1,304	-1,014	-6,966
Below Normal (13%)	169	-1,516	-223	1,007	1,623	842	491	2,088	4,831	-1,568	-1,611	-132
Dry (24%)	163	-1,733	-22	233	396	190	157	750	1,742	-2,243	287	237
Critical (15%)	707	-40	226	469	-286	292	293	-113	1,108	-1,357	379	172

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-28-2. Sacramento River at Freeport, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	14,943	22,413	49,061	63,978	70,378	62,016	46,176	38,567	19,878	24,622	17,168	29,174
20%	14,024	18,968	32,387	52,720	61,625	51,028	32,558	25,925	16,015	24,044	16,812	28,630
30%	13,242	18,223	21,284	38,363	49,339	37,119	22,938	16,497	13,891	22,798	16,216	22,285
40%	12,114	16,756	17,972	24,564	42,829	29,446	19,999	13,452	13,365	20,928	15,920	21,314
50%	10,960	15,237	15,541	20,767	32,462	24,475	15,899	12,324	13,076	19,016	14,837	14,553
60%	9,175	13,091	15,097	18,151	24,481	20,699	12,818	11,385	12,593	17,772	13,961	12,554
70%	8,278	10,048	13,503	14,788	19,200	18,284	11,560	11,000	12,084	16,743	11,450	10,186
80%	7,916	8,600	10,754	13,471	16,242	14,866	10,757	10,413	11,011	15,241	9,408	8,418
90%	6,406	7,499	9,330	11,750	13,930	11,376	9,707	8,994	10,151	11,748	8,218	6,959
Long Term												
Full Simulation Period[b]	11,027	15,700	22,511	30,389	37,384	31,227	21,984	17,938	14,845	18,927	13,660	17,395
Water Year Types[c]												
Wet (32%)	13,028	20,442	36,300	49,140	56,543	48,019	35,045	29,928	20,087	20,487	16,031	28,019
Above Normal (16%)	10,118	17,302	24,668	38,462	46,588	40,888	24,137	16,812	13,665	23,051	16,920	21,159
Below Normal (13%)	12,085	15,834	15,808	18,273	30,185	18,600	14,108	12,602	12,927	22,211	15,563	12,132
Dry (24%)	10,191	12,717	13,654	17,185	23,392	21,285	14,927	11,770	12,904	17,081	10,453	10,150
Critical (15%)	8,102	8,539	11,205	14,132	15,821	12,526	10,333	8,354	9,755	11,143	8,590	7,198

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	14,522	22,777	54,349	64,547	70,425	63,650	46,194	38,572	19,618	24,124	16,982	15,306
20%	14,016	15,433	35,012	55,813	62,015	51,429	32,554	26,881	18,690	23,538	16,423	14,750
30%	12,928	13,874	22,439	41,575	51,558	39,917	22,941	17,225	16,622	22,859	15,633	14,073
40%	11,616	12,936	18,500	26,437	45,279	29,972	19,998	15,149	16,079	21,097	15,244	13,635
50%	10,659	12,079	15,589	22,431	33,014	24,758	16,406	13,375	15,441	19,572	14,373	13,300
60%	9,263	11,153	13,999	18,180	24,733	20,947	12,825	12,360	14,633	17,322	13,505	12,363
70%	8,269	10,294	12,891	14,734	20,406	18,647	11,997	11,712	14,169	15,486	11,575	9,959
80%	7,912	8,827	11,039	13,490	16,256	15,202	10,876	11,076	12,499	13,687	9,625	8,924
90%	6,450	7,533	9,307	11,790	14,187	11,426	10,192	9,200	11,354	10,481	8,411	6,941
Long Term												
Full Simulation Period[b]	10,882	14,066	23,134	31,069	37,948	31,691	22,137	18,659	16,634	18,450	13,425	12,156
Water Year Types[c]												
Wet (32%)	12,631	18,451	38,620	50,401	56,918	48,277	35,056	30,274	21,422	19,904	15,099	14,529
Above Normal (16%)	10,011	15,687	24,282	39,084	47,607	42,363	24,359	18,074	15,986	22,756	16,372	14,207
Below Normal (13%)	11,703	14,058	15,668	19,267	31,751	19,354	14,632	14,094	15,368	22,662	16,099	13,094
Dry (24%)	10,247	10,917	13,572	17,315	23,665	21,407	15,052	12,639	14,931	16,466	10,640	10,168
Critical (15%)	8,345	8,067	11,116	14,242	15,868	12,641	10,425	8,341	10,959	10,077	8,799	7,248

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-421	363	5,288	569	48	1,634	17	5	-261	-498	-186	-13,869
20%	-8	-3,535	2,626	3,092	390	401	-4	956	2,676	-506	-390	-13,880
30%	-314	-4,349	1,155	3,212	2,219	2,797	3	728	2,731	61	-582	-8,213
40%	-498	-3,820	528	1,874	2,450	526	-1	1,698	2,714	170	-677	-7,679
50%	-301	-3,158	48	1,664	552	283	507	1,052	2,364	556	-464	-1,253
60%	88	-1,938	-1,098	30	251	249	7	975	2,040	-450	-456	-191
70%	-9	246	-612	-54	1,205	363	436	712	2,084	-1,258	125	-227
80%	-3	227	285	20	14	336	119	663	1,488	-1,553	218	506
90%	45	33	-22	40	257	50	485	206	1,204	-1,267	193	-18
Long Term												
Full Simulation Period[b]	-145	-1,634	623	680	564	464	153	720	1,789	-477	-234	-5,239
Water Year Types[c]												
Wet (32%)	-397	-1,991	2,320	1,261	375	259	11	346	1,335	-583	-933	-13,490
Above Normal (16%)	-108	-1,615	-386	622	1,019	1,475	222	1,262	2,321	-294	-548	-6,952
Below Normal (13%)	-382	-1,777	-141	994	1,567	754	524	1,493	2,440	452	536	962
Dry (24%)	57	-1,800	-82	130	272	122	126	870	2,027	-615	188	19
Critical (15%)	243	-472	-88	111	47	116	93	-13	1,204	-1,066	209	50

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-28-3. Sacramento River at Freeport, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	14,943	22,413	49,061	63,978	70,378	62,016	46,176	38,567	19,878	24,622	17,168	29,174
20%	14,024	18,968	32,387	52,720	61,625	51,028	32,558	25,925	16,015	24,044	16,812	28,630
30%	13,242	18,223	21,284	38,363	49,339	37,119	22,938	16,497	13,891	22,798	16,216	22,285
40%	12,114	16,756	17,972	24,564	42,829	29,446	19,999	13,452	13,365	20,928	15,920	21,314
50%	10,960	15,237	15,541	20,767	32,462	24,475	15,899	12,324	13,076	19,016	14,837	14,553
60%	9,175	13,091	15,097	18,151	24,481	20,699	12,818	11,385	12,593	17,772	13,961	12,554
70%	8,278	10,048	13,503	14,788	19,200	18,284	11,560	11,000	12,084	16,743	11,450	10,186
80%	7,916	8,600	10,754	13,471	16,242	14,866	10,757	10,413	11,011	15,241	9,408	8,418
90%	6,406	7,499	9,330	11,750	13,930	11,376	9,707	8,994	10,151	11,748	8,218	6,959
Long Term												
Full Simulation Period[b]	11,027	15,700	22,511	30,389	37,384	31,227	21,984	17,938	14,845	18,927	13,660	17,395
Water Year Types[c]												
Wet (32%)	13,028	20,442	36,300	49,140	56,543	48,019	35,045	29,928	20,087	20,487	16,031	28,019
Above Normal (16%)	10,118	17,302	24,668	38,462	46,588	40,888	24,137	16,812	13,665	23,051	16,920	21,159
Below Normal (13%)	12,085	15,834	15,808	18,273	30,185	18,600	14,108	12,602	12,927	22,211	15,563	12,132
Dry (24%)	10,191	12,717	13,654	17,185	23,392	21,285	14,927	11,770	12,904	17,081	10,453	10,150
Critical (15%)	8,102	8,539	11,205	14,132	15,821	12,526	10,333	8,354	9,755	11,143	8,590	7,198

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	14,940	22,403	48,958	63,738	70,363	62,025	46,178	38,574	19,953	24,625	17,185	29,151
20%	13,753	18,981	32,387	52,655	61,599	51,038	32,559	25,815	16,141	24,012	16,842	28,386
30%	13,111	18,329	21,304	38,363	49,567	37,212	22,950	16,490	13,942	23,249	16,214	22,293
40%	11,971	16,727	17,992	24,503	42,844	29,460	20,004	12,900	13,403	21,099	15,960	21,312
50%	10,996	15,185	15,541	20,791	32,715	24,379	15,901	11,905	13,055	19,737	15,468	14,746
60%	9,175	13,119	15,099	18,100	24,483	20,700	12,517	11,096	12,619	18,365	14,543	13,155
70%	8,302	10,026	13,584	14,777	19,202	18,200	11,777	10,131	12,094	17,451	11,864	10,306
80%	7,912	8,595	10,753	13,467	16,241	14,863	10,304	9,401	10,762	15,630	9,789	8,689
90%	6,444	7,512	9,293	11,701	13,900	11,364	9,585	8,003	10,127	11,885	8,975	7,378
Long Term												
Full Simulation Period[b]	11,003	15,715	22,497	30,404	37,388	31,223	21,901	17,523	14,824	19,224	13,951	17,409
Water Year Types[c]												
Wet (32%)	12,973	20,552	36,278	49,232	56,574	48,034	35,045	29,921	20,050	20,717	16,120	27,839
Above Normal (16%)	10,196	17,255	24,677	38,449	46,580	40,841	24,141	16,617	13,618	23,104	16,859	21,070
Below Normal (13%)	12,003	15,829	15,766	18,240	30,181	18,617	14,146	12,152	12,755	22,395	15,727	12,486
Dry (24%)	10,157	12,669	13,658	17,178	23,432	21,280	14,835	10,813	12,951	17,695	11,049	10,285
Critical (15%)	8,100	8,542	11,179	14,090	15,730	12,507	9,883	7,752	9,826	11,428	9,309	7,230

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-3	-10	-103	-240	-15	9	1	7	75	3	17	-24
20%	-271	13	0	-65	-27	10	1	-111	126	-32	29	-244
30%	-131	105	20	0	228	92	12	-7	51	451	-2	7
40%	-143	-29	20	-60	15	14	5	-551	38	171	40	-2
50%	36	-52	0	24	252	-96	2	-418	-21	721	631	193
60%	0	28	2	-50	1	1	-301	-289	26	592	582	602
70%	24	-22	81	-11	2	-84	217	-869	10	708	414	121
80%	-3	-5	-1	-4	-1	-3	-452	-1,012	-249	389	381	271
90%	38	12	-37	-49	-30	-12	-122	-991	-24	137	757	419
Long Term												
Full Simulation Period[b]	-24	15	-14	15	4	-4	-82	-415	-20	298	291	14
Water Year Types[c]												
Wet (32%)	-55	110	-22	92	31	15	0	-8	-37	230	88	-180
Above Normal (16%)	78	-47	9	-13	-9	-47	4	-195	-47	54	-61	-89
Below Normal (13%)	-82	-6	-42	-33	-4	17	38	-450	-172	184	165	354
Dry (24%)	-34	-48	4	-7	39	-5	-92	-957	47	614	596	135
Critical (15%)	-1	3	-26	-42	-92	-19	-450	-602	71	285	719	31

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-28-4. Sacramento River at Freeport, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	14,535	22,483	54,532	64,835	70,451	63,654	46,241	38,579	21,089	23,075	16,647	15,053
20%	14,097	14,990	34,381	56,263	62,040	51,425	32,543	27,633	18,924	21,676	15,939	14,645
30%	13,025	13,727	22,366	41,579	51,549	41,505	22,929	17,142	17,961	20,420	15,394	14,129
40%	11,580	13,241	18,580	26,629	45,721	29,974	20,054	15,174	16,521	19,429	14,779	13,931
50%	10,818	12,087	15,606	23,009	33,290	24,771	16,394	13,624	15,588	18,340	13,795	13,397
60%	10,029	11,225	14,369	18,466	24,734	20,966	12,916	12,737	14,567	16,653	12,006	11,957
70%	9,019	10,194	12,581	15,005	19,838	18,448	11,708	11,915	13,085	14,599	10,893	9,897
80%	8,009	8,857	10,799	13,486	16,580	15,217	11,229	10,874	12,353	12,878	9,767	8,646
90%	6,709	7,537	9,360	11,871	14,217	11,487	10,200	8,922	11,289	10,339	8,546	7,115
Long Term												
Full Simulation Period[b]	11,135	14,147	23,180	31,236	37,980	31,862	22,179	18,663	16,752	17,326	13,094	12,141
Water Year Types[c]												
Wet (32%)	12,828	18,463	38,689	50,375	56,977	48,450	35,060	30,181	20,772	19,106	15,038	14,726
Above Normal (16%)	10,150	15,450	24,122	39,692	47,763	42,758	24,410	18,064	16,533	21,746	15,907	14,192
Below Normal (13%)	12,254	14,318	15,586	19,280	31,808	19,442	14,599	14,690	17,758	20,643	13,951	12,000
Dry (24%)	10,354	10,984	13,633	17,418	23,789	21,475	15,084	12,519	14,646	14,838	10,740	10,387
Critical (15%)	8,809	8,499	11,430	14,601	15,535	12,818	10,626	8,240	10,863	9,787	8,969	7,370

No Action Alternative

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	14,943	22,413	49,061	63,978	70,378	62,016	46,176	38,567	19,878	24,622	17,168	29,174
20%	14,024	18,968	32,387	52,720	61,625	51,028	32,558	25,925	16,015	24,044	16,812	28,630
30%	13,242	18,223	21,284	38,363	49,339	37,119	22,938	16,497	13,891	22,798	16,216	22,285
40%	12,114	16,756	17,972	24,564	42,829	29,446	19,999	13,452	13,365	20,928	15,920	21,314
50%	10,960	15,237	15,541	20,767	32,462	24,475	15,899	12,324	13,076	19,016	14,837	14,553
60%	9,175	13,091	15,097	18,151	24,481	20,699	12,818	11,385	12,593	17,772	13,961	12,554
70%	8,278	10,048	13,503	14,788	19,200	18,284	11,560	11,000	12,084	16,743	11,450	10,186
80%	7,916	8,600	10,754	13,471	16,242	14,866	10,757	10,413	11,011	15,241	9,408	8,418
90%	6,406	7,499	9,330	11,750	13,930	11,376	9,707	8,994	10,151	11,748	8,218	6,959
Long Term												
Full Simulation Period[b]	11,027	15,700	22,511	30,389	37,384	31,227	21,984	17,938	14,845	18,927	13,660	17,395
Water Year Types[c]												
Wet (32%)	13,028	20,442	36,300	49,140	56,543	48,019	35,045	29,928	20,087	20,487	16,031	28,019
Above Normal (16%)	10,118	17,302	24,668	38,462	46,588	40,888	24,137	16,812	13,665	23,051	16,920	21,159
Below Normal (13%)	12,085	15,834	15,808	18,273	30,185	18,600	14,108	12,602	12,927	22,211	15,563	12,132
Dry (24%)	10,191	12,717	13,654	17,185	23,392	21,285	14,927	11,770	12,904	17,081	10,453	10,150
Critical (15%)	8,102	8,539	11,205	14,132	15,821	12,526	10,333	8,354	9,755	11,143	8,590	7,198

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	408	-69	-5,471	-857	-73	-1,638	-65	-12	-1,211	1,546	521	14,121
20%	-73	3,978	-1,994	-3,543	-414	-397	16	-1,708	-2,910	2,368	873	13,985
30%	218	4,496	-1,083	-3,216	-2,211	-4,386	9	-645	-4,070	2,378	821	8,157
40%	534	3,515	-608	-2,066	-2,892	-528	-55	-1,722	-3,156	1,498	1,142	7,383
50%	142	3,150	-65	-2,242	-828	-296	-495	-1,300	-2,512	676	1,042	1,156
60%	-855	1,866	728	-316	-253	-267	-98	-1,352	-1,974	1,119	1,954	597
70%	-741	-146	923	-217	-638	-164	-148	-916	-1,000	2,145	557	289
80%	-94	-257	-45	-15	-339	-350	-472	-461	-1,343	2,363	-360	-228
90%	-303	-38	-30	-121	-288	-111	-493	72	-1,138	1,409	-327	-157
Long Term												
Full Simulation Period[b]	-108	1,553	-669	-847	-596	-635	-195	-725	-1,907	1,601	566	5,254
Water Year Types[c]												
Wet (32%)	200	1,979	-2,389	-1,235	-433	-431	-15	-253	-685	1,381	993	13,293
Above Normal (16%)	-32	1,852	547	-1,230	-1,175	-1,870	-273	-1,252	-2,868	1,304	1,014	6,966
Below Normal (13%)	-169	1,516	223	-1,007	-1,623	-842	-491	-2,088	-4,831	1,568	1,611	132
Dry (24%)	-163	1,733	22	-233	-396	-190	-157	-750	-1,742	2,243	-287	-237
Critical (15%)	-707	40	-226	-469	286	-292	-293	113	-1,108	1,357	-379	-172

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-28-5. Sacramento River at Freeport, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	14,535	22,483	54,532	64,835	70,451	63,654	46,241	38,579	21,089	23,075	16,647	15,053
20%	14,097	14,990	34,381	56,263	62,040	51,425	32,543	27,633	18,924	21,676	15,939	14,645
30%	13,025	13,727	22,366	41,579	51,549	41,505	22,929	17,142	17,961	20,420	15,394	14,129
40%	11,580	13,241	18,580	26,629	45,721	29,974	20,054	15,174	16,521	19,429	14,779	13,931
50%	10,818	12,087	15,606	23,009	33,290	24,771	16,394	13,624	15,588	18,340	13,795	13,397
60%	10,029	11,225	14,369	18,466	24,734	20,966	12,916	12,737	14,567	16,653	12,006	11,957
70%	9,019	10,194	12,581	15,005	19,838	18,448	11,708	11,915	13,085	14,599	10,893	9,897
80%	8,009	8,857	10,799	13,486	16,580	15,217	11,229	10,874	12,353	12,878	9,767	8,646
90%	6,709	7,537	9,360	11,871	14,217	11,487	10,200	8,922	11,289	10,339	8,546	7,115
Long Term												
Full Simulation Period[b]	11,135	14,147	23,180	31,236	37,980	31,862	22,179	18,663	16,752	17,326	13,094	12,141
Water Year Types[c]												
Wet (32%)	12,828	18,463	38,689	50,375	56,977	48,450	35,060	30,181	20,772	19,106	15,038	14,726
Above Normal (16%)	10,150	15,450	24,122	39,692	47,763	42,758	24,410	18,064	16,533	21,746	15,907	14,192
Below Normal (13%)	12,254	14,318	15,586	19,280	31,808	19,442	14,599	14,690	17,758	20,643	13,951	12,000
Dry (24%)	10,354	10,984	13,633	17,418	23,789	21,475	15,084	12,519	14,646	14,838	10,740	10,387
Critical (15%)	8,809	8,499	11,430	14,601	15,535	12,818	10,626	8,240	10,863	9,787	8,969	7,370

Alternative 3

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	14,522	22,777	54,349	64,547	70,425	63,650	46,194	38,572	19,618	24,124	16,982	15,306
20%	14,016	15,433	35,012	55,813	62,015	51,429	32,554	26,881	18,690	23,538	16,423	14,750
30%	12,928	13,874	22,439	41,575	51,558	39,917	22,941	17,225	16,622	22,859	15,633	14,073
40%	11,616	12,936	18,500	26,437	45,279	29,972	19,998	15,149	16,079	21,097	15,244	13,635
50%	10,659	12,079	15,589	22,431	33,014	24,758	16,406	13,375	15,441	19,572	14,373	13,300
60%	9,263	11,153	13,999	18,180	24,733	20,947	12,825	12,360	14,633	17,322	13,505	12,363
70%	8,269	10,294	12,891	14,734	20,406	18,647	11,997	11,712	14,169	15,486	11,575	9,959
80%	7,912	8,827	11,039	13,490	16,256	15,202	10,876	11,076	12,499	13,687	9,625	8,924
90%	6,450	7,533	9,307	11,790	14,187	11,426	10,192	9,200	11,354	10,481	8,411	6,941
Long Term												
Full Simulation Period[b]	10,882	14,066	23,134	31,069	37,948	31,691	22,137	18,659	16,634	18,450	13,425	12,156
Water Year Types[c]												
Wet (32%)	12,631	18,451	38,620	50,401	56,918	48,277	35,056	30,274	21,422	19,904	15,099	14,529
Above Normal (16%)	10,011	15,687	24,282	39,084	47,607	42,363	24,359	18,074	15,986	22,756	16,372	14,207
Below Normal (13%)	11,703	14,058	15,668	19,267	31,751	19,354	14,632	14,094	15,368	22,662	16,099	13,094
Dry (24%)	10,247	10,917	13,572	17,315	23,665	21,407	15,052	12,639	14,931	16,466	10,640	10,168
Critical (15%)	8,345	8,067	11,116	14,242	15,868	12,641	10,425	8,341	10,959	10,077	8,799	7,248

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-13	294	-183	-288	-25	-4	-47	-8	-1,472	1,049	336	252
20%	-81	443	632	-451	-24	4	11	-753	-234	1,862	484	106
30%	-97	147	73	-4	8	-1,588	12	83	-1,339	2,439	239	-56
40%	36	-305	-79	-192	-442	-2	-56	-25	-442	1,668	465	-296
50%	-159	-8	-17	-578	-276	-14	12	-248	-147	1,232	578	-97
60%	-767	-72	-370	-286	-1	-19	-90	-377	67	669	1,498	406
70%	-750	100	310	-271	567	199	288	-203	1,084	887	682	62
80%	-97	-30	241	4	-325	-14	-353	202	146	810	-142	278
90%	-258	-4	-52	-81	-31	-61	-8	278	66	142	-134	-174
Long Term												
Full Simulation Period[b]	-253	-81	-46	-168	-32	-171	-42	-5	-118	1,124	332	15
Water Year Types[c]												
Wet (32%)	-197	-12	-69	26	-58	-172	-4	93	650	798	60	-198
Above Normal (16%)	-140	237	161	-608	-156	-395	-51	10	-547	1,010	466	14
Below Normal (13%)	-551	-260	82	-13	-57	-88	33	-595	-2,390	2,019	2,148	1,094
Dry (24%)	-107	-67	-60	-103	-124	-68	-31	120	285	1,629	-100	-219
Critical (15%)	-464	-432	-314	-358	333	-176	-201	101	96	290	-170	-121

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-28-6. Sacramento River at Freeport, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	14,535	22,483	54,532	64,835	70,451	63,654	46,241	38,579	21,089	23,075	16,647	15,053
20%	14,097	14,990	34,381	56,263	62,040	51,425	32,543	27,633	18,924	21,676	15,939	14,645
30%	13,025	13,727	22,366	41,579	51,549	41,505	22,929	17,142	17,961	20,420	15,394	14,129
40%	11,580	13,241	18,580	26,629	45,721	29,974	20,054	15,174	16,521	19,429	14,779	13,931
50%	10,818	12,087	15,606	23,009	33,290	24,771	16,394	13,624	15,588	18,340	13,795	13,397
60%	10,029	11,225	14,369	18,466	24,734	20,966	12,916	12,737	14,567	16,653	12,006	11,957
70%	9,019	10,194	12,581	15,005	19,838	18,448	11,708	11,915	13,085	14,599	10,893	9,897
80%	8,009	8,857	10,799	13,486	16,580	15,217	11,229	10,874	12,353	12,878	9,767	8,646
90%	6,709	7,537	9,360	11,871	14,217	11,487	10,200	8,922	11,289	10,339	8,546	7,115
Long Term												
Full Simulation Period[b]	11,135	14,147	23,180	31,236	37,980	31,862	22,179	18,663	16,752	17,326	13,094	12,141
Water Year Types[c]												
Wet (32%)	12,828	18,463	38,689	50,375	56,977	48,450	35,060	30,181	20,772	19,106	15,038	14,726
Above Normal (16%)	10,150	15,450	24,122	39,692	47,763	42,758	24,410	18,064	16,533	21,746	15,907	14,192
Below Normal (13%)	12,254	14,318	15,586	19,280	31,808	19,442	14,599	14,690	17,758	20,643	13,951	12,000
Dry (24%)	10,354	10,984	13,633	17,418	23,789	21,475	15,084	12,519	14,646	14,838	10,740	10,387
Critical (15%)	8,809	8,499	11,430	14,601	15,535	12,818	10,626	8,240	10,863	9,787	8,969	7,370

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	14,940	22,403	48,958	63,738	70,363	62,025	46,178	38,574	19,953	24,625	17,185	29,151
20%	13,753	18,981	32,387	52,655	61,599	51,038	32,559	25,815	16,141	24,012	16,842	28,386
30%	13,111	18,329	21,304	38,363	49,567	37,212	22,950	16,490	13,942	23,249	16,214	22,293
40%	11,971	16,727	17,992	24,503	42,844	29,460	20,004	12,900	13,403	21,099	15,960	21,312
50%	10,996	15,185	15,541	20,791	32,715	24,379	15,901	11,905	13,055	19,737	15,468	14,746
60%	9,175	13,119	15,099	18,100	24,483	20,700	12,517	11,096	12,619	18,365	14,543	13,155
70%	8,302	10,026	13,584	14,777	19,202	18,200	11,777	10,131	12,094	17,451	11,864	10,306
80%	7,912	8,595	10,753	13,467	16,241	14,863	10,304	9,401	10,762	15,630	9,789	8,689
90%	6,444	7,512	9,293	11,701	13,900	11,364	9,585	8,003	10,127	11,885	8,975	7,378
Long Term												
Full Simulation Period[b]	11,003	15,715	22,497	30,404	37,388	31,223	21,901	17,523	14,824	19,224	13,951	17,409
Water Year Types[c]												
Wet (32%)	12,973	20,552	36,278	49,232	56,574	48,034	35,045	29,921	20,050	20,717	16,120	27,839
Above Normal (16%)	10,196	17,255	24,677	38,449	46,580	40,841	24,141	16,617	13,618	23,104	16,859	21,070
Below Normal (13%)	12,003	15,829	15,766	18,240	30,181	18,617	14,146	12,152	12,755	22,395	15,727	12,486
Dry (24%)	10,157	12,669	13,658	17,178	23,432	21,280	14,835	10,813	12,951	17,695	11,049	10,285
Critical (15%)	8,100	8,542	11,179	14,090	15,730	12,507	9,883	7,752	9,826	11,428	9,309	7,230

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	405	-79	-5,574	-1,097	-88	-1,629	-63	-5	-1,136	1,550	538	14,097
20%	-344	3,991	-1,994	-3,608	-441	-387	16	-1,819	-2,783	2,336	903	13,742
30%	86	4,601	-1,063	-3,216	-1,983	-4,293	21	-652	-4,019	2,829	820	8,164
40%	390	3,486	-588	-2,126	-2,877	-513	-50	-2,273	-3,118	1,670	1,181	7,381
50%	178	3,098	-65	-2,218	-575	-393	-494	-1,719	-2,533	1,397	1,672	1,349
60%	-855	1,894	730	-366	-252	-266	-399	-1,641	-1,948	1,712	2,537	1,199
70%	-716	-168	1,004	-228	-636	-247	69	-1,785	-990	2,853	971	410
80%	-97	-262	-46	-19	-339	-354	-924	-1,474	-1,591	2,752	21	43
90%	-265	-25	-67	-170	-318	-123	-615	-919	-1,162	1,545	430	263
Long Term												
Full Simulation Period[b]	-132	1,568	-683	-832	-592	-640	-278	-1,140	-1,927	1,898	857	5,268
Water Year Types[c]												
Wet (32%)	146	2,089	-2,411	-1,143	-403	-416	-15	-261	-722	1,611	1,081	13,113
Above Normal (16%)	46	1,804	555	-1,243	-1,184	-1,917	-270	-1,447	-2,914	1,358	952	6,878
Below Normal (13%)	-251	1,511	180	-1,040	-1,627	-825	-453	-2,538	-5,003	1,752	1,776	486
Dry (24%)	-197	1,685	26	-240	-357	-195	-249	-1,707	-1,695	2,858	309	-102
Critical (15%)	-709	43	-251	-511	195	-311	-743	-489	-1,037	1,641	339	-140

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

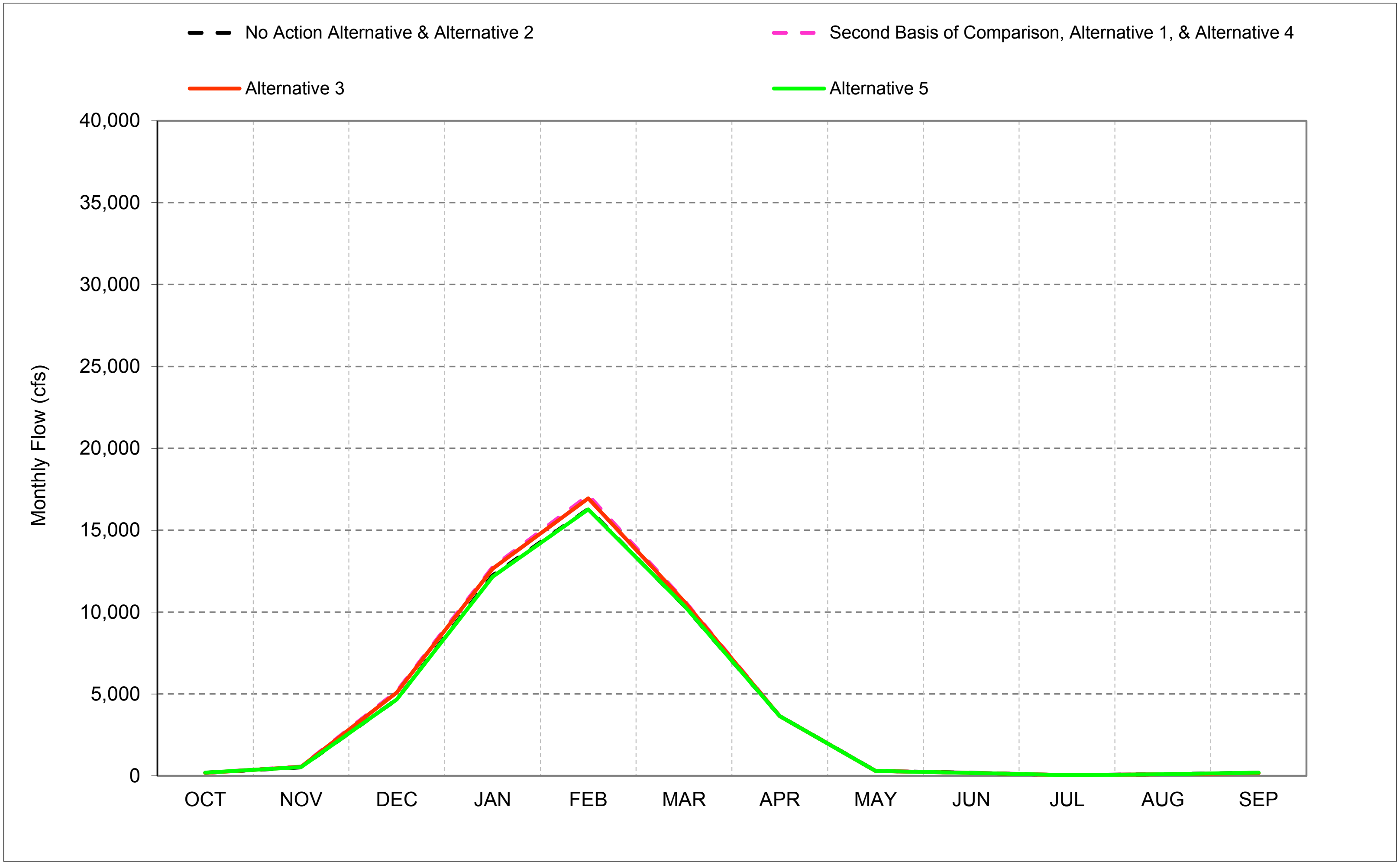
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.29. Yolo Bypass Flow

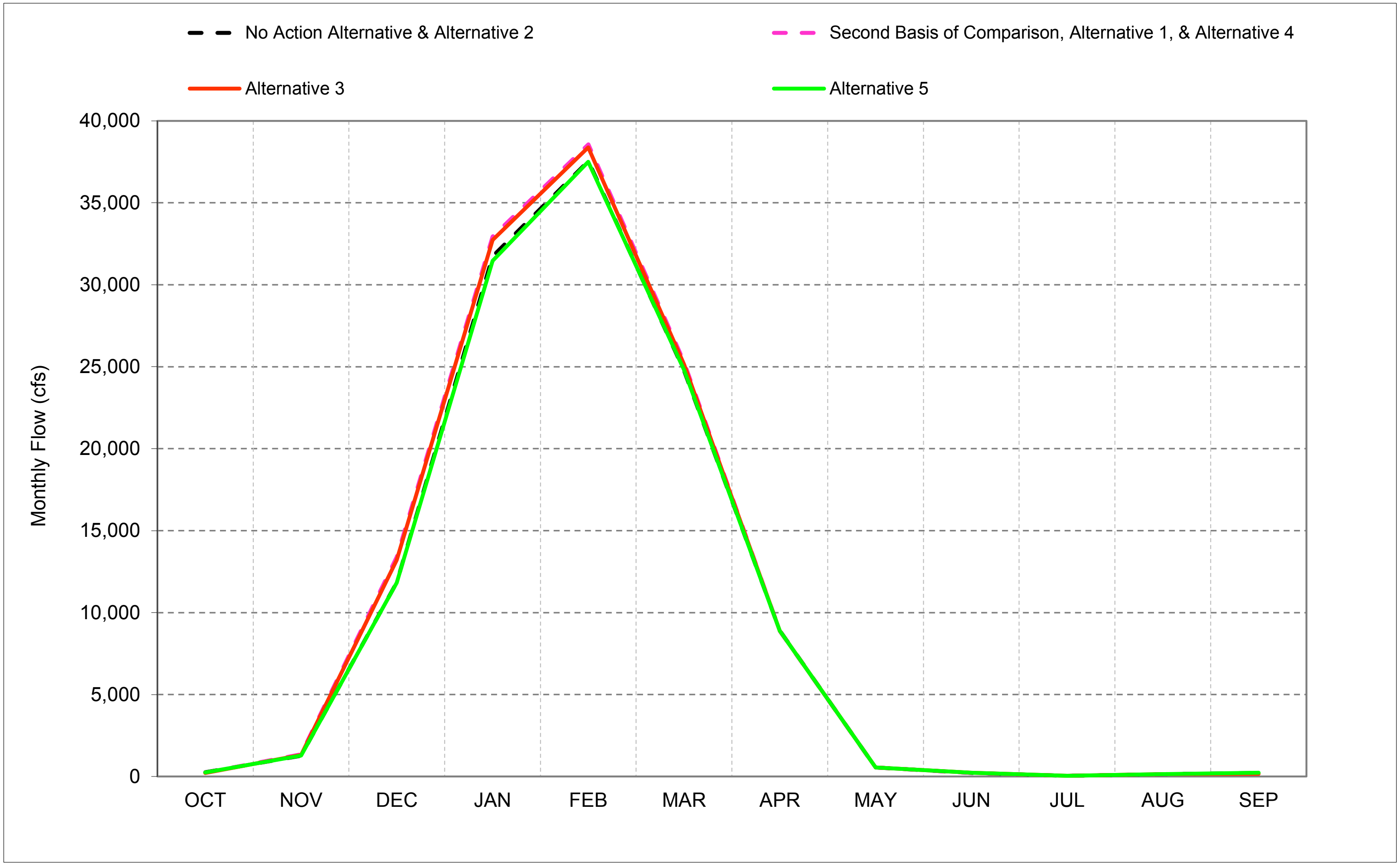
Figure C-29-1. Yolo Bypass, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-29-2. Yolo Bypass, Wet Year* Long-Term Average Flow**

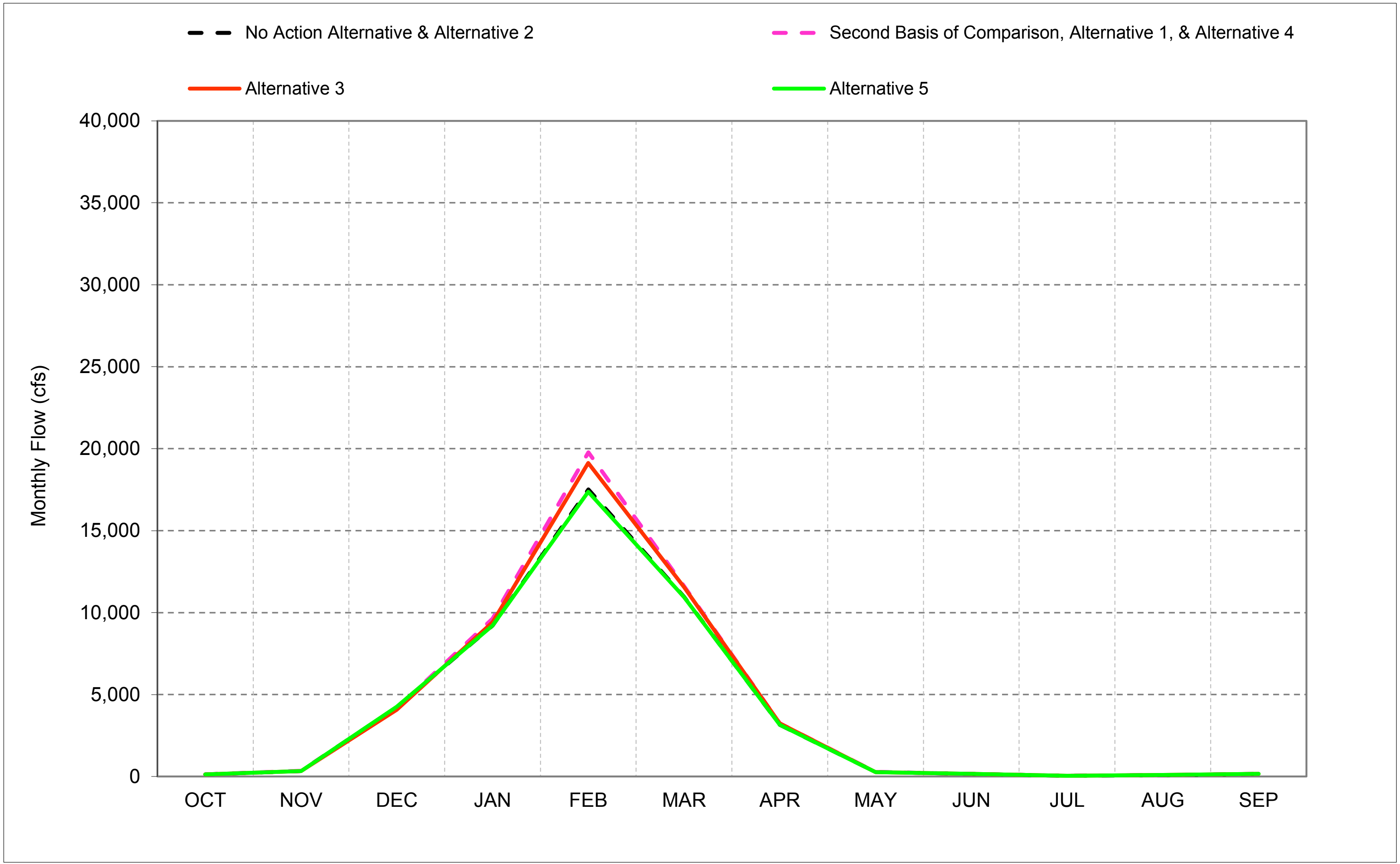


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-29-3. Yolo Bypass, Above Normal Year* Long-Term Average Flow**

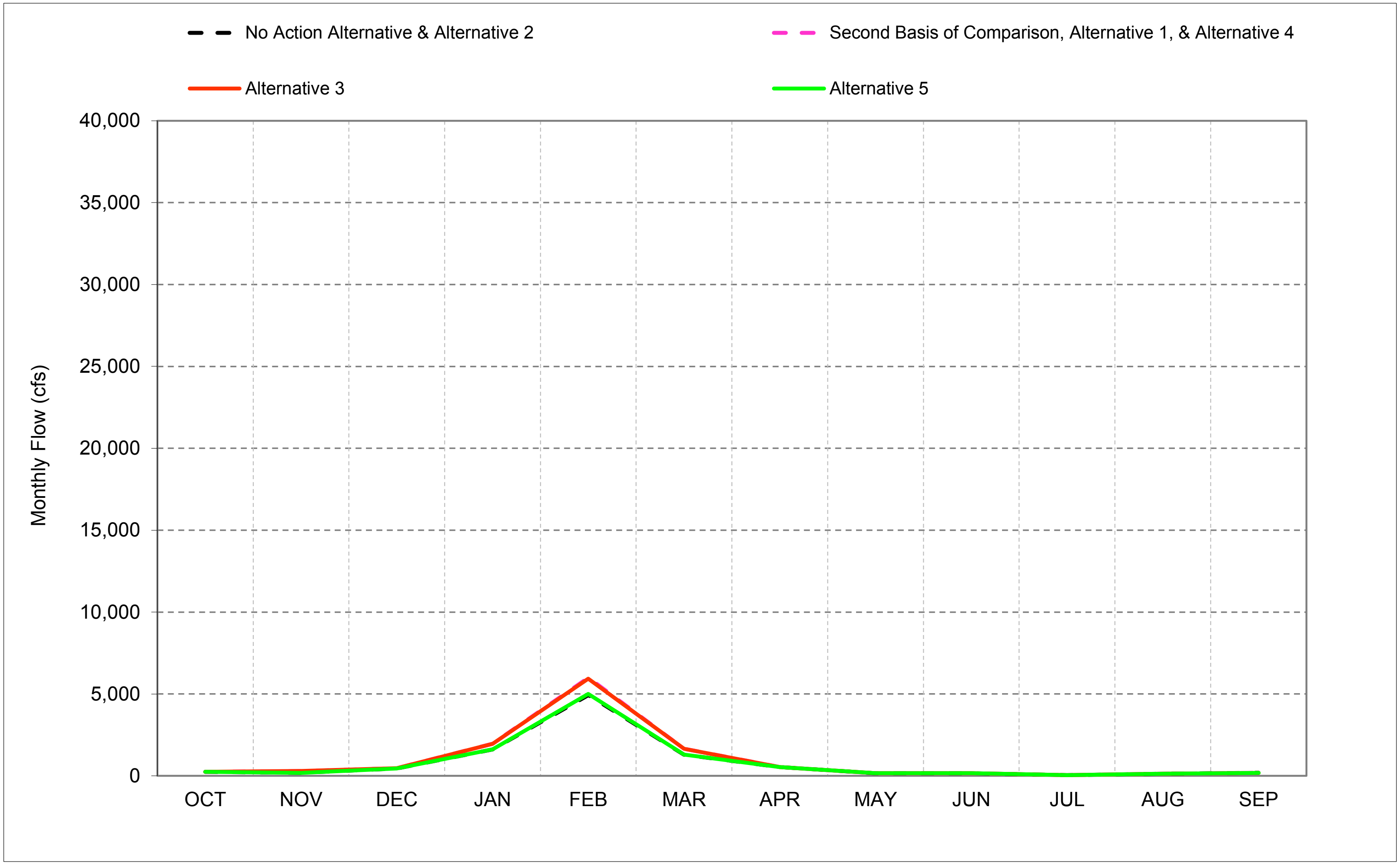


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-29-4. Yolo Bypass, Below Normal Year* Long-Term Average Flow**

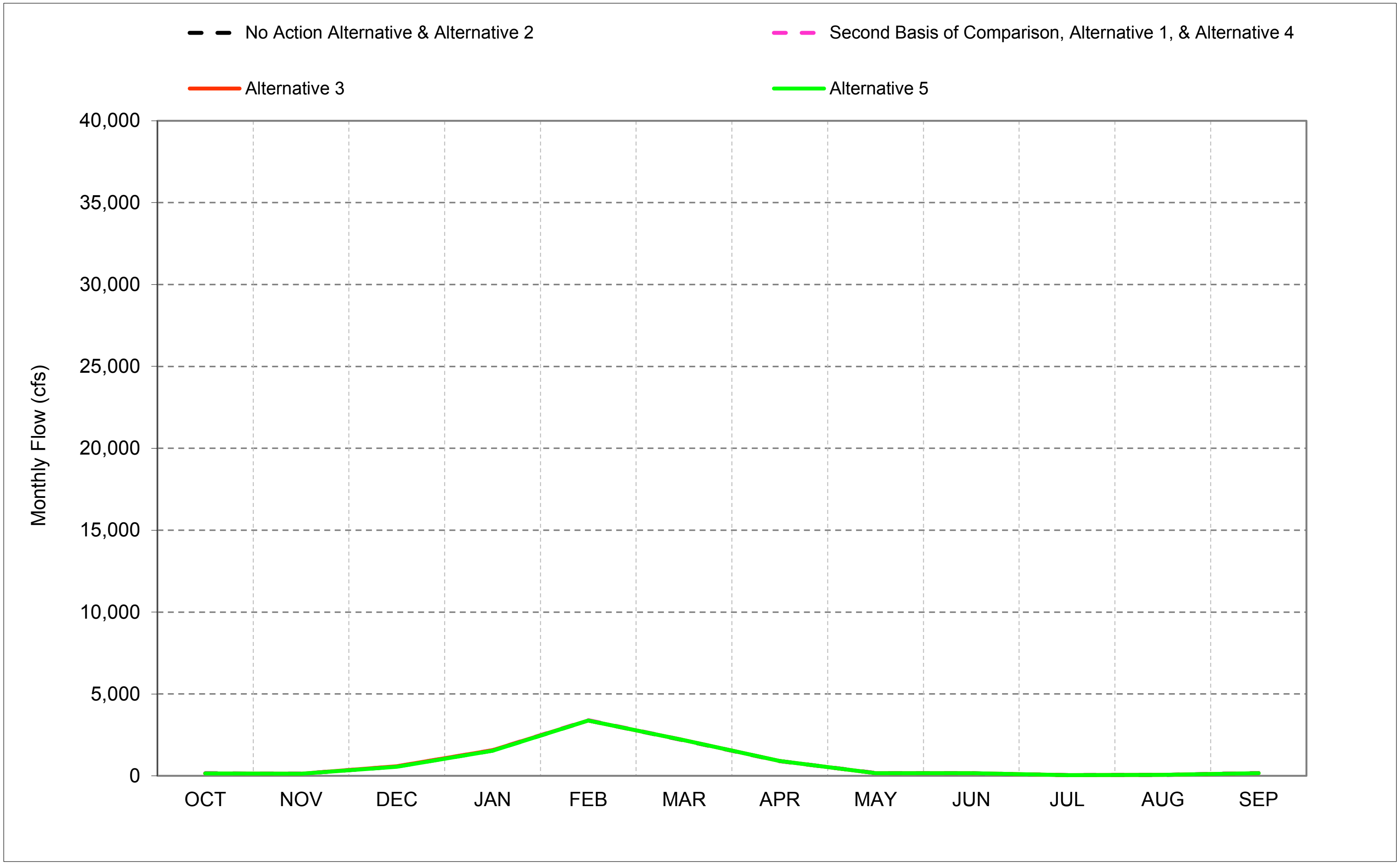


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-29-5. Yolo Bypass, Dry Year* Long-Term Average Flow**

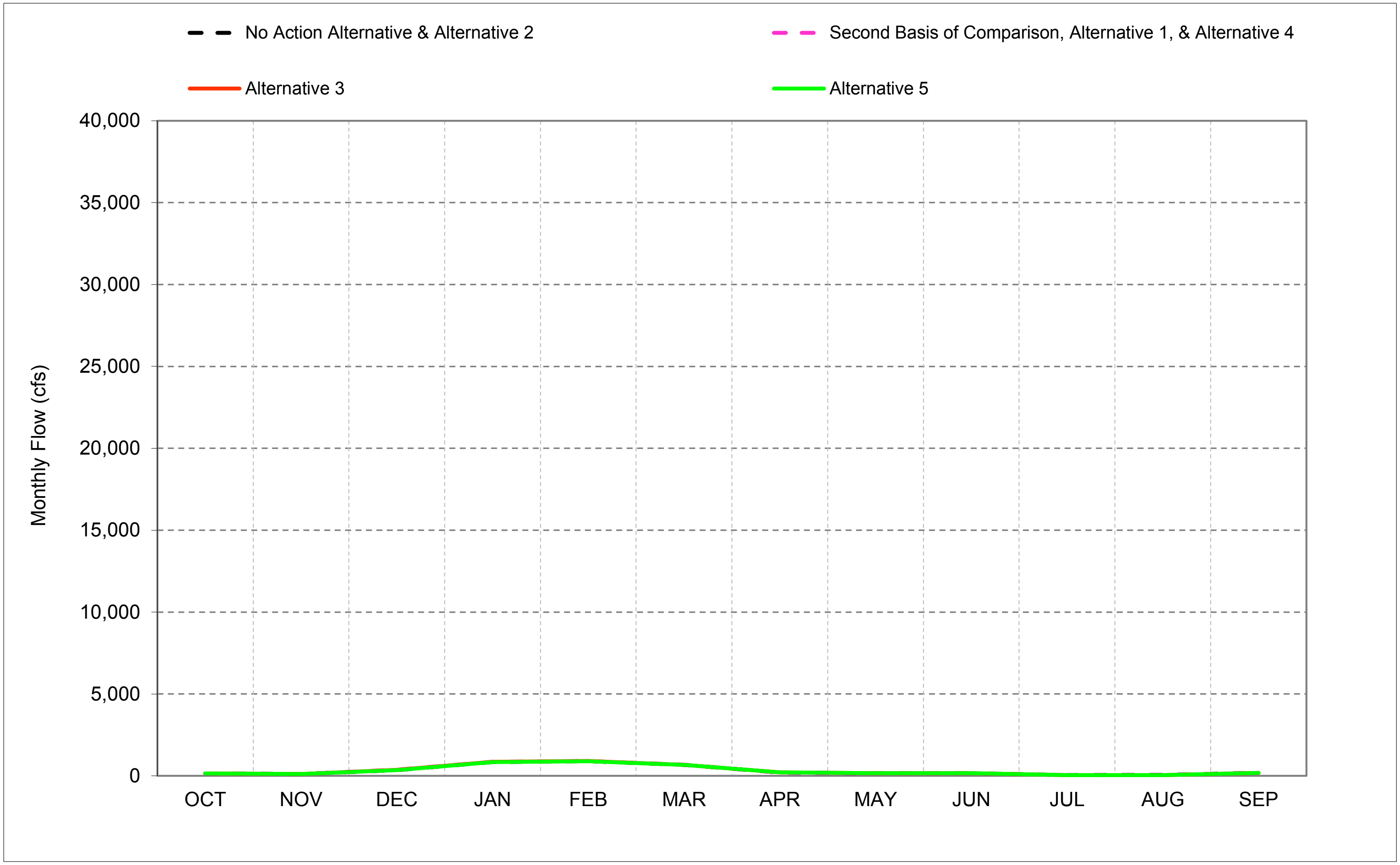


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-29-6. Yolo Bypass, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-29-1. Yolo Bypass, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	163	575	11,441	34,478	52,474	20,341	10,435	335	168	48	183	290
20%	162	245	6,247	15,620	20,921	10,931	7,063	178	168	48	55	194
30%	159	146	2,165	8,237	12,308	7,941	2,042	173	168	48	55	159
40%	153	110	798	4,526	8,343	4,740	497	170	168	48	55	159
50%	146	108	558	1,883	5,503	2,825	267	168	167	48	55	159
60%	141	105	258	776	2,879	1,254	229	165	167	48	55	159
70%	129	100	157	466	951	616	211	163	166	48	55	158
80%	115	100	110	164	321	220	186	159	164	48	55	156
90%	104	100	100	123	152	146	170	153	162	48	54	152
Long Term												
Full Simulation Period[b]	198	531	4,678	12,239	16,299	10,398	3,648	311	185	48	101	193
Water Year Types[c]												
Wet (32%)	269	1,266	11,844	31,732	37,542	24,774	8,899	560	227	48	147	227
Above Normal (16%)	131	337	4,234	9,213	17,513	10,972	3,165	273	166	48	92	165
Below Normal (13%)	245	192	447	1,617	4,933	1,299	547	169	166	48	130	192
Dry (24%)	156	131	569	1,540	3,384	2,173	905	175	167	48	61	170
Critical (15%)	145	124	357	847	897	675	210	167	165	48	55	188

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	164	575	15,113	37,297	53,013	25,747	10,346	335	168	48	183	240
20%	162	245	6,239	16,046	22,314	11,069	7,372	178	168	48	55	159
30%	160	146	2,510	8,216	12,519	8,557	2,043	173	168	48	55	159
40%	154	110	802	5,019	10,224	5,190	498	170	168	48	55	159
50%	147	108	495	2,405	5,513	2,987	272	168	167	48	55	159
60%	142	105	259	970	3,258	1,402	229	165	167	48	55	159
70%	132	100	146	470	1,068	754	211	163	166	48	55	157
80%	116	100	109	167	332	225	186	159	164	48	55	155
90%	106	100	100	122	152	149	173	153	162	48	54	152
Long Term												
Full Simulation Period[b]	187	572	5,169	12,745	17,130	10,720	3,653	311	185	48	101	175
Water Year Types[c]												
Wet (32%)	231	1,348	13,405	32,933	38,563	25,293	8,874	560	227	48	147	173
Above Normal (16%)	137	344	4,156	9,639	19,777	11,623	3,242	273	166	48	92	165
Below Normal (13%)	246	299	470	1,973	5,998	1,664	546	169	166	48	130	192
Dry (24%)	156	131	583	1,579	3,404	2,190	910	175	167	48	61	170
Critical (15%)	145	124	376	856	905	687	210	167	165	48	55	188

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1	0	3,672	2,819	539	5,406	-89	0	0	0	0	-50
20%	1	0	-8	426	1,394	138	309	0	0	0	0	-35
30%	1	0	345	-21	211	616	1	0	0	0	0	0
40%	0	0	3	493	1,881	450	0	0	0	0	0	0
50%	2	0	-63	522	10	163	4	0	0	0	0	0
60%	1	0	1	194	379	148	0	0	0	0	0	-1
70%	3	0	-11	4	118	138	0	0	0	0	0	-1
80%	1	0	-1	3	12	6	0	0	0	0	0	-1
90%	2	0	0	-1	0	3	3	0	0	0	0	0
Long Term												
Full Simulation Period[b]	-11	42	492	507	831	323	5	0	0	0	0	-17
Water Year Types[c]												
Wet (32%)	-38	82	1,561	1,201	1,020	519	-25	0	0	0	0	-55
Above Normal (16%)	6	7	-78	426	2,264	651	77	0	0	0	0	0
Below Normal (13%)	1	108	23	356	1,065	365	-1	0	0	0	0	0
Dry (24%)	0	0	14	39	20	17	4	0	0	0	0	0
Critical (15%)	0	0	19	9	7	12	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-29-2. Yolo Bypass, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	163	575	11,441	34,478	52,474	20,341	10,435	335	168	48	183	290
20%	162	245	6,247	15,620	20,921	10,931	7,063	178	168	48	55	194
30%	159	146	2,165	8,237	12,308	7,941	2,042	173	168	48	55	159
40%	153	110	798	4,526	8,343	4,740	497	170	168	48	55	159
50%	146	108	558	1,883	5,503	2,825	267	168	167	48	55	159
60%	141	105	258	776	2,879	1,254	229	165	167	48	55	159
70%	129	100	157	466	951	616	211	163	166	48	55	158
80%	115	100	110	164	321	220	186	159	164	48	55	156
90%	104	100	100	123	152	146	170	153	162	48	54	152
Long Term												
Full Simulation Period[b]	198	531	4,678	12,239	16,299	10,398	3,648	311	185	48	101	193
Water Year Types[c]												
Wet (32%)	269	1,266	11,844	31,732	37,542	24,774	8,899	560	227	48	147	227
Above Normal (16%)	131	337	4,234	9,213	17,513	10,972	3,165	273	166	48	92	165
Below Normal (13%)	245	192	447	1,617	4,933	1,299	547	169	166	48	130	192
Dry (24%)	156	131	569	1,540	3,384	2,173	905	175	167	48	61	170
Critical (15%)	145	124	357	847	897	675	210	167	165	48	55	188

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	163	575	15,105	36,977	52,994	23,562	10,346	335	168	48	183	240
20%	162	245	6,398	16,162	20,780	10,937	7,383	178	168	48	55	159
30%	159	146	2,014	8,057	12,403	8,314	2,042	173	168	48	55	159
40%	153	110	802	5,022	10,223	5,060	498	170	168	48	55	159
50%	146	108	496	2,336	5,513	2,933	272	168	167	48	55	159
60%	141	105	287	945	2,888	1,421	229	165	167	48	55	159
70%	129	100	149	466	1,114	738	211	163	166	48	55	157
80%	116	100	114	166	323	220	186	159	164	48	55	155
90%	104	100	100	123	152	149	170	153	162	48	54	152
Long Term												
Full Simulation Period[b]	184	564	5,096	12,644	16,954	10,652	3,658	311	185	48	101	175
Water Year Types[c]												
Wet (32%)	223	1,325	13,210	32,736	38,378	25,127	8,889	561	227	48	147	173
Above Normal (16%)	132	338	4,083	9,412	19,135	11,550	3,246	273	166	48	92	165
Below Normal (13%)	246	299	471	1,968	5,929	1,651	546	169	166	48	130	192
Dry (24%)	156	131	590	1,571	3,376	2,186	908	175	167	48	61	170
Critical (15%)	145	124	365	856	908	676	210	167	165	48	55	188

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	3,663	2,500	520	3,221	-89	0	0	0	0	-50
20%	0	0	151	542	-140	6	321	0	0	0	0	-35
30%	0	0	-150	-180	95	373	0	0	0	0	0	0
40%	0	0	4	496	1,881	320	1	0	0	0	0	0
50%	0	0	-62	453	10	108	4	0	0	0	0	0
60%	0	0	29	169	9	167	0	0	0	0	0	-1
70%	1	0	-8	0	163	122	0	0	0	0	0	-1
80%	1	0	3	3	2	0	0	0	0	0	0	-1
90%	0	0	0	0	0	3	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	-14	33	419	406	655	254	10	0	0	0	0	-17
Water Year Types[c]												
Wet (32%)	-46	59	1,366	1,004	836	353	-10	1	0	0	0	-55
Above Normal (16%)	1	1	-151	198	1,622	579	80	0	0	0	0	0
Below Normal (13%)	1	108	24	351	996	352	-1	0	0	0	0	0
Dry (24%)	1	0	21	30	-8	13	3	0	0	0	0	0
Critical (15%)	0	0	8	9	11	1	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-29-3. Yolo Bypass, Monthly Flow

No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	163	575	11,441	34,478	52,474	20,341	10,435	335	168	48	183	290
20%	162	245	6,247	15,620	20,921	10,931	7,063	178	168	48	55	194
30%	159	146	2,165	8,237	12,308	7,941	2,042	173	168	48	55	159
40%	153	110	798	4,526	8,343	4,740	497	170	168	48	55	159
50%	146	108	558	1,883	5,503	2,825	267	168	167	48	55	159
60%	141	105	258	776	2,879	1,254	229	165	167	48	55	159
70%	129	100	157	466	951	616	211	163	166	48	55	158
80%	115	100	110	164	321	220	186	159	164	48	55	156
90%	104	100	100	123	152	146	170	153	162	48	54	152
Long Term												
Full Simulation Period[b]	198	531	4,678	12,239	16,299	10,398	3,648	311	185	48	101	193
Water Year Types[c]												
Wet (32%)	269	1,266	11,844	31,732	37,542	24,774	8,899	560	227	48	147	227
Above Normal (16%)	131	337	4,234	9,213	17,513	10,972	3,165	273	166	48	92	165
Below Normal (13%)	245	192	447	1,617	4,933	1,299	547	169	166	48	130	192
Dry (24%)	156	131	569	1,540	3,384	2,173	905	175	167	48	61	170
Critical (15%)	145	124	357	847	897	675	210	167	165	48	55	188

Alternative 5

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	163	575	11,727	33,139	52,516	20,378	10,436	335	168	48	183	290
20%	162	245	6,221	15,644	20,577	10,932	7,063	178	168	48	55	194
30%	159	146	2,160	8,237	12,384	8,053	2,042	173	168	48	55	159
40%	153	110	824	4,526	8,343	4,746	497	170	168	48	55	159
50%	146	108	533	1,874	5,503	2,793	267	168	167	48	55	159
60%	141	105	258	770	2,873	1,250	229	165	167	48	55	159
70%	129	100	157	466	951	616	211	163	166	48	55	158
80%	115	100	106	164	321	220	186	159	164	48	55	156
90%	104	100	100	126	150	146	170	153	162	48	54	152
Long Term												
Full Simulation Period[b]	194	538	4,670	12,152	16,274	10,399	3,649	311	185	48	101	193
Water Year Types[c]												
Wet (32%)	255	1,289	11,815	31,464	37,505	24,793	8,899	560	227	48	147	227
Above Normal (16%)	131	337	4,256	9,217	17,377	10,938	3,165	273	166	48	92	165
Below Normal (13%)	245	192	451	1,617	5,013	1,302	546	169	166	48	130	192
Dry (24%)	156	131	556	1,533	3,378	2,177	906	175	167	48	61	170
Critical (15%)	145	124	359	846	897	673	210	167	165	48	55	188

Alternative 5 minus No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	285	-1,339	42	37	1	0	0	0	0	0
20%	0	0	-26	24	-343	0	1	0	0	0	0	0
30%	0	0	-5	-1	76	112	0	0	0	0	0	0
40%	0	0	26	0	0	6	0	0	0	0	0	0
50%	0	0	-25	-9	0	-32	0	0	0	0	0	0
60%	0	0	0	-7	-7	-4	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	-5	0	0	0	0	0	0	0	0	0
90%	0	0	0	3	-2	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	-4	7	-8	-86	-24	2	0	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	-14	23	-29	-268	-37	19	0	0	0	0	0	0
Above Normal (16%)	0	0	22	4	-137	-33	0	0	0	0	0	0
Below Normal (13%)	0	0	4	0	81	3	0	0	0	0	0	0
Dry (24%)	0	0	-13	-7	-7	4	0	0	0	0	0	0
Critical (15%)	0	0	1	0	-1	-3	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-29-4. Yolo Bypass, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	164	575	15,113	37,297	53,013	25,747	10,346	335	168	48	183	240
20%	162	245	6,239	16,046	22,314	11,069	7,372	178	168	48	55	159
30%	160	146	2,510	8,216	12,519	8,557	2,043	173	168	48	55	159
40%	154	110	802	5,019	10,224	5,190	498	170	168	48	55	159
50%	147	108	495	2,405	5,513	2,987	272	168	167	48	55	159
60%	142	105	259	970	3,258	1,402	229	165	167	48	55	159
70%	132	100	146	470	1,068	754	211	163	166	48	55	157
80%	116	100	109	167	332	225	186	159	164	48	55	155
90%	106	100	100	122	152	149	173	153	162	48	54	152
Long Term												
Full Simulation Period[b]	187	572	5,169	12,745	17,130	10,720	3,653	311	185	48	101	175
Water Year Types[c]												
Wet (32%)	231	1,348	13,405	32,933	38,563	25,293	8,874	560	227	48	147	173
Above Normal (16%)	137	344	4,156	9,639	19,777	11,623	3,242	273	166	48	92	165
Below Normal (13%)	246	299	470	1,973	5,998	1,664	546	169	166	48	130	192
Dry (24%)	156	131	583	1,579	3,404	2,190	910	175	167	48	61	170
Critical (15%)	145	124	376	856	905	687	210	167	165	48	55	188

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	163	575	11,441	34,478	52,474	20,341	10,435	335	168	48	183	290
20%	162	245	6,247	15,620	20,921	10,931	7,063	178	168	48	55	194
30%	159	146	2,165	8,237	12,308	7,941	2,042	173	168	48	55	159
40%	153	110	798	4,526	8,343	4,740	497	170	168	48	55	159
50%	146	108	558	1,883	5,503	2,825	267	168	167	48	55	159
60%	141	105	258	776	2,879	1,254	229	165	167	48	55	159
70%	129	100	157	466	951	616	211	163	166	48	55	158
80%	115	100	110	164	321	220	186	159	164	48	55	156
90%	104	100	100	123	152	146	170	153	162	48	54	152
Long Term												
Full Simulation Period[b]	198	531	4,678	12,239	16,299	10,398	3,648	311	185	48	101	193
Water Year Types[c]												
Wet (32%)	269	1,266	11,844	31,732	37,542	24,774	8,899	560	227	48	147	227
Above Normal (16%)	131	337	4,234	9,213	17,513	10,972	3,165	273	166	48	92	165
Below Normal (13%)	245	192	447	1,617	4,933	1,299	547	169	166	48	130	192
Dry (24%)	156	131	569	1,540	3,384	2,173	905	175	167	48	61	170
Critical (15%)	145	124	357	847	897	675	210	167	165	48	55	188

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-1	0	-3,672	-2,819	-539	-5,406	89	0	0	0	0	50
20%	-1	0	8	-426	-1,394	-138	-309	0	0	0	0	35
30%	-1	0	-345	21	-211	-616	-1	0	0	0	0	0
40%	0	0	-3	-493	-1,881	-450	0	0	0	0	0	0
50%	-2	0	63	-522	-10	-163	-4	0	0	0	0	0
60%	-1	0	-1	-194	-379	-148	0	0	0	0	0	1
70%	-3	0	11	-4	-118	-138	0	0	0	0	0	1
80%	-1	0	1	-3	-12	-6	0	0	0	0	0	1
90%	-2	0	0	1	0	-3	-3	0	0	0	0	0
Long Term												
Full Simulation Period[b]	11	-42	-492	-507	-831	-323	-5	0	0	0	0	17
Water Year Types[c]												
Wet (32%)	38	-82	-1,561	-1,201	-1,020	-519	25	0	0	0	0	55
Above Normal (16%)	-6	-7	78	-426	-2,264	-651	-77	0	0	0	0	0
Below Normal (13%)	-1	-108	-23	-356	-1,065	-365	1	0	0	0	0	0
Dry (24%)	0	0	-14	-39	-20	-17	-4	0	0	0	0	0
Critical (15%)	0	0	-19	-9	-7	-12	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-29-5. Yolo Bypass, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	164	575	15,113	37,297	53,013	25,747	10,346	335	168	48	183	240
20%	162	245	6,239	16,046	22,314	11,069	7,372	178	168	48	55	159
30%	160	146	2,510	8,216	12,519	8,557	2,043	173	168	48	55	159
40%	154	110	802	5,019	10,224	5,190	498	170	168	48	55	159
50%	147	108	495	2,405	5,513	2,987	272	168	167	48	55	159
60%	142	105	259	970	3,258	1,402	229	165	167	48	55	159
70%	132	100	146	470	1,068	754	211	163	166	48	55	157
80%	116	100	109	167	332	225	186	159	164	48	55	155
90%	106	100	100	122	152	149	173	153	162	48	54	152
Long Term												
Full Simulation Period[b]	187	572	5,169	12,745	17,130	10,720	3,653	311	185	48	101	175
Water Year Types[c]												
Wet (32%)	231	1,348	13,405	32,933	38,563	25,293	8,874	560	227	48	147	173
Above Normal (16%)	137	344	4,156	9,639	19,777	11,623	3,242	273	166	48	92	165
Below Normal (13%)	246	299	470	1,973	5,998	1,664	546	169	166	48	130	192
Dry (24%)	156	131	583	1,579	3,404	2,190	910	175	167	48	61	170
Critical (15%)	145	124	376	856	905	687	210	167	165	48	55	188

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	163	575	15,105	36,977	52,994	23,562	10,346	335	168	48	183	240
20%	162	245	6,398	16,162	20,780	10,937	7,383	178	168	48	55	159
30%	159	146	2,014	8,057	12,403	8,314	2,042	173	168	48	55	159
40%	153	110	802	5,022	10,223	5,060	498	170	168	48	55	159
50%	146	108	496	2,336	5,513	2,933	272	168	167	48	55	159
60%	141	105	287	945	2,888	1,421	229	165	167	48	55	159
70%	129	100	149	466	1,114	738	211	163	166	48	55	157
80%	116	100	114	166	323	220	186	159	164	48	55	155
90%	104	100	100	123	152	149	170	153	162	48	54	152
Long Term												
Full Simulation Period[b]	184	564	5,096	12,644	16,954	10,652	3,658	311	185	48	101	175
Water Year Types[c]												
Wet (32%)	223	1,325	13,210	32,736	38,378	25,127	8,889	561	227	48	147	173
Above Normal (16%)	132	338	4,083	9,412	19,135	11,550	3,246	273	166	48	92	165
Below Normal (13%)	246	299	471	1,968	5,929	1,651	546	169	166	48	130	192
Dry (24%)	156	131	590	1,571	3,376	2,186	908	175	167	48	61	170
Critical (15%)	145	124	365	856	908	676	210	167	165	48	55	188

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-1	0	-8	-319	-19	-2,185	0	0	0	0	0	0
20%	-1	0	159	116	-1,534	-131	11	0	0	0	0	0
30%	-1	0	-495	-159	-116	-243	-1	0	0	0	0	0
40%	0	0	1	3	0	-130	1	0	0	0	0	0
50%	-2	0	1	-68	0	-55	0	0	0	0	0	0
60%	-1	0	28	-24	-370	19	0	0	0	0	0	0
70%	-3	0	3	-4	45	-16	0	0	0	0	0	0
80%	0	0	4	-1	-9	-6	0	0	0	0	0	0
90%	-2	0	0	2	0	0	-3	0	0	0	0	0
Long Term												
Full Simulation Period[b]	-3	-8	-73	-101	-176	-68	5	0	0	0	0	0
Water Year Types[c]												
Wet (32%)	-8	-23	-195	-197	-185	-166	15	0	0	0	0	0
Above Normal (16%)	-5	-6	-73	-228	-642	-72	4	0	0	0	0	0
Below Normal (13%)	0	0	0	-5	-69	-13	0	0	0	0	0	0
Dry (24%)	1	0	7	-9	-28	-4	-2	0	0	0	0	0
Critical (15%)	0	0	-11	0	4	-11	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-29-6. Yolo Bypass, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	164	575	15,113	37,297	53,013	25,747	10,346	335	168	48	183	240
20%	162	245	6,239	16,046	22,314	11,069	7,372	178	168	48	55	159
30%	160	146	2,510	8,216	12,519	8,557	2,043	173	168	48	55	159
40%	154	110	802	5,019	10,224	5,190	498	170	168	48	55	159
50%	147	108	495	2,405	5,513	2,987	272	168	167	48	55	159
60%	142	105	259	970	3,258	1,402	229	165	167	48	55	159
70%	132	100	146	470	1,068	754	211	163	166	48	55	157
80%	116	100	109	167	332	225	186	159	164	48	55	155
90%	106	100	100	122	152	149	173	153	162	48	54	152
Long Term												
Full Simulation Period[b]	187	572	5,169	12,745	17,130	10,720	3,653	311	185	48	101	175
Water Year Types[c]												
Wet (32%)	231	1,348	13,405	32,933	38,563	25,293	8,874	560	227	48	147	173
Above Normal (16%)	137	344	4,156	9,639	19,777	11,623	3,242	273	166	48	92	165
Below Normal (13%)	246	299	470	1,973	5,998	1,664	546	169	166	48	130	192
Dry (24%)	156	131	583	1,579	3,404	2,190	910	175	167	48	61	170
Critical (15%)	145	124	376	856	905	687	210	167	165	48	55	188

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	163	575	11,727	33,139	52,516	20,378	10,436	335	168	48	183	290
20%	162	245	6,221	15,644	20,577	10,932	7,063	178	168	48	55	194
30%	159	146	2,160	8,237	12,384	8,053	2,042	173	168	48	55	159
40%	153	110	824	4,526	8,343	4,746	497	170	168	48	55	159
50%	146	108	533	1,874	5,503	2,793	267	168	167	48	55	159
60%	141	105	258	770	2,873	1,250	229	165	167	48	55	159
70%	129	100	157	466	951	616	211	163	166	48	55	158
80%	115	100	106	164	321	220	186	159	164	48	55	156
90%	104	100	100	126	150	146	170	153	162	48	54	152
Long Term												
Full Simulation Period[b]	194	538	4,670	12,152	16,274	10,399	3,649	311	185	48	101	193
Water Year Types[c]												
Wet (32%)	255	1,289	11,815	31,464	37,505	24,793	8,899	560	227	48	147	227
Above Normal (16%)	131	337	4,256	9,217	17,377	10,938	3,165	273	166	48	92	165
Below Normal (13%)	245	192	451	1,617	5,013	1,302	546	169	166	48	130	192
Dry (24%)	156	131	556	1,533	3,378	2,177	906	175	167	48	61	170
Critical (15%)	145	124	359	846	897	673	210	167	165	48	55	188

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-1	0	-3,386	-4,158	-497	-5,369	90	0	0	0	0	50
20%	-1	0	-17	-402	-1,737	-137	-309	0	0	0	0	35
30%	-1	0	-350	20	-135	-504	-1	0	0	0	0	0
40%	0	0	22	-493	-1,880	-444	0	0	0	0	0	0
50%	-2	0	38	-530	-9	-194	-4	0	0	0	0	0
60%	-1	0	-1	-200	-386	-152	0	0	0	0	0	1
70%	-3	0	11	-4	-118	-138	0	0	0	0	0	1
80%	-1	0	-4	-3	-12	-6	0	0	0	0	0	1
90%	-2	0	0	4	-2	-3	-3	0	0	0	0	0
Long Term												
Full Simulation Period[b]	6	-34	-500	-593	-856	-321	-5	0	0	0	0	17
Water Year Types[c]												
Wet (32%)	24	-59	-1,590	-1,468	-1,057	-500	26	0	0	0	0	55
Above Normal (16%)	-6	-7	100	-422	-2,401	-684	-77	0	0	0	0	0
Below Normal (13%)	-1	-108	-19	-355	-984	-362	1	0	0	0	0	0
Dry (24%)	0	0	-27	-46	-26	-13	-4	0	0	0	0	0
Critical (15%)	0	0	-18	-9	-8	-15	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

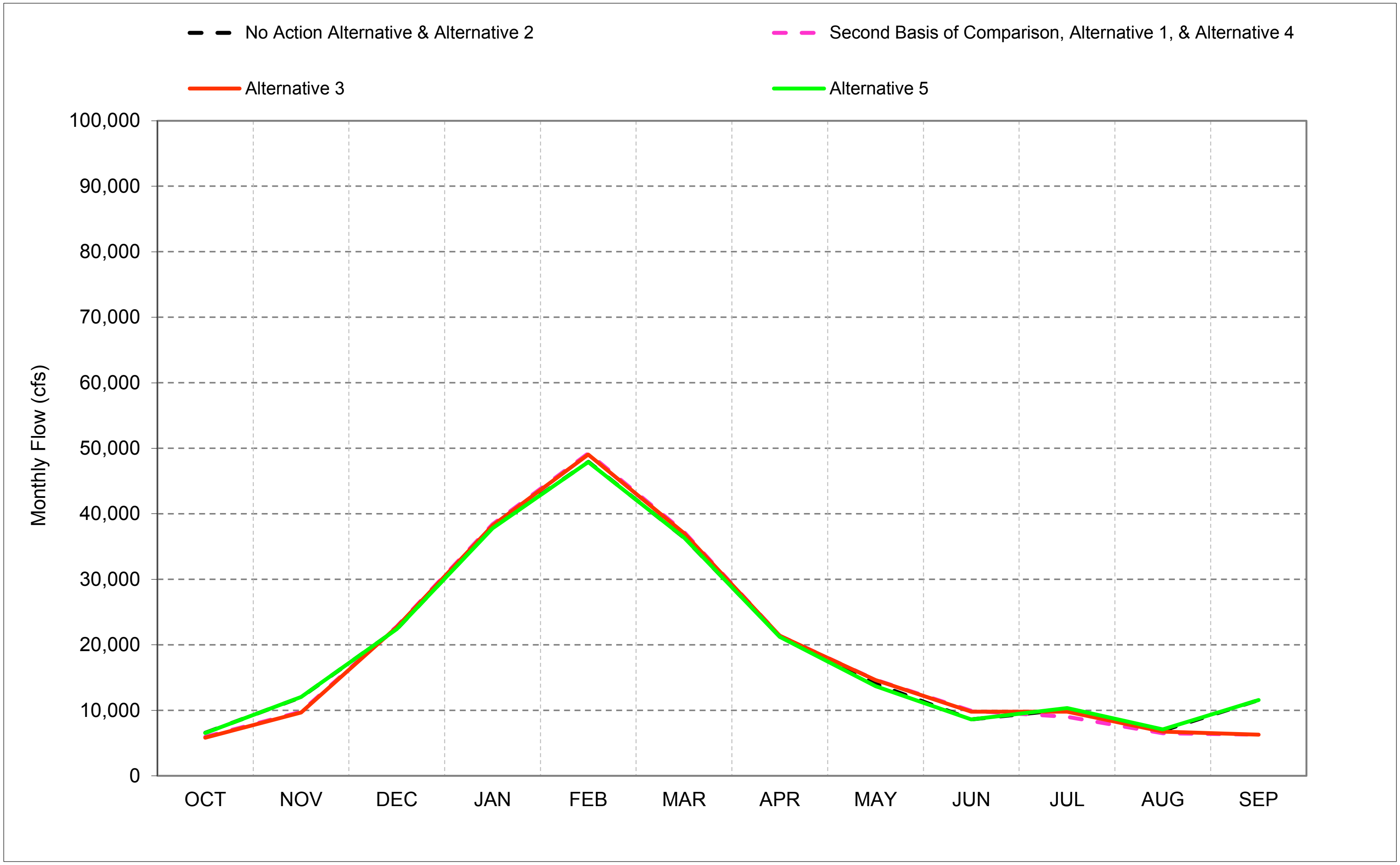
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.30. Sacramento River Flow at Rio Vista

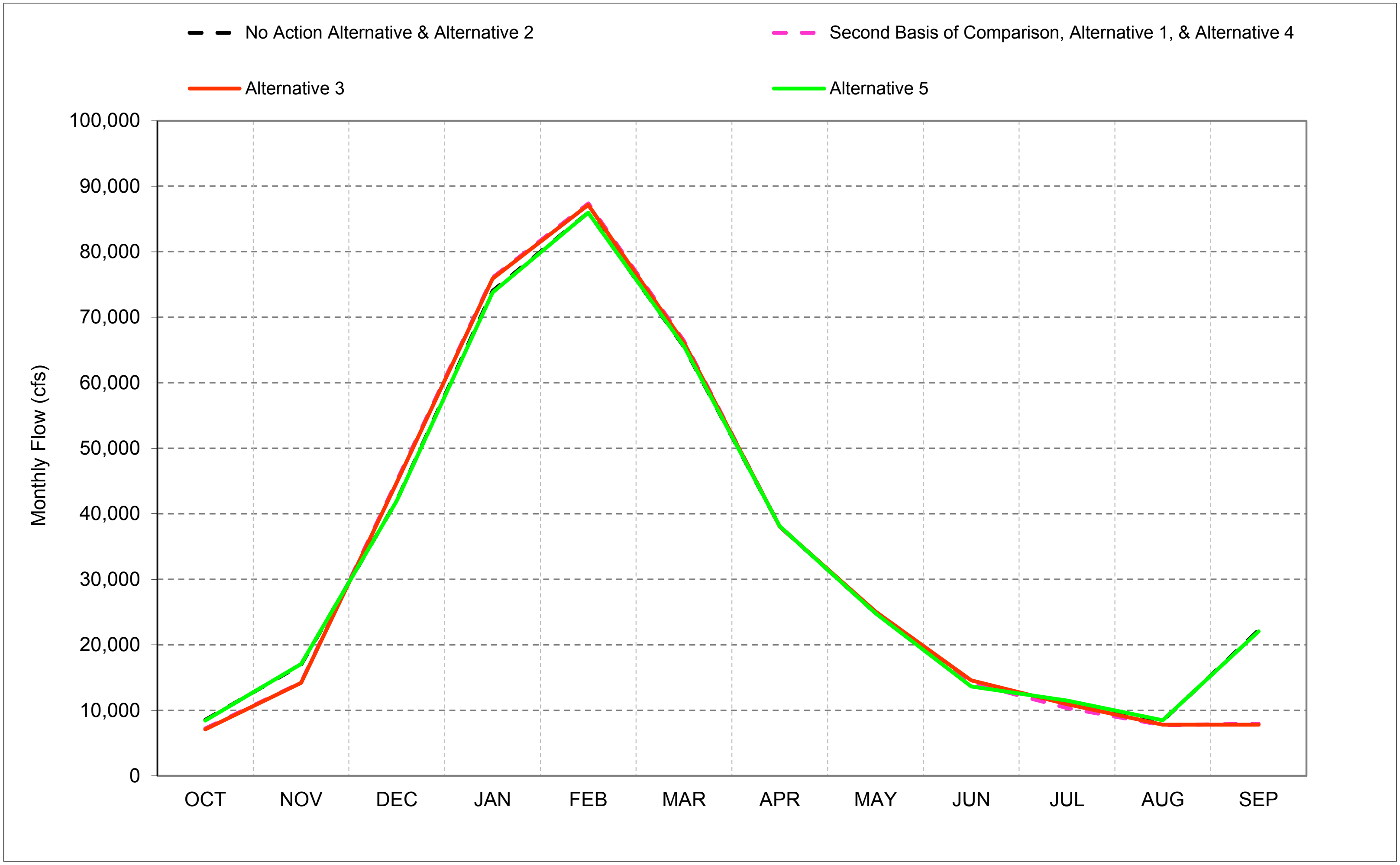
Figure C-30-1. Sacramento River at Rio Vista, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-30-2. Sacramento River at Rio Vista, Wet Year* Long-Term Average Flow**

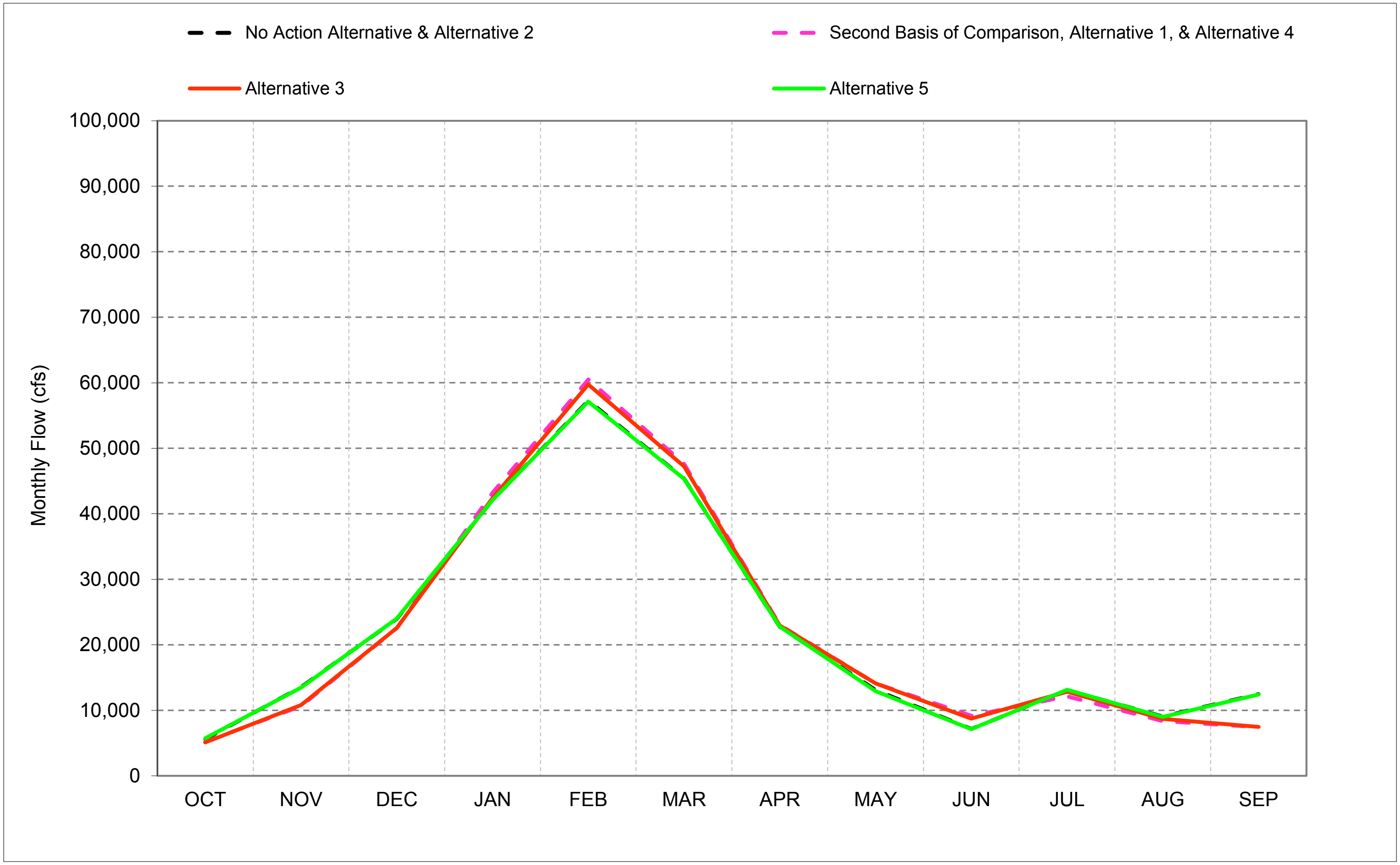


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-30-3. Sacramento River at Rio Vista, Above Normal Year* Long-Term Average Flow**

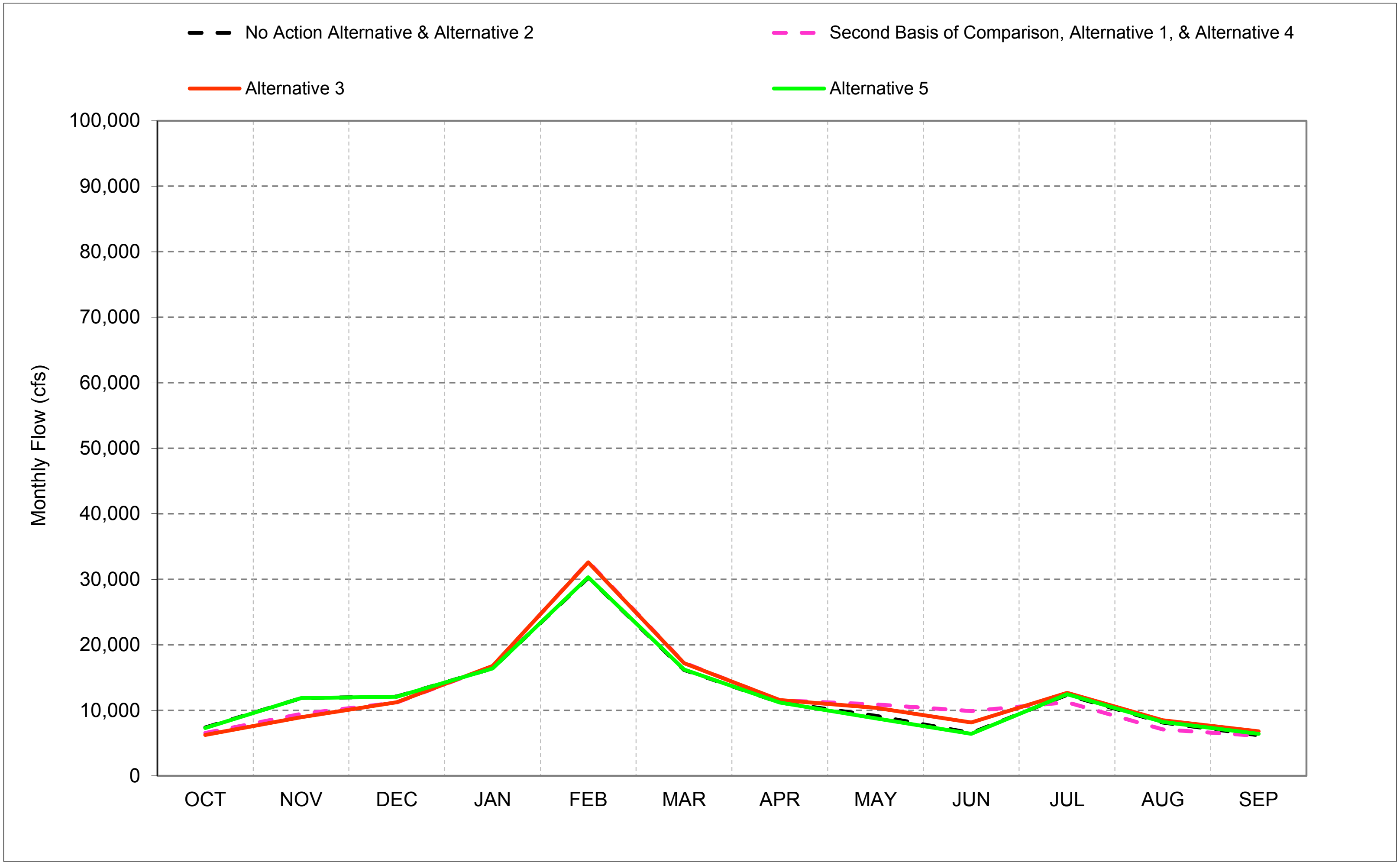


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-30-4. Sacramento River at Rio Vista, Below Normal Year* Long-Term Average Flow**

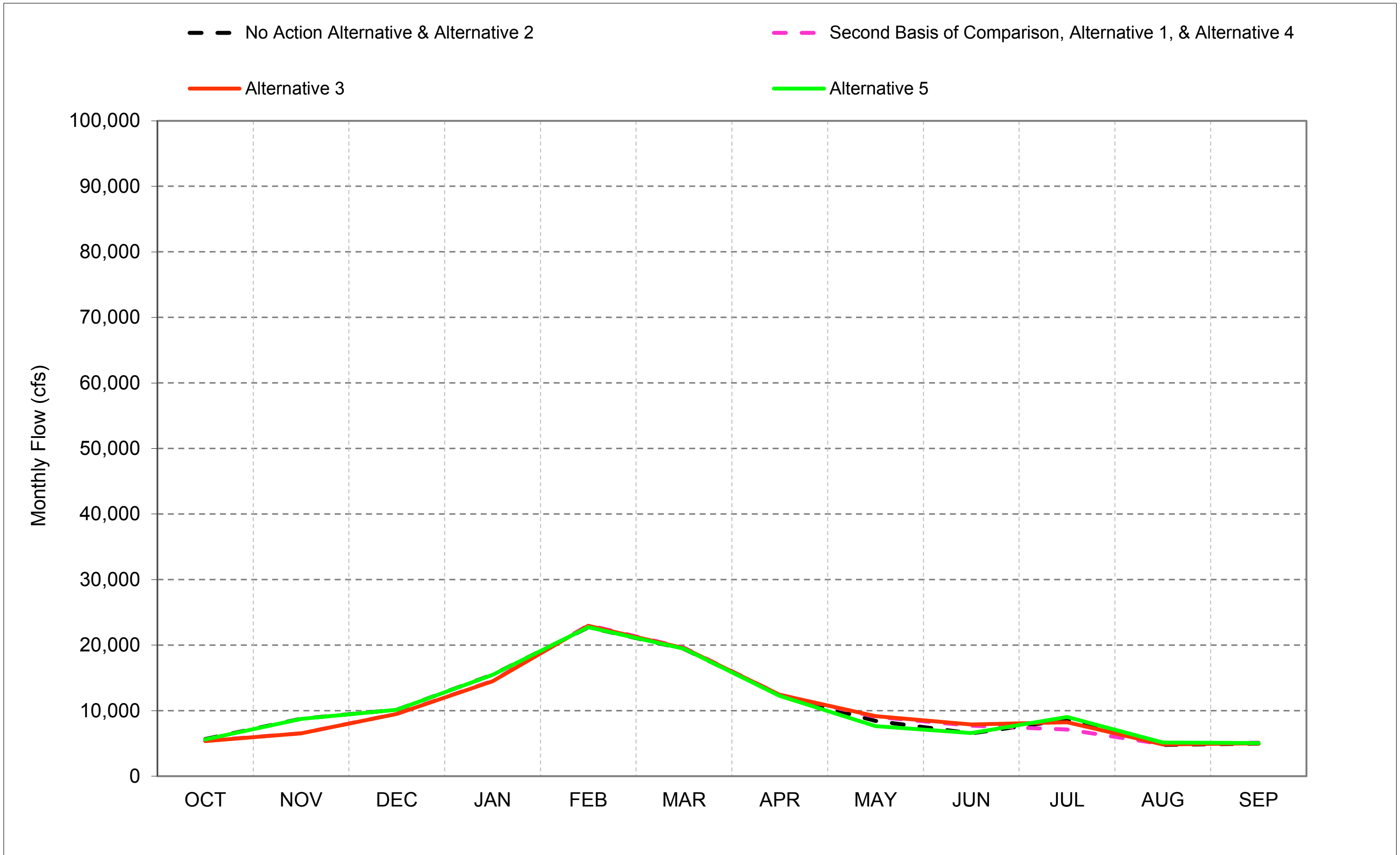


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-30-5. Sacramento River at Rio Vista, Dry Year* Long-Term Average Flow**

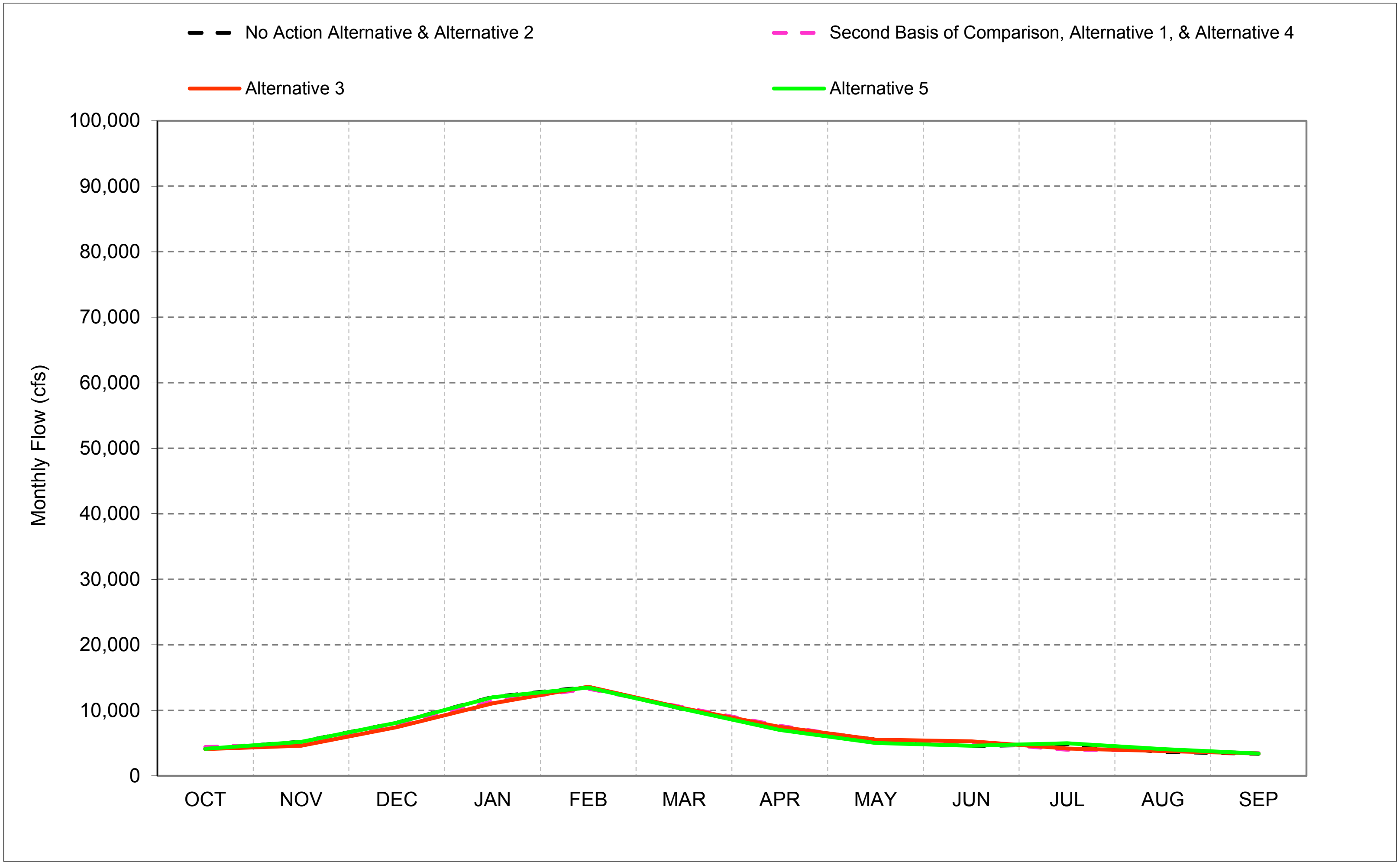


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-30-6. Sacramento River at Rio Vista, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-30-1. Sacramento River at Rio Vista, Monthly Flow

No Action Alternative & Alternative 2

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	10,070	18,978	58,014	88,870	115,150	71,556	52,709	32,159	12,044	14,311	9,331	23,977
20%	9,164	15,087	33,016	59,223	73,063	55,386	33,858	21,120	9,112	13,769	9,021	23,320
30%	7,820	14,319	19,139	43,990	55,265	39,150	20,511	12,940	7,154	12,689	8,637	13,495
40%	6,837	12,410	15,044	26,918	43,815	28,806	17,119	9,913	6,800	11,527	8,237	12,638
50%	5,696	10,612	11,920	19,664	32,125	23,004	12,566	9,009	6,655	10,242	7,597	7,728
60%	4,657	8,444	10,519	15,734	23,143	17,885	9,773	8,093	6,402	9,294	7,198	6,444
70%	4,247	6,189	10,183	12,389	16,301	15,737	8,487	7,678	5,975	8,594	5,139	4,865
80%	3,935	4,800	6,794	10,428	13,181	11,784	7,768	7,067	5,215	7,289	4,202	3,999
90%	3,260	4,011	5,682	9,124	11,209	8,346	6,927	5,954	4,837	5,221	3,592	3,294
Long Term												
Full Simulation Period[b]	6,582	12,014	22,422	37,879	47,932	36,375	21,273	14,053	8,621	10,146	6,909	11,570
Water Year Types[c]												
Wet (32%)	8,546	16,954	42,039	73,996	85,996	65,510	38,081	24,838	13,700	11,352	8,425	22,213
Above Normal (16%)	5,650	13,536	23,981	42,104	57,259	45,401	22,762	13,104	7,166	13,089	9,057	12,475
Below Normal (13%)	7,377	11,863	12,133	16,417	30,256	16,204	11,190	9,160	6,541	12,354	8,153	6,213
Dry (24%)	5,672	8,760	10,143	15,485	22,720	19,433	12,329	8,452	6,559	8,641	4,784	5,005
Critical (15%)	4,120	5,220	8,128	12,048	13,576	10,197	7,390	5,535	4,537	4,827	3,696	3,381

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	7,936	16,012	59,280	91,700	115,954	76,198	51,404	32,132	12,280	13,021	8,831	8,155
20%	7,592	9,452	34,803	60,639	73,800	55,589	33,804	22,340	11,036	12,187	8,574	7,770
30%	7,001	8,564	18,270	44,793	56,713	41,187	20,362	13,312	10,122	11,113	7,943	7,501
40%	6,038	8,016	13,391	26,341	49,187	29,860	17,124	11,207	9,247	10,377	7,536	7,315
50%	5,520	7,275	10,877	19,788	32,753	23,496	12,771	9,869	8,418	9,640	7,185	6,894
60%	5,002	6,617	9,412	14,739	23,353	18,189	9,629	9,369	7,891	8,661	5,815	6,014
70%	4,528	5,979	8,074	11,402	17,101	16,023	8,714	8,559	6,652	6,929	4,952	4,858
80%	4,107	5,091	6,604	9,443	13,382	12,111	8,104	7,695	6,268	5,965	4,428	4,138
90%	3,389	4,022	5,717	8,429	11,115	8,501	7,405	5,936	5,654	4,150	3,632	3,255
Long Term												
Full Simulation Period[b]	5,963	9,788	22,796	38,425	49,250	37,228	21,405	14,644	9,919	9,034	6,503	6,284
Water Year Types[c]												
Wet (32%)	7,239	14,226	45,019	76,053	87,371	66,392	38,027	25,019	14,188	10,354	7,761	7,961
Above Normal (16%)	5,193	10,653	22,550	43,221	60,499	47,632	23,011	14,132	9,164	12,139	8,384	7,447
Below Normal (13%)	6,564	9,456	11,190	16,732	32,676	17,278	11,534	10,910	9,888	11,233	7,092	6,118
Dry (24%)	5,418	6,568	9,526	14,565	23,057	19,592	12,439	9,069	7,718	7,116	4,894	5,129
Critical (15%)	4,392	4,907	7,671	11,351	13,313	10,450	7,643	5,432	5,181	3,991	3,883	3,465

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-2,134	-2,966	1,266	2,830	804	4,642	-1,305	-28	236	-1,290	-500	-15,822
20%	-1,572	-5,635	1,788	1,416	737	203	-54	1,221	1,924	-1,583	-447	-15,550
30%	-819	-5,755	-869	803	1,448	2,037	-149	372	2,968	-1,576	-694	-5,994
40%	-799	-4,394	-1,653	-577	5,372	1,054	4	1,295	2,446	-1,150	-701	-5,323
50%	-176	-3,337	-1,043	124	628	492	205	859	1,763	-602	-412	-834
60%	344	-1,827	-1,107	-995	210	304	-144	1,276	1,489	-633	-1,383	-430
70%	281	-210	-2,109	-986	801	286	228	881	677	-1,665	-186	-7
80%	172	291	-191	-985	201	327	336	628	1,054	-1,324	227	139
90%	129	12	35	-696	-93	155	477	-19	817	-1,070	40	-39
Long Term												
Full Simulation Period[b]	-618	-2,226	374	545	1,318	853	133	591	1,297	-1,111	-406	-5,286
Water Year Types[c]												
Wet (32%)	-1,308	-2,728	2,980	2,056	1,376	882	-54	181	488	-998	-664	-14,251
Above Normal (16%)	-458	-2,884	-1,431	1,118	3,240	2,231	249	1,027	1,998	-950	-673	-5,029
Below Normal (13%)	-813	-2,407	-943	315	2,420	1,075	344	1,750	3,347	-1,121	-1,062	-94
Dry (24%)	-254	-2,193	-617	-919	337	158	111	617	1,159	-1,524	110	124
Critical (15%)	272	-313	-457	-698	-263	252	253	-102	645	-836	187	84

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-30-2. Sacramento River at Rio Vista, Monthly Flow

No Action Alternative & Alternative 2

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	10,070	18,978	58,014	88,870	115,150	71,556	52,709	32,159	12,044	14,311	9,331	23,977
20%	9,164	15,087	33,016	59,223	73,063	55,386	33,858	21,120	9,112	13,769	9,021	23,320
30%	7,820	14,319	19,139	43,990	55,265	39,150	20,511	12,940	7,154	12,689	8,637	13,495
40%	6,837	12,410	15,044	26,918	43,815	28,806	17,119	9,913	6,800	11,527	8,237	12,638
50%	5,696	10,612	11,920	19,664	32,125	23,004	12,566	9,009	6,655	10,242	7,597	7,728
60%	4,657	8,444	10,519	15,734	23,143	17,885	9,773	8,093	6,402	9,294	7,198	6,444
70%	4,247	6,189	10,183	12,389	16,301	15,737	8,487	7,678	5,975	8,594	5,139	4,865
80%	3,935	4,800	6,794	10,428	13,181	11,784	7,768	7,067	5,215	7,289	4,202	3,999
90%	3,260	4,011	5,682	9,124	11,209	8,346	6,927	5,954	4,837	5,221	3,592	3,294
Long Term												
Full Simulation Period[b]	6,582	12,014	22,422	37,879	47,932	36,375	21,273	14,053	8,621	10,146	6,909	11,570
Water Year Types[c]												
Wet (32%)	8,546	16,954	42,039	73,996	85,996	65,510	38,081	24,838	13,700	11,352	8,425	22,213
Above Normal (16%)	5,650	13,536	23,981	42,104	57,259	45,401	22,762	13,104	7,166	13,089	9,057	12,475
Below Normal (13%)	7,377	11,863	12,133	16,417	30,256	16,204	11,190	9,160	6,541	12,354	8,153	6,213
Dry (24%)	5,672	8,760	10,143	15,485	22,720	19,433	12,329	8,452	6,559	8,641	4,784	5,005
Critical (15%)	4,120	5,220	8,128	12,048	13,576	10,197	7,390	5,535	4,537	4,827	3,696	3,381

Alternative 3

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	7,954	16,006	60,411	91,548	115,759	74,068	51,953	32,121	11,790	13,871	9,089	8,186
20%	7,349	9,732	35,930	60,659	74,471	55,585	33,797	21,564	10,764	13,398	8,857	7,898
30%	6,676	8,627	18,042	44,626	56,689	40,207	20,482	13,162	9,187	13,034	8,204	7,468
40%	6,159	7,822	13,466	26,035	49,055	29,853	17,049	11,324	8,737	11,626	7,879	7,156
50%	5,457	7,283	10,961	19,032	32,637	23,522	12,775	9,807	8,372	10,267	7,266	6,934
60%	4,540	6,524	9,468	14,903	23,481	18,149	9,676	8,808	7,718	9,308	6,754	6,239
70%	4,137	6,021	8,437	11,280	17,194	16,114	8,836	8,317	7,279	7,631	5,433	4,830
80%	3,947	4,912	6,649	9,425	13,173	12,063	8,010	7,821	6,326	6,527	4,278	4,140
90%	3,255	4,020	5,536	8,233	11,220	8,370	7,342	6,223	5,519	4,434	3,543	3,164
Long Term												
Full Simulation Period[b]	5,814	9,693	22,698	38,205	49,065	37,021	21,373	14,632	9,809	9,824	6,741	6,305
Water Year Types[c]												
Wet (32%)	7,114	14,209	44,782	75,904	87,147	66,076	38,034	25,087	14,587	10,942	7,814	7,836
Above Normal (16%)	5,095	10,808	22,598	42,408	59,743	47,228	22,970	14,131	8,754	12,872	8,695	7,468
Below Normal (13%)	6,235	8,981	11,261	16,777	32,582	17,195	11,575	10,388	8,166	12,666	8,512	6,807
Dry (24%)	5,377	6,530	9,495	14,518	22,947	19,552	12,408	9,167	7,914	8,224	4,861	5,010
Critical (15%)	4,118	4,626	7,447	11,093	13,627	10,298	7,468	5,518	5,265	4,164	3,812	3,424

Alternative 3 minus No Action Alternative & Alternative 2

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-2,116	-2,971	2,397	2,677	609	2,512	-756	-39	-254	-440	-242	-15,791
20%	-1,814	-5,355	2,914	1,436	1,408	199	-61	445	1,652	-371	-163	-15,422
30%	-1,144	-5,693	-1,097	637	1,423	1,057	-29	222	2,033	345	-433	-6,027
40%	-678	-4,588	-1,578	-883	5,240	1,047	-71	1,411	1,937	98	-358	-5,482
50%	-238	-3,329	-959	-632	512	518	209	798	1,717	25	-331	-794
60%	-117	-1,920	-1,051	-831	338	264	-97	715	1,316	15	-443	-204
70%	-110	-168	-1,746	-1,108	893	377	349	639	1,304	-963	294	-35
80%	11	112	-145	-1,002	-8	279	242	754	1,111	-762	76	141
90%	-6	10	-145	-891	11	24	414	268	681	-786	-49	-130
Long Term												
Full Simulation Period[b]	-768	-2,321	276	326	1,134	646	101	579	1,188	-321	-167	-5,265
Water Year Types[c]												
Wet (32%)	-1,433	-2,745	2,743	1,908	1,151	566	-47	249	887	-410	-611	-14,377
Above Normal (16%)	-555	-2,728	-1,383	304	2,485	1,827	209	1,027	1,588	-217	-362	-5,007
Below Normal (13%)	-1,142	-2,881	-872	359	2,326	992	385	1,228	1,625	312	359	594
Dry (24%)	-295	-2,230	-648	-966	227	118	80	715	1,355	-417	77	5
Critical (15%)	-2	-594	-681	-956	50	101	79	-17	728	-663	116	42

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-30-3. Sacramento River at Rio Vista, Monthly Flow

No Action Alternative & Alternative 2

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	10,070	18,978	58,014	88,870	115,150	71,556	52,709	32,159	12,044	14,311	9,331	23,977
20%	9,164	15,087	33,016	59,223	73,063	55,386	33,858	21,120	9,112	13,769	9,021	23,320
30%	7,820	14,319	19,139	43,990	55,265	39,150	20,511	12,940	7,154	12,689	8,637	13,495
40%	6,837	12,410	15,044	26,918	43,815	28,806	17,119	9,913	6,800	11,527	8,237	12,638
50%	5,696	10,612	11,920	19,664	32,125	23,004	12,566	9,009	6,655	10,242	7,597	7,728
60%	4,657	8,444	10,519	15,734	23,143	17,885	9,773	8,093	6,402	9,294	7,198	6,444
70%	4,247	6,189	10,183	12,389	16,301	15,737	8,487	7,678	5,975	8,594	5,139	4,865
80%	3,935	4,800	6,794	10,428	13,181	11,784	7,768	7,067	5,215	7,289	4,202	3,999
90%	3,260	4,011	5,682	9,124	11,209	8,346	6,927	5,954	4,837	5,221	3,592	3,294
Long Term												
Full Simulation Period[b]	6,582	12,014	22,422	37,879	47,932	36,375	21,273	14,053	8,621	10,146	6,909	11,570
Water Year Types[c]												
Wet (32%)	8,546	16,954	42,039	73,996	85,996	65,510	38,081	24,838	13,700	11,352	8,425	22,213
Above Normal (16%)	5,650	13,536	23,981	42,104	57,259	45,401	22,762	13,104	7,166	13,089	9,057	12,475
Below Normal (13%)	7,377	11,863	12,133	16,417	30,256	16,204	11,190	9,160	6,541	12,354	8,153	6,213
Dry (24%)	5,672	8,760	10,143	15,485	22,720	19,433	12,329	8,452	6,559	8,641	4,784	5,005
Critical (15%)	4,120	5,220	8,128	12,048	13,576	10,197	7,390	5,535	4,537	4,827	3,696	3,381

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	10,094	18,906	58,192	87,361	115,151	71,563	52,709	32,164	12,098	14,214	9,400	23,931
20%	8,702	15,066	33,012	59,113	73,118	55,358	33,862	21,077	9,063	13,803	9,066	23,141
30%	7,616	14,401	19,148	43,992	55,699	39,157	20,576	12,945	7,163	13,152	8,660	13,501
40%	6,915	12,559	15,050	26,809	43,815	28,822	17,139	9,532	6,803	11,639	8,257	12,562
50%	5,973	10,603	11,923	19,684	32,387	22,896	12,582	8,592	6,633	10,511	7,890	7,921
60%	4,624	8,466	10,503	15,733	23,141	17,883	9,449	7,823	6,441	9,531	7,392	6,668
70%	4,312	6,202	10,097	12,390	16,303	15,706	8,668	6,906	5,981	9,114	5,457	4,960
80%	3,990	4,799	6,804	10,462	13,181	11,781	7,452	6,414	5,162	7,510	4,448	4,211
90%	3,291	4,017	5,656	9,117	11,173	8,346	6,712	5,188	4,806	5,427	3,831	3,370
Long Term												
Full Simulation Period[b]	6,555	12,049	22,404	37,806	47,909	36,373	21,208	13,710	8,608	10,348	7,081	11,562
Water Year Types[c]												
Wet (32%)	8,465	17,099	41,993	73,808	85,986	65,543	38,083	24,834	13,674	11,515	8,488	22,059
Above Normal (16%)	5,746	13,499	24,025	42,096	57,115	45,328	22,768	12,943	7,133	13,127	9,015	12,411
Below Normal (13%)	7,311	11,858	12,095	16,389	30,330	16,221	11,220	8,790	6,427	12,485	8,257	6,438
Dry (24%)	5,628	8,744	10,132	15,472	22,747	19,433	12,263	7,651	6,588	9,060	5,144	5,080
Critical (15%)	4,145	5,217	8,105	12,011	13,488	10,178	7,021	5,047	4,594	4,996	4,087	3,400

Alternative 5 minus No Action Alternative & Alternative 2

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	24	-72	178	-1,510	1	7	0	5	54	-96	68	-46
20%	-461	-21	-4	-110	55	-28	4	-43	-49	34	45	-179
30%	-204	82	8	2	434	7	65	4	9	463	23	6
40%	77	149	6	-110	0	15	20	-380	2	112	20	-76
50%	278	-9	3	20	261	-108	16	-417	-23	269	293	193
60%	-33	22	-16	-1	-2	-2	-324	-270	38	237	194	224
70%	65	13	-86	2	2	-31	182	-772	6	520	319	95
80%	54	0	10	34	-1	-3	-315	-653	-52	222	246	212
90%	31	6	-26	-8	-36	0	-216	-767	-31	207	239	76
Long Term												
Full Simulation Period[b]	-27	35	-19	-73	-22	-2	-64	-343	-13	202	172	-7
Water Year Types[c]												
Wet (32%)	-81	145	-46	-188	-9	33	1	-4	-26	163	63	-153
Above Normal (16%)	96	-37	44	-7	-144	-74	6	-161	-33	39	-42	-64
Below Normal (13%)	-67	-5	-38	-28	74	17	31	-370	-114	131	104	226
Dry (24%)	-44	-16	-11	-13	27	0	-65	-801	30	419	360	75
Critical (15%)	26	-3	-23	-37	-88	-19	-369	-488	57	168	391	19

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-30-4. Sacramento River at Rio Vista, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	7,936	16,012	59,280	91,700	115,954	76,198	51,404	32,132	12,280	13,021	8,831	8,155
20%	7,592	9,452	34,803	60,639	73,800	55,589	33,804	22,340	11,036	12,187	8,574	7,770
30%	7,001	8,564	18,270	44,793	56,713	41,187	20,362	13,312	10,122	11,113	7,943	7,501
40%	6,038	8,016	13,391	26,341	49,187	29,860	17,124	11,207	9,247	10,377	7,536	7,315
50%	5,520	7,275	10,877	19,788	32,753	23,496	12,771	9,869	8,418	9,640	7,185	6,894
60%	5,002	6,617	9,412	14,739	23,353	18,189	9,629	9,369	7,891	8,661	5,815	6,014
70%	4,528	5,979	8,074	11,402	17,101	16,023	8,714	8,559	6,652	6,929	4,952	4,858
80%	4,107	5,091	6,604	9,443	13,382	12,111	8,104	7,695	6,268	5,965	4,428	4,138
90%	3,389	4,022	5,717	8,429	11,115	8,501	7,405	5,936	5,654	4,150	3,632	3,255
Long Term												
Full Simulation Period[b]	5,963	9,788	22,796	38,425	49,250	37,228	21,405	14,644	9,919	9,034	6,503	6,284
Water Year Types[c]												
Wet (32%)	7,239	14,226	45,019	76,053	87,371	66,392	38,027	25,019	14,188	10,354	7,761	7,961
Above Normal (16%)	5,193	10,653	22,550	43,221	60,499	47,632	23,011	14,132	9,164	12,139	8,384	7,447
Below Normal (13%)	6,564	9,456	11,190	16,732	32,676	17,278	11,534	10,910	9,888	11,233	7,092	6,118
Dry (24%)	5,418	6,568	9,526	14,565	23,057	19,592	12,439	9,069	7,718	7,116	4,894	5,129
Critical (15%)	4,392	4,907	7,671	11,351	13,313	10,450	7,643	5,432	5,181	3,991	3,883	3,465

No Action Alternative & Alternative 2

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	10,070	18,978	58,014	88,870	115,150	71,556	52,709	32,159	12,044	14,311	9,331	23,977
20%	9,164	15,087	33,016	59,223	73,063	55,386	33,858	21,120	9,112	13,769	9,021	23,320
30%	7,820	14,319	19,139	43,990	55,265	39,150	20,511	12,940	7,154	12,689	8,637	13,495
40%	6,837	12,410	15,044	26,918	43,815	28,806	17,119	9,913	6,800	11,527	8,237	12,638
50%	5,696	10,612	11,920	19,664	32,125	23,004	12,566	9,009	6,655	10,242	7,597	7,728
60%	4,657	8,444	10,519	15,734	23,143	17,885	9,773	8,093	6,402	9,294	7,198	6,444
70%	4,247	6,189	10,183	12,389	16,301	15,737	8,487	7,678	5,975	8,594	5,139	4,865
80%	3,935	4,800	6,794	10,428	13,181	11,784	7,768	7,067	5,215	7,289	4,202	3,999
90%	3,260	4,011	5,682	9,124	11,209	8,346	6,927	5,954	4,837	5,221	3,592	3,294
Long Term												
Full Simulation Period[b]	6,582	12,014	22,422	37,879	47,932	36,375	21,273	14,053	8,621	10,146	6,909	11,570
Water Year Types[c]												
Wet (32%)	8,546	16,954	42,039	73,996	85,996	65,510	38,081	24,838	13,700	11,352	8,425	22,213
Above Normal (16%)	5,650	13,536	23,981	42,104	57,259	45,401	22,762	13,104	7,166	13,089	9,057	12,475
Below Normal (13%)	7,377	11,863	12,133	16,417	30,256	16,204	11,190	9,160	6,541	12,354	8,153	6,213
Dry (24%)	5,672	8,760	10,143	15,485	22,720	19,433	12,329	8,452	6,559	8,641	4,784	5,005
Critical (15%)	4,120	5,220	8,128	12,048	13,576	10,197	7,390	5,535	4,537	4,827	3,696	3,381

No Action Alternative & Alternative 2 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,134	2,966	-1,266	-2,830	-804	-4,642	1,305	28	-236	1,290	500	15,822
20%	1,572	5,635	-1,788	-1,416	-737	-203	54	-1,221	-1,924	1,583	447	15,550
30%	819	5,755	869	-803	-1,448	-2,037	149	-372	-2,968	1,576	694	5,994
40%	799	4,394	1,653	577	-5,372	-1,054	-4	-1,295	-2,446	1,150	701	5,323
50%	176	3,337	1,043	-124	-628	-492	-205	-859	-1,763	602	412	834
60%	-344	1,827	1,107	995	-210	-304	144	-1,276	-1,489	633	1,383	430
70%	-281	210	2,109	986	-801	-286	-228	-881	-677	1,665	186	7
80%	-172	-291	191	985	-201	-327	-336	-628	-1,054	1,324	-227	-139
90%	-129	-12	-35	696	93	-155	-477	19	-817	1,070	-40	39
Long Term												
Full Simulation Period[b]	618	2,226	-374	-545	-1,318	-853	-133	-591	-1,297	1,111	406	5,286
Water Year Types[c]												
Wet (32%)	1,308	2,728	-2,980	-2,056	-1,376	-882	54	-181	-488	998	664	14,251
Above Normal (16%)	458	2,884	1,431	-1,118	-3,240	-2,231	-249	-1,027	-1,998	950	673	5,029
Below Normal (13%)	813	2,407	943	-315	-2,420	-1,075	-344	-1,750	-3,347	1,121	1,062	94
Dry (24%)	254	2,193	617	919	-337	-158	-111	-617	-1,159	1,524	-110	-124
Critical (15%)	-272	313	457	698	263	-252	-253	102	-645	836	-187	-84

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-30-5. Sacramento River at Rio Vista, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	7,936	16,012	59,280	91,700	115,954	76,198	51,404	32,132	12,280	13,021	8,831	8,155
20%	7,592	9,452	34,803	60,639	73,800	55,589	33,804	22,340	11,036	12,187	8,574	7,770
30%	7,001	8,564	18,270	44,793	56,713	41,187	20,362	13,312	10,122	11,113	7,943	7,501
40%	6,038	8,016	13,391	26,341	49,187	29,860	17,124	11,207	9,247	10,377	7,536	7,315
50%	5,520	7,275	10,877	19,788	32,753	23,496	12,771	9,869	8,418	9,640	7,185	6,894
60%	5,002	6,617	9,412	14,739	23,353	18,189	9,629	9,369	7,891	8,661	5,815	6,014
70%	4,528	5,979	8,074	11,402	17,101	16,023	8,714	8,559	6,652	6,929	4,952	4,858
80%	4,107	5,091	6,604	9,443	13,382	12,111	8,104	7,695	6,268	5,965	4,428	4,138
90%	3,389	4,022	5,717	8,429	11,115	8,501	7,405	5,936	5,654	4,150	3,632	3,255
Long Term												
Full Simulation Period[b]	5,963	9,788	22,796	38,425	49,250	37,228	21,405	14,644	9,919	9,034	6,503	6,284
Water Year Types[c]												
Wet (32%)	7,239	14,226	45,019	76,053	87,371	66,392	38,027	25,019	14,188	10,354	7,761	7,961
Above Normal (16%)	5,193	10,653	22,550	43,221	60,499	47,632	23,011	14,132	9,164	12,139	8,384	7,447
Below Normal (13%)	6,564	9,456	11,190	16,732	32,676	17,278	11,534	10,910	9,888	11,233	7,092	6,118
Dry (24%)	5,418	6,568	9,526	14,565	23,057	19,592	12,439	9,069	7,718	7,116	4,894	5,129
Critical (15%)	4,392	4,907	7,671	11,351	13,313	10,450	7,643	5,432	5,181	3,991	3,883	3,465

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	7,954	16,006	60,411	91,548	115,759	74,068	51,953	32,121	11,790	13,871	9,089	8,186
20%	7,349	9,732	35,930	60,659	74,471	55,585	33,797	21,564	10,764	13,398	8,857	7,898
30%	6,676	8,627	18,042	44,626	56,689	40,207	20,482	13,162	9,187	13,034	8,204	7,468
40%	6,159	7,822	13,466	26,035	49,055	29,853	17,049	11,324	8,737	11,626	7,879	7,156
50%	5,457	7,283	10,961	19,032	32,637	23,522	12,775	9,807	8,372	10,267	7,266	6,934
60%	4,540	6,524	9,468	14,903	23,481	18,149	9,676	8,808	7,718	9,308	6,754	6,239
70%	4,137	6,021	8,437	11,280	17,194	16,114	8,836	8,317	7,279	7,631	5,433	4,830
80%	3,947	4,912	6,649	9,425	13,173	12,063	8,010	7,821	6,326	6,527	4,278	4,140
90%	3,255	4,020	5,536	8,233	11,220	8,370	7,342	6,223	5,519	4,434	3,543	3,164
Long Term												
Full Simulation Period[b]	5,814	9,693	22,698	38,205	49,065	37,021	21,373	14,632	9,809	9,824	6,741	6,305
Water Year Types[c]												
Wet (32%)	7,114	14,209	44,782	75,904	87,147	66,076	38,034	25,087	14,587	10,942	7,814	7,836
Above Normal (16%)	5,095	10,808	22,598	42,408	59,743	47,228	22,970	14,131	8,754	12,872	8,695	7,468
Below Normal (13%)	6,235	8,981	11,261	16,777	32,582	17,195	11,575	10,388	8,166	12,666	8,512	6,807
Dry (24%)	5,377	6,530	9,495	14,518	22,947	19,552	12,408	9,167	7,914	8,224	4,861	5,010
Critical (15%)	4,118	4,626	7,447	11,093	13,627	10,298	7,468	5,518	5,265	4,164	3,812	3,424

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	18	-6	1,131	-153	-195	-2,130	549	-11	-490	850	258	31
20%	-243	280	1,126	20	671	-4	-7	-776	-272	1,211	284	128
30%	-325	62	-228	-166	-24	-980	120	-150	-935	1,921	260	-33
40%	121	-195	75	-306	-132	-8	-75	116	-510	1,248	343	-159
50%	-62	8	83	-756	-116	25	4	-61	-46	627	82	40
60%	-461	-93	56	164	127	-40	47	-561	-173	647	939	225
70%	-391	42	363	-122	92	91	121	-241	627	702	481	-28
80%	-160	-179	46	-17	-209	-48	-93	126	57	562	-150	2
90%	-134	-2	-180	-195	104	-132	-63	287	-136	284	-89	-91
Long Term												
Full Simulation Period[b]	-149	-95	-98	-219	-184	-207	-32	-12	-110	790	238	21
Water Year Types[c]												
Wet (32%)	-125	-17	-237	-148	-224	-316	7	68	399	588	53	-125
Above Normal (16%)	-98	156	48	-814	-755	-404	-40	0	-410	733	311	22
Below Normal (13%)	-329	-474	72	45	-93	-83	41	-522	-1,722	1,433	1,421	689
Dry (24%)	-41	-38	-31	-47	-110	-40	-31	98	196	1,107	-33	-119
Critical (15%)	-274	-282	-224	-258	314	-152	-174	85	83	173	-71	-42

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-30-6. Sacramento River at Rio Vista, Monthly Flow

Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	7,936	16,012	59,280	91,700	115,954	76,198	51,404	32,132	12,280	13,021	8,831	8,155
20%	7,592	9,452	34,803	60,639	73,800	55,589	33,804	22,340	11,036	12,187	8,574	7,770
30%	7,001	8,564	18,270	44,793	56,713	41,187	20,362	13,312	10,122	11,113	7,943	7,501
40%	6,038	8,016	13,391	26,341	49,187	29,860	17,124	11,207	9,247	10,377	7,536	7,315
50%	5,520	7,275	10,877	19,788	32,753	23,496	12,771	9,869	8,418	9,640	7,185	6,894
60%	5,002	6,617	9,412	14,739	23,353	18,189	9,629	9,369	7,891	8,661	5,815	6,014
70%	4,528	5,979	8,074	11,402	17,101	16,023	8,714	8,559	6,652	6,929	4,952	4,858
80%	4,107	5,091	6,604	9,443	13,382	12,111	8,104	7,695	6,268	5,965	4,428	4,138
90%	3,389	4,022	5,717	8,429	11,115	8,501	7,405	5,936	5,654	4,150	3,632	3,255
Long Term												
Full Simulation Period[b]	5,963	9,788	22,796	38,425	49,250	37,228	21,405	14,644	9,919	9,034	6,503	6,284
Water Year Types[c]												
Wet (32%)	7,239	14,226	45,019	76,053	87,371	66,392	38,027	25,019	14,188	10,354	7,761	7,961
Above Normal (16%)	5,193	10,653	22,550	43,221	60,499	47,632	23,011	14,132	9,164	12,139	8,384	7,447
Below Normal (13%)	6,564	9,456	11,190	16,732	32,676	17,278	11,534	10,910	9,888	11,233	7,092	6,118
Dry (24%)	5,418	6,568	9,526	14,565	23,057	19,592	12,439	9,069	7,718	7,116	4,894	5,129
Critical (15%)	4,392	4,907	7,671	11,351	13,313	10,450	7,643	5,432	5,181	3,991	3,883	3,465

Alternative 5

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	10,094	18,906	58,192	87,361	115,151	71,563	52,709	32,164	12,098	14,214	9,400	23,931
20%	8,702	15,066	33,012	59,113	73,118	55,358	33,862	21,077	9,063	13,803	9,066	23,141
30%	7,616	14,401	19,148	43,992	55,699	39,157	20,576	12,945	7,163	13,152	8,660	13,501
40%	6,915	12,559	15,050	26,809	43,815	28,822	17,139	9,532	6,803	11,639	8,257	12,562
50%	5,973	10,603	11,923	19,684	32,387	22,896	12,582	8,592	6,633	10,511	7,890	7,921
60%	4,624	8,466	10,503	15,733	23,141	17,883	9,449	7,823	6,441	9,531	7,392	6,668
70%	4,312	6,202	10,097	12,390	16,303	15,706	8,668	6,906	5,981	9,114	5,457	4,960
80%	3,990	4,799	6,804	10,462	13,181	11,781	7,452	6,414	5,162	7,510	4,448	4,211
90%	3,291	4,017	5,656	9,117	11,173	8,346	6,712	5,188	4,806	5,427	3,831	3,370
Long Term												
Full Simulation Period[b]	6,555	12,049	22,404	37,806	47,909	36,373	21,208	13,710	8,608	10,348	7,081	11,562
Water Year Types[c]												
Wet (32%)	8,465	17,099	41,993	73,808	85,986	65,543	38,083	24,834	13,674	11,515	8,488	22,059
Above Normal (16%)	5,746	13,499	24,025	42,096	57,115	45,328	22,768	12,943	7,133	13,127	9,015	12,411
Below Normal (13%)	7,311	11,858	12,095	16,389	30,330	16,221	11,220	8,790	6,427	12,485	8,257	6,438
Dry (24%)	5,628	8,744	10,132	15,472	22,747	19,433	12,263	7,651	6,588	9,060	5,144	5,080
Critical (15%)	4,145	5,217	8,105	12,011	13,488	10,178	7,021	5,047	4,594	4,996	4,087	3,400

Alternative 5 minus Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,157	2,894	-1,088	-4,340	-803	-4,635	1,305	33	-182	1,193	569	15,776
20%	1,110	5,615	-1,791	-1,527	-682	-231	58	-1,263	-1,973	1,617	492	15,371
30%	615	5,837	877	-801	-1,014	-2,030	214	-367	-2,959	2,039	717	5,999
40%	876	4,542	1,659	468	-5,372	-1,039	16	-1,675	-2,444	1,262	720	5,247
50%	453	3,328	1,046	-104	-366	-601	-190	-1,277	-1,785	871	705	1,027
60%	-378	1,849	1,091	994	-212	-305	-180	-1,546	-1,450	870	1,577	654
70%	-216	223	2,023	988	-799	-316	-46	-1,652	-671	2,185	505	102
80%	-118	-292	201	1,019	-202	-330	-651	-1,281	-1,106	1,546	19	73
90%	-98	-5	-61	688	58	-155	-693	-748	-848	1,277	199	115
Long Term												
Full Simulation Period[b]	592	2,261	-393	-618	-1,340	-855	-197	-934	-1,311	1,314	578	5,279
Water Year Types[c]												
Wet (32%)	1,226	2,873	-3,026	-2,245	-1,385	-849	55	-185	-514	1,160	727	14,098
Above Normal (16%)	553	2,847	1,475	-1,125	-3,384	-2,305	-243	-1,189	-2,030	989	631	4,965
Below Normal (13%)	747	2,402	906	-343	-2,345	-1,057	-314	-2,120	-3,461	1,252	1,166	320
Dry (24%)	210	2,176	606	906	-310	-158	-176	-1,419	-1,130	1,944	250	-49
Critical (15%)	-247	310	434	660	175	-271	-621	-386	-588	1,004	204	-65

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

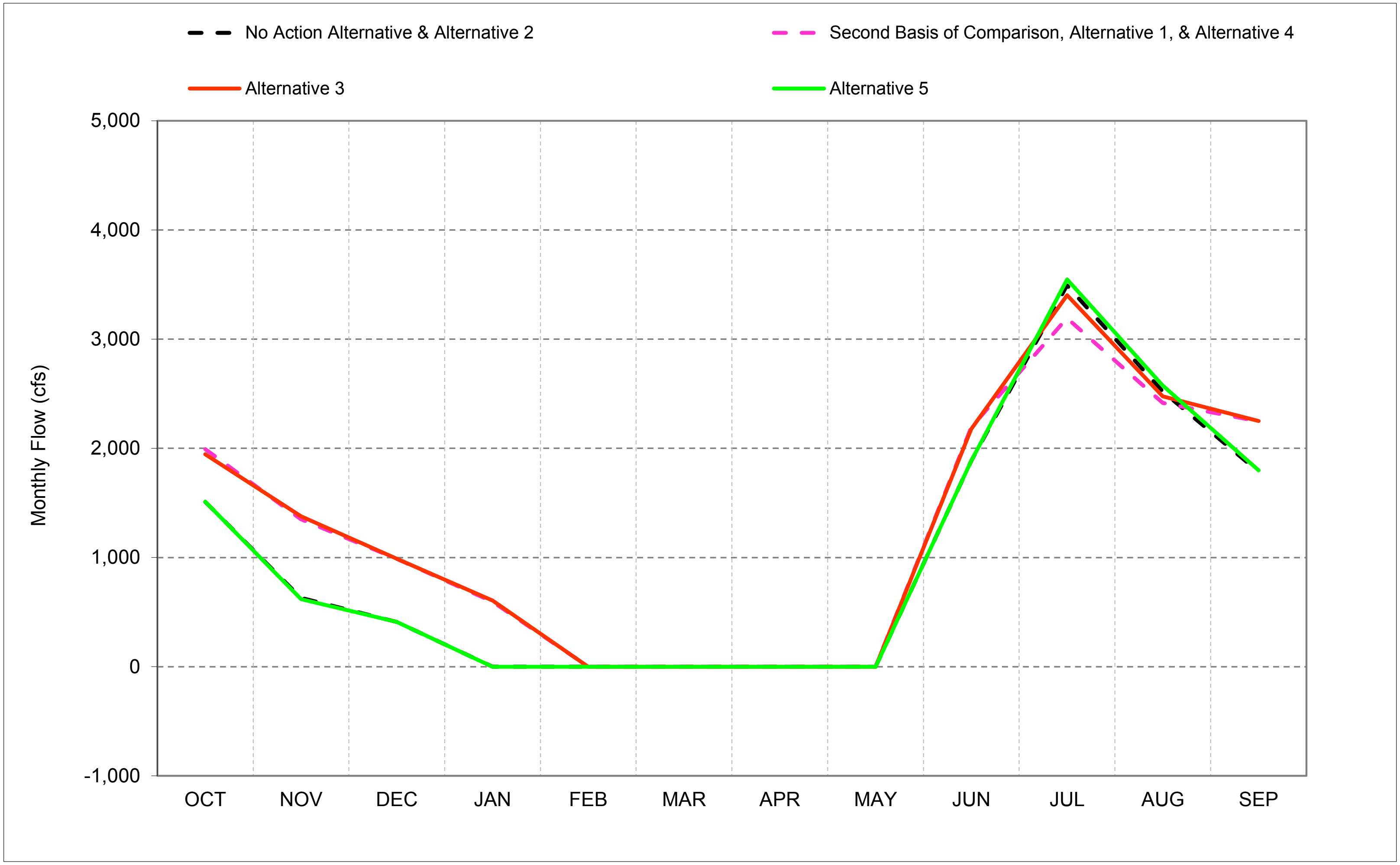
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.31. Delta Cross Channel Flow

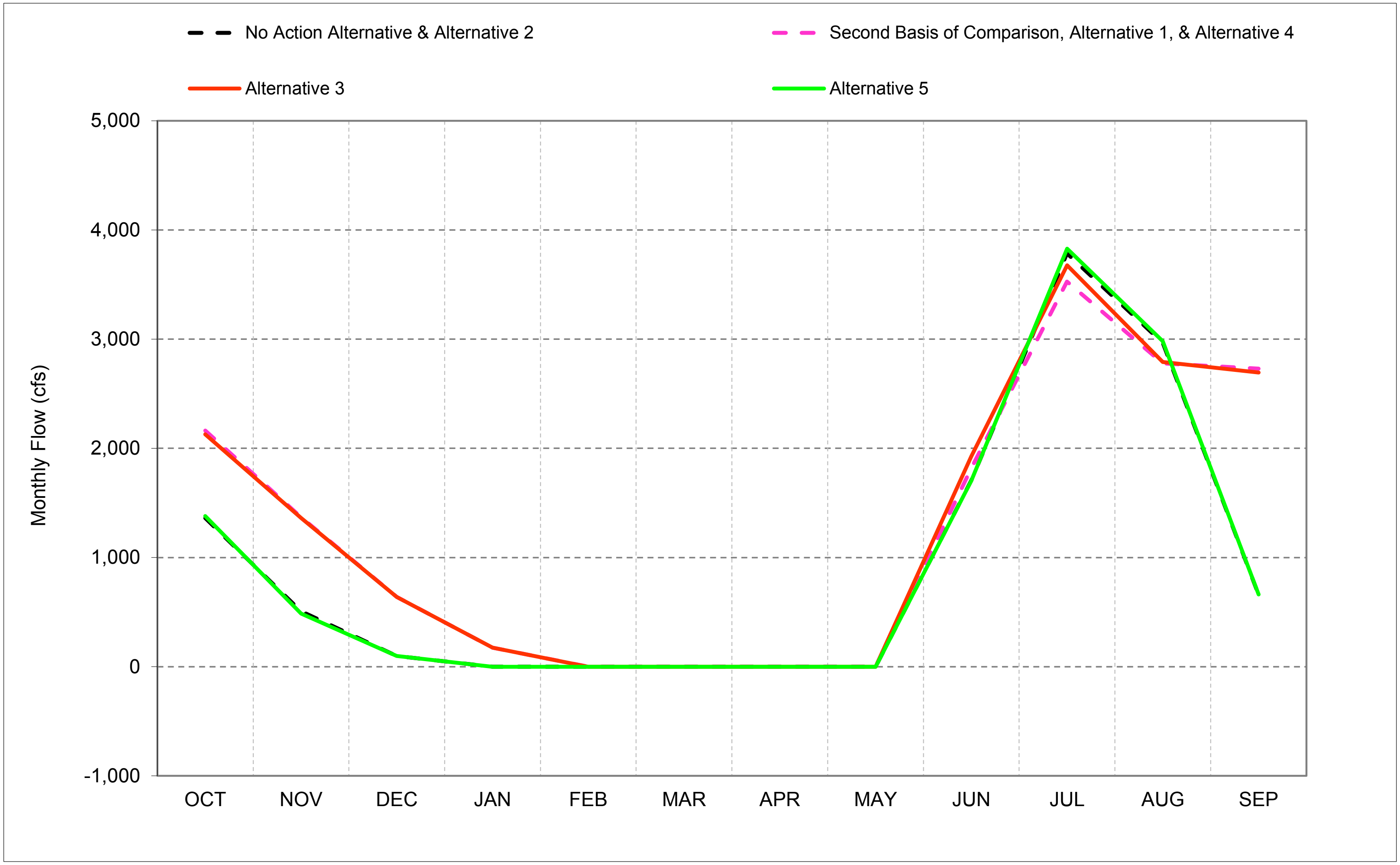
Figure C-31-1. Delta Cross Channel, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-31-2. Delta Cross Channel, Wet Year* Long-Term Average Flow**

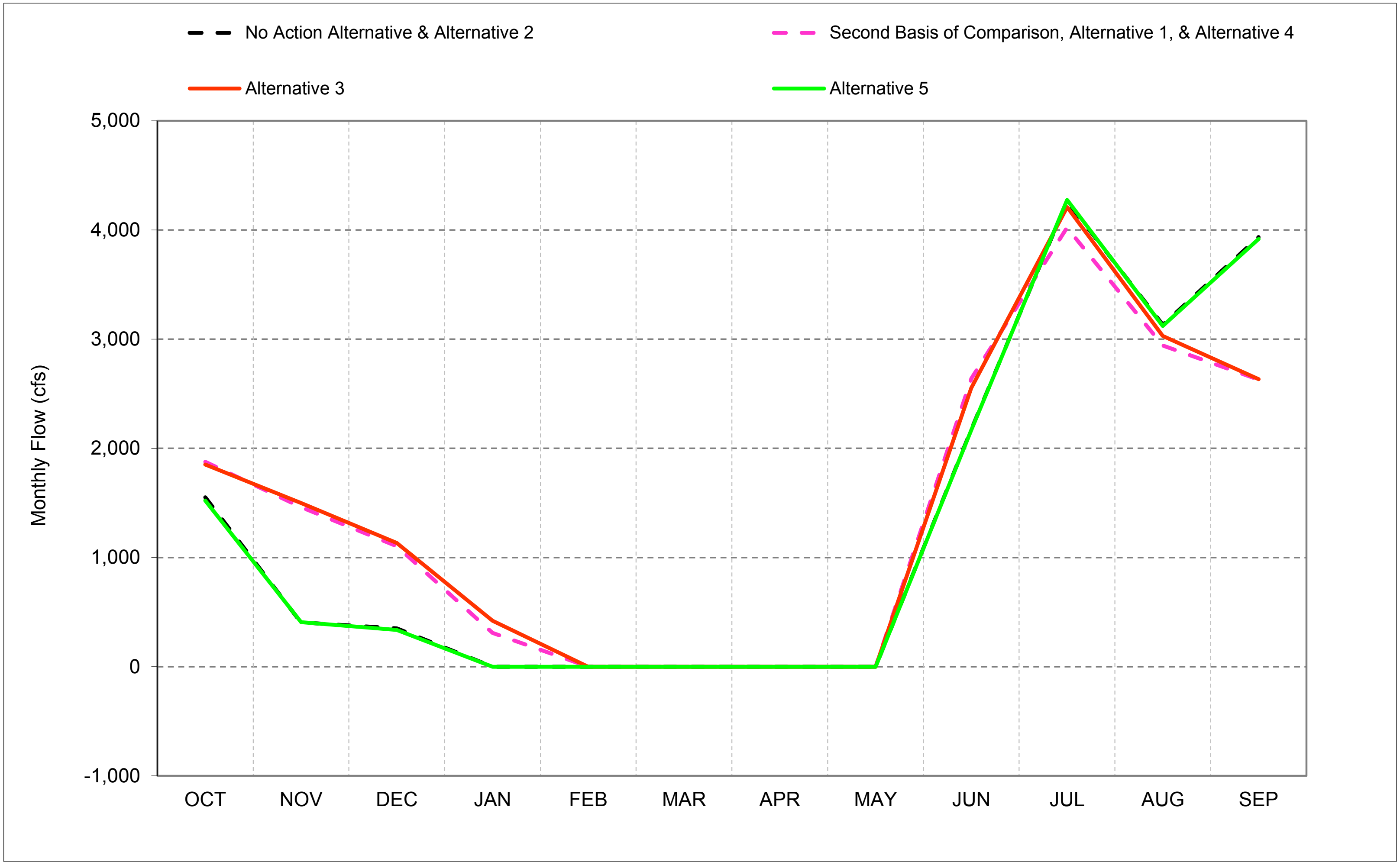


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-31-3. Delta Cross Channel, Above Normal Year* Long-Term Average Flow**

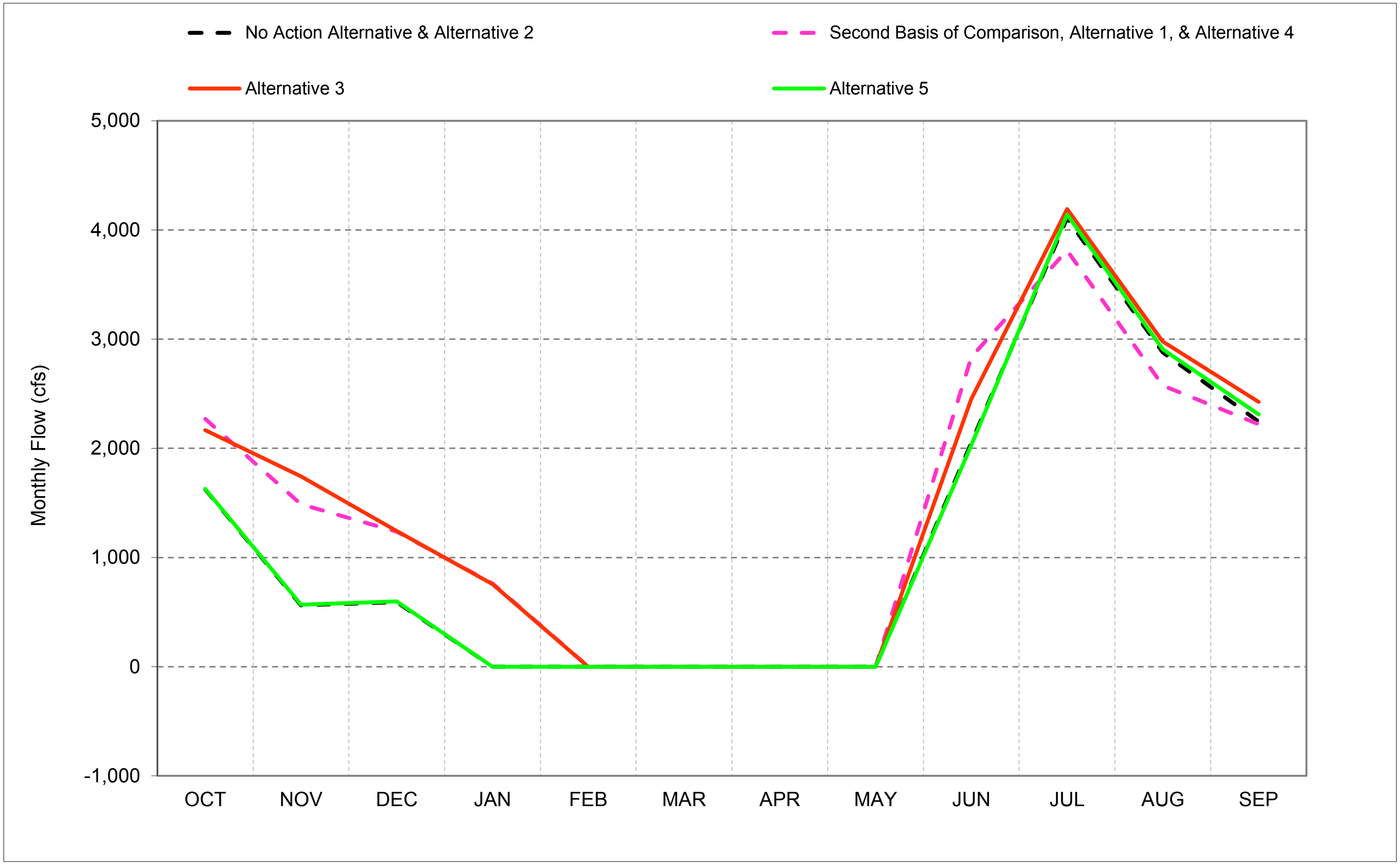


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-31-4. Delta Cross Channel, Below Normal Year* Long-Term Average Flow**

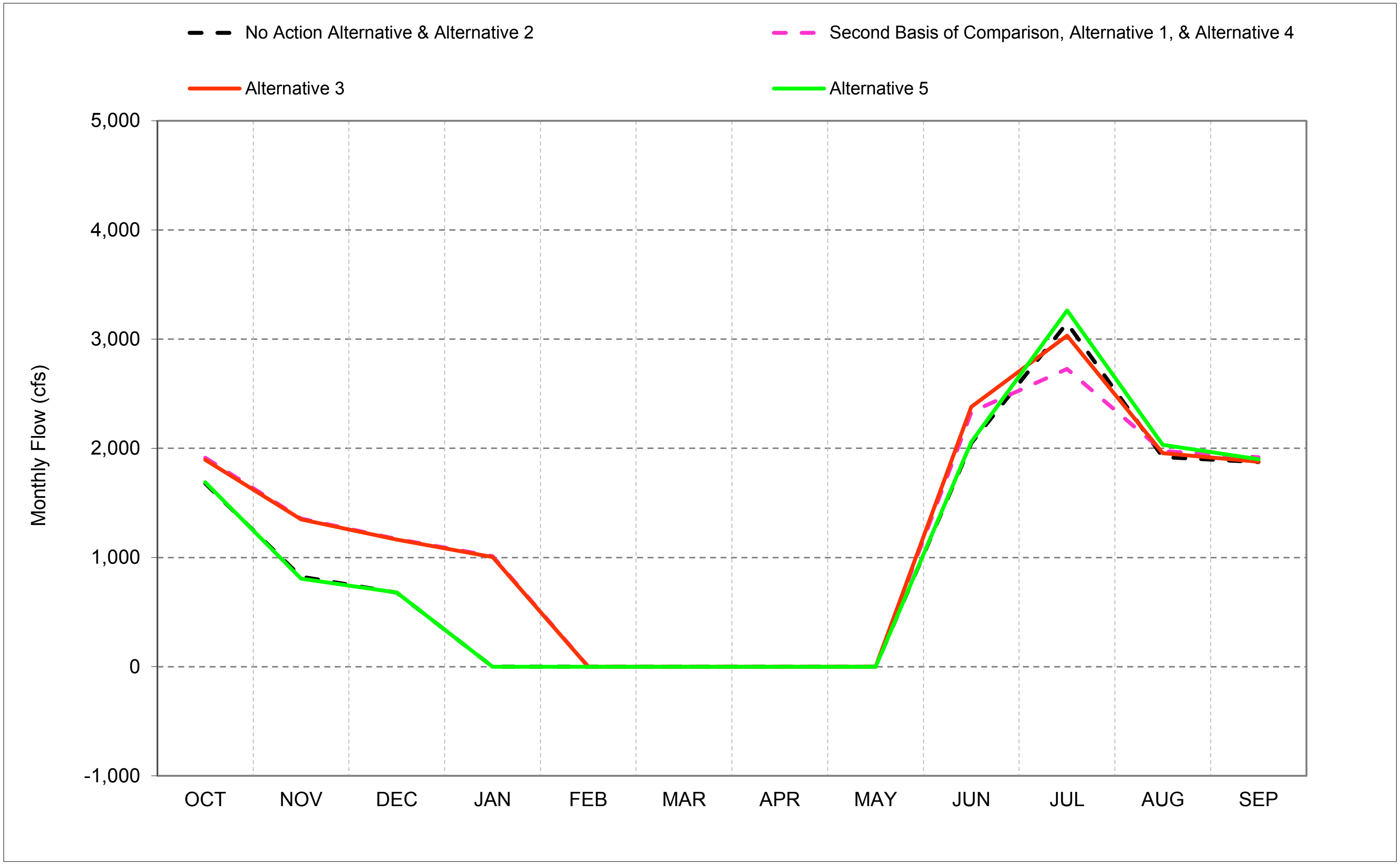


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-31-5. Delta Cross Channel, Dry Year* Long-Term Average Flow**

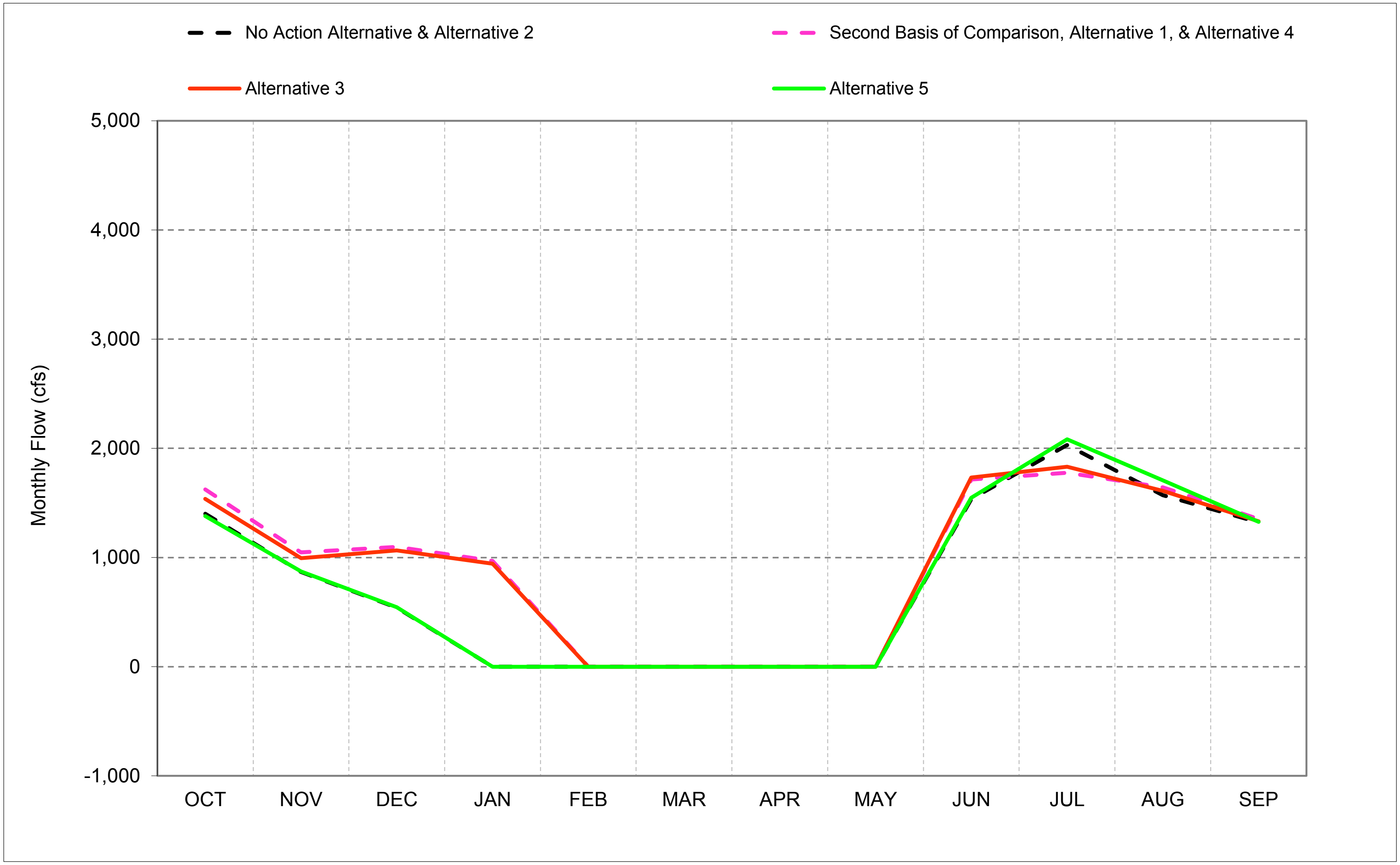


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-31-6. Delta Cross Channel, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-31-1. Delta Cross Channel, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,113	1,241	917	0	0	0	0	0	2,565	4,561	3,177	4,016
20%	1,890	1,053	822	0	0	0	0	0	2,240	4,452	3,109	3,318
30%	1,745	953	725	0	0	0	0	0	2,130	4,216	2,999	2,471
40%	1,611	813	627	0	0	0	0	0	2,088	3,867	2,944	1,929
50%	1,494	768	415	0	0	0	0	0	2,004	3,510	2,739	1,632
60%	1,444	474	0	0	0	0	0	0	1,935	3,272	2,577	1,442
70%	1,248	246	0	0	0	0	0	0	1,755	3,086	2,107	1,171
80%	1,142	0	0	0	0	0	0	0	1,615	2,802	1,727	0
90%	986	0	0	0	0	0	0	0	1,176	2,140	1,501	0
Long Term												
Full Simulation Period[b]	1,509	629	411	0	0	0	0	0	1,887	3,491	2,521	1,785
Water Year Types[c]												
Wet (32%)	1,362	509	99	0	0	0	0	0	1,709	3,785	2,964	660
Above Normal (16%)	1,552	406	351	0	0	0	0	0	2,175	4,264	3,131	3,933
Below Normal (13%)	1,624	562	591	0	0	0	0	0	2,054	4,106	2,877	2,246
Dry (24%)	1,677	824	678	0	0	0	0	0	2,050	3,146	1,921	1,874
Critical (15%)	1,401	869	542	0	0	0	0	0	1,536	2,030	1,572	1,321

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,682	1,880	1,855	1,359	0	0	0	0	3,057	4,269	3,079	2,792
20%	2,598	1,713	1,538	1,154	0	0	0	0	2,903	4,011	2,947	2,714
30%	2,387	1,645	1,421	935	0	0	0	0	2,679	3,772	2,844	2,617
40%	2,119	1,509	1,256	868	0	0	0	0	2,495	3,585	2,731	2,582
50%	1,987	1,391	1,094	739	0	0	0	0	2,350	3,385	2,547	2,483
60%	1,839	1,269	936	0	0	0	0	0	2,091	3,068	2,210	2,212
70%	1,642	1,108	781	0	0	0	0	0	1,978	2,681	2,003	1,826
80%	1,468	962	0	0	0	0	0	0	1,840	2,356	1,791	1,591
90%	1,192	768	0	0	0	0	0	0	1,369	1,878	1,565	1,305
Long Term												
Full Simulation Period[b]	1,992	1,350	989	595	0	0	0	0	2,196	3,192	2,415	2,246
Water Year Types[c]												
Wet (32%)	2,162	1,371	638	174	0	0	0	0	1,819	3,527	2,779	2,730
Above Normal (16%)	1,877	1,462	1,104	309	0	0	0	0	2,640	4,020	2,941	2,630
Below Normal (13%)	2,270	1,488	1,237	761	0	0	0	0	2,837	3,813	2,575	2,221
Dry (24%)	1,914	1,358	1,170	1,012	0	0	0	0	2,332	2,727	1,975	1,919
Critical (15%)	1,624	1,047	1,096	968	0	0	0	0	1,716	1,776	1,643	1,354

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	569	638	938	1,359	0	0	0	0	492	-292	-97	-1,224
20%	709	660	716	1,154	0	0	0	0	663	-441	-162	-604
30%	641	692	697	935	0	0	0	0	549	-444	-155	146
40%	507	697	629	868	0	0	0	0	408	-282	-213	653
50%	493	623	679	739	0	0	0	0	346	-125	-193	850
60%	396	795	936	0	0	0	0	0	156	-204	-367	770
70%	394	862	781	0	0	0	0	0	222	-406	-104	655
80%	325	962	0	0	0	0	0	0	225	-446	64	1,591
90%	205	768	0	0	0	0	0	0	192	-262	64	1,305
Long Term												
Full Simulation Period[b]	483	721	578	595	0	0	0	0	309	-299	-106	462
Water Year Types[c]												
Wet (32%)	801	862	540	174	0	0	0	0	111	-258	-186	2,069
Above Normal (16%)	325	1,056	753	309	0	0	0	0	465	-244	-190	-1,303
Below Normal (13%)	647	926	646	761	0	0	0	0	783	-293	-301	-25
Dry (24%)	237	534	492	1,012	0	0	0	0	283	-420	54	44
Critical (15%)	224	178	555	968	0	0	0	0	180	-254	71	32

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-31-2. Delta Cross Channel, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,113	1,241	917	0	0	0	0	0	2,565	4,561	3,177	4,016
20%	1,890	1,053	822	0	0	0	0	0	2,240	4,452	3,109	3,318
30%	1,745	953	725	0	0	0	0	0	2,130	4,216	2,999	2,471
40%	1,611	813	627	0	0	0	0	0	2,088	3,867	2,944	1,929
50%	1,494	768	415	0	0	0	0	0	2,004	3,510	2,739	1,632
60%	1,444	474	0	0	0	0	0	0	1,935	3,272	2,577	1,442
70%	1,248	246	0	0	0	0	0	0	1,755	3,086	2,107	1,171
80%	1,142	0	0	0	0	0	0	0	1,615	2,802	1,727	0
90%	986	0	0	0	0	0	0	0	1,176	2,140	1,501	0
Long Term												
Full Simulation Period[b]	1,509	629	411	0	0	0	0	0	1,887	3,491	2,521	1,785
Water Year Types[c]												
Wet (32%)	1,362	509	99	0	0	0	0	0	1,709	3,785	2,964	660
Above Normal (16%)	1,552	406	351	0	0	0	0	0	2,175	4,264	3,131	3,933
Below Normal (13%)	1,624	562	591	0	0	0	0	0	2,054	4,106	2,877	2,246
Dry (24%)	1,677	824	678	0	0	0	0	0	2,050	3,146	1,921	1,874
Critical (15%)	1,401	869	542	0	0	0	0	0	1,536	2,030	1,572	1,321

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,673	1,943	1,853	1,448	0	0	0	0	3,006	4,466	3,141	2,838
20%	2,573	1,787	1,552	1,160	0	0	0	0	2,654	4,357	3,037	2,735
30%	2,297	1,665	1,422	941	0	0	0	0	2,571	4,228	2,892	2,608
40%	2,123	1,523	1,294	864	0	0	0	0	2,474	3,893	2,818	2,527
50%	1,967	1,388	1,093	746	0	0	0	0	2,354	3,609	2,653	2,463
60%	1,697	1,291	916	0	0	0	0	0	2,265	3,191	2,494	2,287
70%	1,513	1,113	738	0	0	0	0	0	2,000	2,848	2,129	1,840
80%	1,456	961	0	0	0	0	0	0	1,823	2,514	1,765	1,644
90%	1,166	771	0	0	0	0	0	0	1,288	1,902	1,540	1,276
Long Term												
Full Simulation Period[b]	1,946	1,378	989	606	0	0	0	0	2,177	3,402	2,477	2,249
Water Year Types[c]												
Wet (32%)	2,129	1,362	639	174	0	0	0	0	1,925	3,676	2,790	2,693
Above Normal (16%)	1,851	1,499	1,134	419	0	0	0	0	2,551	4,209	3,029	2,633
Below Normal (13%)	2,167	1,743	1,242	756	0	0	0	0	2,450	4,191	2,977	2,426
Dry (24%)	1,894	1,350	1,164	1,005	0	0	0	0	2,378	3,031	1,956	1,878
Critical (15%)	1,537	993	1,066	945	0	0	0	0	1,731	1,830	1,611	1,331

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	561	701	935	1,448	0	0	0	0	441	-95	-36	-1,178
20%	684	734	730	1,160	0	0	0	0	415	-95	-72	-582
30%	551	712	697	941	0	0	0	0	441	12	-107	137
40%	512	711	667	864	0	0	0	0	386	26	-126	598
50%	473	620	678	746	0	0	0	0	350	99	-86	831
60%	253	817	916	0	0	0	0	0	330	-80	-84	845
70%	265	867	738	0	0	0	0	0	244	-238	23	669
80%	314	961	0	0	0	0	0	0	208	-289	38	1,644
90%	180	771	0	0	0	0	0	0	111	-238	39	1,276
Long Term												
Full Simulation Period[b]	436	749	578	606	0	0	0	0	290	-89	-44	465
Water Year Types[c]												
Wet (32%)	767	853	540	174	0	0	0	0	216	-109	-175	2,032
Above Normal (16%)	299	1,093	783	419	0	0	0	0	376	-55	-102	-1,301
Below Normal (13%)	544	1,181	651	756	0	0	0	0	396	84	100	180
Dry (24%)	217	525	487	1,005	0	0	0	0	329	-115	35	3
Critical (15%)	137	124	525	945	0	0	0	0	195	-200	39	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-31-3. Delta Cross Channel, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,113	1,241	917	0	0	0	0	0	2,565	4,561	3,177	4,016
20%	1,890	1,053	822	0	0	0	0	0	2,240	4,452	3,109	3,318
30%	1,745	953	725	0	0	0	0	0	2,130	4,216	2,999	2,471
40%	1,611	813	627	0	0	0	0	0	2,088	3,867	2,944	1,929
50%	1,494	768	415	0	0	0	0	0	2,004	3,510	2,739	1,632
60%	1,444	474	0	0	0	0	0	0	1,935	3,272	2,577	1,442
70%	1,248	246	0	0	0	0	0	0	1,755	3,086	2,107	1,171
80%	1,142	0	0	0	0	0	0	0	1,615	2,802	1,727	0
90%	986	0	0	0	0	0	0	0	1,176	2,140	1,501	0
Long Term												
Full Simulation Period[b]	1,509	629	411	0	0	0	0	0	1,887	3,491	2,521	1,785
Water Year Types[c]												
Wet (32%)	1,362	509	99	0	0	0	0	0	1,709	3,785	2,964	660
Above Normal (16%)	1,552	406	351	0	0	0	0	0	2,175	4,264	3,131	3,933
Below Normal (13%)	1,624	562	591	0	0	0	0	0	2,054	4,106	2,877	2,246
Dry (24%)	1,677	824	678	0	0	0	0	0	2,050	3,146	1,921	1,874
Critical (15%)	1,401	869	542	0	0	0	0	0	1,536	2,030	1,572	1,321

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,136	1,242	913	0	0	0	0	0	2,583	4,560	3,180	3,993
20%	1,977	1,034	823	0	0	0	0	0	2,241	4,446	3,116	3,329
30%	1,719	952	725	0	0	0	0	0	2,134	4,301	3,000	2,471
40%	1,585	813	639	0	0	0	0	0	2,085	3,897	2,950	1,922
50%	1,491	769	376	0	0	0	0	0	2,010	3,644	2,859	1,673
60%	1,451	386	0	0	0	0	0	0	1,952	3,387	2,687	1,472
70%	1,261	228	0	0	0	0	0	0	1,723	3,219	2,184	1,169
80%	1,161	0	0	0	0	0	0	0	1,606	2,875	1,796	0
90%	988	0	0	0	0	0	0	0	1,186	2,173	1,651	0
Long Term												
Full Simulation Period[b]	1,511	620	410	0	0	0	0	0	1,883	3,547	2,575	1,798
Water Year Types[c]												
Wet (32%)	1,380	487	99	0	0	0	0	0	1,702	3,828	2,981	661
Above Normal (16%)	1,521	407	338	0	0	0	0	0	2,167	4,275	3,120	3,917
Below Normal (13%)	1,628	567	597	0	0	0	0	0	2,026	4,141	2,908	2,312
Dry (24%)	1,690	807	679	0	0	0	0	0	2,057	3,261	2,033	1,899
Critical (15%)	1,379	872	545	0	0	0	0	0	1,548	2,083	1,706	1,327

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	23	1	-4	0	0	0	0	0	19	0	3	-23
20%	88	-19	1	0	0	0	0	0	1	-6	6	11
30%	-26	-2	0	0	0	0	0	0	5	85	1	0
40%	-26	0	12	0	0	0	0	0	-3	30	7	-7
50%	-3	0	-39	0	0	0	0	0	7	134	119	40
60%	7	-88	0	0	0	0	0	0	17	115	110	30
70%	13	-18	0	0	0	0	0	0	-32	133	77	-2
80%	18	0	0	0	0	0	0	0	-9	72	69	0
90%	1	0	0	0	0	0	0	0	10	33	150	0
Long Term												
Full Simulation Period[b]	1	-10	-1	0	0	0	0	0	-3	56	54	13
Water Year Types[c]												
Wet (32%)	18	-22	0	0	0	0	0	0	-6	43	17	1
Above Normal (16%)	-31	1	-13	0	0	0	0	0	-8	10	-11	-17
Below Normal (13%)	5	5	6	0	0	0	0	0	-28	34	31	66
Dry (24%)	13	-17	1	0	0	0	0	0	8	115	112	25
Critical (15%)	-22	3	3	0	0	0	0	0	12	53	134	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-31-4. Delta Cross Channel, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,682	1,880	1,855	1,359	0	0	0	0	3,057	4,269	3,079	2,792
20%	2,598	1,713	1,538	1,154	0	0	0	0	2,903	4,011	2,947	2,714
30%	2,387	1,645	1,421	935	0	0	0	0	2,679	3,772	2,844	2,617
40%	2,119	1,509	1,256	868	0	0	0	0	2,495	3,585	2,731	2,582
50%	1,987	1,391	1,094	739	0	0	0	0	2,350	3,385	2,547	2,483
60%	1,839	1,269	936	0	0	0	0	0	2,091	3,068	2,210	2,212
70%	1,642	1,108	781	0	0	0	0	0	1,978	2,681	2,003	1,826
80%	1,468	962	0	0	0	0	0	0	1,840	2,356	1,791	1,591
90%	1,192	768	0	0	0	0	0	0	1,369	1,878	1,565	1,305
Long Term												
Full Simulation Period[b]	1,992	1,350	989	595	0	0	0	0	2,196	3,192	2,415	2,246
Water Year Types[c]												
Wet (32%)	2,162	1,371	638	174	0	0	0	0	1,819	3,527	2,779	2,730
Above Normal (16%)	1,877	1,462	1,104	309	0	0	0	0	2,640	4,020	2,941	2,630
Below Normal (13%)	2,270	1,488	1,237	761	0	0	0	0	2,837	3,813	2,575	2,221
Dry (24%)	1,914	1,358	1,170	1,012	0	0	0	0	2,332	2,727	1,975	1,919
Critical (15%)	1,624	1,047	1,096	968	0	0	0	0	1,716	1,776	1,643	1,354

No Action Alternative

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,113	1,241	917	0	0	0	0	0	2,565	4,561	3,177	4,016
20%	1,890	1,053	822	0	0	0	0	0	2,240	4,452	3,109	3,318
30%	1,745	953	725	0	0	0	0	0	2,130	4,216	2,999	2,471
40%	1,611	813	627	0	0	0	0	0	2,088	3,867	2,944	1,929
50%	1,494	768	415	0	0	0	0	0	2,004	3,510	2,739	1,632
60%	1,444	474	0	0	0	0	0	0	1,935	3,272	2,577	1,442
70%	1,248	246	0	0	0	0	0	0	1,755	3,086	2,107	1,171
80%	1,142	0	0	0	0	0	0	0	1,615	2,802	1,727	0
90%	986	0	0	0	0	0	0	0	1,176	2,140	1,501	0
Long Term												
Full Simulation Period[b]	1,509	629	411	0	0	0	0	0	1,887	3,491	2,521	1,785
Water Year Types[c]												
Wet (32%)	1,362	509	99	0	0	0	0	0	1,709	3,785	2,964	660
Above Normal (16%)	1,552	406	351	0	0	0	0	0	2,175	4,264	3,131	3,933
Below Normal (13%)	1,624	562	591	0	0	0	0	0	2,054	4,106	2,877	2,246
Dry (24%)	1,677	824	678	0	0	0	0	0	2,050	3,146	1,921	1,874
Critical (15%)	1,401	869	542	0	0	0	0	0	1,536	2,030	1,572	1,321

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-569	-638	-938	-1,359	0	0	0	0	-492	292	97	1,224
20%	-709	-660	-716	-1,154	0	0	0	0	-663	441	162	604
30%	-641	-692	-697	-935	0	0	0	0	-549	444	155	-146
40%	-507	-697	-629	-868	0	0	0	0	-408	282	213	-653
50%	-493	-623	-679	-739	0	0	0	0	-346	125	193	-850
60%	-396	-795	-936	0	0	0	0	0	-156	204	367	-770
70%	-394	-862	-781	0	0	0	0	0	-222	406	104	-655
80%	-325	-962	0	0	0	0	0	0	-225	446	-64	-1,591
90%	-205	-768	0	0	0	0	0	0	-192	262	-64	-1,305
Long Term												
Full Simulation Period[b]	-483	-721	-578	-595	0	0	0	0	-309	299	106	-462
Water Year Types[c]												
Wet (32%)	-801	-862	-540	-174	0	0	0	0	-111	258	186	-2,069
Above Normal (16%)	-325	-1,056	-753	-309	0	0	0	0	-465	244	190	1,303
Below Normal (13%)	-647	-926	-646	-761	0	0	0	0	-783	293	301	25
Dry (24%)	-237	-534	-492	-1,012	0	0	0	0	-283	420	-54	-44
Critical (15%)	-224	-178	-555	-968	0	0	0	0	-180	254	-71	-32

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-31-5. Delta Cross Channel, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,682	1,880	1,855	1,359	0	0	0	0	3,057	4,269	3,079	2,792
20%	2,598	1,713	1,538	1,154	0	0	0	0	2,903	4,011	2,947	2,714
30%	2,387	1,645	1,421	935	0	0	0	0	2,679	3,772	2,844	2,617
40%	2,119	1,509	1,256	868	0	0	0	0	2,495	3,585	2,731	2,582
50%	1,987	1,391	1,094	739	0	0	0	0	2,350	3,385	2,547	2,483
60%	1,839	1,269	936	0	0	0	0	0	2,091	3,068	2,210	2,212
70%	1,642	1,108	781	0	0	0	0	0	1,978	2,681	2,003	1,826
80%	1,468	962	0	0	0	0	0	0	1,840	2,356	1,791	1,591
90%	1,192	768	0	0	0	0	0	0	1,369	1,878	1,565	1,305
Long Term												
Full Simulation Period[b]	1,992	1,350	989	595	0	0	0	0	2,196	3,192	2,415	2,246
Water Year Types[c]												
Wet (32%)	2,162	1,371	638	174	0	0	0	0	1,819	3,527	2,779	2,730
Above Normal (16%)	1,877	1,462	1,104	309	0	0	0	0	2,640	4,020	2,941	2,630
Below Normal (13%)	2,270	1,488	1,237	761	0	0	0	0	2,837	3,813	2,575	2,221
Dry (24%)	1,914	1,358	1,170	1,012	0	0	0	0	2,332	2,727	1,975	1,919
Critical (15%)	1,624	1,047	1,096	968	0	0	0	0	1,716	1,776	1,643	1,354

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,673	1,943	1,853	1,448	0	0	0	0	3,006	4,466	3,141	2,838
20%	2,573	1,787	1,552	1,160	0	0	0	0	2,654	4,357	3,037	2,735
30%	2,297	1,665	1,422	941	0	0	0	0	2,571	4,228	2,892	2,608
40%	2,123	1,523	1,294	864	0	0	0	0	2,474	3,893	2,818	2,527
50%	1,967	1,388	1,093	746	0	0	0	0	2,354	3,609	2,653	2,463
60%	1,697	1,291	916	0	0	0	0	0	2,265	3,191	2,494	2,287
70%	1,513	1,113	738	0	0	0	0	0	2,000	2,848	2,129	1,840
80%	1,456	961	0	0	0	0	0	0	1,823	2,514	1,765	1,644
90%	1,166	771	0	0	0	0	0	0	1,288	1,902	1,540	1,276
Long Term												
Full Simulation Period[b]	1,946	1,378	989	606	0	0	0	0	2,177	3,402	2,477	2,249
Water Year Types[c]												
Wet (32%)	2,129	1,362	639	174	0	0	0	0	1,925	3,676	2,790	2,693
Above Normal (16%)	1,851	1,499	1,134	419	0	0	0	0	2,551	4,209	3,029	2,633
Below Normal (13%)	2,167	1,743	1,242	756	0	0	0	0	2,450	4,191	2,977	2,426
Dry (24%)	1,894	1,350	1,164	1,005	0	0	0	0	2,378	3,031	1,956	1,878
Critical (15%)	1,537	993	1,066	945	0	0	0	0	1,731	1,830	1,611	1,331

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-8	63	-3	89	0	0	0	0	-51	197	62	47
20%	-25	74	14	6	0	0	0	0	-248	347	90	22
30%	-90	20	0	6	0	0	0	0	-108	456	48	-9
40%	4	14	38	-4	0	0	0	0	-21	308	88	-55
50%	-21	-3	-1	7	0	0	0	0	4	224	106	-19
60%	-142	22	-20	0	0	0	0	0	174	123	284	75
70%	-129	5	-44	0	0	0	0	0	22	168	127	14
80%	-12	-1	0	0	0	0	0	0	-18	157	-26	54
90%	-25	3	0	0	0	0	0	0	-81	24	-25	-30
Long Term												
Full Simulation Period[b]	-46	27	0	12	0	0	0	0	-19	210	62	3
Water Year Types[c]												
Wet (32%)	-34	-9	0	0	0	0	0	0	105	149	11	-37
Above Normal (16%)	-26	38	30	110	0	0	0	0	-89	189	87	3
Below Normal (13%)	-103	255	5	-4	0	0	0	0	-388	378	402	205
Dry (24%)	-20	-8	-6	-7	0	0	0	0	46	305	-19	-41
Critical (15%)	-87	-54	-30	-24	0	0	0	0	16	54	-32	-23

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-31-6. Delta Cross Channel, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,682	1,880	1,855	1,359	0	0	0	0	3,057	4,269	3,079	2,792
20%	2,598	1,713	1,538	1,154	0	0	0	0	2,903	4,011	2,947	2,714
30%	2,387	1,645	1,421	935	0	0	0	0	2,679	3,772	2,844	2,617
40%	2,119	1,509	1,256	868	0	0	0	0	2,495	3,585	2,731	2,582
50%	1,987	1,391	1,094	739	0	0	0	0	2,350	3,385	2,547	2,483
60%	1,839	1,269	936	0	0	0	0	0	2,091	3,068	2,210	2,212
70%	1,642	1,108	781	0	0	0	0	0	1,978	2,681	2,003	1,826
80%	1,468	962	0	0	0	0	0	0	1,840	2,356	1,791	1,591
90%	1,192	768	0	0	0	0	0	0	1,369	1,878	1,565	1,305
Long Term												
Full Simulation Period[b]	1,992	1,350	989	595	0	0	0	0	2,196	3,192	2,415	2,246
Water Year Types[c]												
Wet (32%)	2,162	1,371	638	174	0	0	0	0	1,819	3,527	2,779	2,730
Above Normal (16%)	1,877	1,462	1,104	309	0	0	0	0	2,640	4,020	2,941	2,630
Below Normal (13%)	2,270	1,488	1,237	761	0	0	0	0	2,837	3,813	2,575	2,221
Dry (24%)	1,914	1,358	1,170	1,012	0	0	0	0	2,332	2,727	1,975	1,919
Critical (15%)	1,624	1,047	1,096	968	0	0	0	0	1,716	1,776	1,643	1,354

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,136	1,242	913	0	0	0	0	0	2,583	4,560	3,180	3,993
20%	1,977	1,034	823	0	0	0	0	0	2,241	4,446	3,116	3,329
30%	1,719	952	725	0	0	0	0	0	2,134	4,301	3,000	2,471
40%	1,585	813	639	0	0	0	0	0	2,085	3,897	2,950	1,922
50%	1,491	769	376	0	0	0	0	0	2,010	3,644	2,859	1,673
60%	1,451	386	0	0	0	0	0	0	1,952	3,387	2,687	1,472
70%	1,261	228	0	0	0	0	0	0	1,723	3,219	2,184	1,169
80%	1,161	0	0	0	0	0	0	0	1,606	2,875	1,796	0
90%	988	0	0	0	0	0	0	0	1,186	2,173	1,651	0
Long Term												
Full Simulation Period[b]	1,511	620	410	0	0	0	0	0	1,883	3,547	2,575	1,798
Water Year Types[c]												
Wet (32%)	1,380	487	99	0	0	0	0	0	1,702	3,828	2,981	661
Above Normal (16%)	1,521	407	338	0	0	0	0	0	2,167	4,275	3,120	3,917
Below Normal (13%)	1,628	567	597	0	0	0	0	0	2,026	4,141	2,908	2,312
Dry (24%)	1,690	807	679	0	0	0	0	0	2,057	3,261	2,033	1,899
Critical (15%)	1,379	872	545	0	0	0	0	0	1,548	2,083	1,706	1,327

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-546	-637	-942	-1,359	0	0	0	0	-474	291	100	1,201
20%	-621	-679	-715	-1,154	0	0	0	0	-662	435	169	615
30%	-668	-694	-697	-935	0	0	0	0	-545	529	156	-146
40%	-533	-696	-617	-868	0	0	0	0	-410	312	220	-660
50%	-496	-623	-718	-739	0	0	0	0	-339	259	312	-810
60%	-388	-883	-936	0	0	0	0	0	-139	319	477	-740
70%	-381	-880	-781	0	0	0	0	0	-254	539	181	-657
80%	-307	-962	0	0	0	0	0	0	-234	518	5	-1,591
90%	-204	-768	0	0	0	0	0	0	-182	296	86	-1,305
Long Term												
Full Simulation Period[b]	-481	-731	-579	-595	0	0	0	0	-313	355	160	-448
Water Year Types[c]												
Wet (32%)	-783	-884	-540	-174	0	0	0	0	-117	301	202	-2,069
Above Normal (16%)	-356	-1,054	-766	-309	0	0	0	0	-473	254	178	1,287
Below Normal (13%)	-642	-921	-640	-761	0	0	0	0	-811	328	332	91
Dry (24%)	-224	-551	-491	-1,012	0	0	0	0	-275	535	58	-19
Critical (15%)	-245	-175	-552	-968	0	0	0	0	-168	307	64	-26

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

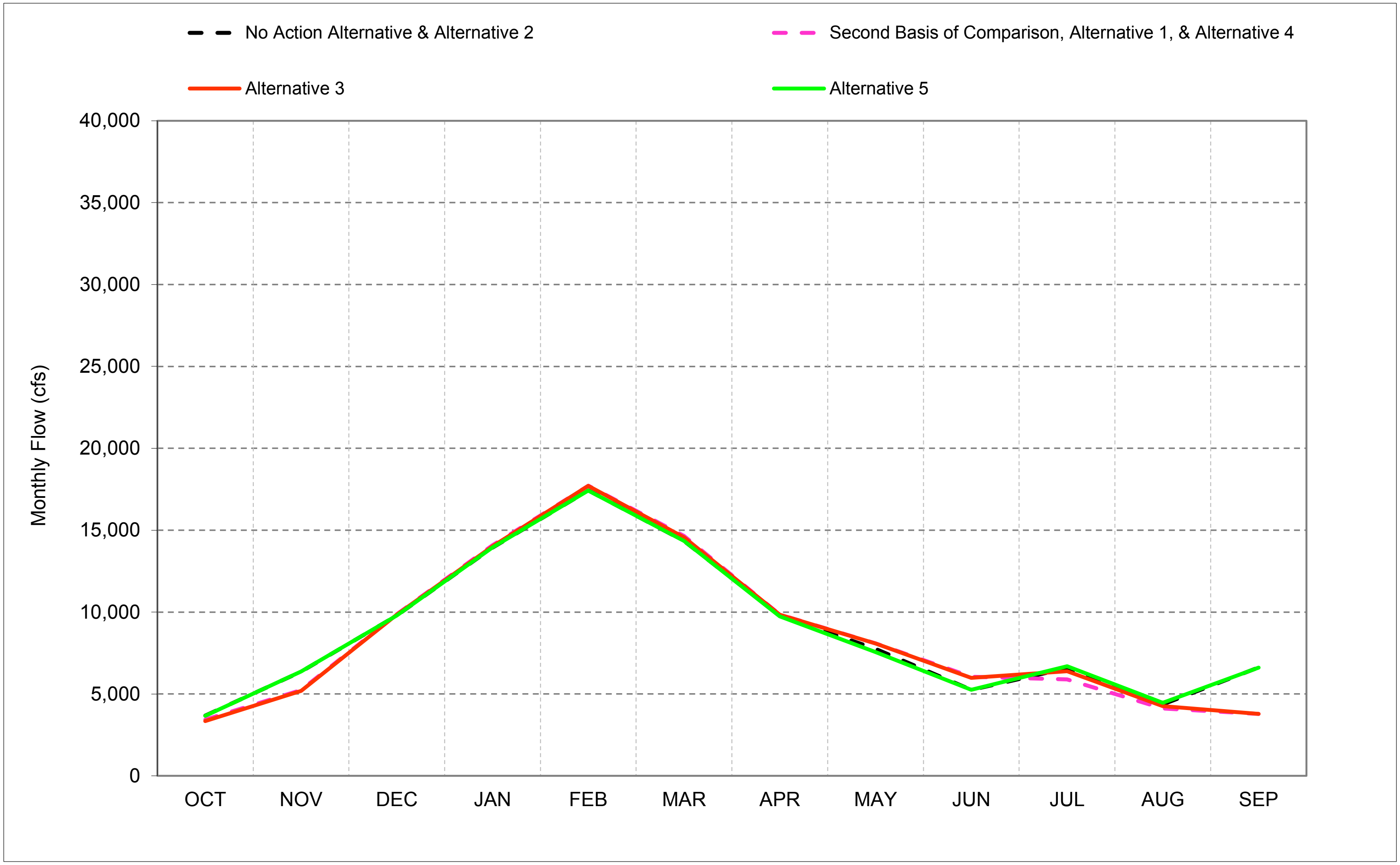
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.32. Sutter and Steamboat Slough Flows

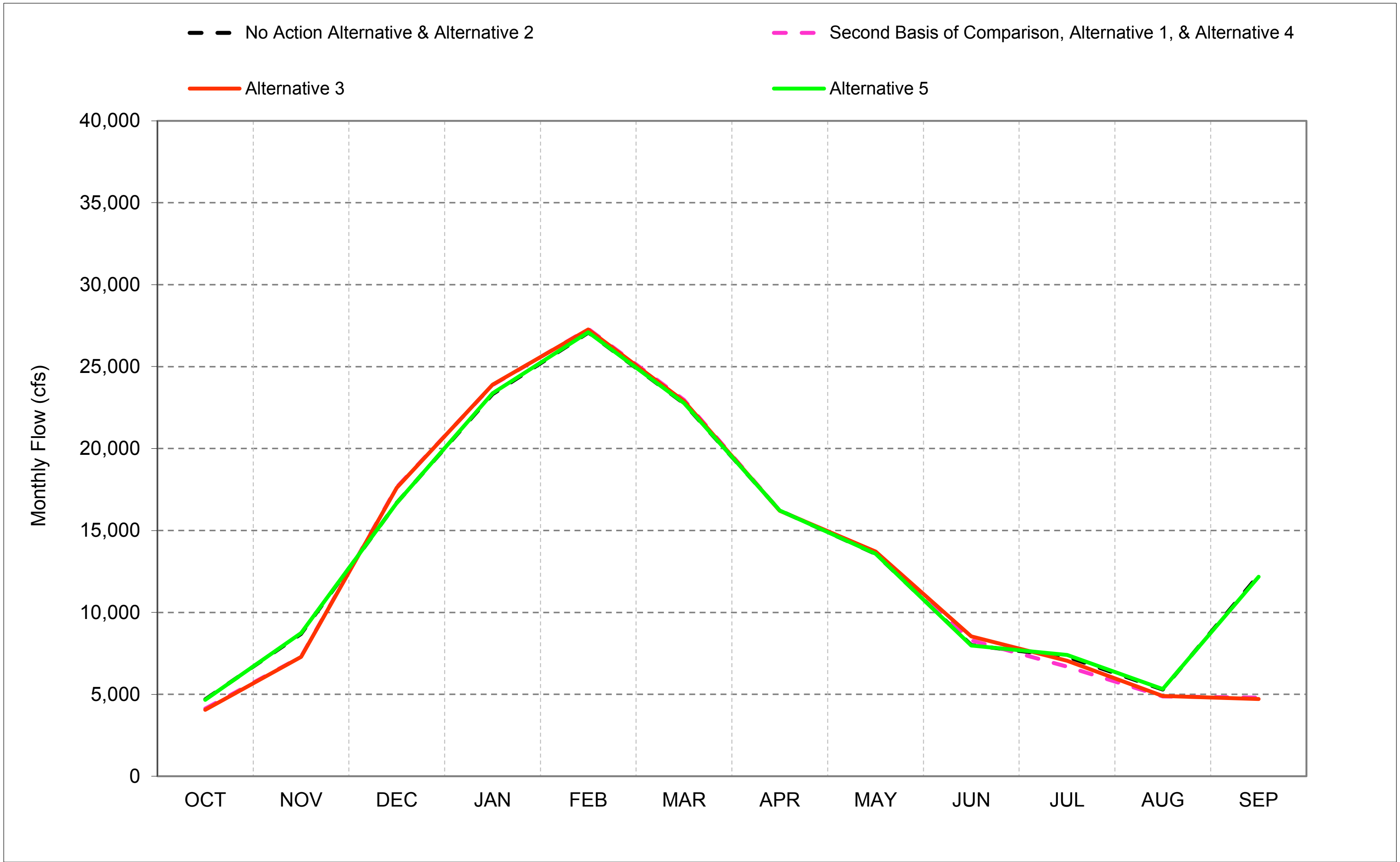
Figure C-32-1. Sutter and Steamboat Slough, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-32-2. Sutter and Steamboat Slough, Wet Year* Long-Term Average Flow**

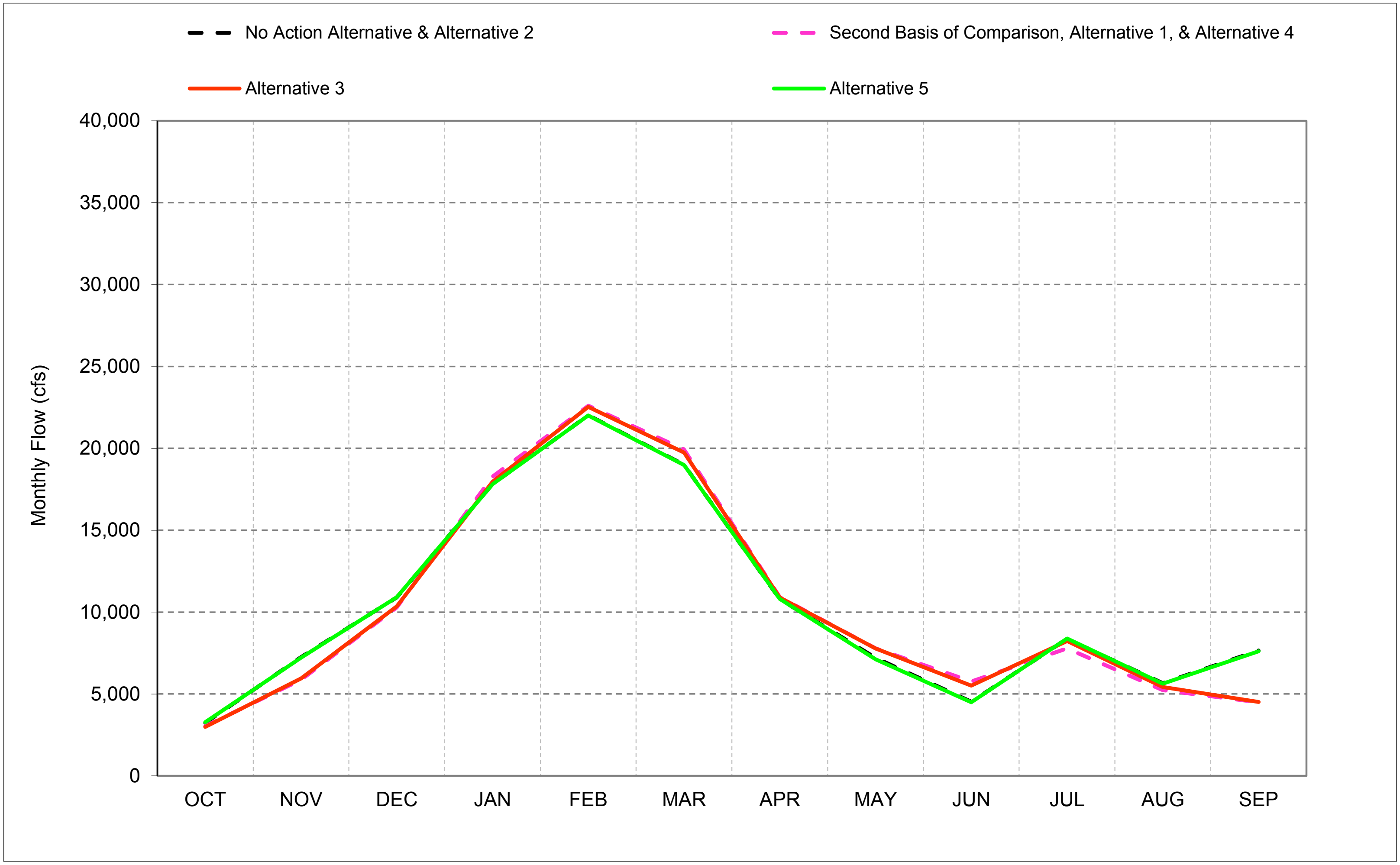


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-32-3. Sutter and Steamboat Slough, Above Normal Year* Long-Term Average Flow**

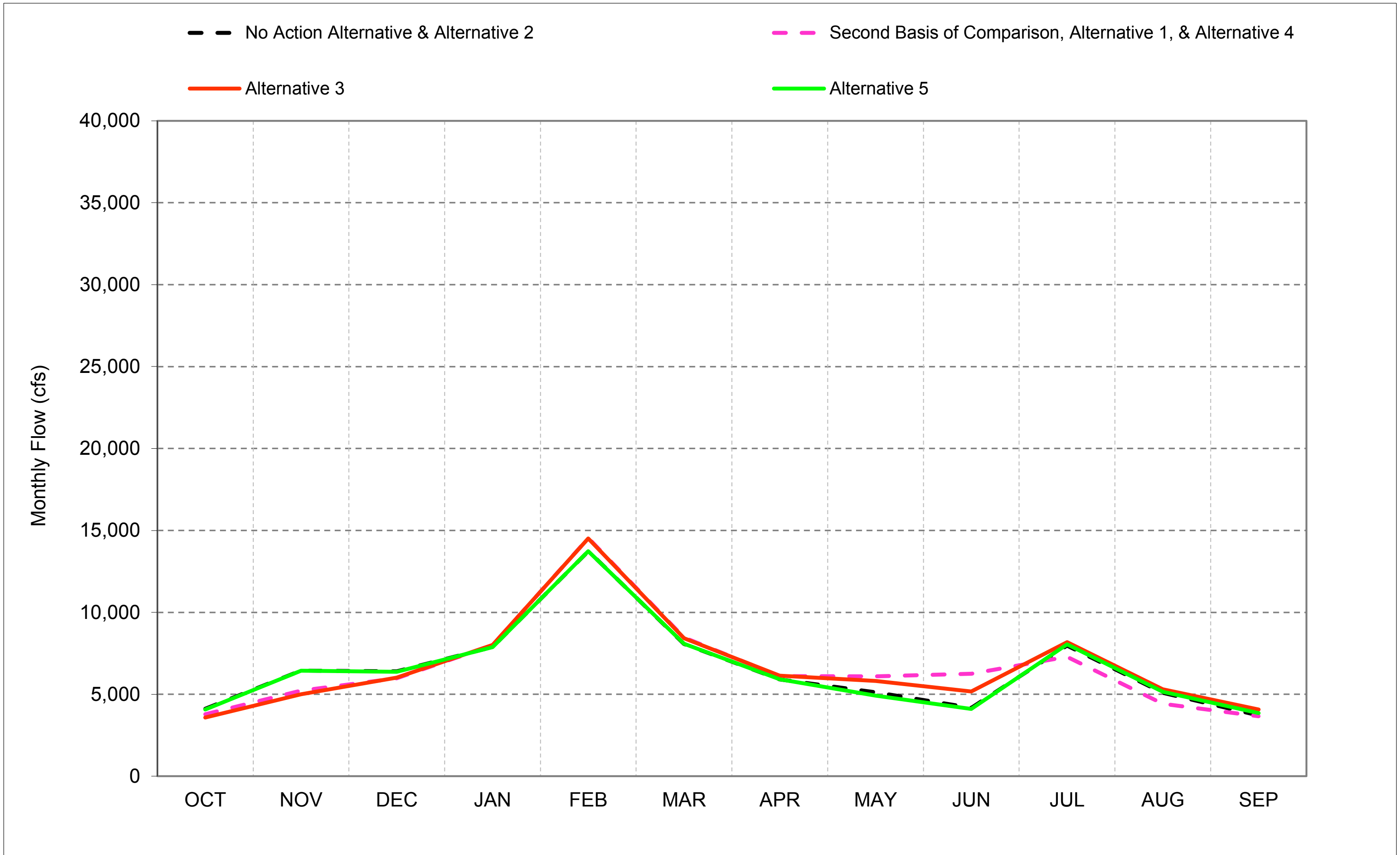


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-32-4. Sutter and Steamboat Slough, Below Normal Year* Long-Term Average Flow**

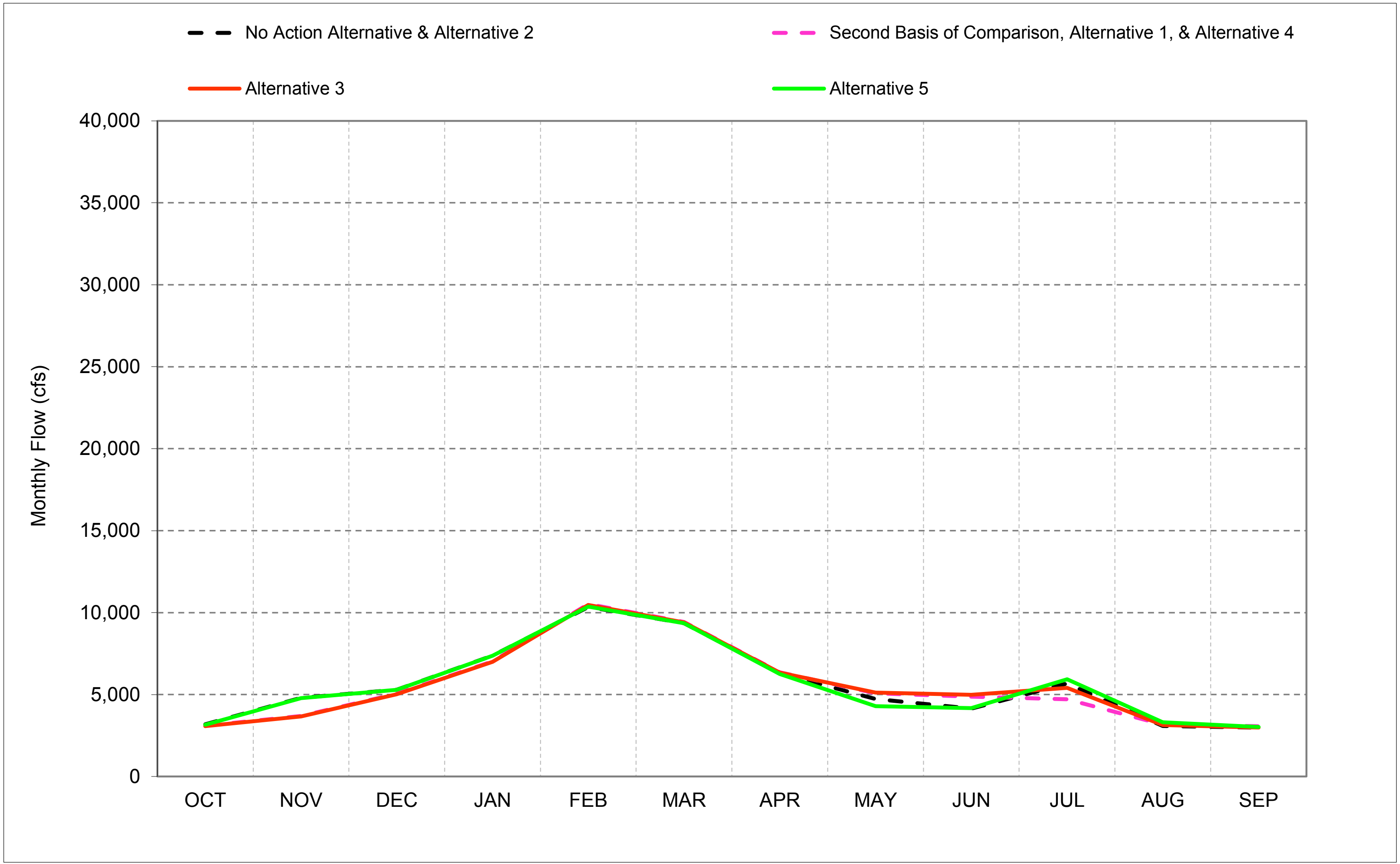


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-32-5. Sutter and Steamboat Slough, Dry Year* Long-Term Average Flow**

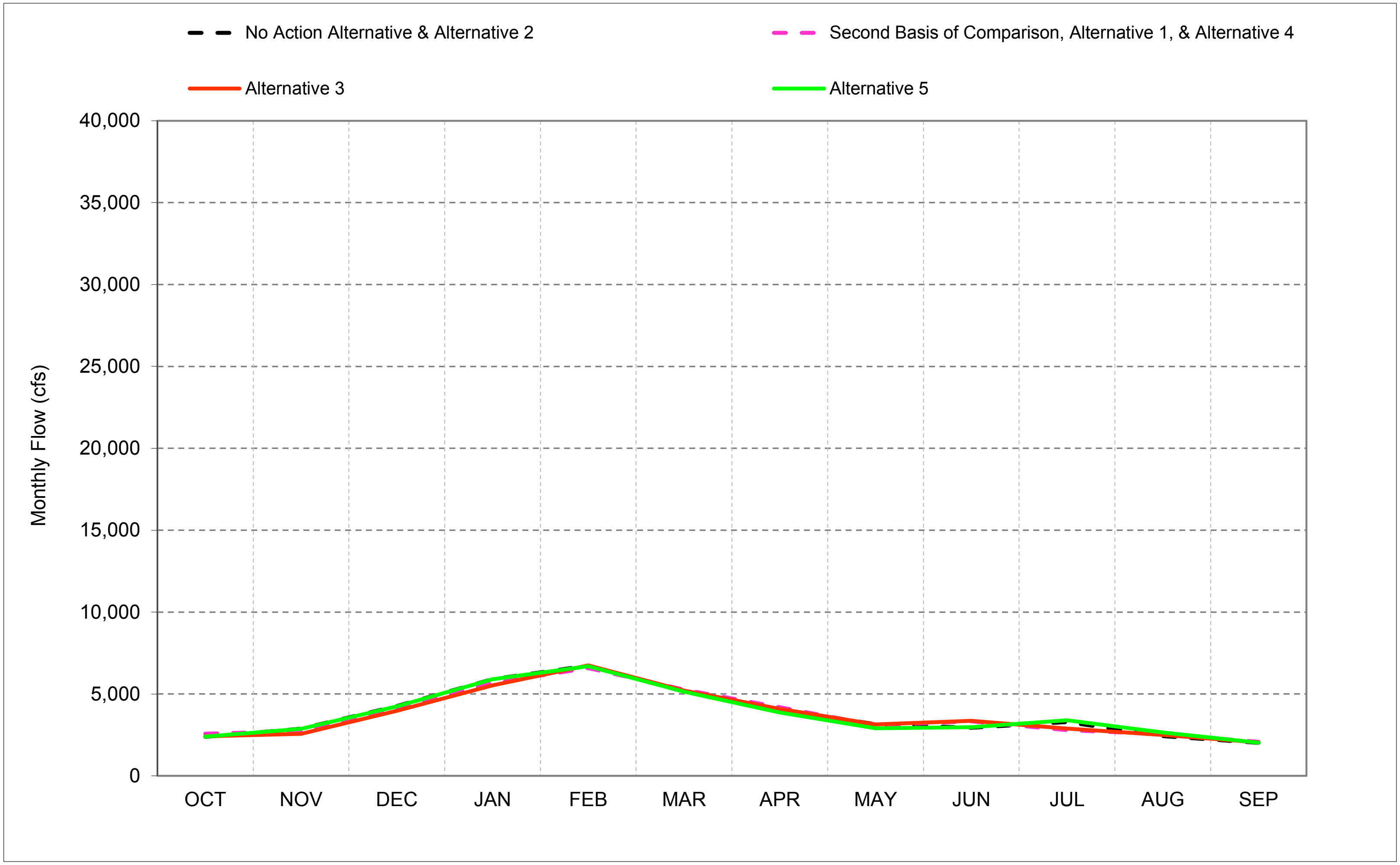


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-32-6. Sutter and Steamboat Slough, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-32-1. Sutter and Steamboat Slough, Monthly Flow

No Action Alternative & Alternative 2

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	5,638	9,919	22,841	30,715	34,265	29,738	21,623	17,660	7,388	9,072	5,798	13,044
20%	5,118	8,100	14,561	24,952	29,584	24,030	14,768	11,502	5,656	8,823	5,613	12,752
30%	4,445	7,825	9,289	17,508	23,047	16,979	10,185	7,102	4,575	8,224	5,352	8,255
40%	3,969	6,762	7,709	10,939	19,729	13,223	8,773	5,574	4,298	7,420	5,249	7,773
50%	3,370	5,910	6,296	9,129	14,750	10,865	6,774	4,994	4,232	6,552	4,790	4,655
60%	2,635	4,713	5,846	7,832	10,867	9,111	5,302	4,528	4,067	6,086	4,392	3,813
70%	2,379	3,412	5,350	6,231	8,435	8,001	4,678	4,374	3,812	5,689	3,357	2,914
80%	2,250	2,743	3,796	5,556	6,943	6,224	4,254	4,044	3,359	4,870	2,687	2,371
90%	1,805	2,331	3,187	4,712	5,838	4,541	3,788	3,408	3,114	3,427	2,335	1,940
Long Term												
Full Simulation Period[b]	3,683	6,361	9,793	13,944	17,426	14,344	9,777	7,750	5,259	6,577	4,367	6,623
Water Year Types[c]												
Wet (32%)	4,698	8,688	16,691	23,326	27,078	22,752	16,223	13,578	7,999	7,304	5,292	12,260
Above Normal (16%)	3,238	7,246	10,898	17,822	22,015	19,003	10,799	7,201	4,525	8,363	5,657	7,657
Below Normal (13%)	4,119	6,441	6,401	7,889	13,734	8,070	5,902	5,121	4,183	7,975	5,088	3,714
Dry (24%)	3,189	4,806	5,295	7,376	10,343	9,354	6,297	4,734	4,153	5,670	3,092	2,985
Critical (15%)	2,392	2,881	4,260	5,913	6,733	5,150	4,058	3,153	2,947	3,294	2,430	2,020

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	4,649	8,840	25,683	31,237	34,303	30,702	21,643	17,648	7,769	8,400	5,588	4,885
20%	4,462	5,375	15,531	26,676	29,803	24,242	14,740	12,352	6,848	7,765	5,301	4,690
30%	4,036	4,788	8,986	19,028	24,301	19,273	10,157	7,389	6,374	7,223	5,023	4,489
40%	3,478	4,540	7,230	11,878	21,140	13,509	8,783	6,343	5,760	6,752	4,743	4,405
50%	3,213	4,085	5,858	9,554	15,013	11,030	6,949	5,561	5,277	6,271	4,326	4,186
60%	2,961	3,716	5,257	7,428	10,947	9,190	5,286	5,226	4,945	5,615	3,628	3,595
70%	2,608	3,328	4,481	5,870	8,705	8,062	4,739	4,793	4,229	4,603	3,209	2,840
80%	2,277	2,840	3,740	5,110	7,084	6,387	4,461	4,306	4,016	3,932	2,803	2,441
90%	1,891	2,345	3,143	4,381	5,968	4,614	4,053	3,378	3,595	2,947	2,385	1,997
Long Term												
Full Simulation Period[b]	3,435	5,243	9,859	14,083	17,717	14,650	9,854	8,085	6,059	5,895	4,116	3,779
Water Year Types[c]												
Wet (32%)	4,134	7,289	17,643	23,870	27,298	22,969	16,213	13,686	8,296	6,695	4,872	4,797
Above Normal (16%)	3,037	5,861	10,293	18,272	22,598	19,927	10,909	7,780	5,769	7,790	5,239	4,495
Below Normal (13%)	3,787	5,220	5,987	8,000	14,534	8,463	6,113	6,100	6,251	7,289	4,427	3,664
Dry (24%)	3,103	3,694	5,048	7,023	10,521	9,433	6,359	5,082	4,871	4,713	3,171	3,069
Critical (15%)	2,582	2,741	4,090	5,680	6,582	5,275	4,189	3,102	3,328	2,799	2,552	2,083

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-989	-1,080	2,841	522	38	964	20	-12	381	-672	-210	-8,159
20%	-656	-2,725	970	1,724	220	212	-28	849	1,192	-1,059	-312	-8,062
30%	-409	-3,037	-303	1,520	1,254	2,293	-28	287	1,799	-1,001	-329	-3,766
40%	-491	-2,222	-479	938	1,411	286	10	769	1,462	-668	-507	-3,368
50%	-156	-1,825	-437	425	263	165	175	567	1,045	-280	-464	-469
60%	326	-997	-589	-404	80	80	-16	697	878	-470	-764	-218
70%	229	-85	-869	-360	270	62	60	420	417	-1,085	-148	-74
80%	26	97	-56	-446	141	163	207	262	657	-938	115	70
90%	86	14	-44	-331	130	74	265	-31	481	-480	50	57
Long Term												
Full Simulation Period[b]	-249	-1,118	65	138	291	306	77	335	799	-682	-251	-2,844
Water Year Types[c]												
Wet (32%)	-564	-1,398	952	544	219	217	-10	108	297	-609	-420	-7,462
Above Normal (16%)	-201	-1,385	-605	450	583	924	111	579	1,244	-572	-418	-3,162
Below Normal (13%)	-332	-1,221	-414	111	800	393	211	978	2,068	-685	-661	-50
Dry (24%)	-86	-1,111	-247	-353	178	79	62	348	717	-957	79	84
Critical (15%)	189	-140	-169	-233	-151	125	131	-51	381	-495	122	64

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-32-2. Sutter and Steamboat Slough, Monthly Flow

No Action Alternative & Alternative 2

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	5,638	9,919	22,841	30,715	34,265	29,738	21,623	17,660	7,388	9,072	5,798	13,044
20%	5,118	8,100	14,561	24,952	29,584	24,030	14,768	11,502	5,656	8,823	5,613	12,752
30%	4,445	7,825	9,289	17,508	23,047	16,979	10,185	7,102	4,575	8,224	5,352	8,255
40%	3,969	6,762	7,709	10,939	19,729	13,223	8,773	5,574	4,298	7,420	5,249	7,773
50%	3,370	5,910	6,296	9,129	14,750	10,865	6,774	4,994	4,232	6,552	4,790	4,655
60%	2,635	4,713	5,846	7,832	10,867	9,111	5,302	4,528	4,067	6,086	4,392	3,813
70%	2,379	3,412	5,350	6,231	8,435	8,001	4,678	4,374	3,812	5,689	3,357	2,914
80%	2,250	2,743	3,796	5,556	6,943	6,224	4,254	4,044	3,359	4,870	2,687	2,371
90%	1,805	2,331	3,187	4,712	5,838	4,541	3,788	3,408	3,114	3,427	2,335	1,940
Long Term												
Full Simulation Period[b]	3,683	6,361	9,793	13,944	17,426	14,344	9,777	7,750	5,259	6,577	4,367	6,623
Water Year Types[c]												
Wet (32%)	4,698	8,688	16,691	23,326	27,078	22,752	16,223	13,578	7,999	7,304	5,292	12,260
Above Normal (16%)	3,238	7,246	10,898	17,822	22,015	19,003	10,799	7,201	4,525	8,363	5,657	7,657
Below Normal (13%)	4,119	6,441	6,401	7,889	13,734	8,070	5,902	5,121	4,183	7,975	5,088	3,714
Dry (24%)	3,189	4,806	5,295	7,376	10,343	9,354	6,297	4,734	4,153	5,670	3,092	2,985
Critical (15%)	2,392	2,881	4,260	5,913	6,733	5,150	4,058	3,153	2,947	3,294	2,430	2,020

Alternative 3

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,655	8,981	25,614	31,086	34,292	30,700	21,619	17,642	7,301	8,858	5,700	4,979
20%	4,421	5,559	15,854	26,457	29,791	24,240	14,741	11,882	6,721	8,591	5,460	4,771
30%	3,987	4,855	9,051	19,041	24,281	18,210	10,159	7,348	5,733	8,316	5,118	4,459
40%	3,479	4,405	7,191	11,812	20,933	13,506	8,757	6,313	5,545	7,487	4,917	4,257
50%	3,160	4,087	5,828	9,280	15,030	11,028	6,954	5,489	5,237	6,799	4,586	4,171
60%	2,671	3,707	5,172	7,323	10,944	9,183	5,259	4,982	4,866	6,018	4,198	3,755
70%	2,363	3,356	4,611	5,757	8,923	8,175	4,870	4,670	4,636	4,952	3,458	2,880
80%	2,252	2,811	3,783	5,111	6,950	6,390	4,327	4,406	3,987	4,296	2,763	2,528
90%	1,806	2,339	3,122	4,359	5,955	4,566	4,038	3,499	3,589	2,985	2,378	1,943
Long Term												
Full Simulation Period[b]	3,348	5,199	9,841	14,017	17,709	14,570	9,835	8,077	5,988	6,384	4,261	3,789
Water Year Types[c]												
Wet (32%)	4,062	7,287	17,615	23,896	27,272	22,880	16,209	13,724	8,547	7,056	4,904	4,720
Above Normal (16%)	2,990	5,960	10,354	17,956	22,528	19,733	10,885	7,780	5,512	8,240	5,425	4,511
Below Normal (13%)	3,591	5,007	6,025	8,024	14,513	8,425	6,131	5,817	5,182	8,181	5,314	4,079
Dry (24%)	3,075	3,671	5,021	6,996	10,476	9,410	6,344	5,131	4,986	5,414	3,147	2,994
Critical (15%)	2,418	2,576	3,971	5,537	6,755	5,204	4,098	3,146	3,368	2,888	2,500	2,047

Alternative 3 minus No Action Alternative & Alternative 2

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-983	-938	2,773	371	27	962	-4	-18	-87	-214	-98	-8,065
20%	-697	-2,541	1,293	1,505	207	210	-27	380	1,064	-233	-153	-7,981
30%	-458	-2,970	-238	1,533	1,234	1,231	-26	245	1,158	92	-234	-3,796
40%	-490	-2,358	-518	872	1,204	283	-17	739	1,247	67	-332	-3,517
50%	-209	-1,823	-468	151	280	163	180	494	1,005	248	-204	-485
60%	35	-1,007	-674	-509	77	72	-44	454	799	-67	-194	-59
70%	-16	-56	-739	-473	488	174	192	296	824	-737	101	-33
80%	1	68	-13	-445	7	166	73	363	628	-573	75	157
90%	1	8	-65	-353	116	26	250	91	474	-442	43	3
Long Term												
Full Simulation Period[b]	-336	-1,162	48	72	283	226	57	327	729	-192	-106	-2,834
Water Year Types[c]												
Wet (32%)	-635	-1,401	924	570	193	128	-14	146	547	-248	-389	-7,540
Above Normal (16%)	-248	-1,286	-543	134	513	730	87	579	987	-122	-233	-3,146
Below Normal (13%)	-527	-1,434	-376	135	779	355	229	695	999	206	226	365
Dry (24%)	-114	-1,134	-274	-380	133	56	47	397	833	-257	55	9
Critical (15%)	26	-305	-288	-376	22	54	40	-8	421	-406	70	28

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-32-3. Sutter and Steamboat Slough, Monthly Flow

No Action Alternative & Alternative 2

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	5,638	9,919	22,841	30,715	34,265	29,738	21,623	17,660	7,388	9,072	5,798	13,044
20%	5,118	8,100	14,561	24,952	29,584	24,030	14,768	11,502	5,656	8,823	5,613	12,752
30%	4,445	7,825	9,289	17,508	23,047	16,979	10,185	7,102	4,575	8,224	5,352	8,255
40%	3,969	6,762	7,709	10,939	19,729	13,223	8,773	5,574	4,298	7,420	5,249	7,773
50%	3,370	5,910	6,296	9,129	14,750	10,865	6,774	4,994	4,232	6,552	4,790	4,655
60%	2,635	4,713	5,846	7,832	10,867	9,111	5,302	4,528	4,067	6,086	4,392	3,813
70%	2,379	3,412	5,350	6,231	8,435	8,001	4,678	4,374	3,812	5,689	3,357	2,914
80%	2,250	2,743	3,796	5,556	6,943	6,224	4,254	4,044	3,359	4,870	2,687	2,371
90%	1,805	2,331	3,187	4,712	5,838	4,541	3,788	3,408	3,114	3,427	2,335	1,940
Long Term												
Full Simulation Period[b]	3,683	6,361	9,793	13,944	17,426	14,344	9,777	7,750	5,259	6,577	4,367	6,623
Water Year Types[c]												
Wet (32%)	4,698	8,688	16,691	23,326	27,078	22,752	16,223	13,578	7,999	7,304	5,292	12,260
Above Normal (16%)	3,238	7,246	10,898	17,822	22,015	19,003	10,799	7,201	4,525	8,363	5,657	7,657
Below Normal (13%)	4,119	6,441	6,401	7,889	13,734	8,070	5,902	5,121	4,183	7,975	5,088	3,714
Dry (24%)	3,189	4,806	5,295	7,376	10,343	9,354	6,297	4,734	4,153	5,670	3,092	2,985
Critical (15%)	2,392	2,881	4,260	5,913	6,733	5,150	4,058	3,153	2,947	3,294	2,430	2,020

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	5,626	9,905	22,792	30,588	34,257	29,735	21,624	17,663	7,422	9,036	5,798	13,038
20%	4,926	8,064	14,561	24,919	29,567	24,035	14,767	11,460	5,622	8,816	5,637	12,659
30%	4,384	7,838	9,295	17,508	23,186	17,024	10,189	7,100	4,590	8,434	5,396	8,258
40%	3,981	6,857	7,720	10,911	19,737	13,224	8,781	5,314	4,324	7,483	5,249	7,767
50%	3,389	5,901	6,295	9,140	14,814	10,820	6,789	4,834	4,212	6,792	5,044	4,773
60%	2,635	4,723	5,839	7,807	10,869	9,110	5,156	4,448	4,061	6,246	4,650	4,065
70%	2,416	3,424	5,412	6,225	8,436	7,959	4,761	3,942	3,881	5,959	3,524	2,956
80%	2,249	2,744	3,795	5,556	6,943	6,223	4,081	3,599	3,269	5,075	2,826	2,449
90%	1,805	2,334	3,173	4,689	5,828	4,536	3,731	2,973	3,110	3,529	2,566	2,075
Long Term												
Full Simulation Period[b]	3,669	6,373	9,787	13,951	17,428	14,342	9,745	7,565	5,251	6,703	4,471	6,620
Water Year Types[c]												
Wet (32%)	4,660	8,749	16,681	23,370	27,094	22,759	16,223	13,576	7,984	7,406	5,330	12,175
Above Normal (16%)	3,288	7,225	10,908	17,816	22,010	18,979	10,801	7,113	4,505	8,386	5,631	7,617
Below Normal (13%)	4,077	6,437	6,377	7,873	13,732	8,078	5,925	4,919	4,113	8,055	5,154	3,851
Dry (24%)	3,166	4,793	5,295	7,373	10,362	9,351	6,264	4,299	4,171	5,939	3,312	3,028
Critical (15%)	2,401	2,879	4,250	5,893	6,689	5,141	3,866	2,902	2,978	3,393	2,656	2,030

Alternative 5 minus No Action Alternative & Alternative 2

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-12	-15	-50	-127	-8	-3	1	3	34	-36	1	-6
20%	-192	-36	0	-34	-16	5	-1	-43	-34	-8	24	-93
30%	-61	13	6	0	139	44	3	-2	15	210	44	3
40%	12	95	11	-29	8	0	8	-260	27	62	-1	-6
50%	19	-9	-1	11	64	-45	15	-161	-20	240	254	118
60%	0	10	-7	-25	2	-1	-147	-80	-6	161	258	252
70%	37	11	62	-5	1	-41	82	-432	69	270	167	42
80%	-2	1	-1	0	0	-2	-174	-445	-91	205	139	78
90%	0	3	-14	-23	-11	-5	-56	-436	-4	102	231	135
Long Term												
Full Simulation Period[b]	-14	12	-6	7	2	-2	-33	-185	-8	127	104	-3
Water Year Types[c]												
Wet (32%)	-37	61	-10	44	16	7	0	-2	-15	102	38	-84
Above Normal (16%)	50	-21	10	-6	-5	-24	2	-88	-20	23	-26	-40
Below Normal (13%)	-42	-5	-24	-16	-2	8	23	-202	-70	80	66	137
Dry (24%)	-23	-12	1	-3	19	-2	-33	-436	18	268	220	42
Critical (15%)	9	-2	-10	-20	-44	-9	-192	-251	31	99	226	10

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-32-4. Sutter and Steamboat Slough, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	4,649	8,840	25,683	31,237	34,303	30,702	21,643	17,648	7,769	8,400	5,588	4,885
20%	4,462	5,375	15,531	26,676	29,803	24,242	14,740	12,352	6,848	7,765	5,301	4,690
30%	4,036	4,788	8,986	19,028	24,301	19,273	10,157	7,389	6,374	7,223	5,023	4,489
40%	3,478	4,540	7,230	11,878	21,140	13,509	8,783	6,343	5,760	6,752	4,743	4,405
50%	3,213	4,085	5,858	9,554	15,013	11,030	6,949	5,561	5,277	6,271	4,326	4,186
60%	2,961	3,716	5,257	7,428	10,947	9,190	5,286	5,226	4,945	5,615	3,628	3,595
70%	2,608	3,328	4,481	5,870	8,705	8,062	4,739	4,793	4,229	4,603	3,209	2,840
80%	2,277	2,840	3,740	5,110	7,084	6,387	4,461	4,306	4,016	3,932	2,803	2,441
90%	1,891	2,345	3,143	4,381	5,968	4,614	4,053	3,378	3,595	2,947	2,385	1,997
Long Term												
Full Simulation Period[b]	3,435	5,243	9,859	14,083	17,717	14,650	9,854	8,085	6,059	5,895	4,116	3,779
Water Year Types[c]												
Wet (32%)	4,134	7,289	17,643	23,870	27,298	22,969	16,213	13,686	8,296	6,695	4,872	4,797
Above Normal (16%)	3,037	5,861	10,293	18,272	22,598	19,927	10,909	7,780	5,769	7,790	5,239	4,495
Below Normal (13%)	3,787	5,220	5,987	8,000	14,534	8,463	6,113	6,100	6,251	7,289	4,427	3,664
Dry (24%)	3,103	3,694	5,048	7,023	10,521	9,433	6,359	5,082	4,871	4,713	3,171	3,069
Critical (15%)	2,582	2,741	4,090	5,680	6,582	5,275	4,189	3,102	3,328	2,799	2,552	2,083

No Action Alternative & Alternative 2

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	5,638	9,919	22,841	30,715	34,265	29,738	21,623	17,660	7,388	9,072	5,798	13,044
20%	5,118	8,100	14,561	24,952	29,584	24,030	14,768	11,502	5,656	8,823	5,613	12,752
30%	4,445	7,825	9,289	17,508	23,047	16,979	10,185	7,102	4,575	8,224	5,352	8,255
40%	3,969	6,762	7,709	10,939	19,729	13,223	8,773	5,574	4,298	7,420	5,249	7,773
50%	3,370	5,910	6,296	9,129	14,750	10,865	6,774	4,994	4,232	6,552	4,790	4,655
60%	2,635	4,713	5,846	7,832	10,867	9,111	5,302	4,528	4,067	6,086	4,392	3,813
70%	2,379	3,412	5,350	6,231	8,435	8,001	4,678	4,374	3,812	5,689	3,357	2,914
80%	2,250	2,743	3,796	5,556	6,943	6,224	4,254	4,044	3,359	4,870	2,687	2,371
90%	1,805	2,331	3,187	4,712	5,838	4,541	3,788	3,408	3,114	3,427	2,335	1,940
Long Term												
Full Simulation Period[b]	3,683	6,361	9,793	13,944	17,426	14,344	9,777	7,750	5,259	6,577	4,367	6,623
Water Year Types[c]												
Wet (32%)	4,698	8,688	16,691	23,326	27,078	22,752	16,223	13,578	7,999	7,304	5,292	12,260
Above Normal (16%)	3,238	7,246	10,898	17,822	22,015	19,003	10,799	7,201	4,525	8,363	5,657	7,657
Below Normal (13%)	4,119	6,441	6,401	7,889	13,734	8,070	5,902	5,121	4,183	7,975	5,088	3,714
Dry (24%)	3,189	4,806	5,295	7,376	10,343	9,354	6,297	4,734	4,153	5,670	3,092	2,985
Critical (15%)	2,392	2,881	4,260	5,913	6,733	5,150	4,058	3,153	2,947	3,294	2,430	2,020

No Action Alternative & Alternative 2 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	989	1,080	-2,841	-522	-38	-964	-20	12	-381	672	210	8,159
20%	656	2,725	-970	-1,724	-220	-212	28	-849	-1,192	1,059	312	8,062
30%	409	3,037	303	-1,520	-1,254	-2,293	28	-287	-1,799	1,001	329	3,766
40%	491	2,222	479	-938	-1,411	-286	-10	-769	-1,462	668	507	3,368
50%	156	1,825	437	-425	-263	-165	-175	-567	-1,045	280	464	469
60%	-326	997	589	404	-80	-80	16	-697	-878	470	764	218
70%	-229	85	869	360	-270	-62	-60	-420	-417	1,085	148	74
80%	-26	-97	56	446	-141	-163	-207	-262	-657	938	-115	-70
90%	-86	-14	44	331	-130	-74	-265	31	-481	480	-50	-57
Long Term												
Full Simulation Period[b]	249	1,118	-65	-138	-291	-306	-77	-335	-799	682	251	2,844
Water Year Types[c]												
Wet (32%)	564	1,398	-952	-544	-219	-217	10	-108	-297	609	420	7,462
Above Normal (16%)	201	1,385	605	-450	-583	-924	-111	-579	-1,244	572	418	3,162
Below Normal (13%)	332	1,221	414	-111	-800	-393	-211	-978	-2,068	685	661	50
Dry (24%)	86	1,111	247	353	-178	-79	-62	-348	-717	957	-79	-84
Critical (15%)	-189	140	169	233	151	-125	-131	51	-381	495	-122	-64

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-32-5. Sutter and Steamboat Slough, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,649	8,840	25,683	31,237	34,303	30,702	21,643	17,648	7,769	8,400	5,588	4,885
20%	4,462	5,375	15,531	26,676	29,803	24,242	14,740	12,352	6,848	7,765	5,301	4,690
30%	4,036	4,788	8,986	19,028	24,301	19,273	10,157	7,389	6,374	7,223	5,023	4,489
40%	3,478	4,540	7,230	11,878	21,140	13,509	8,783	6,343	5,760	6,752	4,743	4,405
50%	3,213	4,085	5,858	9,554	15,013	11,030	6,949	5,561	5,277	6,271	4,326	4,186
60%	2,961	3,716	5,257	7,428	10,947	9,190	5,286	5,226	4,945	5,615	3,628	3,595
70%	2,608	3,328	4,481	5,870	8,705	8,062	4,739	4,793	4,229	4,603	3,209	2,840
80%	2,277	2,840	3,740	5,110	7,084	6,387	4,461	4,306	4,016	3,932	2,803	2,441
90%	1,891	2,345	3,143	4,381	5,968	4,614	4,053	3,378	3,595	2,947	2,385	1,997
Long Term												
Full Simulation Period[b]	3,435	5,243	9,859	14,083	17,717	14,650	9,854	8,085	6,059	5,895	4,116	3,779
Water Year Types[c]												
Wet (32%)	4,134	7,289	17,643	23,870	27,298	22,969	16,213	13,686	8,296	6,695	4,872	4,797
Above Normal (16%)	3,037	5,861	10,293	18,272	22,598	19,927	10,909	7,780	5,769	7,790	5,239	4,495
Below Normal (13%)	3,787	5,220	5,987	8,000	14,534	8,463	6,113	6,100	6,251	7,289	4,427	3,664
Dry (24%)	3,103	3,694	5,048	7,023	10,521	9,433	6,359	5,082	4,871	4,713	3,171	3,069
Critical (15%)	2,582	2,741	4,090	5,680	6,582	5,275	4,189	3,102	3,328	2,799	2,552	2,083

Alternative 3

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,655	8,981	25,614	31,086	34,292	30,700	21,619	17,642	7,301	8,858	5,700	4,979
20%	4,421	5,559	15,854	26,457	29,791	24,240	14,741	11,882	6,721	8,591	5,460	4,771
30%	3,987	4,855	9,051	19,041	24,281	18,210	10,159	7,348	5,733	8,316	5,118	4,459
40%	3,479	4,405	7,191	11,812	20,933	13,506	8,757	6,313	5,545	7,487	4,917	4,257
50%	3,160	4,087	5,828	9,280	15,030	11,028	6,954	5,489	5,237	6,799	4,586	4,171
60%	2,671	3,707	5,172	7,323	10,944	9,183	5,259	4,982	4,866	6,018	4,198	3,755
70%	2,363	3,356	4,611	5,757	8,923	8,175	4,870	4,670	4,636	4,952	3,458	2,880
80%	2,252	2,811	3,783	5,111	6,950	6,390	4,327	4,406	3,987	4,296	2,763	2,528
90%	1,806	2,339	3,122	4,359	5,955	4,566	4,038	3,499	3,589	2,985	2,378	1,943
Long Term												
Full Simulation Period[b]	3,348	5,199	9,841	14,017	17,709	14,570	9,835	8,077	5,988	6,384	4,261	3,789
Water Year Types[c]												
Wet (32%)	4,062	7,287	17,615	23,896	27,272	22,880	16,209	13,724	8,547	7,056	4,904	4,720
Above Normal (16%)	2,990	5,960	10,354	17,956	22,528	19,733	10,885	7,780	5,512	8,240	5,425	4,511
Below Normal (13%)	3,591	5,007	6,025	8,024	14,513	8,425	6,131	5,817	5,182	8,181	5,314	4,079
Dry (24%)	3,075	3,671	5,021	6,996	10,476	9,410	6,344	5,131	4,986	5,414	3,147	2,994
Critical (15%)	2,418	2,576	3,971	5,537	6,755	5,204	4,098	3,146	3,368	2,888	2,500	2,047

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	6	141	-69	-151	-11	-3	-24	-6	-469	458	112	94
20%	-41	184	324	-219	-12	-3	1	-470	-128	826	159	80
30%	-49	67	65	13	-20	-1,063	2	-42	-641	1,093	95	-30
40%	1	-136	-39	-66	-207	-3	-26	-31	-215	735	175	-149
50%	-53	3	-30	-274	18	-2	5	-72	-40	528	260	-16
60%	-290	-9	-85	-105	-3	-8	-28	-244	-79	403	570	159
70%	-245	28	129	-113	218	112	131	-124	407	348	248	40
80%	-25	-29	43	1	-134	3	-133	101	-29	365	-40	87
90%	-85	-6	-21	-21	-13	-48	-15	122	-7	37	-7	-55
Long Term												
Full Simulation Period[b]	-87	-43	-18	-66	-8	-80	-20	-8	-71	489	145	10
Water Year Types[c]												
Wet (32%)	-71	-2	-28	26	-26	-89	-4	38	251	361	31	-78
Above Normal (16%)	-48	99	62	-316	-69	-194	-24	0	-257	450	185	16
Below Normal (13%)	-195	-213	38	24	-21	-38	18	-283	-1,070	892	887	415
Dry (24%)	-28	-23	-27	-26	-45	-23	-15	49	116	701	-24	-75
Critical (15%)	-164	-165	-119	-143	172	-71	-91	43	40	88	-52	-36

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-32-6. Sutter and Steamboat Slough, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,649	8,840	25,683	31,237	34,303	30,702	21,643	17,648	7,769	8,400	5,588	4,885
20%	4,462	5,375	15,531	26,676	29,803	24,242	14,740	12,352	6,848	7,765	5,301	4,690
30%	4,036	4,788	8,986	19,028	24,301	19,273	10,157	7,389	6,374	7,223	5,023	4,489
40%	3,478	4,540	7,230	11,878	21,140	13,509	8,783	6,343	5,760	6,752	4,743	4,405
50%	3,213	4,085	5,858	9,554	15,013	11,030	6,949	5,561	5,277	6,271	4,326	4,186
60%	2,961	3,716	5,257	7,428	10,947	9,190	5,286	5,226	4,945	5,615	3,628	3,595
70%	2,608	3,328	4,481	5,870	8,705	8,062	4,739	4,793	4,229	4,603	3,209	2,840
80%	2,277	2,840	3,740	5,110	7,084	6,387	4,461	4,306	4,016	3,932	2,803	2,441
90%	1,891	2,345	3,143	4,381	5,968	4,614	4,053	3,378	3,595	2,947	2,385	1,997
Long Term												
Full Simulation Period[b]	3,435	5,243	9,859	14,083	17,717	14,650	9,854	8,085	6,059	5,895	4,116	3,779
Water Year Types[c]												
Wet (32%)	4,134	7,289	17,643	23,870	27,298	22,969	16,213	13,686	8,296	6,695	4,872	4,797
Above Normal (16%)	3,037	5,861	10,293	18,272	22,598	19,927	10,909	7,780	5,769	7,790	5,239	4,495
Below Normal (13%)	3,787	5,220	5,987	8,000	14,534	8,463	6,113	6,100	6,251	7,289	4,427	3,664
Dry (24%)	3,103	3,694	5,048	7,023	10,521	9,433	6,359	5,082	4,871	4,713	3,171	3,069
Critical (15%)	2,582	2,741	4,090	5,680	6,582	5,275	4,189	3,102	3,328	2,799	2,552	2,083

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	5,626	9,905	22,792	30,588	34,257	29,735	21,624	17,663	7,422	9,036	5,798	13,038
20%	4,926	8,064	14,561	24,919	29,567	24,035	14,767	11,460	5,622	8,816	5,637	12,659
30%	4,384	7,838	9,295	17,508	23,186	17,024	10,189	7,100	4,590	8,434	5,396	8,258
40%	3,981	6,857	7,720	10,911	19,737	13,224	8,781	5,314	4,324	7,483	5,249	7,767
50%	3,389	5,901	6,295	9,140	14,814	10,820	6,789	4,834	4,212	6,792	5,044	4,773
60%	2,635	4,723	5,839	7,807	10,869	9,110	5,156	4,448	4,061	6,246	4,650	4,065
70%	2,416	3,424	5,412	6,225	8,436	7,959	4,761	3,942	3,881	5,959	3,524	2,956
80%	2,249	2,744	3,795	5,556	6,943	6,223	4,081	3,599	3,269	5,075	2,826	2,449
90%	1,805	2,334	3,173	4,689	5,828	4,536	3,731	2,973	3,110	3,529	2,566	2,075
Long Term												
Full Simulation Period[b]	3,669	6,373	9,787	13,951	17,428	14,342	9,745	7,565	5,251	6,703	4,471	6,620
Water Year Types[c]												
Wet (32%)	4,660	8,749	16,681	23,370	27,094	22,759	16,223	13,576	7,984	7,406	5,330	12,175
Above Normal (16%)	3,288	7,225	10,908	17,816	22,010	18,979	10,801	7,113	4,505	8,386	5,631	7,617
Below Normal (13%)	4,077	6,437	6,377	7,873	13,732	8,078	5,925	4,919	4,113	8,055	5,154	3,851
Dry (24%)	3,166	4,793	5,295	7,373	10,362	9,351	6,264	4,299	4,171	5,939	3,312	3,028
Critical (15%)	2,401	2,879	4,250	5,893	6,689	5,141	3,866	2,902	2,978	3,393	2,656	2,030

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	977	1,065	-2,891	-649	-46	-967	-19	15	-348	636	211	8,153
20%	464	2,689	-970	-1,757	-236	-207	27	-892	-1,227	1,051	337	7,968
30%	348	3,050	309	-1,520	-1,115	-2,249	32	-289	-1,784	1,211	373	3,770
40%	502	2,317	490	-967	-1,403	-286	-2	-1,030	-1,436	730	506	3,361
50%	176	1,816	437	-414	-198	-210	-160	-727	-1,065	521	717	587
60%	-326	1,007	582	380	-78	-81	-131	-777	-884	631	1,023	470
70%	-192	96	930	355	-269	-103	22	-851	-348	1,355	314	116
80%	-28	-96	55	446	-141	-164	-380	-707	-747	1,143	23	8
90%	-86	-10	30	308	-140	-78	-322	-405	-485	582	181	78
Long Term												
Full Simulation Period[b]	235	1,131	-72	-131	-289	-308	-110	-519	-808	808	354	2,841
Water Year Types[c]												
Wet (32%)	527	1,459	-962	-500	-204	-210	10	-110	-312	711	458	7,378
Above Normal (16%)	250	1,364	616	-456	-588	-947	-108	-667	-1,264	595	392	3,122
Below Normal (13%)	290	1,217	390	-127	-802	-385	-188	-1,180	-2,138	766	727	187
Dry (24%)	63	1,099	247	350	-159	-81	-95	-783	-700	1,226	141	-42
Critical (15%)	-180	138	159	213	107	-134	-323	-201	-350	594	104	-54

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

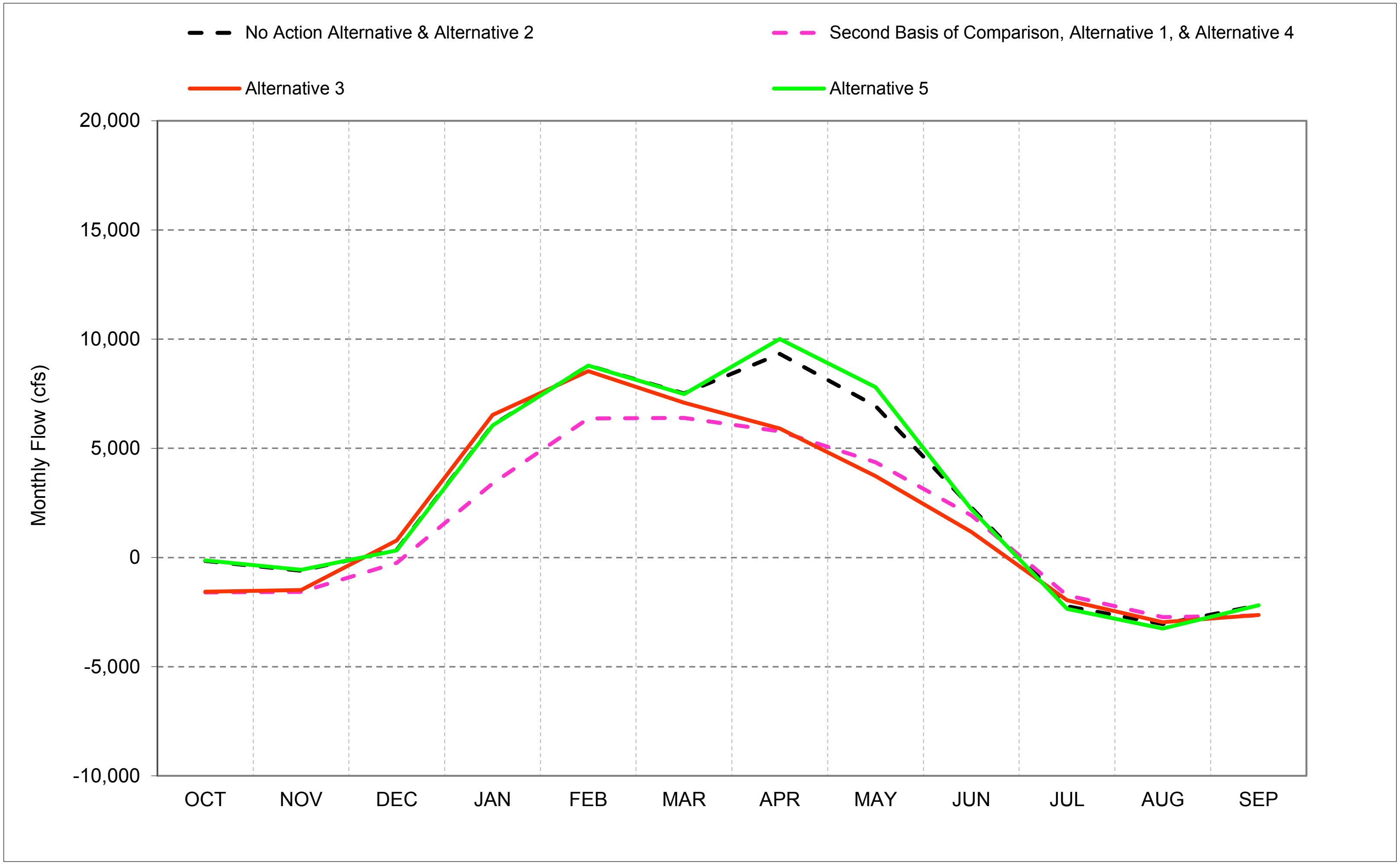
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

This page left blank intentionally.

C.33. Qwest Flow

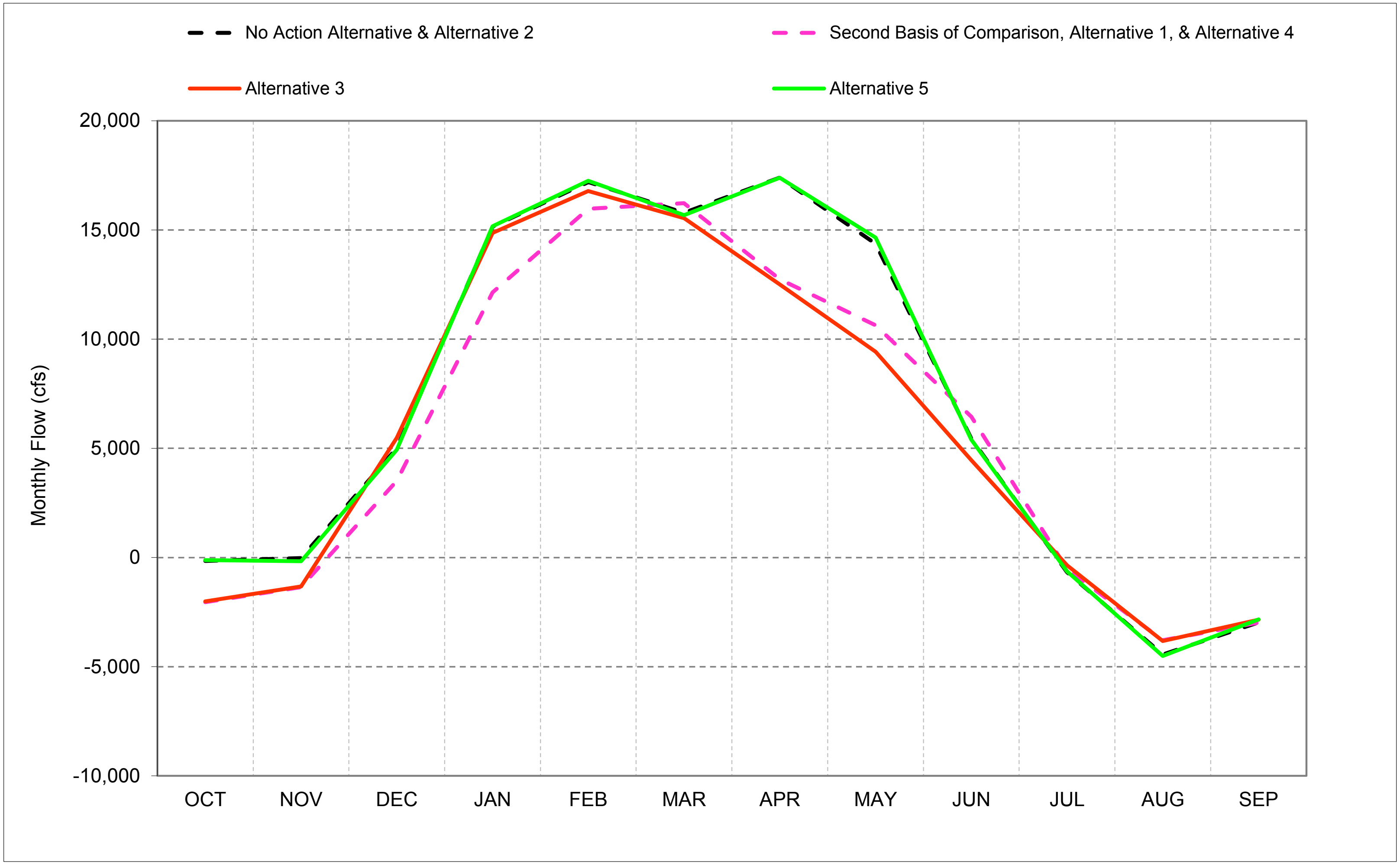
Figure C-33-1. Qwest, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-33-2. Qwest, Wet Year* Long-Term Average Flow**

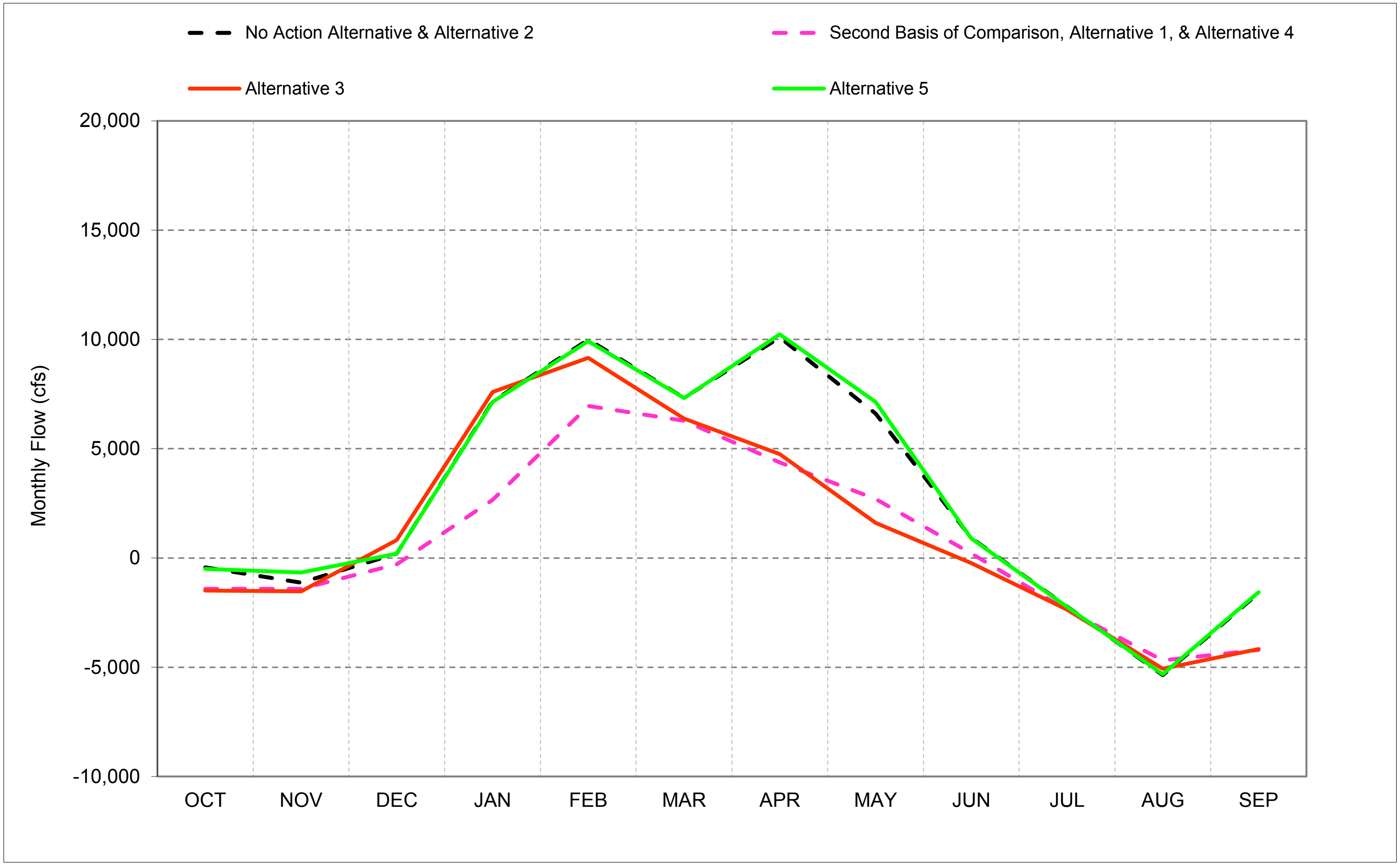


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-33-3. Qwest, Above Normal Year* Long-Term Average Flow**

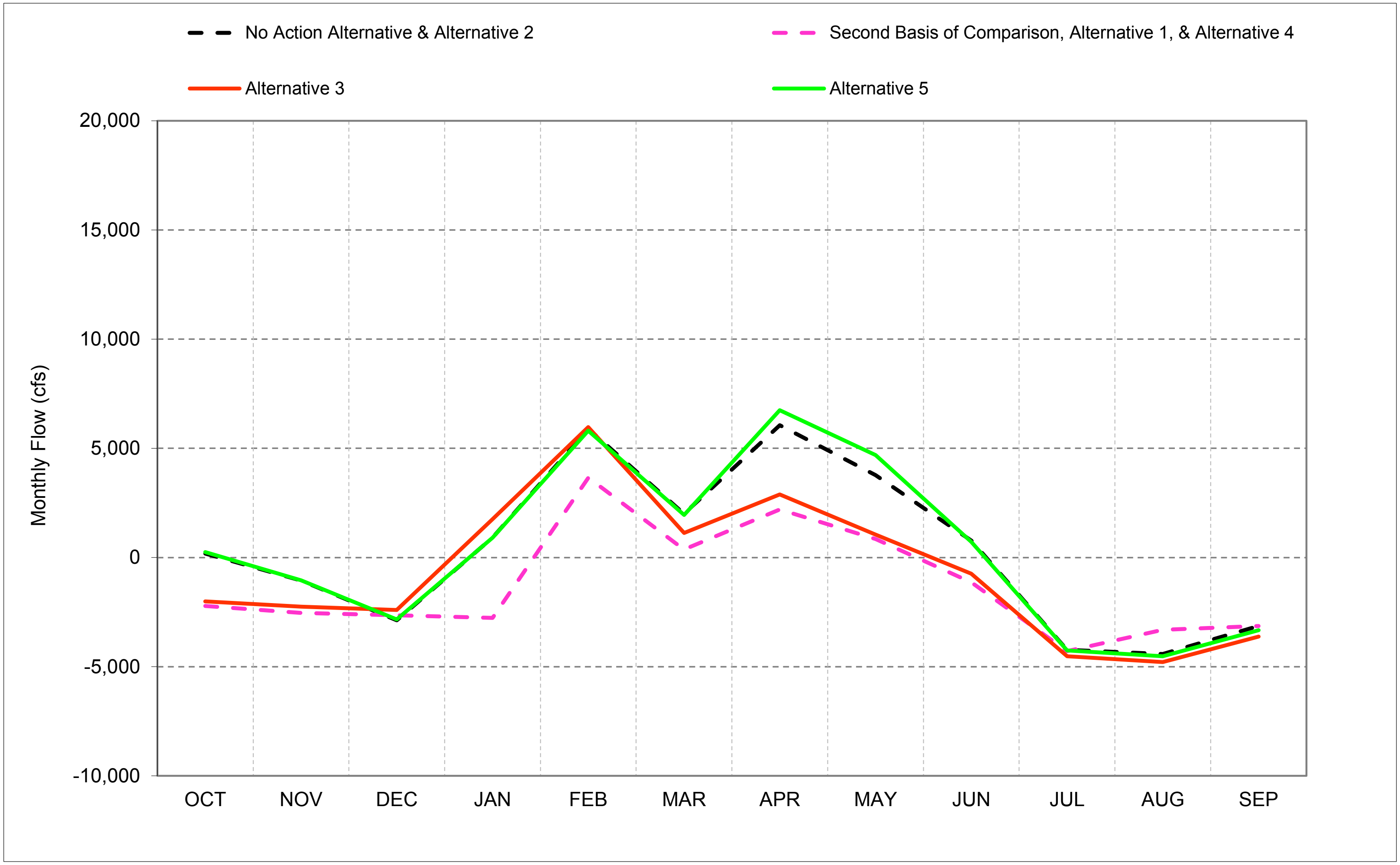


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-33-4. Qwest, Below Normal Year* Long-Term Average Flow**

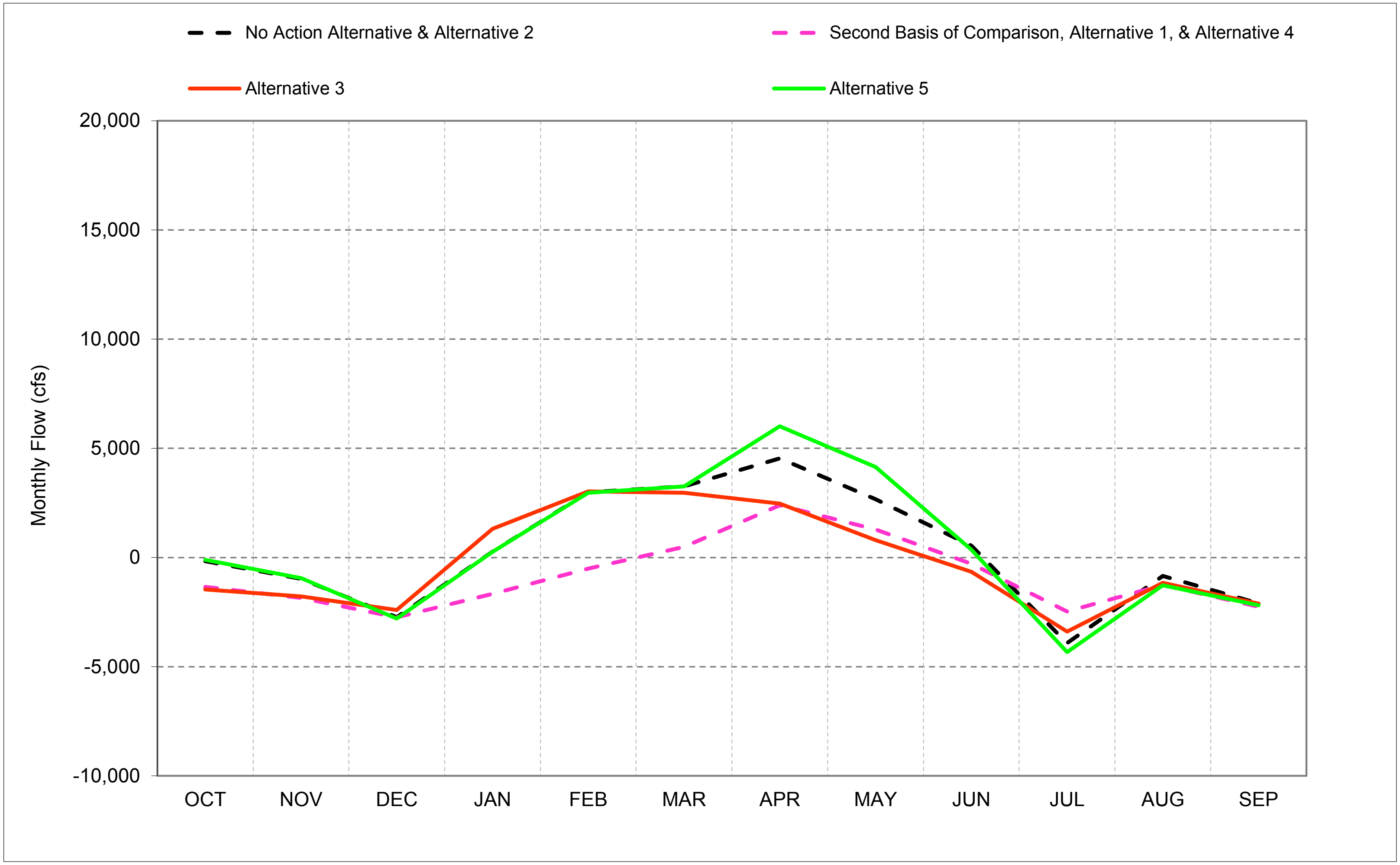


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-33-5. Qwest, Dry Year* Long-Term Average Flow**

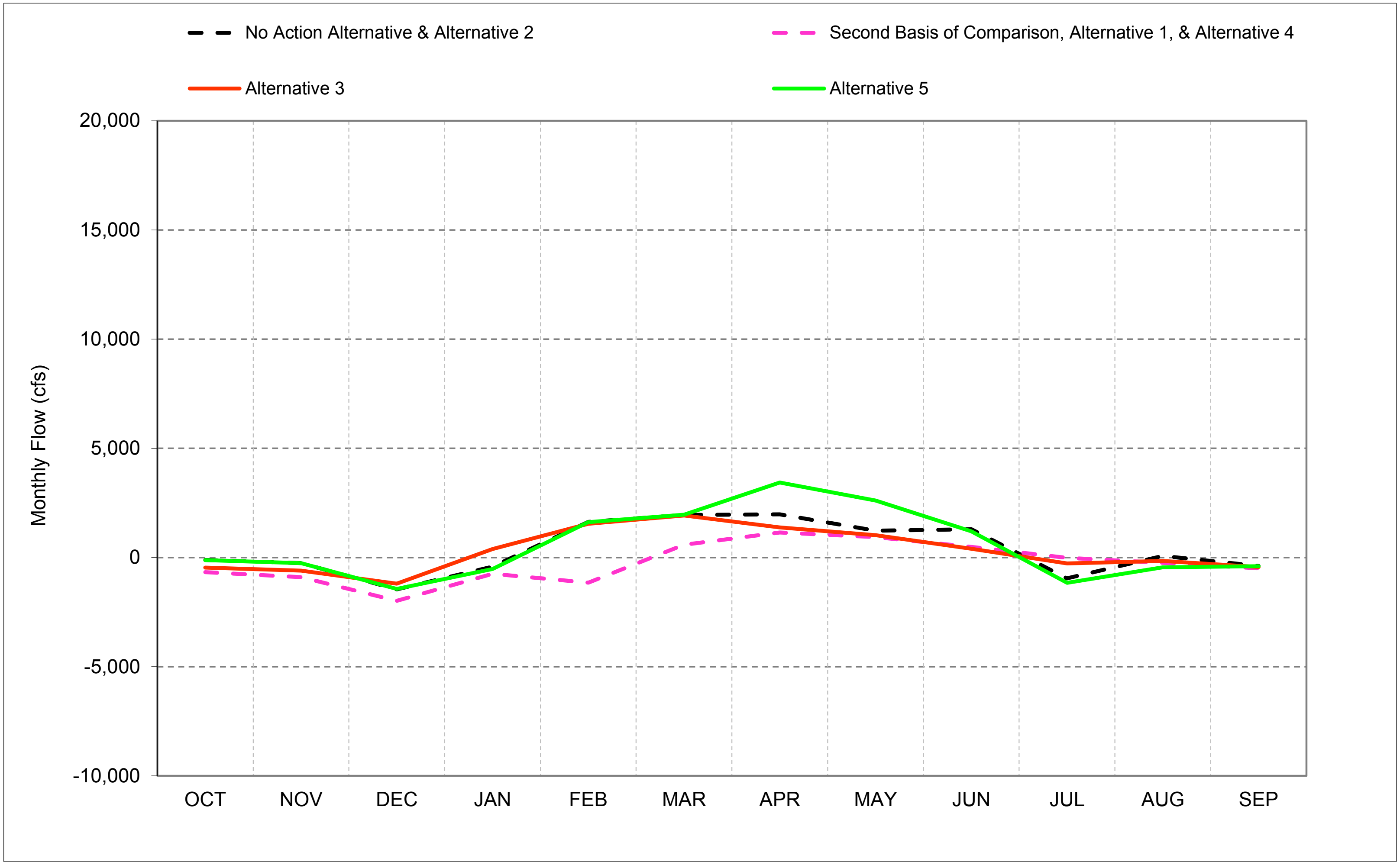


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-33-6. Qwest, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-33-1. Qwest, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,190	939	7,381	16,329	20,138	16,951	21,018	17,565	6,736	440	871	120
20%	515	53	1,563	11,264	12,704	10,469	13,927	9,636	3,197	-437	-453	-734
30%	215	-36	-367	5,662	10,982	7,517	10,386	6,993	1,869	-1,594	-1,445	-1,120
40%	59	-439	-908	3,520	7,240	5,489	9,345	6,123	1,385	-2,172	-2,923	-1,931
50%	13	-688	-1,266	2,051	4,895	3,149	7,690	5,136	1,021	-2,566	-3,852	-2,445
60%	-277	-1,356	-1,870	926	3,228	2,565	6,087	2,939	740	-3,117	-4,635	-3,011
70%	-498	-1,752	-3,347	-388	1,998	1,798	3,568	2,183	544	-3,831	-4,922	-3,732
80%	-771	-2,186	-5,079	-1,042	1,138	1,341	2,090	1,276	97	-4,457	-5,315	-4,050
90%	-1,577	-3,655	-5,613	-1,317	-525	826	1,649	929	-75	-4,771	-5,533	-4,414
Long Term												
Full Simulation Period[b]	-152	-604	354	6,065	8,790	7,514	9,325	6,938	2,291	-2,226	-3,046	-2,189
Water Year Types[c]												
Wet (32%)	-159	-25	5,007	15,152	17,194	15,778	17,396	14,363	5,435	-668	-4,441	-2,977
Above Normal (16%)	-434	-1,125	199	7,163	9,988	7,324	10,091	6,608	909	-2,220	-5,358	-1,608
Below Normal (13%)	185	-1,055	-2,871	908	5,888	2,004	6,057	3,774	773	-4,223	-4,418	-3,135
Dry (24%)	-166	-978	-2,732	266	2,980	3,262	4,539	2,664	538	-3,920	-846	-2,104
Critical (15%)	-118	-258	-1,458	-420	1,627	1,952	1,977	1,228	1,289	-954	74	-384

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	526	63	3,807	14,561	22,874	19,881	17,707	11,934	6,962	589	574	51
20%	52	-329	-373	5,175	11,903	12,002	9,173	5,150	3,364	-449	-914	-893
30%	-460	-1,268	-1,373	2,351	7,291	6,402	5,119	3,265	1,714	-1,165	-1,709	-1,906
40%	-1,099	-1,835	-2,345	434	3,614	3,627	3,040	2,343	986	-1,555	-2,018	-2,562
50%	-1,755	-2,203	-2,771	-770	1,066	1,641	2,151	2,056	282	-1,968	-3,060	-3,258
60%	-2,219	-2,602	-2,967	-2,092	-314	884	1,828	1,415	13	-2,278	-3,763	-3,773
70%	-2,740	-3,082	-3,330	-2,363	-1,709	-252	1,518	1,130	-706	-2,909	-4,291	-3,947
80%	-3,336	-3,412	-3,547	-2,866	-2,513	-874	1,188	513	-1,399	-3,531	-4,804	-4,109
90%	-3,917	-3,663	-4,036	-3,611	-3,110	-1,605	763	-453	-2,023	-4,332	-5,168	-4,339
Long Term												
Full Simulation Period[b]	-1,596	-1,575	-246	3,386	6,363	6,391	5,778	4,362	1,925	-1,726	-2,729	-2,654
Water Year Types[c]												
Wet (32%)	-2,042	-1,353	3,511	12,143	15,965	16,223	12,737	10,629	6,448	-533	-3,786	-2,986
Above Normal (16%)	-1,407	-1,408	-293	2,659	6,954	6,279	4,374	2,700	203	-2,384	-4,684	-4,210
Below Normal (13%)	-2,223	-2,535	-2,647	-2,770	3,655	366	2,198	847	-1,135	-4,288	-3,305	-3,131
Dry (24%)	-1,352	-1,850	-2,738	-1,663	-502	484	2,392	1,283	-289	-2,470	-1,259	-2,247
Critical (15%)	-666	-898	-1,983	-742	-1,155	580	1,146	938	485	-14	-243	-491

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-664	-876	-3,574	-1,768	2,736	2,930	-3,312	-5,631	226	149	-297	-69
20%	-463	-382	-1,936	-6,089	-801	1,533	-4,755	-4,487	167	-12	-461	-160
30%	-675	-1,232	-1,006	-3,311	-3,691	-1,115	-5,267	-3,728	-155	429	-264	-786
40%	-1,157	-1,396	-1,437	-3,087	-3,627	-1,862	-6,305	-3,780	-399	617	905	-631
50%	-1,768	-1,515	-1,505	-2,821	-3,829	-1,507	-5,539	-3,080	-740	597	792	-813
60%	-1,941	-1,246	-1,098	-3,018	-3,542	-1,681	-4,259	-1,524	-727	839	872	-762
70%	-2,242	-1,329	16	-1,975	-3,707	-2,049	-2,050	-1,053	-1,251	922	631	-215
80%	-2,565	-1,227	1,533	-1,824	-3,651	-2,215	-902	-763	-1,497	926	511	-59
90%	-2,340	-8	1,577	-2,294	-2,585	-2,431	-886	-1,381	-1,948	440	365	75
Long Term												
Full Simulation Period[b]	-1,444	-971	-600	-2,679	-2,427	-1,123	-3,546	-2,575	-366	500	317	-465
Water Year Types[c]												
Wet (32%)	-1,883	-1,328	-1,496	-3,009	-1,229	445	-4,659	-3,734	1,013	136	656	-9
Above Normal (16%)	-973	-282	-492	-4,504	-3,034	-1,046	-5,717	-3,908	-707	-164	674	-2,602
Below Normal (13%)	-2,408	-1,480	224	-3,677	-2,233	-1,637	-3,858	-2,927	-1,908	-65	1,112	4
Dry (24%)	-1,186	-872	-6	-1,929	-3,482	-2,778	-2,147	-1,381	-827	1,451	-413	-142
Critical (15%)	-549	-640	-524	-322	-2,782	-1,372	-831	-291	-804	940	-317	-107

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-33-2. Qwest, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,190	939	7,381	16,329	20,138	16,951	21,018	17,565	6,736	440	871	120
20%	515	53	1,563	11,264	12,704	10,469	13,927	9,636	3,197	-437	-453	-734
30%	215	-36	-367	5,662	10,982	7,517	10,386	6,993	1,869	-1,594	-1,445	-1,120
40%	59	-439	-908	3,520	7,240	5,489	9,345	6,123	1,385	-2,172	-2,923	-1,931
50%	13	-688	-1,266	2,051	4,895	3,149	7,690	5,136	1,021	-2,566	-3,852	-2,445
60%	-277	-1,356	-1,870	926	3,228	2,565	6,087	2,939	740	-3,117	-4,635	-3,011
70%	-498	-1,752	-3,347	-388	1,998	1,798	3,568	2,183	544	-3,831	-4,922	-3,732
80%	-771	-2,186	-5,079	-1,042	1,138	1,341	2,090	1,276	97	-4,457	-5,315	-4,050
90%	-1,577	-3,655	-5,613	-1,317	-525	826	1,649	929	-75	-4,771	-5,533	-4,414
Long Term												
Full Simulation Period[b]	-152	-604	354	6,065	8,790	7,514	9,325	6,938	2,291	-2,226	-3,046	-2,189
Water Year Types[c]												
Wet (32%)	-159	-25	5,007	15,152	17,194	15,778	17,396	14,363	5,435	-668	-4,441	-2,977
Above Normal (16%)	-434	-1,125	199	7,163	9,988	7,324	10,091	6,608	909	-2,220	-5,358	-1,608
Below Normal (13%)	185	-1,055	-2,871	908	5,888	2,004	6,057	3,774	773	-4,223	-4,418	-3,135
Dry (24%)	-166	-978	-2,732	266	2,980	3,262	4,539	2,664	538	-3,920	-846	-2,104
Critical (15%)	-118	-258	-1,458	-420	1,627	1,952	1,977	1,228	1,289	-954	74	-384

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	83	73	6,891	16,697	23,223	20,213	15,887	10,799	4,840	710	346	66
20%	49	-17	1,659	10,215	12,269	10,204	8,880	3,919	1,899	-325	-670	-971
30%	-115	-844	38	6,317	10,027	6,380	5,473	2,022	631	-717	-1,640	-1,833
40%	-600	-1,792	-930	3,541	6,548	4,551	3,460	1,600	180	-1,862	-2,730	-2,462
50%	-1,730	-2,278	-1,568	2,754	4,145	2,910	3,048	1,243	-175	-2,431	-3,512	-3,217
60%	-2,231	-2,540	-2,531	1,900	2,573	2,148	2,142	1,036	-675	-2,945	-4,187	-3,653
70%	-2,815	-3,019	-3,073	841	1,626	1,517	1,694	609	-916	-3,376	-4,629	-3,809
80%	-3,331	-3,396	-3,382	65	567	806	1,255	288	-1,370	-4,175	-5,134	-4,063
90%	-3,941	-3,786	-3,798	-532	-963	-483	662	-390	-1,638	-4,926	-5,457	-4,430
Long Term												
Full Simulation Period[b]	-1,568	-1,486	783	6,530	8,539	7,092	5,910	3,725	1,179	-1,964	-2,963	-2,627
Water Year Types[c]												
Wet (32%)	-2,011	-1,326	5,481	14,861	16,783	15,532	12,500	9,420	4,460	-362	-3,821	-2,846
Above Normal (16%)	-1,488	-1,523	820	7,597	9,153	6,379	4,758	1,601	-233	-2,368	-5,066	-4,165
Below Normal (13%)	-2,014	-2,255	-2,401	1,759	5,969	1,128	2,884	1,043	-736	-4,525	-4,783	-3,620
Dry (24%)	-1,461	-1,779	-2,408	1,318	3,030	2,961	2,470	798	-649	-3,392	-1,162	-2,111
Critical (15%)	-467	-597	-1,196	387	1,547	1,928	1,383	1,023	400	-269	-158	-435

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-1,107	-866	-489	368	3,084	3,263	-5,131	-6,766	-1,896	270	-526	-54
20%	-467	-70	96	-1,049	-435	-265	-5,048	-5,718	-1,298	112	-217	-237
30%	-329	-808	405	655	-955	-1,137	-4,913	-4,971	-1,238	877	-196	-713
40%	-659	-1,353	-22	20	-692	-938	-5,885	-4,523	-1,205	310	194	-532
50%	-1,743	-1,590	-301	703	-751	-239	-4,642	-3,892	-1,196	134	340	-772
60%	-1,953	-1,183	-661	974	-654	-417	-3,945	-1,903	-1,415	172	448	-642
70%	-2,318	-1,267	273	1,229	-372	-281	-1,874	-1,574	-1,460	455	293	-77
80%	-2,560	-1,210	1,698	1,107	-571	-535	-835	-989	-1,468	282	182	-13
90%	-2,364	-131	1,816	785	-438	-1,309	-987	-1,319	-1,563	-154	76	-16
Long Term												
Full Simulation Period[b]	-1,416	-882	429	465	-251	-423	-3,415	-3,213	-1,112	262	83	-438
Water Year Types[c]												
Wet (32%)	-1,852	-1,302	474	-291	-410	-246	-4,897	-4,943	-975	306	620	131
Above Normal (16%)	-1,055	-397	622	434	-834	-946	-5,332	-5,007	-1,143	-148	292	-2,557
Below Normal (13%)	-2,199	-1,200	469	851	81	-876	-3,172	-2,731	-1,509	-302	-365	-485
Dry (24%)	-1,295	-801	323	1,052	50	-301	-2,069	-1,866	-1,187	528	-316	-7
Critical (15%)	-349	-338	262	807	-80	-24	-594	-205	-888	685	-232	-51

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-33-3. Qwest, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,190	939	7,381	16,329	20,138	16,951	21,018	17,565	6,736	440	871	120
20%	515	53	1,563	11,264	12,704	10,469	13,927	9,636	3,197	-437	-453	-734
30%	215	-36	-367	5,662	10,982	7,517	10,386	6,993	1,869	-1,594	-1,445	-1,120
40%	59	-439	-908	3,520	7,240	5,489	9,345	6,123	1,385	-2,172	-2,923	-1,931
50%	13	-688	-1,266	2,051	4,895	3,149	7,690	5,136	1,021	-2,566	-3,852	-2,445
60%	-277	-1,356	-1,870	926	3,228	2,565	6,087	2,939	740	-3,117	-4,635	-3,011
70%	-498	-1,752	-3,347	-388	1,998	1,798	3,568	2,183	544	-3,831	-4,922	-3,732
80%	-771	-2,186	-5,079	-1,042	1,138	1,341	2,090	1,276	97	-4,457	-5,315	-4,050
90%	-1,577	-3,655	-5,613	-1,317	-525	826	1,649	929	-75	-4,771	-5,533	-4,414
Long Term												
Full Simulation Period[b]	-152	-604	354	6,065	8,790	7,514	9,325	6,938	2,291	-2,226	-3,046	-2,189
Water Year Types[c]												
Wet (32%)	-159	-25	5,007	15,152	17,194	15,778	17,396	14,363	5,435	-668	-4,441	-2,977
Above Normal (16%)	-434	-1,125	199	7,163	9,988	7,324	10,091	6,608	909	-2,220	-5,358	-1,608
Below Normal (13%)	185	-1,055	-2,871	908	5,888	2,004	6,057	3,774	773	-4,223	-4,418	-3,135
Dry (24%)	-166	-978	-2,732	266	2,980	3,262	4,539	2,664	538	-3,920	-846	-2,104
Critical (15%)	-118	-258	-1,458	-420	1,627	1,952	1,977	1,228	1,289	-954	74	-384

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,313	968	7,282	16,331	20,138	16,955	21,014	17,566	6,728	437	81	120
20%	638	63	1,597	11,247	13,399	10,470	13,753	9,636	2,812	-820	-724	-747
30%	229	-54	-137	5,649	11,039	7,466	10,689	7,517	1,840	-1,646	-2,006	-1,275
40%	63	-389	-911	3,523	7,238	5,229	9,387	6,665	1,308	-2,129	-3,225	-1,958
50%	33	-628	-1,305	2,059	4,891	3,149	7,939	5,892	916	-2,560	-4,387	-2,417
60%	-304	-1,160	-1,901	635	3,241	2,564	6,513	4,370	682	-3,583	-4,645	-3,022
70%	-529	-1,607	-3,368	-267	1,998	1,797	4,975	3,342	316	-4,074	-4,946	-3,631
80%	-808	-2,205	-5,076	-1,042	1,131	1,339	4,199	3,100	38	-4,661	-5,317	-3,869
90%	-1,328	-3,634	-5,605	-1,318	-523	826	3,332	2,556	-228	-4,898	-5,527	-4,431
Long Term												
Full Simulation Period[b]	-126	-568	324	6,049	8,782	7,475	10,009	7,798	2,216	-2,354	-3,255	-2,188
Water Year Types[c]												
Wet (32%)	-116	-170	4,930	15,168	17,253	15,677	17,395	14,643	5,404	-643	-4,504	-2,838
Above Normal (16%)	-494	-665	200	7,142	9,916	7,321	10,237	7,138	900	-2,243	-5,317	-1,571
Below Normal (13%)	244	-1,049	-2,835	903	5,803	1,948	6,741	4,691	713	-4,254	-4,527	-3,334
Dry (24%)	-104	-940	-2,793	263	2,969	3,260	6,004	4,146	362	-4,324	-1,270	-2,188
Critical (15%)	-124	-260	-1,433	-530	1,622	1,961	3,430	2,612	1,200	-1,154	-455	-399

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	124	28	-99	2	-1	4	-4	0	-8	-3	-790	0
20%	122	9	34	-17	695	1	-174	0	-385	-382	-271	-14
30%	14	-18	230	-13	57	-51	303	524	-29	-52	-561	-155
40%	4	50	-3	3	-2	-260	42	542	-77	43	-301	-27
50%	20	60	-39	8	-4	0	249	756	-105	5	-535	28
60%	-27	197	-31	-291	13	-1	426	1,431	-58	-466	-10	-11
70%	-31	145	-21	121	0	-1	1,407	1,159	-229	-243	-24	100
80%	-37	-19	3	0	-7	-2	2,109	1,824	-59	-204	-2	181
90%	250	21	8	-1	2	0	1,683	1,628	-153	-126	6	-17
Long Term												
Full Simulation Period[b]	26	36	-31	-16	-8	-40	684	860	-75	-128	-209	1
Water Year Types[c]												
Wet (32%)	43	-146	-77	16	59	-102	-2	280	-31	25	-63	139
Above Normal (16%)	-60	460	1	-20	-72	-4	146	530	-10	-23	41	37
Below Normal (13%)	59	6	35	-5	-86	-55	684	918	-60	-31	-109	-199
Dry (24%)	62	38	-62	-3	-12	-2	1,465	1,482	-177	-404	-423	-84
Critical (15%)	-7	-2	26	-110	-5	8	1,453	1,383	-89	-200	-529	-15

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-33-4. Qwest, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	526	63	3,807	14,561	22,874	19,881	17,707	11,934	6,962	589	574	51
20%	52	-329	-373	5,175	11,903	12,002	9,173	5,150	3,364	-449	-914	-893
30%	-460	-1,268	-1,373	2,351	7,291	6,402	5,119	3,265	1,714	-1,165	-1,709	-1,906
40%	-1,099	-1,835	-2,345	434	3,614	3,627	3,040	2,343	986	-1,555	-2,018	-2,562
50%	-1,755	-2,203	-2,771	-770	1,066	1,641	2,151	2,056	282	-1,968	-3,060	-3,258
60%	-2,219	-2,602	-2,967	-2,092	-314	884	1,828	1,415	13	-2,278	-3,763	-3,773
70%	-2,740	-3,082	-3,330	-2,363	-1,709	-252	1,518	1,130	-706	-2,909	-4,291	-3,947
80%	-3,336	-3,412	-3,547	-2,866	-2,513	-874	1,188	513	-1,399	-3,531	-4,804	-4,109
90%	-3,917	-3,663	-4,036	-3,611	-3,110	-1,605	763	-453	-2,023	-4,332	-5,168	-4,339
Long Term												
Full Simulation Period[b]	-1,596	-1,575	-246	3,386	6,363	6,391	5,778	4,362	1,925	-1,726	-2,729	-2,654
Water Year Types[c]												
Wet (32%)	-2,042	-1,353	3,511	12,143	15,965	16,223	12,737	10,629	6,448	-533	-3,786	-2,986
Above Normal (16%)	-1,407	-1,408	-293	2,659	6,954	6,279	4,374	2,700	203	-2,384	-4,684	-4,210
Below Normal (13%)	-2,223	-2,535	-2,647	-2,770	3,655	366	2,198	847	-1,135	-4,288	-3,305	-3,131
Dry (24%)	-1,352	-1,850	-2,738	-1,663	-502	484	2,392	1,283	-289	-2,470	-1,259	-2,247
Critical (15%)	-666	-898	-1,983	-742	-1,155	580	1,146	938	485	-14	-243	-491

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,190	939	7,381	16,329	20,138	16,951	21,018	17,565	6,736	440	871	120
20%	515	53	1,563	11,264	12,704	10,469	13,927	9,636	3,197	-437	-453	-734
30%	215	-36	-367	5,662	10,982	7,517	10,386	6,993	1,869	-1,594	-1,445	-1,120
40%	59	-439	-908	3,520	7,240	5,489	9,345	6,123	1,385	-2,172	-2,923	-1,931
50%	13	-688	-1,266	2,051	4,895	3,149	7,690	5,136	1,021	-2,566	-3,852	-2,445
60%	-277	-1,356	-1,870	926	3,228	2,565	6,087	2,939	740	-3,117	-4,635	-3,011
70%	-498	-1,752	-3,347	-388	1,998	1,798	3,568	2,183	544	-3,831	-4,922	-3,732
80%	-771	-2,186	-5,079	-1,042	1,138	1,341	2,090	1,276	97	-4,457	-5,315	-4,050
90%	-1,577	-3,655	-5,613	-1,317	-525	826	1,649	929	-75	-4,771	-5,533	-4,414
Long Term												
Full Simulation Period[b]	-152	-604	354	6,065	8,790	7,514	9,325	6,938	2,291	-2,226	-3,046	-2,189
Water Year Types[c]												
Wet (32%)	-159	-25	5,007	15,152	17,194	15,778	17,396	14,363	5,435	-668	-4,441	-2,977
Above Normal (16%)	-434	-1,125	199	7,163	9,988	7,324	10,091	6,608	909	-2,220	-5,358	-1,608
Below Normal (13%)	185	-1,055	-2,871	908	5,888	2,004	6,057	3,774	773	-4,223	-4,418	-3,135
Dry (24%)	-166	-978	-2,732	266	2,980	3,262	4,539	2,664	538	-3,920	-846	-2,104
Critical (15%)	-118	-258	-1,458	-420	1,627	1,952	1,977	1,228	1,289	-954	74	-384

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	664	876	3,574	1,768	**-2,736**	**-2,930**	3,312	5,631	**-226**	**-149**	297	69
20%	463	382	1,936	6,089	801	**-1,533**	4,755	4,487	**-167**	12	461	160
30%	675	1,232	1,006	3,311	3,691	1,115	5,267	3,728	155	**-429**	264	786
40%	1,157	1,396	1,437	3,087	3,627	1,862	6,305	3,780	399	**-617**	**-905**	631
50%	1,768	1,515	1,505	2,821	3,829	1,507	5,539	3,080	740	**-597**	**-792**	813
60%	1,941	1,246	1,098	3,018	3,542	1,681	4,259	1,524	727	**-839**	**-872**	762
70%	2,242	1,329	**-16**	1,975	3,707	2,049	2,050	1,053	1,251	**-922**	**-631**	215
80%	2,565	1,227	**-1,533**	1,824	3,651	2,215	902	763	1,497	**-926**	**-511**	59
90%	2,340	8	**-1,577**	2,294	2,585	2,431	886	1,381	1,948	**-440**	**-365**	**-75**
Long Term												
Full Simulation Period[b]	1,444	971	600	2,679	2,427	1,123	3,546	2,575	366	**-500**	**-317**	465
Water Year Types[c]												
Wet (32%)	1,883	1,328	1,496	3,009	1,229	**-445**	4,659	3,734	**-1,013**	**-136**	**-656**	9
Above Normal (16%)	973	282	492	4,504	3,034	1,046	5,717	3,908	707	164	**-674**	2,602
Below Normal (13%)	2,408	1,480	**-224**	3,677	2,233	1,637	3,858	2,927	1,908	65	**-1,112**	**-4**
Dry (24%)	1,186	872	6	1,929	3,482	2,778	2,147	1,381	827	**-1,451**	413	142
Critical (15%)	549	640	524	322	2,782	1,372	831	291	804	**-940**	317	107

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-33-5. Qwest, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	526	63	3,807	14,561	22,874	19,881	17,707	11,934	6,962	589	574	51
20%	52	-329	-373	5,175	11,903	12,002	9,173	5,150	3,364	-449	-914	-893
30%	-460	-1,268	-1,373	2,351	7,291	6,402	5,119	3,265	1,714	-1,165	-1,709	-1,906
40%	-1,099	-1,835	-2,345	434	3,614	3,627	3,040	2,343	986	-1,555	-2,018	-2,562
50%	-1,755	-2,203	-2,771	-770	1,066	1,641	2,151	2,056	282	-1,968	-3,060	-3,258
60%	-2,219	-2,602	-2,967	-2,092	-314	884	1,828	1,415	13	-2,278	-3,763	-3,773
70%	-2,740	-3,082	-3,330	-2,363	-1,709	-252	1,518	1,130	-706	-2,909	-4,291	-3,947
80%	-3,336	-3,412	-3,547	-2,866	-2,513	-874	1,188	513	-1,399	-3,531	-4,804	-4,109
90%	-3,917	-3,663	-4,036	-3,611	-3,110	-1,605	763	-453	-2,023	-4,332	-5,168	-4,339
Long Term												
Full Simulation Period[b]	-1,596	-1,575	-246	3,386	6,363	6,391	5,778	4,362	1,925	-1,726	-2,729	-2,654
Water Year Types[c]												
Wet (32%)	-2,042	-1,353	3,511	12,143	15,965	16,223	12,737	10,629	6,448	-533	-3,786	-2,986
Above Normal (16%)	-1,407	-1,408	-293	2,659	6,954	6,279	4,374	2,700	203	-2,384	-4,684	-4,210
Below Normal (13%)	-2,223	-2,535	-2,647	-2,770	3,655	366	2,198	847	-1,135	-4,288	-3,305	-3,131
Dry (24%)	-1,352	-1,850	-2,738	-1,663	-502	484	2,392	1,283	-289	-2,470	-1,259	-2,247
Critical (15%)	-666	-898	-1,983	-742	-1,155	580	1,146	938	485	-14	-243	-491

Alternative 3

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	83	73	6,891	16,697	23,223	20,213	15,887	10,799	4,840	710	346	66
20%	49	-17	1,659	10,215	12,269	10,204	8,880	3,919	1,899	-325	-670	-971
30%	-115	-844	38	6,317	10,027	6,380	5,473	2,022	631	-717	-1,640	-1,833
40%	-600	-1,792	-930	3,541	6,548	4,551	3,460	1,600	180	-1,862	-2,730	-2,462
50%	-1,730	-2,278	-1,568	2,754	4,145	2,910	3,048	1,243	-175	-2,431	-3,512	-3,217
60%	-2,231	-2,540	-2,531	1,900	2,573	2,148	2,142	1,036	-675	-2,945	-4,187	-3,653
70%	-2,815	-3,019	-3,073	841	1,626	1,517	1,694	609	-916	-3,376	-4,629	-3,809
80%	-3,331	-3,396	-3,382	65	567	806	1,255	288	-1,370	-4,175	-5,134	-4,063
90%	-3,941	-3,786	-3,798	-532	-963	-483	662	-390	-1,638	-4,926	-5,457	-4,430
Long Term												
Full Simulation Period[b]	-1,568	-1,486	783	6,530	8,539	7,092	5,910	3,725	1,179	-1,964	-2,963	-2,627
Water Year Types[c]												
Wet (32%)	-2,011	-1,326	5,481	14,861	16,783	15,532	12,500	9,420	4,460	-362	-3,821	-2,846
Above Normal (16%)	-1,488	-1,523	820	7,597	9,153	6,379	4,758	1,601	-233	-2,368	-5,066	-4,165
Below Normal (13%)	-2,014	-2,255	-2,401	1,759	5,969	1,128	2,884	1,043	-736	-4,525	-4,783	-3,620
Dry (24%)	-1,461	-1,779	-2,408	1,318	3,030	2,961	2,470	798	-649	-3,392	-1,162	-2,111
Critical (15%)	-467	-597	-1,196	387	1,547	1,928	1,383	1,023	400	-269	-158	-435

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-443	10	3,084	2,136	349	333	-1,819	-1,135	-2,122	121	-229	16
20%	-4	312	2,032	5,040	365	-1,798	-293	-1,231	-1,465	124	244	-77
30%	345	424	1,412	3,966	2,736	-22	354	-1,243	-1,083	448	68	73
40%	498	43	1,415	3,107	2,934	924	420	-742	-806	-306	-712	100
50%	25	-75	1,203	3,524	3,079	1,268	897	-812	-456	-463	-452	41
60%	-12	62	436	3,991	2,888	1,264	314	-379	-689	-667	-424	120
70%	-76	63	257	3,204	3,335	1,768	176	-521	-210	-467	-339	138
80%	6	17	165	2,931	3,080	1,680	67	-225	29	-644	-330	46
90%	-24	-123	239	3,079	2,147	1,122	-101	63	386	-594	-289	-91
Long Term												
Full Simulation Period[b]	27	89	1,030	3,144	2,176	700	131	-637	-746	-238	-234	27
Water Year Types[c]												
Wet (32%)	31	26	1,970	2,718	819	-691	-238	-1,209	-1,988	170	-36	140
Above Normal (16%)	-82	-115	1,113	4,938	2,200	100	385	-1,099	-436	16	-382	45
Below Normal (13%)	209	280	245	4,529	2,314	761	686	196	399	-237	-1,477	-489
Dry (24%)	-110	70	330	2,981	3,532	2,477	78	-485	-360	-923	98	136
Critical (15%)	199	302	786	1,129	2,702	1,348	237	85	-84	-255	85	56

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-33-6. Qwest, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	526	63	3,807	14,561	22,874	19,881	17,707	11,934	6,962	589	574	51
20%	52	-329	-373	5,175	11,903	12,002	9,173	5,150	3,364	-449	-914	-893
30%	-460	-1,268	-1,373	2,351	7,291	6,402	5,119	3,265	1,714	-1,165	-1,709	-1,906
40%	-1,099	-1,835	-2,345	434	3,614	3,627	3,040	2,343	986	-1,555	-2,018	-2,562
50%	-1,755	-2,203	-2,771	-770	1,066	1,641	2,151	2,056	282	-1,968	-3,060	-3,258
60%	-2,219	-2,602	-2,967	-2,092	-314	884	1,828	1,415	13	-2,278	-3,763	-3,773
70%	-2,740	-3,082	-3,330	-2,363	-1,709	-252	1,518	1,130	-706	-2,909	-4,291	-3,947
80%	-3,336	-3,412	-3,547	-2,866	-2,513	-874	1,188	513	-1,399	-3,531	-4,804	-4,109
90%	-3,917	-3,663	-4,036	-3,611	-3,110	-1,605	763	-453	-2,023	-4,332	-5,168	-4,339
Long Term												
Full Simulation Period[b]	-1,596	-1,575	-246	3,386	6,363	6,391	5,778	4,362	1,925	-1,726	-2,729	-2,654
Water Year Types[c]												
Wet (32%)	-2,042	-1,353	3,511	12,143	15,965	16,223	12,737	10,629	6,448	-533	-3,786	-2,986
Above Normal (16%)	-1,407	-1,408	-293	2,659	6,954	6,279	4,374	2,700	203	-2,384	-4,684	-4,210
Below Normal (13%)	-2,223	-2,535	-2,647	-2,770	3,655	366	2,198	847	-1,135	-4,288	-3,305	-3,131
Dry (24%)	-1,352	-1,850	-2,738	-1,663	-502	484	2,392	1,283	-289	-2,470	-1,259	-2,247
Critical (15%)	-666	-898	-1,983	-742	-1,155	580	1,146	938	485	-14	-243	-491

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1,313	968	7,282	16,331	20,138	16,955	21,014	17,566	6,728	437	81	120
20%	638	63	1,597	11,247	13,399	10,470	13,753	9,636	2,812	-820	-724	-747
30%	229	-54	-137	5,649	11,039	7,466	10,689	7,517	1,840	-1,646	-2,006	-1,275
40%	63	-389	-911	3,523	7,238	5,229	9,387	6,665	1,308	-2,129	-3,225	-1,958
50%	33	-628	-1,305	2,059	4,891	3,149	7,939	5,892	916	-2,560	-4,387	-2,417
60%	-304	-1,160	-1,901	635	3,241	2,564	6,513	4,370	682	-3,583	-4,645	-3,022
70%	-529	-1,607	-3,368	-267	1,998	1,797	4,975	3,342	316	-4,074	-4,946	-3,631
80%	-808	-2,205	-5,076	-1,042	1,131	1,339	4,199	3,100	38	-4,661	-5,317	-3,869
90%	-1,328	-3,634	-5,605	-1,318	-523	826	3,332	2,556	-228	-4,898	-5,527	-4,431
Long Term												
Full Simulation Period[b]	-126	-568	324	6,049	8,782	7,475	10,009	7,798	2,216	-2,354	-3,255	-2,188
Water Year Types[c]												
Wet (32%)	-116	-170	4,930	15,168	17,253	15,677	17,395	14,643	5,404	-643	-4,504	-2,838
Above Normal (16%)	-494	-665	200	7,142	9,916	7,321	10,237	7,138	900	-2,243	-5,317	-1,571
Below Normal (13%)	244	-1,049	-2,835	903	5,803	1,948	6,741	4,691	713	-4,254	-4,527	-3,334
Dry (24%)	-104	-940	-2,793	263	2,969	3,260	6,004	4,146	362	-4,324	-1,270	-2,188
Critical (15%)	-124	-260	-1,433	-530	1,622	1,961	3,430	2,612	1,200	-1,154	-455	-399

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	787	904	3,475	1,770	**-2,737**	**-2,926**	3,308	5,632	**-234**	**-152**	**-493**	69
20%	585	391	1,970	6,072	1,495	**-1,532**	4,580	4,487	**-552**	**-370**	190	146
30%	689	1,214	1,237	3,298	3,748	1,064	5,570	4,252	126	**-481**	**-297**	631
40%	1,161	1,446	1,434	3,090	3,625	1,602	6,347	4,322	322	**-574**	**-1,207**	604
50%	1,787	1,575	1,466	2,829	3,825	1,508	5,787	3,836	634	**-592**	**-1,327**	841
60%	1,915	1,442	1,066	2,726	3,555	1,680	4,685	2,955	669	**-1,305**	**-882**	751
70%	2,211	1,474	**-37**	2,096	3,706	2,049	3,457	2,212	1,022	**-1,165**	**-655**	316
80%	2,528	1,208	**-1,530**	1,824	3,643	2,213	3,011	2,587	1,438	**-1,129**	**-513**	240
90%	2,590	29	**-1,568**	2,293	2,588	2,431	2,569	3,009	1,795	**-566**	**-359**	**-92**
Long Term												
Full Simulation Period[b]	1,470	1,007	570	2,663	2,419	1,083	4,231	3,435	291	**-627**	**-525**	466
Water Year Types[c]												
Wet (32%)	1,927	1,182	1,419	3,025	1,288	**-547**	4,657	4,014	**-1,043**	**-110**	**-718**	148
Above Normal (16%)	913	742	493	4,484	2,962	1,042	5,863	4,438	697	141	**-633**	2,639
Below Normal (13%)	2,467	1,487	**-189**	3,672	2,148	1,582	4,542	3,844	1,847	34	**-1,222**	**-202**
Dry (24%)	1,248	910	**-56**	1,926	3,471	2,776	3,612	2,863	651	**-1,855**	**-10**	58
Critical (15%)	542	638	550	213	2,776	1,380	2,284	1,674	715	**-1,140**	**-212**	93

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

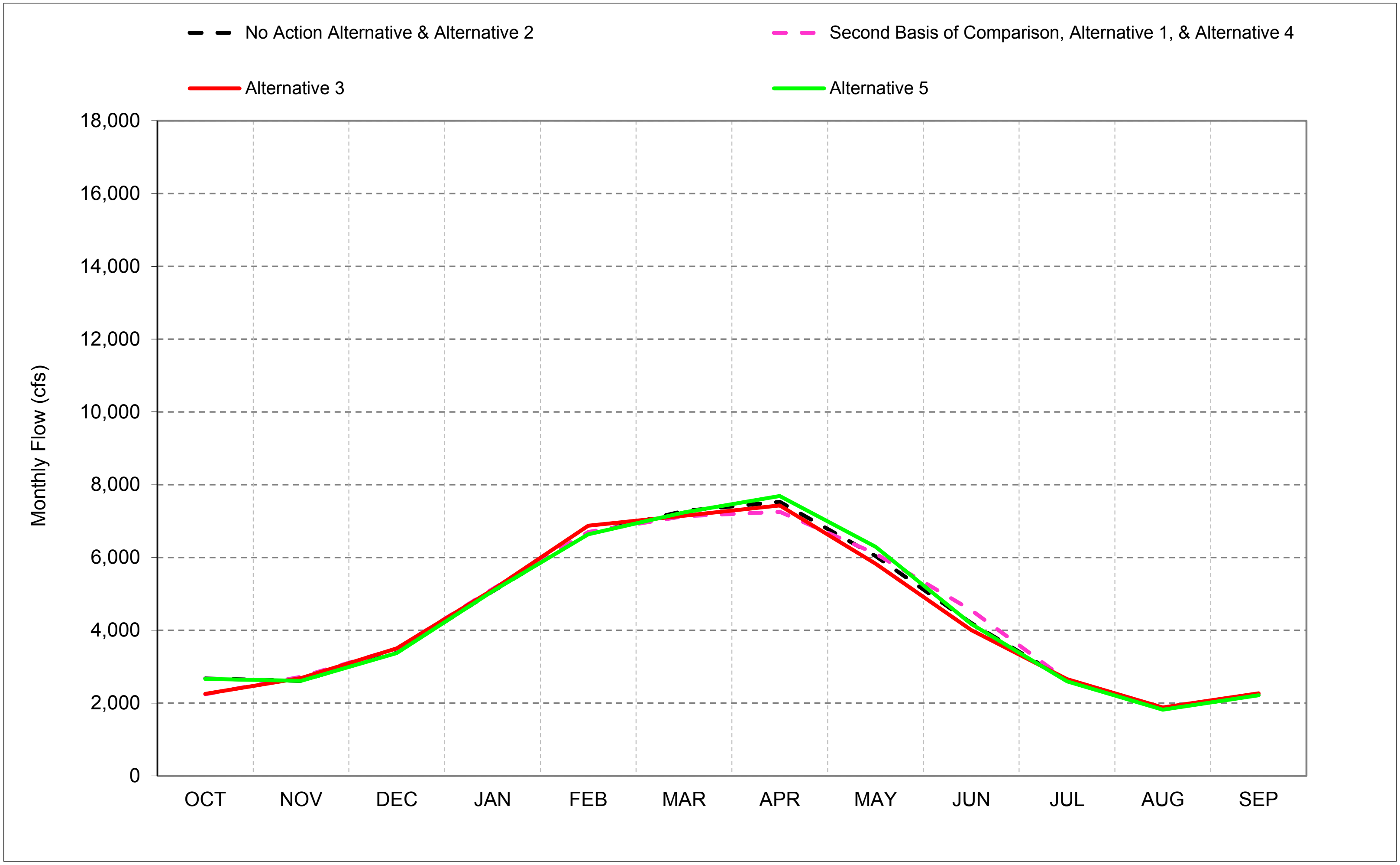
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.34. San Joaquin River Flow at Vernalis

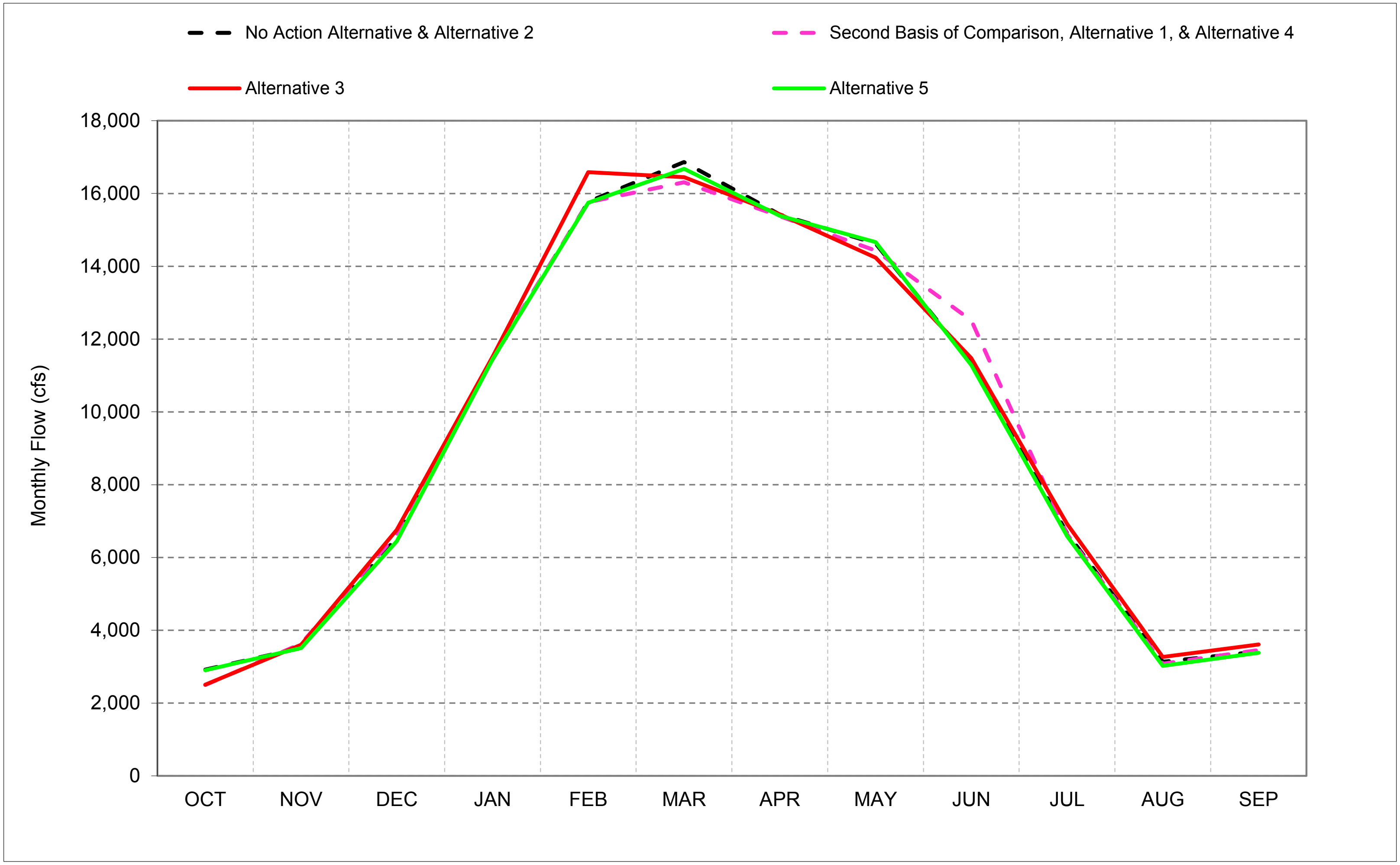
Figure C-34-1. San Joaquin River at Vernalis, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-34-2. San Joaquin River at Vernalis, Wet Year* Long-Term Average Flow**

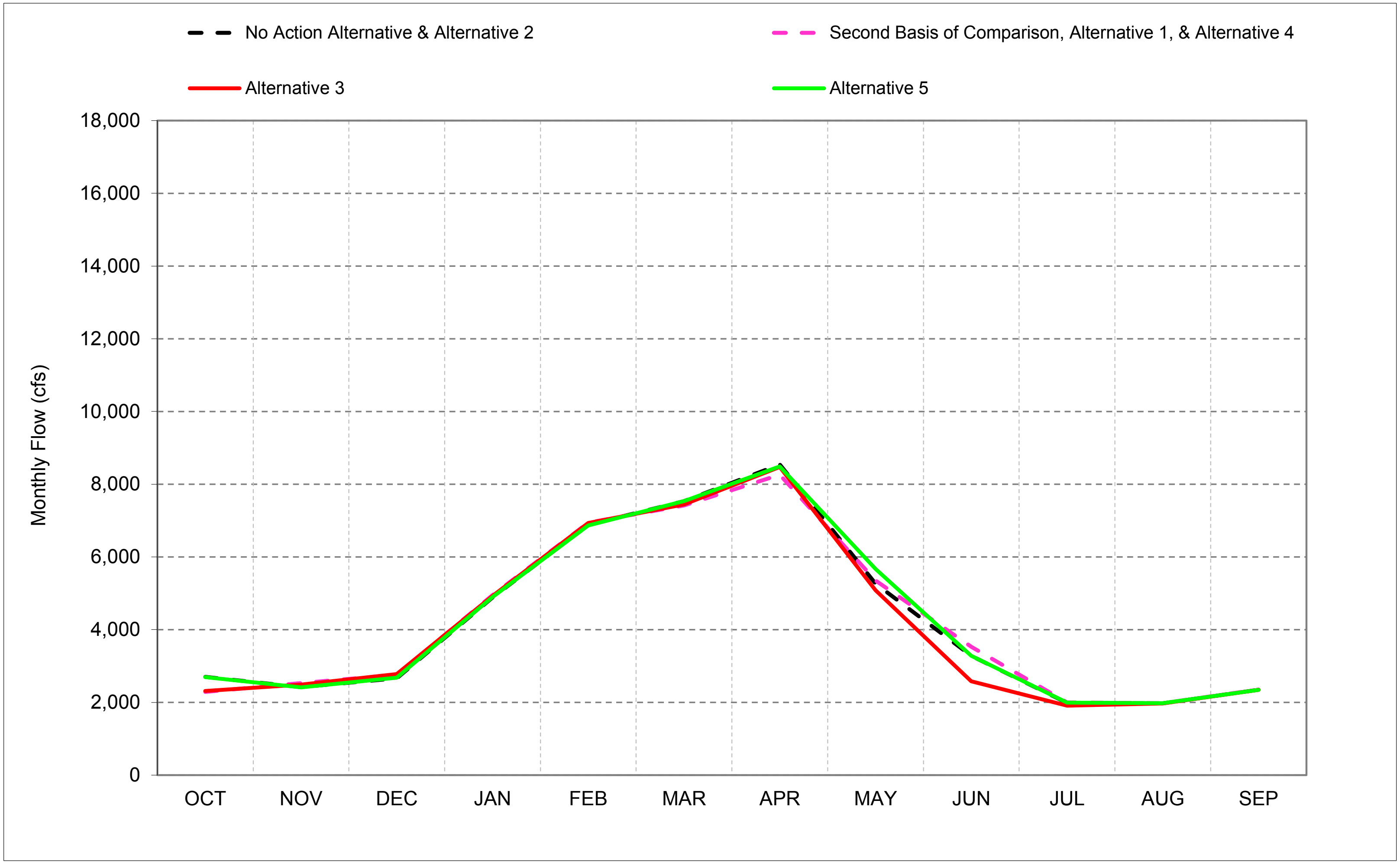


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-34-3. San Joaquin River at Vernalis, Above Normal Year* Long-Term Average Flow**

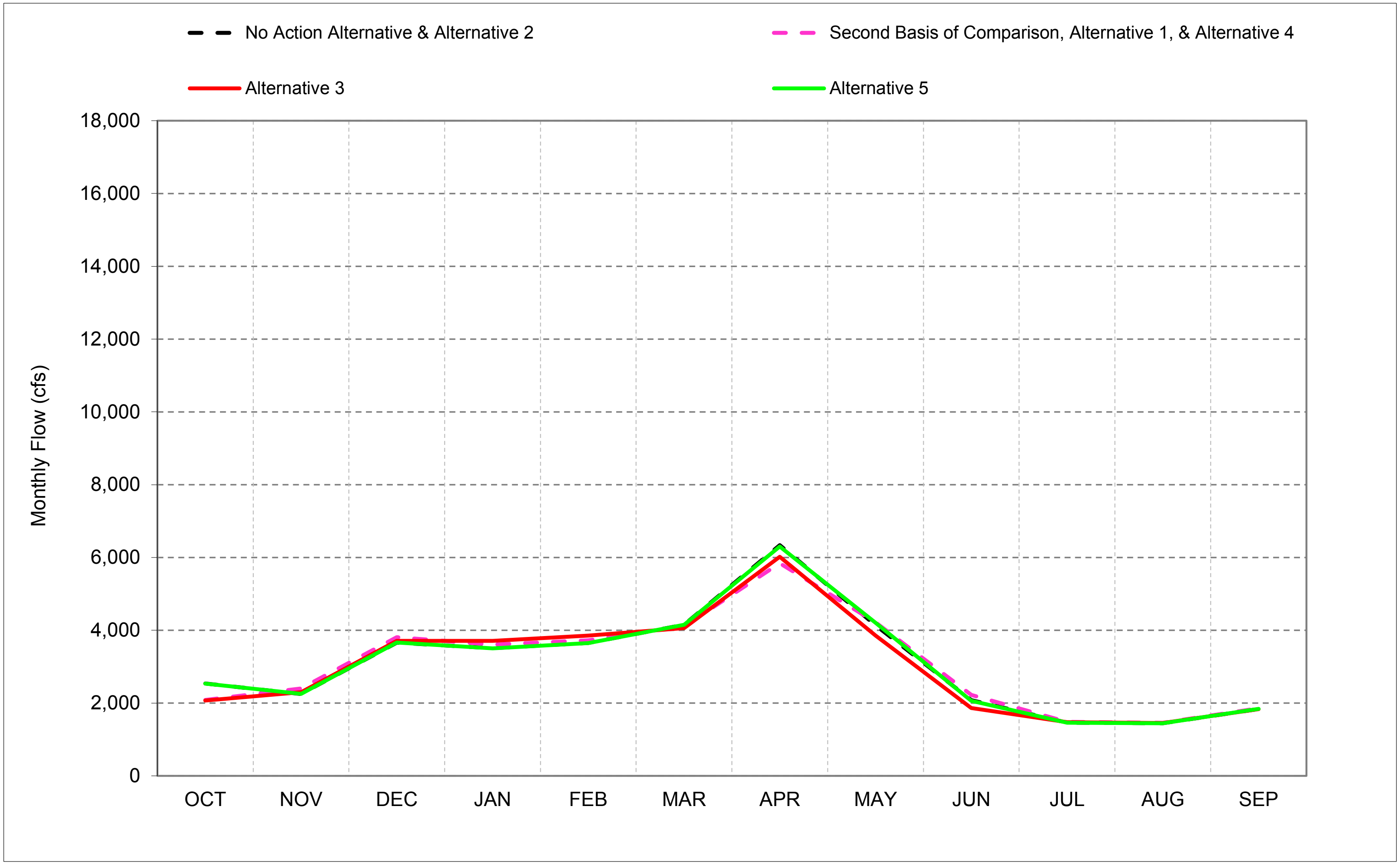


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-34-4. San Joaquin River at Vernalis, Below Normal Year* Long-Term Average Flow**

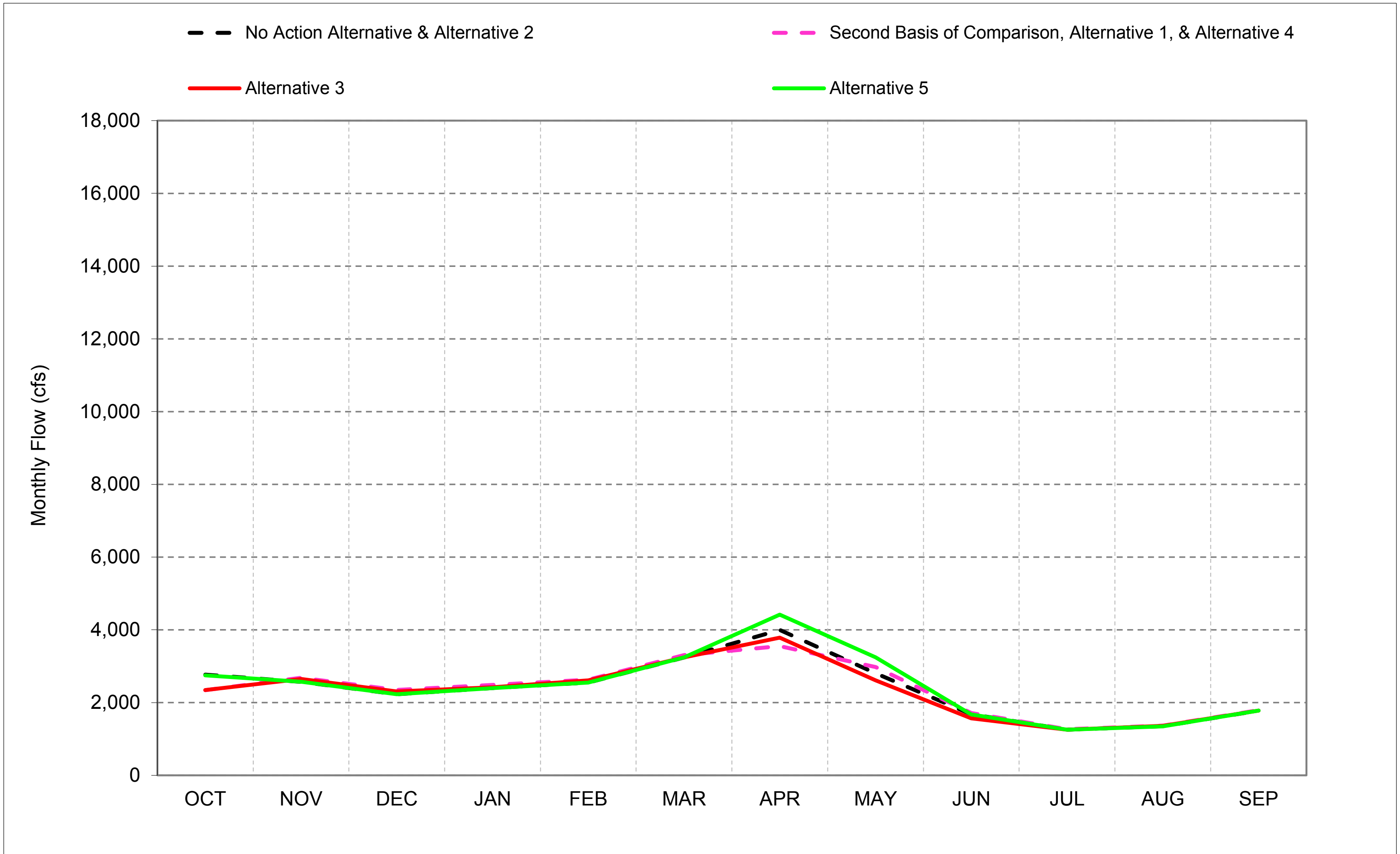


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-34-5. San Joaquin River at Vernalis, Dry Year* Long-Term Average Flow**

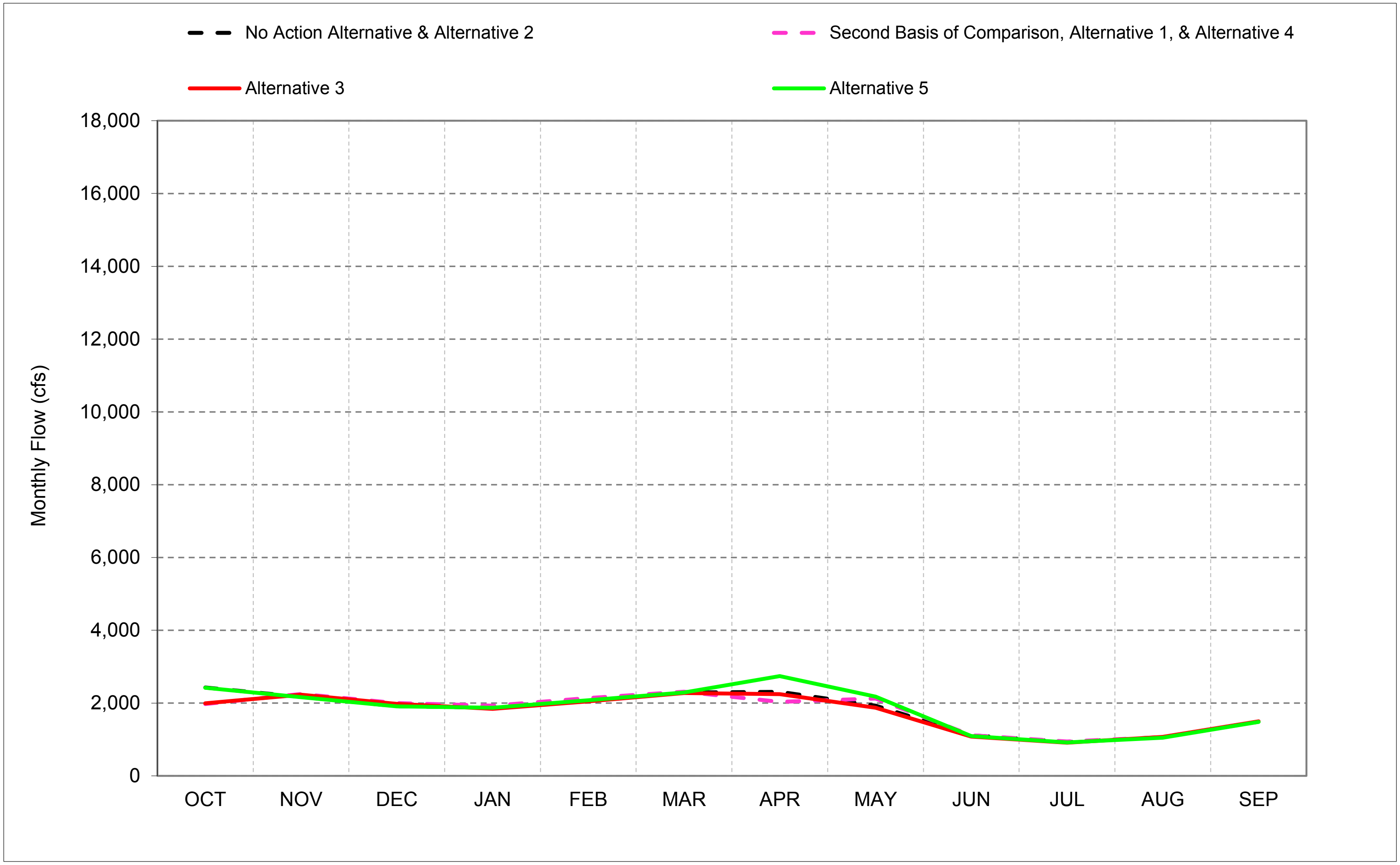


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-34-6. San Joaquin River at Vernalis, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-34-1. San Joaquin River at Vernalis, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	3,498	2,953	4,804	11,135	14,596	15,471	14,974	14,174	9,351	5,890	2,796	3,060
20%	3,161	2,777	2,857	4,812	10,143	10,197	10,637	8,318	4,690	2,628	2,589	2,654
30%	2,980	2,527	2,401	3,610	6,118	8,459	8,616	5,534	3,364	1,985	1,904	2,490
40%	2,796	2,395	2,215	2,629	4,232	5,570	7,564	4,609	2,947	1,735	1,666	2,125
50%	2,601	2,219	2,101	2,402	3,420	3,847	6,017	3,925	2,246	1,487	1,488	1,930
60%	2,401	2,169	2,046	2,293	2,683	3,459	4,832	3,062	1,859	1,366	1,403	1,835
70%	2,247	2,059	1,979	2,114	2,305	2,906	3,776	2,699	1,448	1,154	1,307	1,739
80%	1,994	1,951	1,829	1,884	2,150	2,371	2,789	2,153	1,293	1,087	1,202	1,611
90%	1,849	1,763	1,669	1,699	1,947	2,204	1,887	1,678	1,085	885	1,067	1,476
Long Term												
Full Simulation Period[b]	2,672	2,611	3,391	5,070	6,655	7,278	7,528	6,039	4,194	2,622	1,847	2,223
Water Year Types[c]												
Wet (23%)	2,918	3,513	6,545	11,446	15,776	16,863	15,423	14,628	11,335	6,676	3,135	3,416
Above Normal (24%)	2,700	2,416	2,663	4,883	6,881	7,536	8,542	5,264	3,280	1,989	1,975	2,345
Below Normal (10%)	2,538	2,249	3,661	3,507	3,651	4,149	6,337	4,140	2,076	1,463	1,446	1,837
Dry (16%)	2,767	2,569	2,232	2,402	2,549	3,241	3,996	2,805	1,680	1,254	1,347	1,776
Critical (27%)	2,426	2,168	1,915	1,877	2,090	2,288	2,307	1,929	1,115	926	1,060	1,487

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	3,015	3,156	4,932	11,157	14,594	15,467	14,666	14,360	10,139	5,612	2,740	3,146
20%	2,692	2,843	2,953	4,819	10,200	9,482	10,169	8,291	5,696	2,636	2,600	2,658
30%	2,520	2,663	2,541	3,655	6,300	7,933	8,421	5,676	3,488	1,990	1,897	2,503
40%	2,331	2,500	2,341	2,692	4,268	5,393	7,435	4,617	3,188	1,742	1,676	2,142
50%	2,157	2,386	2,257	2,544	3,420	3,883	6,016	4,043	2,349	1,506	1,500	1,944
60%	1,952	2,244	2,165	2,343	2,774	3,511	4,349	3,276	1,895	1,379	1,415	1,842
70%	1,752	2,141	2,027	2,153	2,443	2,963	3,119	2,891	1,485	1,170	1,321	1,743
80%	1,597	1,984	1,903	1,923	2,174	2,414	2,442	2,362	1,274	1,088	1,211	1,611
90%	1,411	1,793	1,699	1,733	1,945	2,230	1,779	1,890	1,085	941	1,071	1,478
Long Term												
Full Simulation Period[b]	2,241	2,721	3,492	5,136	6,700	7,131	7,255	6,101	4,547	2,625	1,838	2,238
Water Year Types[c]												
Wet (23%)	2,497	3,627	6,644	11,506	15,763	16,308	15,374	14,433	12,512	6,641	3,078	3,456
Above Normal (24%)	2,288	2,532	2,757	4,947	6,946	7,415	8,260	5,348	3,525	1,999	1,977	2,352
Below Normal (10%)	2,086	2,397	3,810	3,608	3,723	4,101	5,842	4,213	2,225	1,481	1,457	1,856
Dry (16%)	2,339	2,684	2,347	2,487	2,628	3,304	3,551	2,976	1,714	1,267	1,362	1,789
Critical (27%)	1,974	2,251	1,998	1,927	2,138	2,311	2,031	2,122	1,116	943	1,059	1,485

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-483	203	128	23	-2	-4	-308	186	788	-278	-56	86
20%	-469	65	96	7	57	-714	-468	-26	1,006	8	11	4
30%	-460	136	141	44	182	-526	-195	142	124	5	-7	13
40%	-465	105	125	64	36	-177	-129	8	241	8	10	17
50%	-444	166	156	143	0	36	-2	118	103	20	12	14
60%	-449	75	119	50	91	52	-483	214	36	14	13	7
70%	-494	82	48	39	139	57	-657	192	37	15	14	4
80%	-397	33	74	40	23	43	-347	209	-19	1	9	1
90%	-438	30	30	34	-2	26	-108	213	0	56	5	2
Long Term												
Full Simulation Period[b]	-431	110	101	66	45	-147	-273	61	353	3	-9	14
Water Year Types[c]												
Wet (23%)	-420	114	99	60	-13	-555	-49	-195	1,177	-35	-57	40
Above Normal (24%)	-412	116	94	63	65	-121	-282	83	244	10	2	7
Below Normal (10%)	-452	148	148	102	72	-49	-495	74	149	18	11	19
Dry (16%)	-428	115	115	85	79	63	-445	171	33	12	15	13
Critical (27%)	-452	83	83	49	48	23	-276	194	2	17	-1	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-34-2. San Joaquin River at Vernalis, Monthly Flow

No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,498	2,953	4,804	11,135	14,596	15,471	14,974	14,174	9,351	5,890	2,796	3,060
20%	3,161	2,777	2,857	4,812	10,143	10,197	10,637	8,318	4,690	2,628	2,589	2,654
30%	2,980	2,527	2,401	3,610	6,118	8,459	8,616	5,534	3,364	1,985	1,904	2,490
40%	2,796	2,395	2,215	2,629	4,232	5,570	7,564	4,609	2,947	1,735	1,666	2,125
50%	2,601	2,219	2,101	2,402	3,420	3,847	6,017	3,925	2,246	1,487	1,488	1,930
60%	2,401	2,169	2,046	2,293	2,683	3,459	4,832	3,062	1,859	1,366	1,403	1,835
70%	2,247	2,059	1,979	2,114	2,305	2,906	3,776	2,699	1,448	1,154	1,307	1,739
80%	1,994	1,951	1,829	1,884	2,150	2,371	2,789	2,153	1,293	1,087	1,202	1,611
90%	1,849	1,763	1,669	1,699	1,947	2,204	1,887	1,678	1,085	885	1,067	1,476
Long Term												
Full Simulation Period[b]	2,672	2,611	3,391	5,070	6,655	7,278	7,528	6,039	4,194	2,622	1,847	2,223
Water Year Types[c]												
Wet (23%)	2,918	3,513	6,545	11,446	15,776	16,863	15,423	14,628	11,335	6,676	3,135	3,416
Above Normal (24%)	2,700	2,416	2,663	4,883	6,881	7,536	8,542	5,264	3,280	1,989	1,975	2,345
Below Normal (10%)	2,538	2,249	3,661	3,507	3,651	4,149	6,337	4,140	2,076	1,463	1,446	1,837
Dry (16%)	2,767	2,569	2,232	2,402	2,549	3,241	3,996	2,805	1,680	1,254	1,347	1,776
Critical (27%)	2,426	2,168	1,915	1,877	2,090	2,288	2,307	1,929	1,115	926	1,060	1,487

Alternative 3

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,023	3,053	4,949	12,089	17,246	15,467	14,936	14,309	10,004	6,473	3,525	3,287
20%	2,667	2,830	2,938	4,833	10,213	9,874	10,251	7,931	4,627	2,495	2,587	2,623
30%	2,494	2,583	2,421	3,540	6,797	7,753	8,532	5,438	2,558	1,926	1,892	2,464
40%	2,328	2,478	2,304	2,753	4,210	5,305	7,580	4,344	2,294	1,722	1,667	2,125
50%	2,137	2,313	2,191	2,439	3,215	3,847	6,112	3,821	1,955	1,506	1,495	1,932
60%	1,956	2,244	2,140	2,236	2,668	3,440	4,501	2,907	1,700	1,361	1,415	1,838
70%	1,782	2,148	2,012	2,088	2,360	2,906	3,355	2,502	1,364	1,164	1,319	1,743
80%	1,609	1,974	1,886	1,824	2,090	2,371	2,581	2,158	1,241	1,026	1,211	1,612
90%	1,466	1,763	1,669	1,639	1,849	2,205	1,936	1,650	1,001	930	1,065	1,477
Long Term												
Full Simulation Period[b]	2,252	2,683	3,501	5,108	6,872	7,145	7,431	5,830	4,009	2,655	1,882	2,271
Water Year Types[c]												
Wet (23%)	2,505	3,604	6,760	11,512	16,584	16,445	15,425	14,237	11,476	6,916	3,267	3,610
Above Normal (24%)	2,310	2,488	2,775	4,925	6,937	7,444	8,476	5,078	2,579	1,910	1,972	2,341
Below Normal (10%)	2,067	2,299	3,711	3,708	3,857	4,057	6,015	3,856	1,865	1,472	1,454	1,834
Dry (16%)	2,346	2,646	2,309	2,419	2,607	3,241	3,785	2,611	1,568	1,253	1,360	1,782
Critical (27%)	1,991	2,227	1,974	1,842	2,043	2,273	2,247	1,874	1,080	912	1,067	1,497

Alternative 3 minus No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-474	100	146	954	2,651	-4	-38	135	653	582	729	227
20%	-495	53	80	21	70	-322	-386	-387	-63	-134	-2	-31
30%	-486	56	20	-71	679	-706	-84	-95	-806	-59	-11	-25
40%	-468	83	89	124	-22	-264	17	-265	-653	-12	1	0
50%	-464	94	91	37	-205	1	95	-104	-291	19	6	3
60%	-444	75	94	-57	-15	-19	-331	-155	-159	-5	13	3
70%	-465	89	33	-26	55	0	-421	-197	-83	10	12	4
80%	-385	23	56	-59	-60	1	-208	5	-52	-61	9	2
90%	-382	0	0	-59	-98	1	49	-27	-84	45	-1	1
Long Term												
Full Simulation Period[b]	-420	72	110	38	218	-132	-97	-209	-186	33	35	47
Water Year Types[c]												
Wet (23%)	-412	91	215	66	808	-418	2	-391	141	240	132	194
Above Normal (24%)	-390	72	112	42	56	-93	-66	-186	-701	-79	-3	-4
Below Normal (10%)	-471	50	50	201	206	-92	-322	-284	-210	9	8	-3
Dry (16%)	-421	77	77	17	58	1	-212	-194	-112	-2	13	6
Critical (27%)	-435	59	59	-35	-47	-15	-61	-54	-34	-14	7	10

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

1/0/1900

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	3,498	2,953	4,804	11,135	14,596	15,471	14,974	14,174	9,351	5,890	2,796	3,060
20%	3,161	2,777	2,857	4,812	10,143	10,197	10,637	8,318	4,690	2,628	2,589	2,654
30%	2,980	2,527	2,401	3,610	6,118	8,459	8,616	5,534	3,364	1,985	1,904	2,490
40%	2,796	2,395	2,215	2,629	4,232	5,570	7,564	4,609	2,947	1,735	1,666	2,125
50%	2,601	2,219	2,101	2,402	3,420	3,847	6,017	3,925	2,246	1,487	1,488	1,930
60%	2,401	2,169	2,046	2,293	2,683	3,459	4,832	3,062	1,859	1,366	1,403	1,835
70%	2,247	2,059	1,979	2,114	2,305	2,906	3,776	2,699	1,448	1,154	1,307	1,739
80%	1,994	1,951	1,829	1,884	2,150	2,371	2,789	2,153	1,293	1,087	1,202	1,611
90%	1,849	1,763	1,669	1,699	1,947	2,204	1,887	1,678	1,085	885	1,067	1,476
Long Term												
Full Simulation Period[b]	2,672	2,611	3,391	5,070	6,655	7,278	7,528	6,039	4,194	2,622	1,847	2,223
Water Year Types[c]												
Wet (23%)	2,918	3,513	6,545	11,446	15,776	16,863	15,423	14,628	11,335	6,676	3,135	3,416
Above Normal (24%)	2,700	2,416	2,663	4,883	6,881	7,536	8,542	5,264	3,280	1,989	1,975	2,345
Below Normal (10%)	2,538	2,249	3,661	3,507	3,651	4,149	6,337	4,140	2,076	1,463	1,446	1,837
Dry (16%)	2,767	2,569	2,232	2,402	2,549	3,241	3,996	2,805	1,680	1,254	1,347	1,776
Critical (27%)	2,426	2,168	1,915	1,877	2,090	2,288	2,307	1,929	1,115	926	1,060	1,487

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	3,495	2,953	4,804	11,129	14,597	15,473	14,976	14,176	9,351	5,773	2,776	3,084
20%	3,146	2,777	2,897	4,811	10,142	9,856	10,265	8,232	4,688	2,628	2,589	2,654
30%	2,938	2,527	2,401	3,610	6,118	8,461	8,576	5,670	3,364	1,985	1,904	2,488
40%	2,763	2,395	2,204	2,629	4,232	5,570	7,567	5,162	2,947	1,735	1,666	2,125
50%	2,588	2,219	2,101	2,402	3,420	3,846	6,110	4,183	2,219	1,484	1,488	1,930
60%	2,385	2,169	2,046	2,289	2,683	3,459	5,047	3,554	1,860	1,365	1,402	1,835
70%	2,196	2,059	1,979	2,083	2,303	2,906	4,317	2,916	1,447	1,155	1,307	1,739
80%	1,988	1,951	1,829	1,883	2,145	2,371	3,100	2,401	1,283	1,052	1,202	1,611
90%	1,849	1,763	1,669	1,699	1,947	2,204	2,461	2,245	1,000	885	1,025	1,431
Long Term												
Full Simulation Period[b]	2,660	2,609	3,371	5,071	6,639	7,235	7,686	6,290	4,174	2,597	1,818	2,213
Water Year Types[c]												
Wet (23%)	2,903	3,513	6,448	11,445	15,743	16,679	15,389	14,666	11,287	6,580	3,020	3,379
Above Normal (24%)	2,691	2,411	2,679	4,897	6,864	7,536	8,487	5,671	3,280	1,989	1,975	2,345
Below Normal (10%)	2,531	2,249	3,661	3,506	3,650	4,149	6,299	4,206	2,062	1,462	1,446	1,837
Dry (16%)	2,750	2,569	2,232	2,400	2,547	3,241	4,420	3,245	1,672	1,253	1,346	1,776
Critical (27%)	2,418	2,163	1,910	1,871	2,078	2,288	2,741	2,177	1,090	916	1,051	1,480

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-2	0	0	-6	1	2	2	2	0	-117	-20	24
20%	-16	0	39	0	0	-341	-372	-86	-2	-1	0	0
30%	-42	0	0	0	0	1	-40	136	0	0	0	-1
40%	-32	0	-11	0	0	0	3	553	0	0	0	0
50%	-14	0	0	0	0	0	92	258	-26	-3	0	0
60%	-15	0	0	-4	0	0	215	492	0	-1	0	0
70%	-51	0	0	-31	-2	0	541	216	0	1	0	0
80%	-7	0	0	0	-6	0	311	248	-10	-36	0	0
90%	0	0	0	0	0	0	574	568	-85	0	-42	-45
Long Term												
Full Simulation Period[b]	-11	-2	-20	1	-15	-43	158	251	-20	-25	-29	-11
Water Year Types[c]												
Wet (23%)	-15	0	-97	0	-32	-185	-34	38	-47	-96	-115	-38
Above Normal (24%)	-9	-5	16	13	-17	0	-55	407	0	0	0	0
Below Normal (10%)	-7	0	0	-1	-1	0	-38	66	-14	0	0	0
Dry (16%)	-17	0	0	-2	-2	0	424	439	-9	-1	-1	0
Critical (27%)	-8	-5	-5	-6	-13	0	434	248	-24	-10	-9	-7

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-34-4. San Joaquin River at Vernalis, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,015	3,156	4,932	11,157	14,594	15,467	14,666	14,360	10,139	5,612	2,740	3,146
20%	2,692	2,843	2,953	4,819	10,200	9,482	10,169	8,291	5,696	2,636	2,600	2,658
30%	2,520	2,663	2,541	3,655	6,300	7,933	8,421	5,676	3,488	1,990	1,897	2,503
40%	2,331	2,500	2,341	2,692	4,268	5,393	7,435	4,617	3,188	1,742	1,676	2,142
50%	2,157	2,386	2,257	2,544	3,420	3,883	6,016	4,043	2,349	1,506	1,500	1,944
60%	1,952	2,244	2,165	2,343	2,774	3,511	4,349	3,276	1,895	1,379	1,415	1,842
70%	1,752	2,141	2,027	2,153	2,443	2,963	3,119	2,891	1,485	1,170	1,321	1,743
80%	1,597	1,984	1,903	1,923	2,174	2,414	2,442	2,362	1,274	1,088	1,211	1,611
90%	1,411	1,793	1,699	1,733	1,945	2,230	1,779	1,890	1,085	941	1,071	1,478
Long Term												
Full Simulation Period[b]	2,241	2,721	3,492	5,136	6,700	7,131	7,255	6,101	4,547	2,625	1,838	2,238
Water Year Types[c]												
Wet (23%)	2,497	3,627	6,644	11,506	15,763	16,308	15,374	14,433	12,512	6,641	3,078	3,456
Above Normal (24%)	2,288	2,532	2,757	4,947	6,946	7,415	8,260	5,348	3,525	1,999	1,977	2,352
Below Normal (10%)	2,086	2,397	3,810	3,608	3,723	4,101	5,842	4,213	2,225	1,481	1,457	1,856
Dry (16%)	2,339	2,684	2,347	2,487	2,628	3,304	3,551	2,976	1,714	1,267	1,362	1,789
Critical (27%)	1,974	2,251	1,998	1,927	2,138	2,311	2,031	2,122	1,116	943	1,059	1,485

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,498	2,953	4,804	11,135	14,596	15,471	14,974	14,174	9,351	5,890	2,796	3,060
20%	3,161	2,777	2,857	4,812	10,143	10,197	10,637	8,318	4,690	2,628	2,589	2,654
30%	2,980	2,527	2,401	3,610	6,118	8,459	8,616	5,534	3,364	1,985	1,904	2,490
40%	2,796	2,395	2,215	2,629	4,232	5,570	7,564	4,609	2,947	1,735	1,666	2,125
50%	2,601	2,219	2,101	2,402	3,420	3,847	6,017	3,925	2,246	1,487	1,488	1,930
60%	2,401	2,169	2,046	2,293	2,683	3,459	4,832	3,062	1,859	1,366	1,403	1,835
70%	2,247	2,059	1,979	2,114	2,305	2,906	3,776	2,699	1,448	1,154	1,307	1,739
80%	1,994	1,951	1,829	1,884	2,150	2,371	2,789	2,153	1,293	1,087	1,202	1,611
90%	1,849	1,763	1,669	1,699	1,947	2,204	1,887	1,678	1,085	885	1,067	1,476
Long Term												
Full Simulation Period[b]	2,672	2,611	3,391	5,070	6,655	7,278	7,528	6,039	4,194	2,622	1,847	2,223
Water Year Types[c]												
Wet (23%)	2,918	3,513	6,545	11,446	15,776	16,863	15,423	14,628	11,335	6,676	3,135	3,416
Above Normal (24%)	2,700	2,416	2,663	4,883	6,881	7,536	8,542	5,264	3,280	1,989	1,975	2,345
Below Normal (10%)	2,538	2,249	3,661	3,507	3,651	4,149	6,337	4,140	2,076	1,463	1,446	1,837
Dry (16%)	2,767	2,569	2,232	2,402	2,549	3,241	3,996	2,805	1,680	1,254	1,347	1,776
Critical (27%)	2,426	2,168	1,915	1,877	2,090	2,288	2,307	1,929	1,115	926	1,060	1,487

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	483	-203	-128	-23	2	4	308	-186	-788	278	56	-86
20%	469	-65	-96	-7	-57	714	468	26	-1,006	-8	-11	-4
30%	460	-136	-141	-44	-182	526	195	-142	-124	-5	7	-13
40%	465	-105	-125	-64	-36	177	129	-8	-241	-8	-10	-17
50%	444	-166	-156	-143	0	-36	2	-118	-103	-20	-12	-14
60%	449	-75	-119	-50	-91	-52	483	-214	-36	-14	-13	-7
70%	494	-82	-48	-39	-139	-57	657	-192	-37	-15	-14	-4
80%	397	-33	-74	-40	-23	-43	347	-209	19	-1	-9	-1
90%	438	-30	-30	-34	2	-26	108	-213	0	-56	-5	-2
Long Term												
Full Simulation Period[b]	431	-110	-101	-66	-45	147	273	-61	-353	-3	9	-14
Water Year Types[c]												
Wet (23%)	420	-114	-99	-60	13	555	49	195	-1,177	35	57	-40
Above Normal (24%)	412	-116	-94	-63	-65	121	282	-83	-244	-10	-2	-7
Below Normal (10%)	452	-148	-148	-102	-72	49	495	-74	-149	-18	-11	-19
Dry (16%)	428	-115	-115	-85	-79	-63	445	-171	-33	-12	-15	-13
Critical (27%)	452	-83	-83	-49	-48	-23	276	-194	-2	-17	1	2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-34-5. San Joaquin River at Vernalis, Monthly Flow

Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	3,015	3,156	4,932	11,157	14,594	15,467	14,666	14,360	10,139	5,612	2,740	3,146
20%	2,692	2,843	2,953	4,819	10,200	9,482	10,169	8,291	5,696	2,636	2,600	2,658
30%	2,520	2,663	2,541	3,655	6,300	7,933	8,421	5,676	3,488	1,990	1,897	2,503
40%	2,331	2,500	2,341	2,692	4,268	5,393	7,435	4,617	3,188	1,742	1,676	2,142
50%	2,157	2,386	2,257	2,544	3,420	3,883	6,016	4,043	2,349	1,506	1,500	1,944
60%	1,952	2,244	2,165	2,343	2,774	3,511	4,349	3,276	1,895	1,379	1,415	1,842
70%	1,752	2,141	2,027	2,153	2,443	2,963	3,119	2,891	1,485	1,170	1,321	1,743
80%	1,597	1,984	1,903	1,923	2,174	2,414	2,442	2,362	1,274	1,088	1,211	1,611
90%	1,411	1,793	1,699	1,733	1,945	2,230	1,779	1,890	1,085	941	1,071	1,478
Long Term												
Full Simulation Period[b]	2,241	2,721	3,492	5,136	6,700	7,131	7,255	6,101	4,547	2,625	1,838	2,238
Water Year Types[c]												
Wet (23%)	2,497	3,627	6,644	11,506	15,763	16,308	15,374	14,433	12,512	6,641	3,078	3,456
Above Normal (24%)	2,288	2,532	2,757	4,947	6,946	7,415	8,260	5,348	3,525	1,999	1,977	2,352
Below Normal (10%)	2,086	2,397	3,810	3,608	3,723	4,101	5,842	4,213	2,225	1,481	1,457	1,856
Dry (16%)	2,339	2,684	2,347	2,487	2,628	3,304	3,551	2,976	1,714	1,267	1,362	1,789
Critical (27%)	1,974	2,251	1,998	1,927	2,138	2,311	2,031	2,122	1,116	943	1,059	1,485

Alternative 3

	Monthly Flow (cfs)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	3,023	3,053	4,949	12,089	17,246	15,467	14,936	14,309	10,004	6,473	3,525	3,287
20%	2,667	2,830	2,938	4,833	10,213	9,874	10,251	7,931	4,627	2,495	2,587	2,623
30%	2,494	2,583	2,421	3,540	6,797	7,753	8,532	5,438	2,558	1,926	1,892	2,464
40%	2,328	2,478	2,304	2,753	4,210	5,305	7,580	4,344	2,294	1,722	1,667	2,125
50%	2,137	2,313	2,191	2,439	3,215	3,847	6,112	3,821	1,955	1,506	1,495	1,932
60%	1,956	2,244	2,140	2,236	2,668	3,440	4,501	2,907	1,700	1,361	1,415	1,838
70%	1,782	2,148	2,012	2,088	2,360	2,906	3,355	2,502	1,364	1,164	1,319	1,743
80%	1,609	1,974	1,886	1,824	2,090	2,371	2,581	2,158	1,241	1,026	1,211	1,612
90%	1,466	1,763	1,669	1,639	1,849	2,205	1,936	1,650	1,001	930	1,065	1,477
Long Term												
Full Simulation Period[b]	2,252	2,683	3,501	5,108	6,872	7,145	7,431	5,830	4,009	2,655	1,882	2,271
Water Year Types[c]												
Wet (23%)	2,505	3,604	6,760	11,512	16,584	16,445	15,425	14,237	11,476	6,916	3,267	3,610
Above Normal (24%)	2,310	2,488	2,775	4,925	6,937	7,444	8,476	5,078	2,579	1,910	1,972	2,341
Below Normal (10%)	2,067	2,299	3,711	3,708	3,857	4,057	6,015	3,856	1,865	1,472	1,454	1,834
Dry (16%)	2,346	2,646	2,309	2,419	2,607	3,241	3,785	2,611	1,568	1,253	1,360	1,782
Critical (27%)	1,991	2,227	1,974	1,842	2,043	2,273	2,247	1,874	1,080	912	1,067	1,497

Alternative 3 minus Second Basis of Comparison

	Monthly Flow (cfs)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]												
10%	8	-103	17	932	2,652	0	270	-51	-135	861	785	140
20%	-25	-12	-15	14	13	392	82	-360	-1,070	-142	-13	-34
30%	-26	-80	-120	-115	497	-180	111	-238	-930	-64	-5	-39
40%	-3	-22	-36	60	-58	-88	145	-273	-894	-20	-9	-17
50%	-20	-72	-65	-105	-205	-36	97	-222	-394	-1	-6	-11
60%	5	0	-25	-107	-107	-71	152	-369	-195	-19	0	-5
70%	30	7	-15	-65	-84	-57	237	-389	-121	-5	-2	-1
80%	12	-9	-17	-99	-84	-42	140	-203	-33	-62	0	1
90%	55	-30	-30	-94	-96	-25	156	-240	-84	-11	-6	-1
Long Term												
Full Simulation Period[b]	11	-38	9	-27	172	14	176	-271	-538	31	44	33
Water Year Types[c]												
Wet (23%)	8	-23	116	6	821	137	51	-197	-1,036	275	190	154
Above Normal (24%)	22	-45	18	-21	-9	29	216	-269	-945	-89	-5	-11
Below Normal (10%)	-19	-98	-98	100	134	-44	174	-357	-359	-9	-4	-22
Dry (16%)	7	-38	-38	-68	-21	-62	233	-365	-146	-14	-2	-7
Critical (27%)	16	-24	-24	-84	-95	-38	215	-248	-36	-31	8	12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-34-6. San Joaquin River at Vernalis, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,015	3,156	4,932	11,157	14,594	15,467	14,666	14,360	10,139	5,612	2,740	3,146
20%	2,692	2,843	2,953	4,819	10,200	9,482	10,169	8,291	5,696	2,636	2,600	2,658
30%	2,520	2,663	2,541	3,655	6,300	7,933	8,421	5,676	3,488	1,990	1,897	2,503
40%	2,331	2,500	2,341	2,692	4,268	5,393	7,435	4,617	3,188	1,742	1,676	2,142
50%	2,157	2,386	2,257	2,544	3,420	3,883	6,016	4,043	2,349	1,506	1,500	1,944
60%	1,952	2,244	2,165	2,343	2,774	3,511	4,349	3,276	1,895	1,379	1,415	1,842
70%	1,752	2,141	2,027	2,153	2,443	2,963	3,119	2,891	1,485	1,170	1,321	1,743
80%	1,597	1,984	1,903	1,923	2,174	2,414	2,442	2,362	1,274	1,088	1,211	1,611
90%	1,411	1,793	1,699	1,733	1,945	2,230	1,779	1,890	1,085	941	1,071	1,478
Long Term												
Full Simulation Period[b]	2,241	2,721	3,492	5,136	6,700	7,131	7,255	6,101	4,547	2,625	1,838	2,238
Water Year Types[c]												
Wet (23%)	2,497	3,627	6,644	11,506	15,763	16,308	15,374	14,433	12,512	6,641	3,078	3,456
Above Normal (24%)	2,288	2,532	2,757	4,947	6,946	7,415	8,260	5,348	3,525	1,999	1,977	2,352
Below Normal (10%)	2,086	2,397	3,810	3,608	3,723	4,101	5,842	4,213	2,225	1,481	1,457	1,856
Dry (16%)	2,339	2,684	2,347	2,487	2,628	3,304	3,551	2,976	1,714	1,267	1,362	1,789
Critical (27%)	1,974	2,251	1,998	1,927	2,138	2,311	2,031	2,122	1,116	943	1,059	1,485

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3,495	2,953	4,804	11,129	14,597	15,473	14,976	14,176	9,351	5,773	2,776	3,084
20%	3,146	2,777	2,897	4,811	10,142	9,856	10,265	8,232	4,688	2,628	2,589	2,654
30%	2,938	2,527	2,401	3,610	6,118	8,461	8,576	5,670	3,364	1,985	1,904	2,488
40%	2,763	2,395	2,204	2,629	4,232	5,570	7,567	5,162	2,947	1,735	1,666	2,125
50%	2,588	2,219	2,101	2,402	3,420	3,846	6,110	4,183	2,219	1,484	1,488	1,930
60%	2,385	2,169	2,046	2,289	2,683	3,459	5,047	3,554	1,860	1,365	1,402	1,835
70%	2,196	2,059	1,979	2,083	2,303	2,906	4,317	2,916	1,447	1,155	1,307	1,739
80%	1,988	1,951	1,829	1,883	2,145	2,371	3,100	2,401	1,283	1,052	1,202	1,611
90%	1,849	1,763	1,669	1,699	1,947	2,204	2,461	2,245	1,000	885	1,025	1,431
Long Term												
Full Simulation Period[b]	2,660	2,609	3,371	5,071	6,639	7,235	7,686	6,290	4,174	2,597	1,818	2,213
Water Year Types[c]												
Wet (23%)	2,903	3,513	6,448	11,445	15,743	16,679	15,389	14,666	11,287	6,580	3,020	3,379
Above Normal (24%)	2,691	2,411	2,679	4,897	6,864	7,536	8,487	5,671	3,280	1,989	1,975	2,345
Below Normal (10%)	2,531	2,249	3,661	3,506	3,650	4,149	6,299	4,206	2,062	1,462	1,446	1,837
Dry (16%)	2,750	2,569	2,232	2,400	2,547	3,241	4,420	3,245	1,672	1,253	1,346	1,776
Critical (27%)	2,418	2,163	1,910	1,871	2,078	2,288	2,741	2,177	1,090	916	1,051	1,480

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	480	-204	-128	-28	3	6	310	-184	-788	161	37	-62
20%	454	-65	-56	-8	-57	373	95	-60	-1,008	-8	-10	-3
30%	418	-136	-141	-44	-182	527	155	-6	-124	-4	7	-14
40%	432	-105	-137	-64	-36	176	131	545	-241	-8	-9	-18
50%	430	-166	-156	-143	0	-36	94	140	-129	-22	-12	-14
60%	433	-75	-119	-54	-91	-52	697	278	-35	-14	-13	-7
70%	444	-82	-48	-69	-141	-57	1,198	24	-37	-15	-14	-4
80%	390	-33	-74	-40	-29	-43	659	39	9	-37	-9	-1
90%	438	-30	-30	-34	2	-26	682	355	-85	-56	-46	-47
Long Term												
Full Simulation Period[b]	420	-112	-121	-65	-61	104	431	189	-373	-28	-20	-25
Water Year Types[c]												
Wet (23%)	406	-114	-196	-60	-20	371	14	233	-1,224	-61	-58	-77
Above Normal (24%)	403	-121	-79	-50	-82	121	227	323	-244	-10	-3	-7
Below Normal (10%)	444	-148	-148	-102	-73	48	457	-8	-162	-18	-12	-19
Dry (16%)	411	-115	-115	-86	-81	-63	869	269	-42	-13	-15	-14
Critical (27%)	443	-88	-88	-55	-61	-23	710	54	-26	-27	-8	-5

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

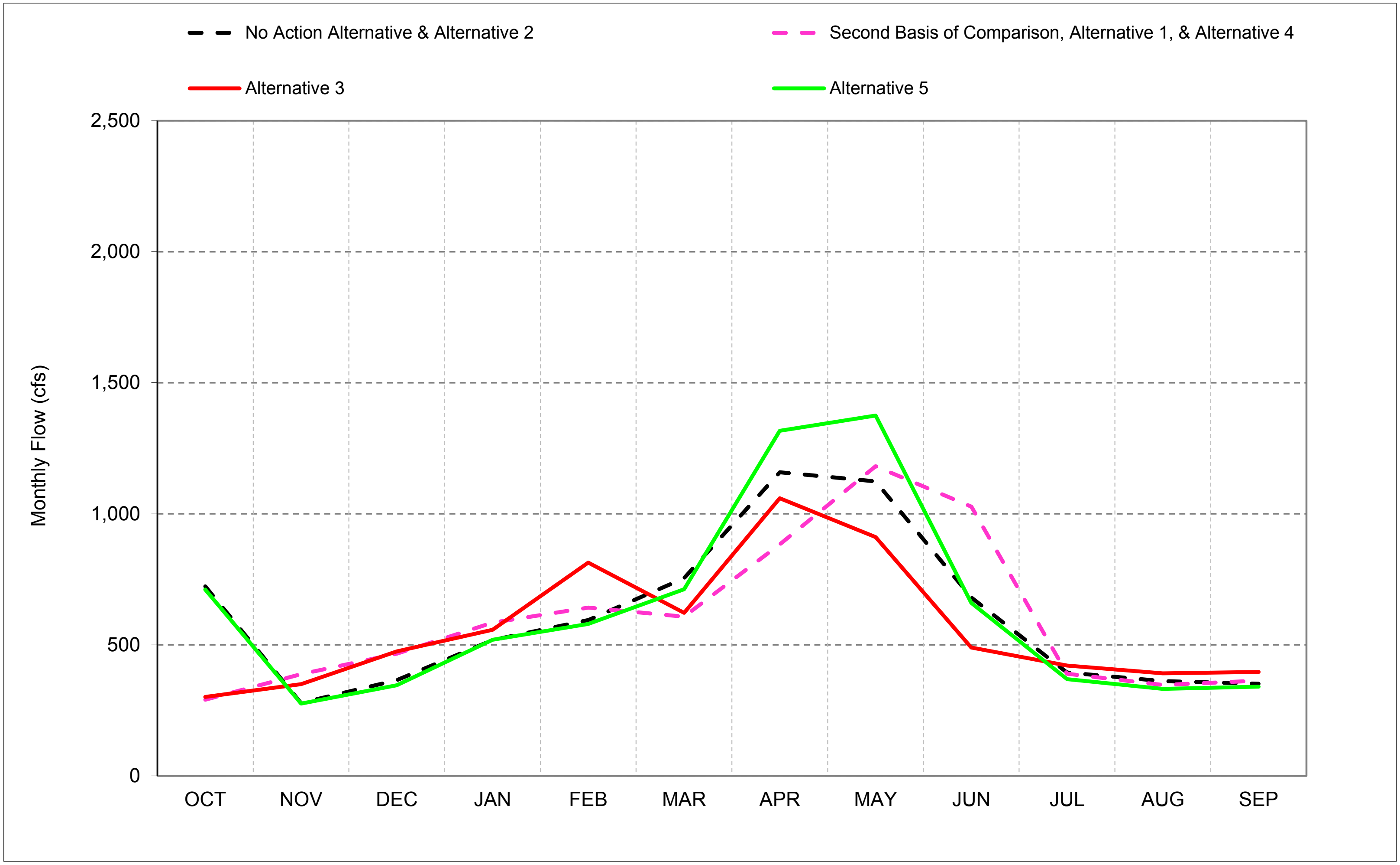
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

C.35. Stanislaus River Flow below Goodwin

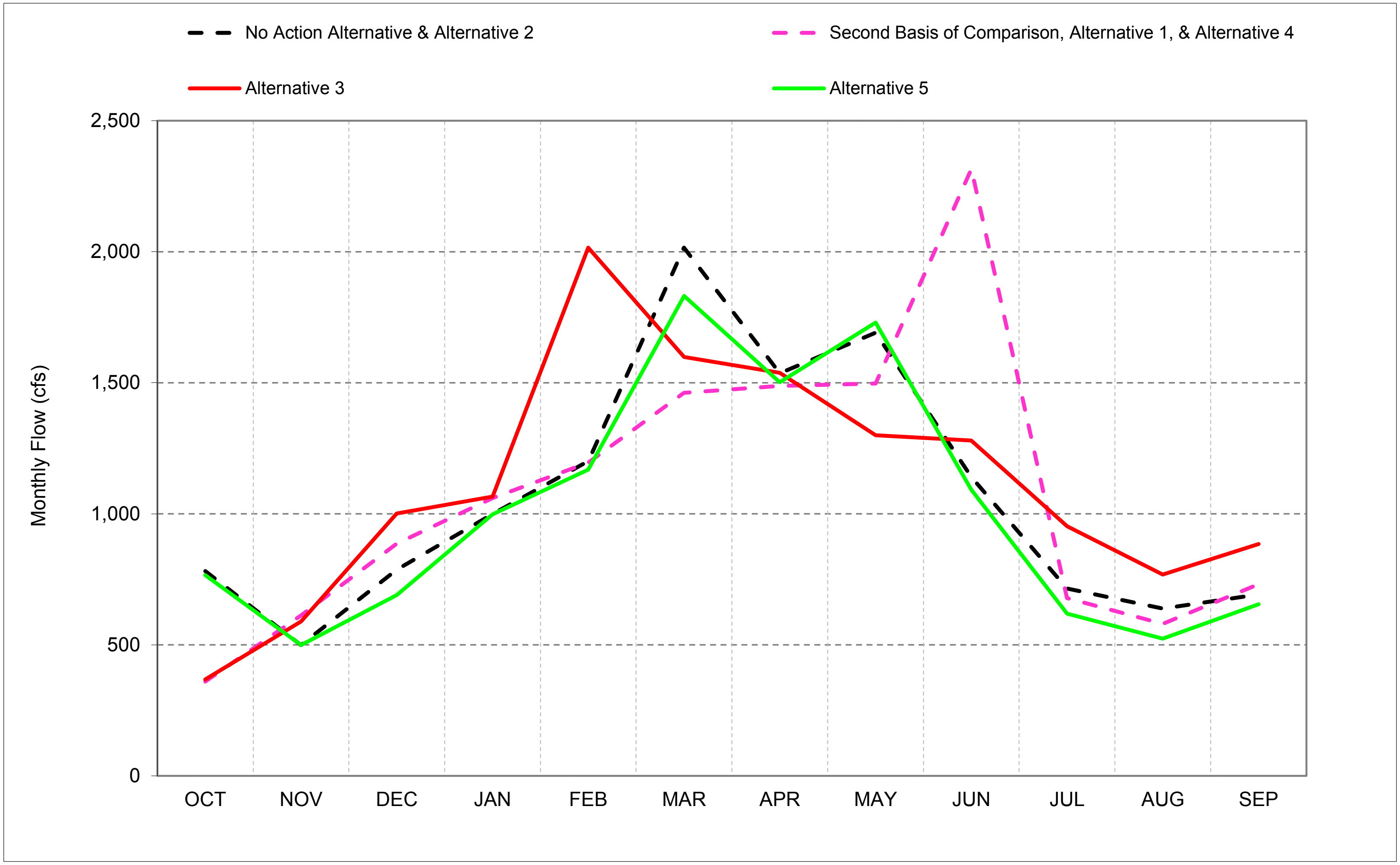
Figure C-35-1. Stanislaus River below Goodwin, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-35-2. Stanislaus River below Goodwin, Wet Year* Long-Term Average Flow**

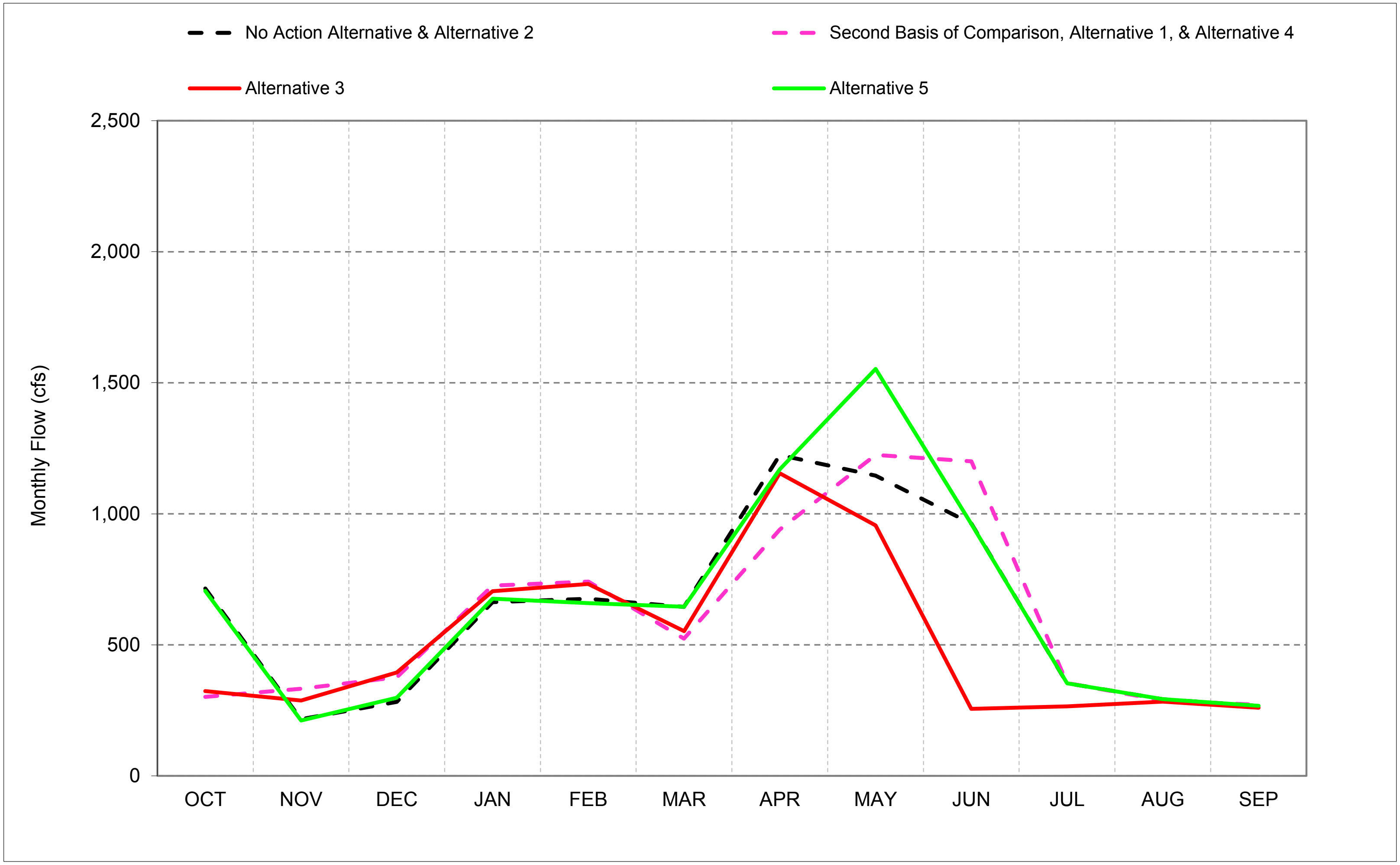


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-35-3. Stanislaus River below Goodwin, Above Normal Year* Long-Term Average Flow**

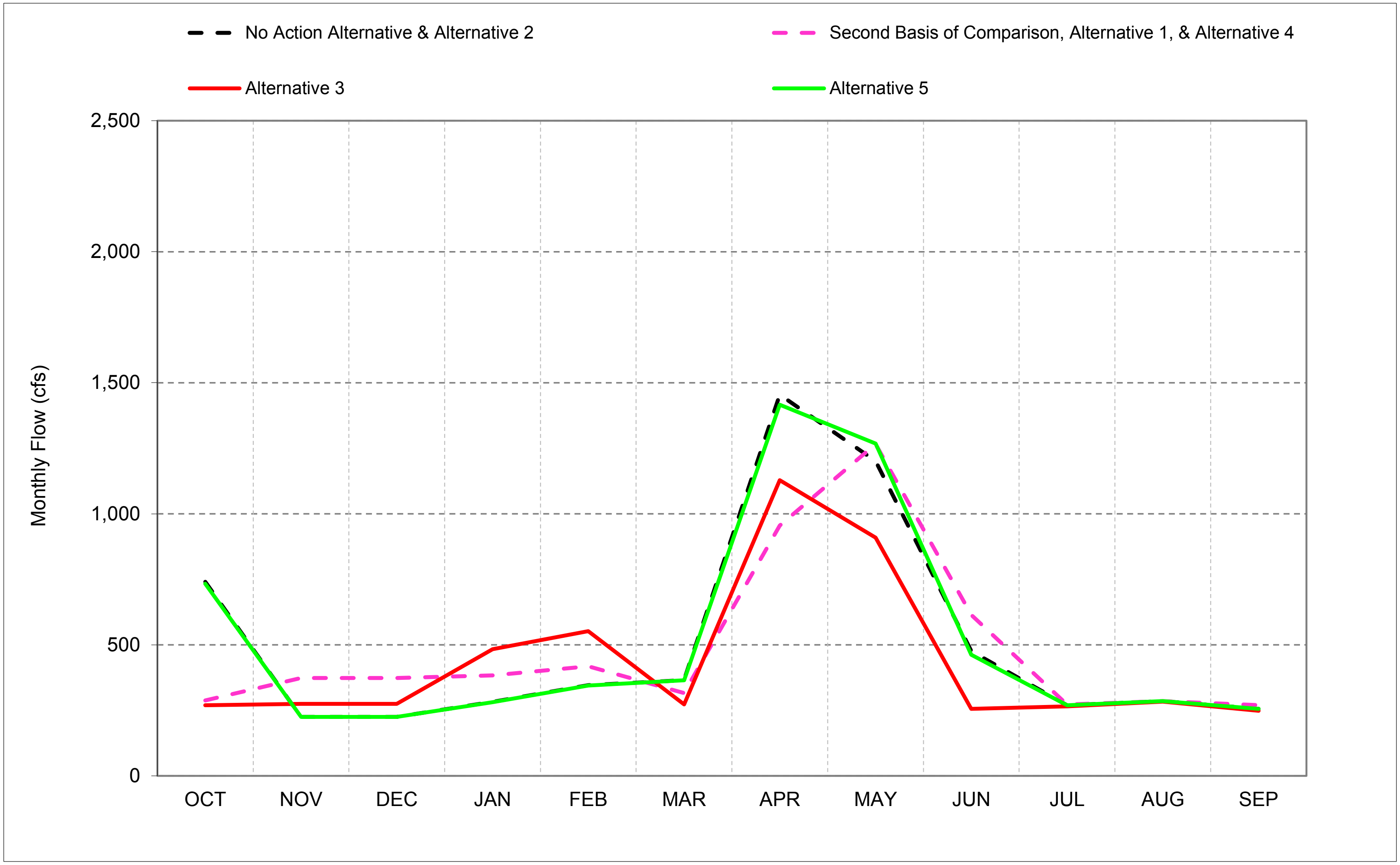


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-35-4. Stanislaus River below Goodwin, Below Normal Year* Long-Term Average Flow**

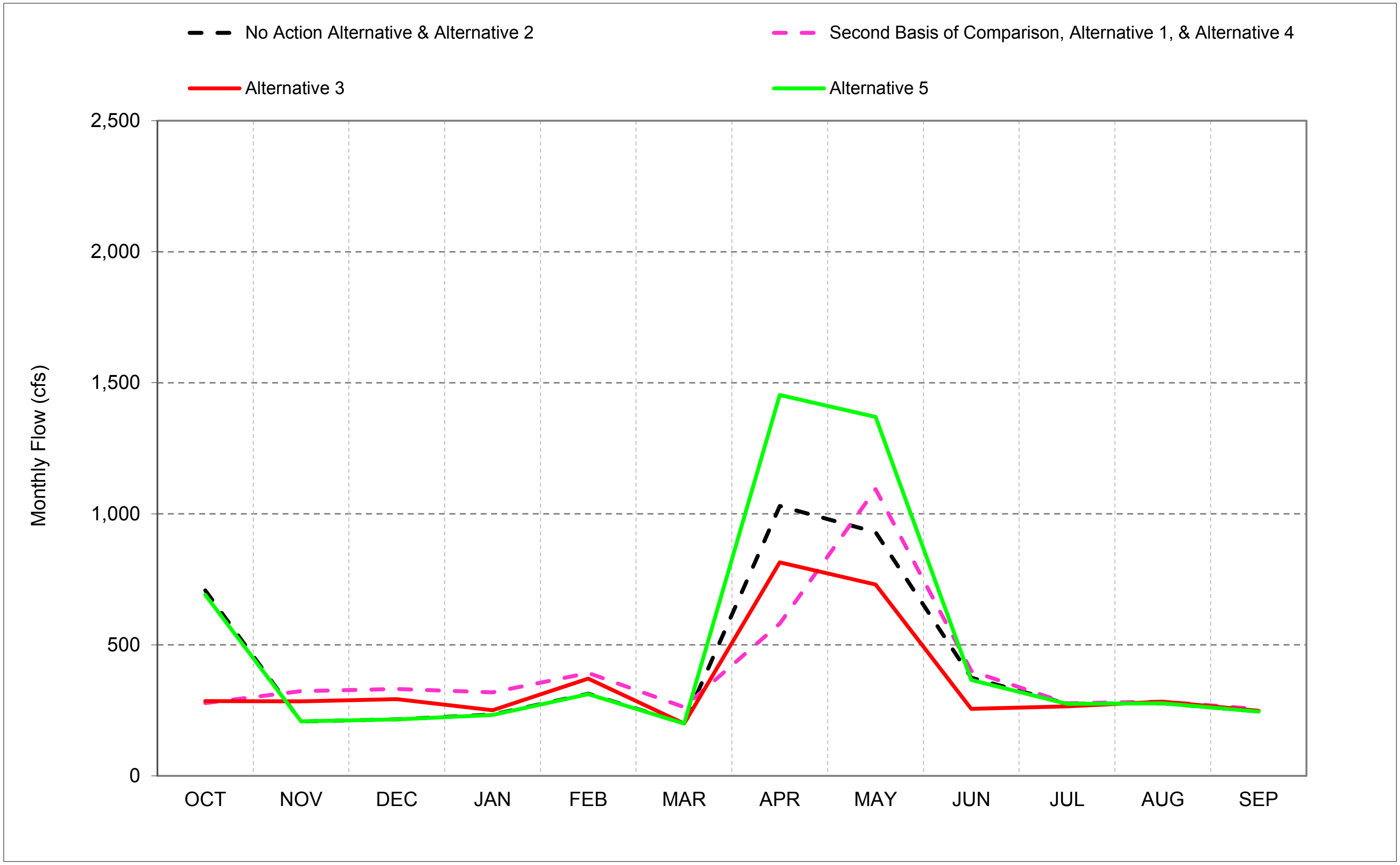


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-35-5. Stanislaus River below Goodwin, Dry Year* Long-Term Average Flow**

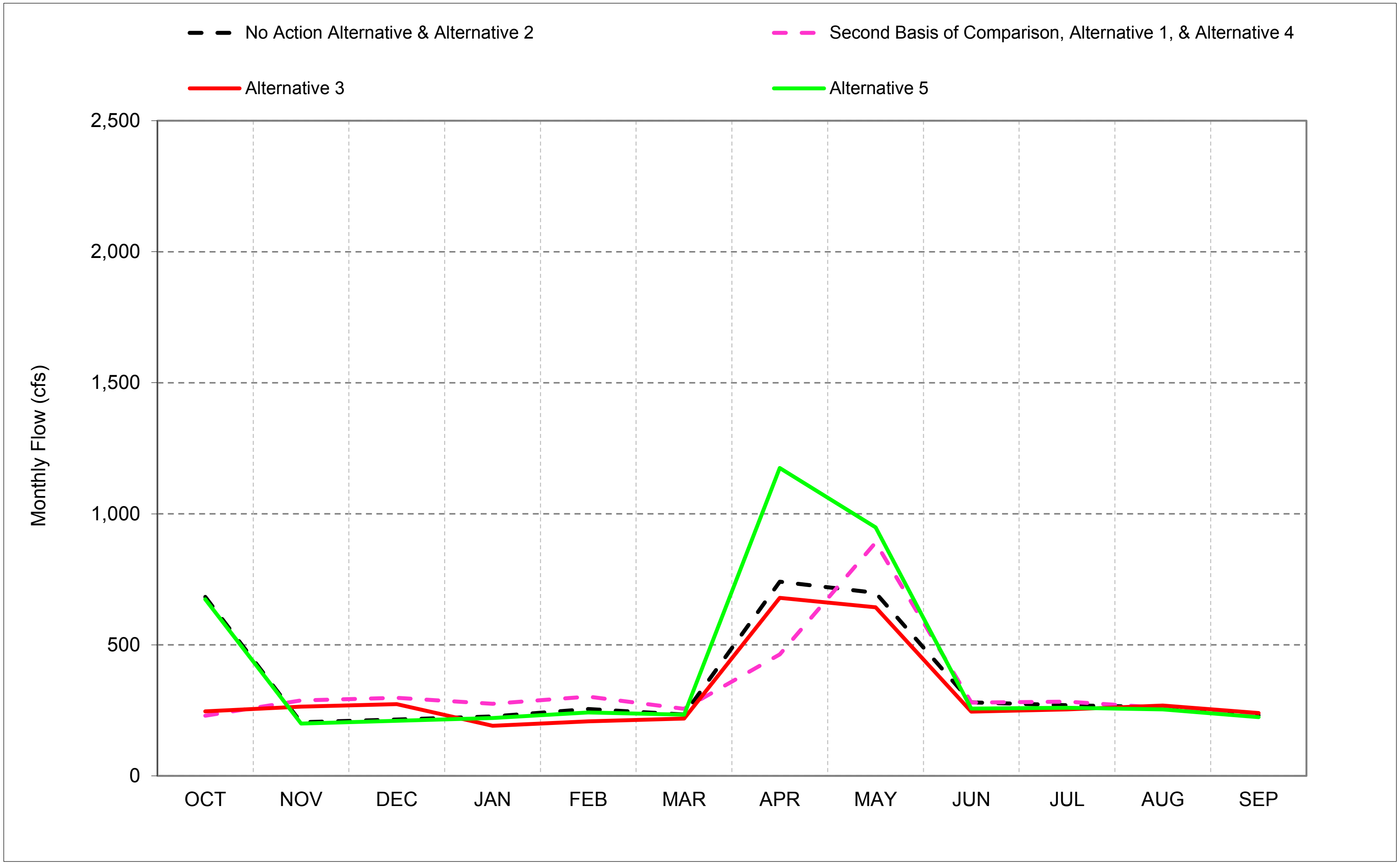


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-35-6. Stanislaus River below Goodwin, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-35-1. Stanislaus River below Goodwin, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	837	290	306	358	897	1,648	1,633	1,929	1,103	429	390	390
20%	797	200	218	232	409	1,521	1,553	1,555	1,090	310	300	300
30%	774	200	200	232	290	440	1,553	1,296	940	300	284	250
40%	774	200	200	226	236	200	1,400	1,242	855	300	283	250
50%	774	200	200	226	236	200	1,400	1,242	363	271	283	250
60%	636	200	200	219	229	200	812	918	363	265	283	249
70%	636	200	200	219	229	200	767	705	297	265	283	249
80%	578	200	200	214	221	200	767	631	261	265	283	249
90%	577	200	200	213	215	200	505	546	255	265	283	249
Long Term												
Full Simulation Period[b]	723	278	365	518	595	754	1,158	1,123	680	394	361	351
Water Year Types[c]												
Wet (23%)	781	499	787	999	1,201	2,016	1,536	1,691	1,140	715	639	692
Above Normal (24%)	714	216	282	663	676	645	1,224	1,146	962	353	292	267
Below Normal (10%)	740	225	225	282	346	365	1,454	1,201	476	269	285	256
Dry (16%)	707	208	216	234	313	200	1,030	930	374	275	277	245
Critical (27%)	683	205	215	227	255	234	741	699	281	269	262	231

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	350	499	508	508	907	709	1,500	1,500	2,887	360	300	300
20%	350	415	415	415	503	415	1,462	1,500	1,709	306	300	300
30%	331	386	415	408	415	415	1,337	1,434	1,571	300	296	268
40%	286	318	326	318	415	318	991	1,303	845	300	283	268
50%	286	318	318	318	318	318	664	1,303	450	284	283	268
60%	194	247	275	242	318	275	512	1,112	398	268	283	249
70%	194	247	247	242	260	242	461	920	289	268	283	249
80%	173	233	247	242	242	242	424	848	257	265	283	249
90%	164	230	230	200	239	200	378	760	255	265	283	249
Long Term												
Full Simulation Period[b]	291	388	466	584	642	607	884	1,181	1,028	390	347	363
Water Year Types[c]												
Wet (23%)	360	612	886	1,060	1,196	1,462	1,488	1,497	2,316	678	580	731
Above Normal (24%)	301	332	376	726	742	523	940	1,225	1,200	354	288	271
Below Normal (10%)	288	373	373	383	418	316	955	1,266	613	272	285	270
Dry (16%)	278	323	331	318	392	262	581	1,094	399	276	283	255
Critical (27%)	230	287	298	275	303	256	464	890	280	283	259	228

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-487	209	203	150	10	-939	-133	-429	1,783	-69	-90	-90
20%	-447	215	197	183	94	-1,106	-91	-55	619	-4	0	0
30%	-443	186	215	176	125	-25	-216	138	631	0	12	18
40%	-488	118	126	92	179	118	-409	61	-10	0	0	18
50%	-488	118	118	92	83	118	-736	61	87	13	0	18
60%	-441	47	75	23	90	75	-300	194	35	3	0	0
70%	-441	47	47	23	31	42	-306	215	-8	3	0	0
80%	-405	33	47	28	21	42	-343	218	-4	0	0	0
90%	-413	30	30	-13	24	0	-127	214	0	0	0	0
Long Term												
Full Simulation Period[b]	-432	110	101	66	47	-147	-275	58	348	-4	-15	12
Water Year Types[c]												
Wet (23%)	-421	113	99	61	-5	-554	-48	-195	1,176	-37	-59	39
Above Normal (24%)	-413	116	94	63	66	-122	-284	79	238	1	-4	4
Below Normal (10%)	-453	148	148	101	72	-50	-500	65	138	2	0	14
Dry (16%)	-429	115	115	84	79	62	-449	164	25	1	6	9
Critical (27%)	-453	83	83	49	47	23	-277	192	-1	14	-3	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-35-2. Stanislaus River below Goodwin, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	837	290	306	358	897	1,648	1,633	1,929	1,103	429	390	390
20%	797	200	218	232	409	1,521	1,553	1,555	1,090	310	300	300
30%	774	200	200	232	290	440	1,553	1,296	940	300	284	250
40%	774	200	200	226	236	200	1,400	1,242	855	300	283	250
50%	774	200	200	226	236	200	1,400	1,242	363	271	283	250
60%	636	200	200	219	229	200	812	918	363	265	283	249
70%	636	200	200	219	229	200	767	705	297	265	283	249
80%	578	200	200	214	221	200	767	631	261	265	283	249
90%	577	200	200	213	215	200	505	546	255	265	283	249
Long Term												
Full Simulation Period[b]	723	278	365	518	595	754	1,158	1,123	680	394	361	351
Water Year Types[c]												
Wet (23%)	781	499	787	999	1,201	2,016	1,536	1,691	1,140	715	639	692
Above Normal (24%)	714	216	282	663	676	645	1,224	1,146	962	353	292	267
Below Normal (10%)	740	225	225	282	346	365	1,454	1,201	476	269	285	256
Dry (16%)	707	208	216	234	313	200	1,030	930	374	275	277	245
Critical (27%)	683	205	215	227	255	234	741	699	281	269	262	231

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	300	300	609	1,135	2,548	1,189	1,500	1,165	255	265	283	952
20%	300	300	305	300	1,157	344	1,500	1,165	255	265	283	249
30%	300	300	300	300	333	300	1,500	1,165	255	265	283	249
40%	252	300	300	300	300	300	1,034	963	255	265	283	249
50%	252	300	300	150	176	200	893	829	255	265	283	249
60%	252	300	300	150	173	200	893	829	255	265	283	249
70%	252	300	300	150	173	200	893	829	255	265	283	249
80%	200	200	220	150	173	200	528	466	255	265	283	249
90%	200	200	200	150	173	200	493	466	255	265	283	249
Long Term												
Full Simulation Period[b]	302	349	475	557	814	622	1,060	911	490	421	391	397
Water Year Types[c]												
Wet (23%)	368	589	1,001	1,066	2,016	1,599	1,538	1,300	1,279	952	768	885
Above Normal (24%)	323	287	394	705	732	552	1,155	955	255	265	283	260
Below Normal (10%)	269	275	275	483	552	272	1,128	909	255	265	283	249
Dry (16%)	285	285	293	251	371	200	815	730	255	265	283	249
Critical (27%)	246	264	274	191	208	218	680	643	245	254	268	240

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-537	10	303	776	1,651	-460	-133	-765	-848	-164	-107	562
20%	-497	100	86	68	748	-1,177	-53	-390	-835	-45	-17	-51
30%	-474	100	100	68	43	-140	-53	-131	-685	-35	-1	-1
40%	-522	100	100	74	64	100	-366	-279	-599	-35	0	-1
50%	-522	100	100	-76	-59	0	-507	-413	-108	-5	0	-1
60%	-384	100	100	-69	-56	0	81	-89	-108	0	0	0
70%	-384	100	100	-69	-56	0	127	124	-42	0	0	0
80%	-378	0	20	-64	-48	0	-238	-165	-5	0	0	0
90%	-377	0	0	-63	-42	0	-12	-79	0	0	0	0
Long Term												
Full Simulation Period[b]	-421	71	110	39	219	-132	-99	-212	-190	27	30	45
Water Year Types[c]												
Wet (23%)	-413	90	215	67	815	-417	2	-392	139	237	130	193
Above Normal (24%)	-391	71	112	42	57	-93	-69	-191	-707	-88	-9	-7
Below Normal (10%)	-471	50	50	201	206	-93	-327	-292	-220	-4	-2	-7
Dry (16%)	-422	77	77	16	58	0	-215	-199	-119	-10	6	3
Critical (27%)	-436	59	59	-36	-47	-15	-61	-56	-35	-15	6	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-35-3. Stanislaus River below Goodwin, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	837	290	306	358	897	1,648	1,633	1,929	1,103	429	390	390
20%	797	200	218	232	409	1,521	1,553	1,555	1,090	310	300	300
30%	774	200	200	232	290	440	1,553	1,296	940	300	284	250
40%	774	200	200	226	236	200	1,400	1,242	855	300	283	250
50%	774	200	200	226	236	200	1,400	1,242	363	271	283	250
60%	636	200	200	219	229	200	812	918	363	265	283	249
70%	636	200	200	219	229	200	767	705	297	265	283	249
80%	578	200	200	214	221	200	767	631	261	265	283	249
90%	577	200	200	213	215	200	505	546	255	265	283	249
Long Term												
Full Simulation Period[b]	723	278	365	518	595	754	1,158	1,123	680	394	361	351
Water Year Types[c]												
Wet (23%)	781	499	787	999	1,201	2,016	1,536	1,691	1,140	715	639	692
Above Normal (24%)	714	216	282	663	676	645	1,224	1,146	962	353	292	267
Below Normal (10%)	740	225	225	282	346	365	1,454	1,201	476	269	285	256
Dry (16%)	707	208	216	234	313	200	1,030	930	374	275	277	245
Critical (27%)	683	205	215	227	255	234	741	699	281	269	262	231

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	797	200	306	358	885	1,636	1,717	1,958	1,103	423	300	300
20%	797	200	211	232	415	1,521	1,633	1,815	979	307	300	300
30%	774	200	200	232	274	343	1,553	1,595	940	300	283	250
40%	774	200	200	226	236	200	1,487	1,555	759	297	283	250
50%	636	200	200	226	236	200	1,400	1,341	363	265	283	249
60%	636	200	200	219	229	200	1,324	1,242	342	265	283	249
70%	636	200	200	219	222	200	1,134	1,068	270	265	283	249
80%	577	200	200	213	221	200	825	887	255	265	283	249
90%	577	200	200	213	214	200	767	798	255	265	283	249
Long Term												
Full Simulation Period[b]	711	276	345	520	580	712	1,317	1,375	660	369	332	341
Water Year Types[c]												
Wet (23%)	766	499	690	998	1,169	1,831	1,502	1,730	1,093	619	523	655
Above Normal (24%)	705	211	298	676	659	645	1,170	1,553	962	353	292	267
Below Normal (10%)	733	225	225	281	345	365	1,416	1,267	462	269	285	256
Dry (16%)	690	208	216	233	312	200	1,454	1,370	366	275	277	245
Critical (27%)	674	200	210	221	242	234	1,175	948	257	260	253	224

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-41	-90	0	0	-12	-13	83	29	0	-6	-90	-90
20%	0	0	-7	0	6	0	80	261	-111	-3	0	0
30%	0	0	0	0	-15	-97	0	299	0	0	-1	0
40%	0	0	0	0	0	0	87	313	-96	-3	0	0
50%	-139	0	0	0	0	0	0	99	0	-5	0	-1
60%	0	0	0	0	0	0	512	324	-21	0	0	0
70%	0	0	0	0	-6	0	367	363	-27	0	0	0
80%	-1	0	0	-1	0	0	59	256	-5	0	0	0
90%	0	0	0	0	-1	0	262	252	0	0	0	0
Long Term												
Full Simulation Period[b]	-11	-2	-20	1	-15	-43	159	251	-20	-25	-29	-11
Water Year Types[c]												
Wet (23%)	-15	0	-97	0	-33	-185	-34	38	-47	-96	-115	-38
Above Normal (24%)	-9	-5	16	13	-17	0	-55	407	0	0	0	0
Below Normal (10%)	-7	0	0	-1	-1	0	-38	66	-13	0	0	0
Dry (16%)	-17	0	0	-1	-2	0	424	440	-8	0	0	0
Critical (27%)	-8	-5	-5	-6	-13	0	434	250	-24	-10	-9	-7

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-35-4. Stanislaus River below Goodwin, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	350	499	508	508	907	709	1,500	1,500	2,887	360	300	300
20%	350	415	415	415	503	415	1,462	1,500	1,709	306	300	300
30%	331	386	415	408	415	415	1,337	1,434	1,571	300	296	268
40%	286	318	326	318	415	318	991	1,303	845	300	283	268
50%	286	318	318	318	318	318	664	1,303	450	284	283	268
60%	194	247	275	242	318	275	512	1,112	398	268	283	249
70%	194	247	247	242	260	242	461	920	289	268	283	249
80%	173	233	247	242	242	242	424	848	257	265	283	249
90%	164	230	230	200	239	200	378	760	255	265	283	249
Long Term												
Full Simulation Period[b]	291	388	466	584	642	607	884	1,181	1,028	390	347	363
Water Year Types[c]												
Wet (23%)	360	612	886	1,060	1,196	1,462	1,488	1,497	2,316	678	580	731
Above Normal (24%)	301	332	376	726	742	523	940	1,225	1,200	354	288	271
Below Normal (10%)	288	373	373	383	418	316	955	1,266	613	272	285	270
Dry (16%)	278	323	331	318	392	262	581	1,094	399	276	283	255
Critical (27%)	230	287	298	275	303	256	464	890	280	283	259	228

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	837	290	306	358	897	1,648	1,633	1,929	1,103	429	390	390
20%	797	200	218	232	409	1,521	1,553	1,555	1,090	310	300	300
30%	774	200	200	232	290	440	1,553	1,296	940	300	284	250
40%	774	200	200	226	236	200	1,400	1,242	855	300	283	250
50%	774	200	200	226	236	200	1,400	1,242	363	271	283	250
60%	636	200	200	219	229	200	812	918	363	265	283	249
70%	636	200	200	219	229	200	767	705	297	265	283	249
80%	578	200	200	214	221	200	767	631	261	265	283	249
90%	577	200	200	213	215	200	505	546	255	265	283	249
Long Term												
Full Simulation Period[b]	723	278	365	518	595	754	1,158	1,123	680	394	361	351
Water Year Types[c]												
Wet (23%)	781	499	787	999	1,201	2,016	1,536	1,691	1,140	715	639	692
Above Normal (24%)	714	216	282	663	676	645	1,224	1,146	962	353	292	267
Below Normal (10%)	740	225	225	282	346	365	1,454	1,201	476	269	285	256
Dry (16%)	707	208	216	234	313	200	1,030	930	374	275	277	245
Critical (27%)	683	205	215	227	255	234	741	699	281	269	262	231

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	487	-209	-203	-150	-10	939	133	429	-1,783	69	90	90
20%	447	-215	-197	-183	-94	1,106	91	55	-619	4	0	0
30%	443	-186	-215	-176	-125	25	216	-138	-631	0	-12	-18
40%	488	-118	-126	-92	-179	-118	409	-61	10	0	0	-18
50%	488	-118	-118	-92	-83	-118	736	-61	-87	-13	0	-18
60%	441	-47	-75	-23	-90	-75	300	-194	-35	-3	0	0
70%	441	-47	-47	-23	-31	-42	306	-215	8	-3	0	0
80%	405	-33	-47	-28	-21	-42	343	-218	4	0	0	0
90%	413	-30	-30	13	-24	0	127	-214	0	0	0	0
Long Term												
Full Simulation Period[b]	432	-110	-101	-66	-47	147	275	-58	-348	4	15	-12
Water Year Types[c]												
Wet (23%)	421	-113	-99	-61	5	554	48	195	-1,176	37	59	-39
Above Normal (24%)	413	-116	-94	-63	-66	122	284	-79	-238	-1	4	-4
Below Normal (10%)	453	-148	-148	-101	-72	50	500	-65	-138	-2	0	-14
Dry (16%)	429	-115	-115	-84	-79	-62	449	-164	-25	-1	-6	-9
Critical (27%)	453	-83	-83	-49	-47	-23	277	-192	1	-14	3	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-35-5. Stanislaus River below Goodwin, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	350	499	508	508	907	709	1,500	1,500	2,887	360	300	300
20%	350	415	415	415	503	415	1,462	1,500	1,709	306	300	300
30%	331	386	415	408	415	415	1,337	1,434	1,571	300	296	268
40%	286	318	326	318	415	318	991	1,303	845	300	283	268
50%	286	318	318	318	318	318	664	1,303	450	284	283	268
60%	194	247	275	242	318	275	512	1,112	398	268	283	249
70%	194	247	247	242	260	242	461	920	289	268	283	249
80%	173	233	247	242	242	242	424	848	257	265	283	249
90%	164	230	230	200	239	200	378	760	255	265	283	249
Long Term												
Full Simulation Period[b]	291	388	466	584	642	607	884	1,181	1,028	390	347	363
Water Year Types[c]												
Wet (23%)	360	612	886	1,060	1,196	1,462	1,488	1,497	2,316	678	580	731
Above Normal (24%)	301	332	376	726	742	523	940	1,225	1,200	354	288	271
Below Normal (10%)	288	373	373	383	418	316	955	1,266	613	272	285	270
Dry (16%)	278	323	331	318	392	262	581	1,094	399	276	283	255
Critical (27%)	230	287	298	275	303	256	464	890	280	283	259	228

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	300	300	609	1,135	2,548	1,189	1,500	1,165	255	265	283	952
20%	300	300	305	300	1,157	344	1,500	1,165	255	265	283	249
30%	300	300	300	300	333	300	1,500	1,165	255	265	283	249
40%	252	300	300	300	300	300	1,034	963	255	265	283	249
50%	252	300	300	150	176	200	893	829	255	265	283	249
60%	252	300	300	150	173	200	893	829	255	265	283	249
70%	252	300	300	150	173	200	893	829	255	265	283	249
80%	200	200	220	150	173	200	528	466	255	265	283	249
90%	200	200	200	150	173	200	493	466	255	265	283	249
Long Term												
Full Simulation Period[b]	302	349	475	557	814	622	1,060	911	490	421	391	397
Water Year Types[c]												
Wet (23%)	368	589	1,001	1,066	2,016	1,599	1,538	1,300	1,279	952	768	885
Above Normal (24%)	323	287	394	705	732	552	1,155	955	255	265	283	260
Below Normal (10%)	269	275	275	483	552	272	1,128	909	255	265	283	249
Dry (16%)	285	285	293	251	371	200	815	730	255	265	283	249
Critical (27%)	246	264	274	191	208	218	680	643	245	254	268	240

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-50	-199	100	626	1,641	479	0	-335	-2,631	-94	-17	652
20%	-50	-115	-110	-115	654	-71	38	-335	-1,454	-41	-17	-51
30%	-31	-86	-115	-108	-82	-115	163	-269	-1,316	-35	-13	-19
40%	-34	-18	-26	-18	-115	-18	43	-340	-590	-35	0	-19
50%	-34	-18	-18	-168	-142	-118	229	-474	-195	-19	0	-19
60%	58	53	25	-92	-145	-75	381	-283	-143	-3	0	0
70%	58	53	53	-92	-87	-42	432	-91	-34	-3	0	0
80%	27	-33	-27	-92	-69	-42	104	-382	-1	0	0	0
90%	36	-30	-30	-50	-66	0	116	-294	0	0	0	0
Long Term												
Full Simulation Period[b]	11	-38	9	-27	172	15	176	-270	-538	32	45	33
Water Year Types[c]												
Wet (23%)	8	-23	116	6	820	137	50	-197	-1,037	274	189	154
Above Normal (24%)	22	-45	18	-21	-9	29	215	-269	-945	-89	-5	-11
Below Normal (10%)	-19	-98	-98	100	134	-43	173	-356	-358	-7	-2	-21
Dry (16%)	7	-38	-38	-68	-21	-62	234	-364	-144	-11	0	-6
Critical (27%)	17	-24	-24	-84	-95	-38	216	-247	-35	-29	9	12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-35-6. Stanislaus River below Goodwin, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	350	499	508	508	907	709	1,500	1,500	2,887	360	300	300
20%	350	415	415	415	503	415	1,462	1,500	1,709	306	300	300
30%	331	386	415	408	415	415	1,337	1,434	1,571	300	296	268
40%	286	318	326	318	415	318	991	1,303	845	300	283	268
50%	286	318	318	318	318	318	664	1,303	450	284	283	268
60%	194	247	275	242	318	275	512	1,112	398	268	283	249
70%	194	247	247	242	260	242	461	920	289	268	283	249
80%	173	233	247	242	242	242	424	848	257	265	283	249
90%	164	230	230	200	239	200	378	760	255	265	283	249
Long Term												
Full Simulation Period[b]	291	388	466	584	642	607	884	1,181	1,028	390	347	363
Water Year Types[c]												
Wet (23%)	360	612	886	1,060	1,196	1,462	1,488	1,497	2,316	678	580	731
Above Normal (24%)	301	332	376	726	742	523	940	1,225	1,200	354	288	271
Below Normal (10%)	288	373	373	383	418	316	955	1,266	613	272	285	270
Dry (16%)	278	323	331	318	392	262	581	1,094	399	276	283	255
Critical (27%)	230	287	298	275	303	256	464	890	280	283	259	228

Alternative 5

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	797	200	306	358	885	1,636	1,717	1,958	1,103	423	300	300
20%	797	200	211	232	415	1,521	1,633	1,815	979	307	300	300
30%	774	200	200	232	274	343	1,553	1,595	940	300	283	250
40%	774	200	200	226	236	200	1,487	1,555	759	297	283	250
50%	636	200	200	226	236	200	1,400	1,341	363	265	283	249
60%	636	200	200	219	229	200	1,324	1,242	342	265	283	249
70%	636	200	200	219	222	200	1,134	1,068	270	265	283	249
80%	577	200	200	213	221	200	825	887	255	265	283	249
90%	577	200	200	213	214	200	767	798	255	265	283	249
Long Term												
Full Simulation Period[b]	711	276	345	520	580	712	1,317	1,375	660	369	332	341
Water Year Types[c]												
Wet (23%)	766	499	690	998	1,169	1,831	1,502	1,730	1,093	619	523	655
Above Normal (24%)	705	211	298	676	659	645	1,170	1,553	962	353	292	267
Below Normal (10%)	733	225	225	281	345	365	1,416	1,267	462	269	285	256
Dry (16%)	690	208	216	233	312	200	1,454	1,370	366	275	277	245
Critical (27%)	674	200	210	221	242	234	1,175	948	257	260	253	224

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	447	-299	-203	-150	-22	926	217	458	-1,783	63	0	0
20%	447	-215	-204	-183	-88	1,106	171	315	-730	1	0	0
30%	443	-186	-215	-176	-141	-72	216	161	-631	0	-13	-18
40%	488	-118	-126	-92	-179	-118	496	252	-86	-3	0	-18
50%	349	-118	-118	-92	-83	-118	736	38	-87	-19	0	-19
60%	441	-47	-75	-23	-90	-75	812	130	-56	-3	0	0
70%	441	-47	-47	-23	-38	-42	673	148	-19	-3	0	0
80%	404	-33	-47	-29	-21	-42	401	38	-1	0	0	0
90%	413	-30	-30	13	-25	0	389	38	0	0	0	0
Long Term												
Full Simulation Period[b]	421	-112	-121	-65	-62	104	433	193	-368	-21	-15	-22
Water Year Types[c]												
Wet (23%)	407	-113	-196	-61	-27	369	14	233	-1,223	-59	-56	-76
Above Normal (24%)	404	-121	-78	-50	-83	122	230	328	-238	-1	4	-4
Below Normal (10%)	445	-148	-148	-102	-73	50	462	2	-151	-2	0	-14
Dry (16%)	412	-115	-115	-86	-80	-62	873	276	-34	-1	-6	-9
Critical (27%)	445	-87	-87	-55	-60	-23	711	58	-23	-23	-6	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

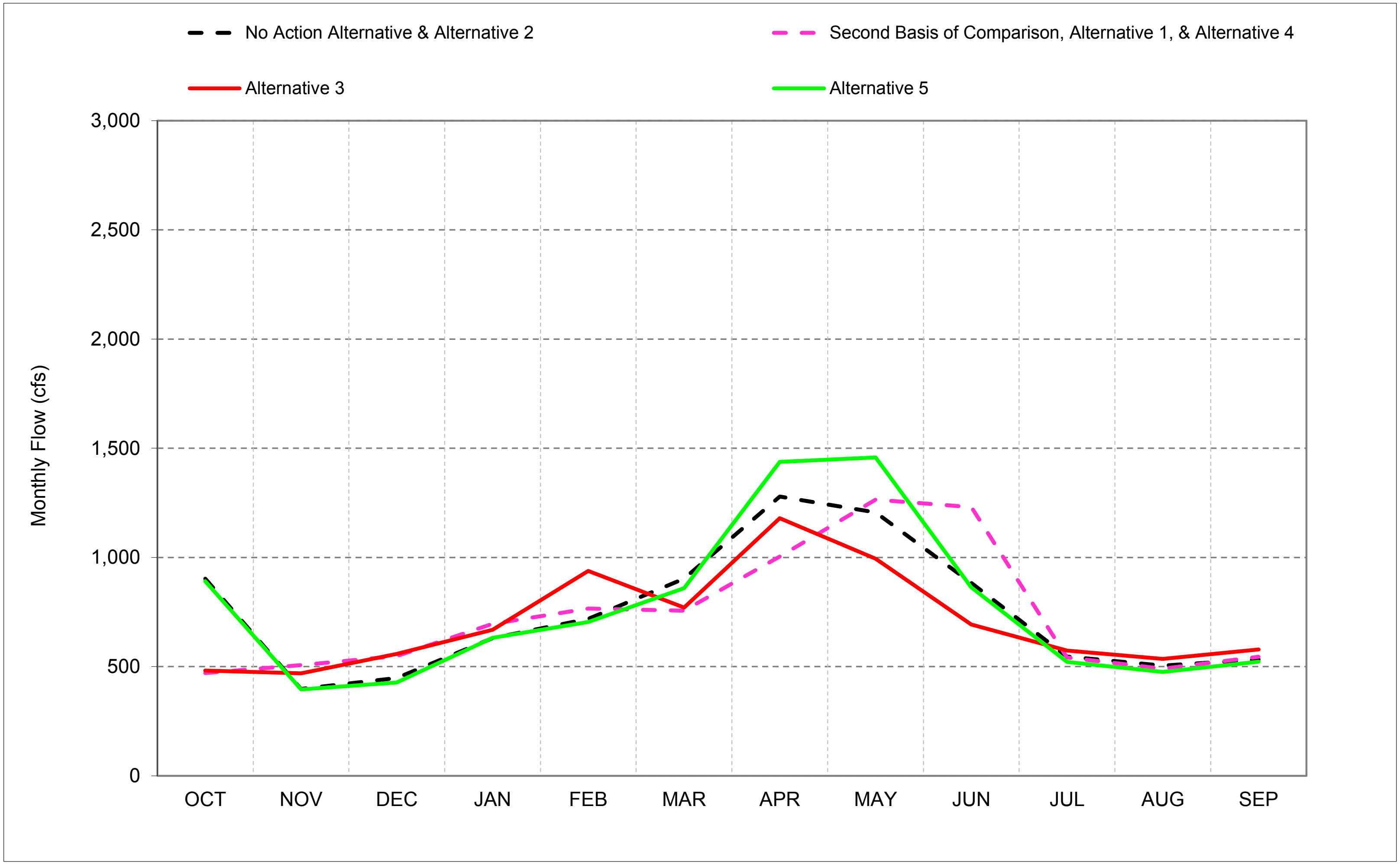
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

C.36. Stanislaus River Flow at Mouth

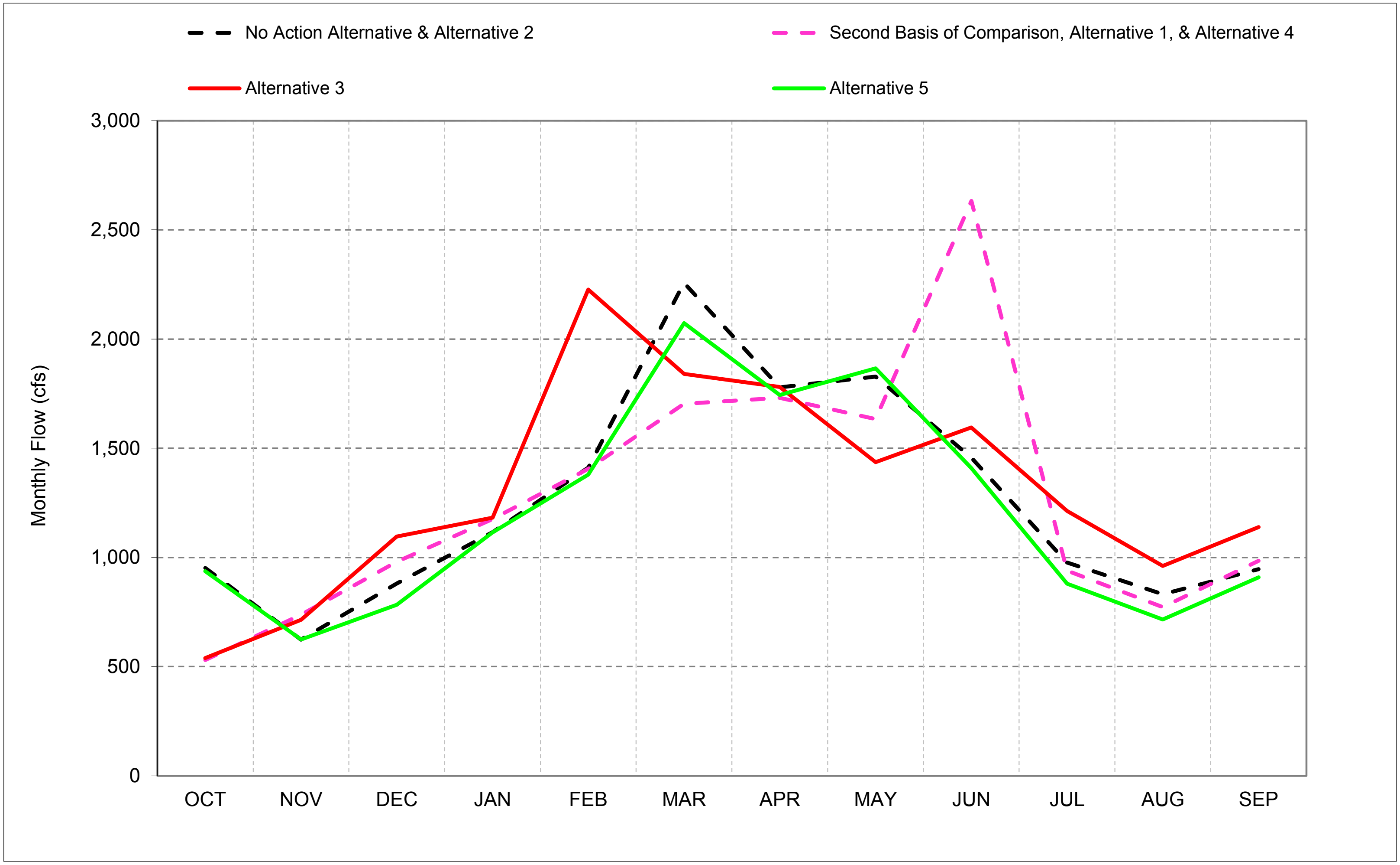
Figure C-36-1. Stanislaus River at Mouth, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-36-2. Stanislaus River at Mouth, Wet Year* Long-Term Average Flow**

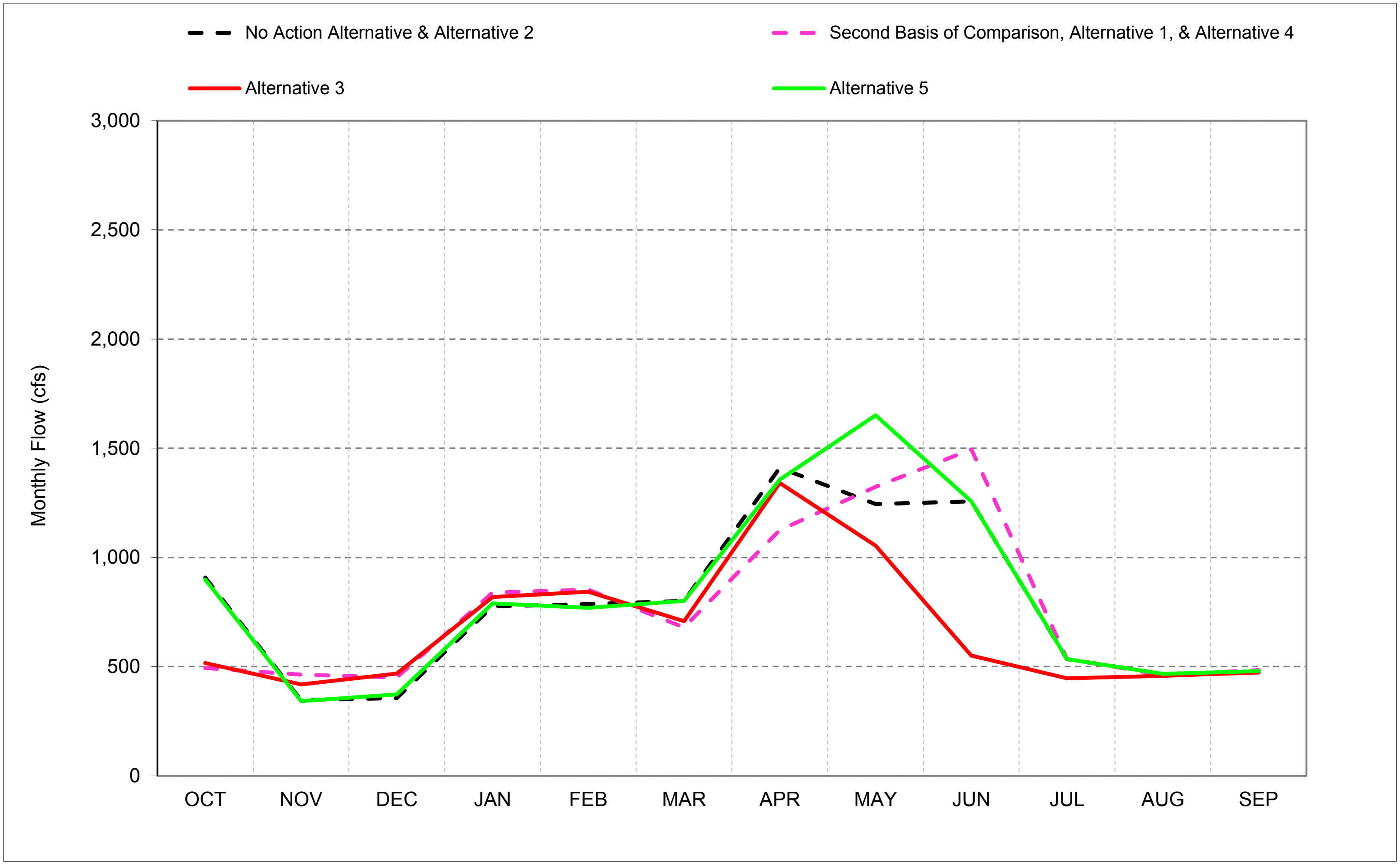


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-36-3. Stanislaus River at Mouth, Above Normal Year* Long-Term Average Flow**

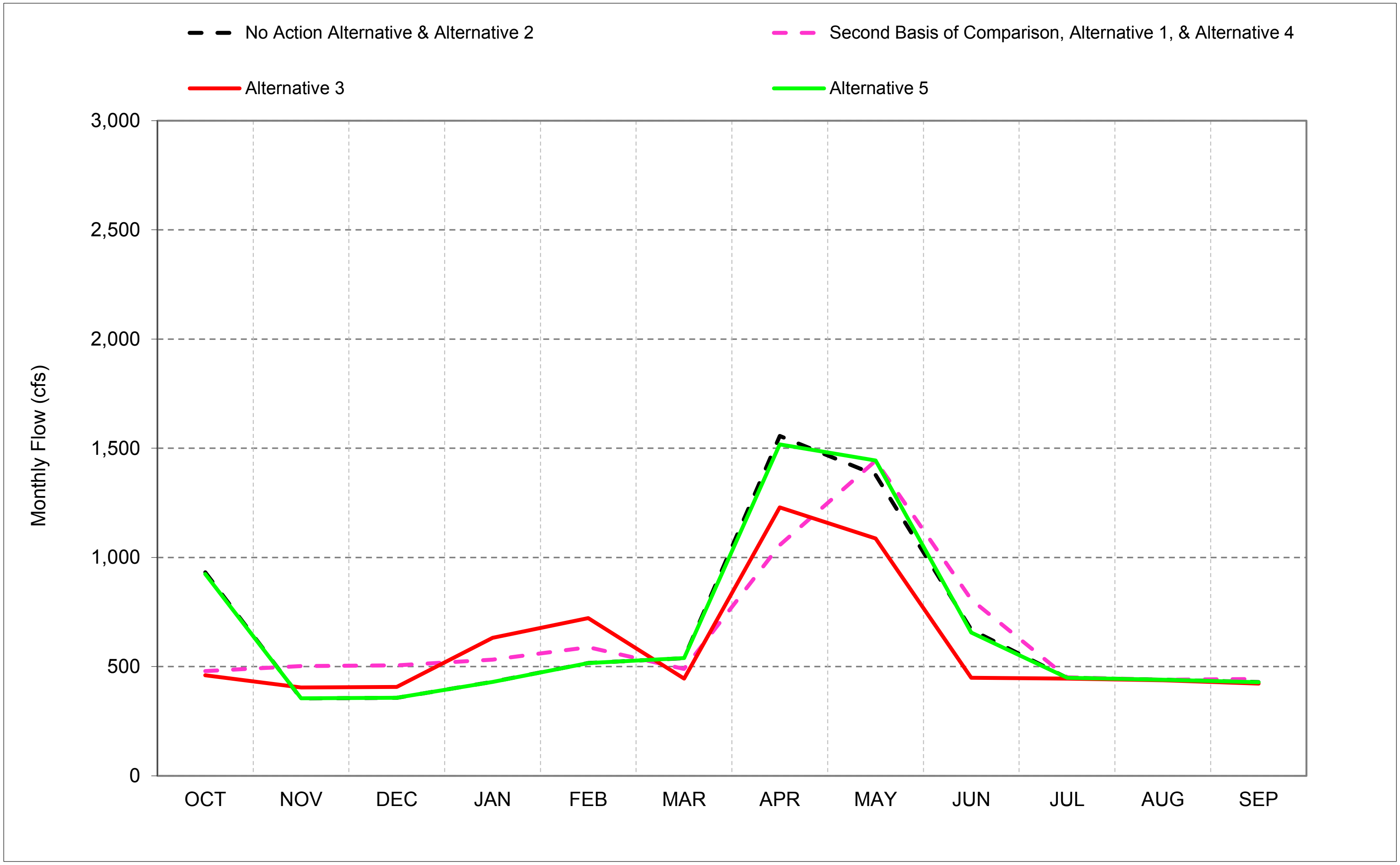


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-36-4. Stanislaus River at Mouth, Below Normal Year* Long-Term Average Flow**

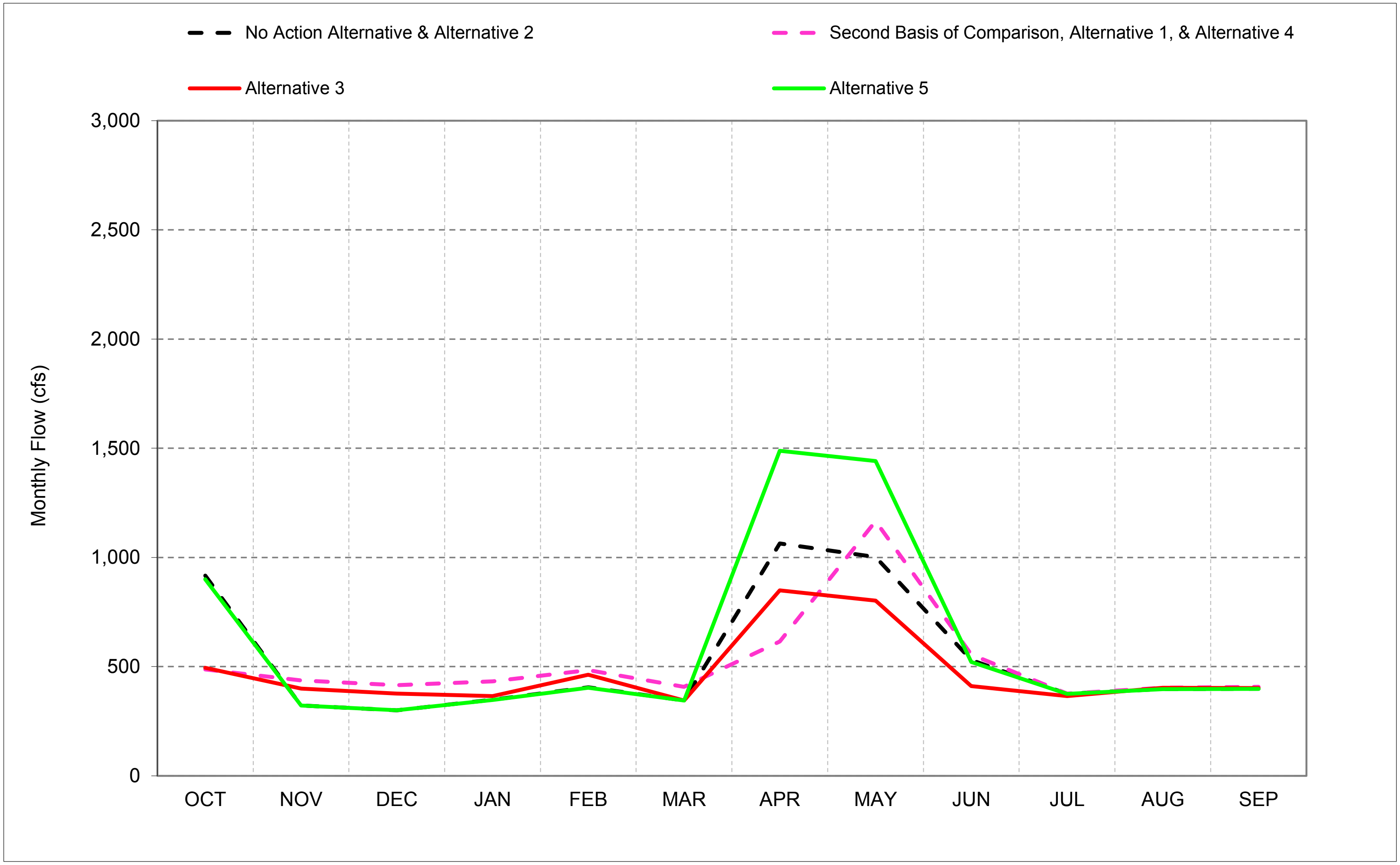


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-36-5. Stanislaus River at Mouth, Dry Year* Long-Term Average Flow**

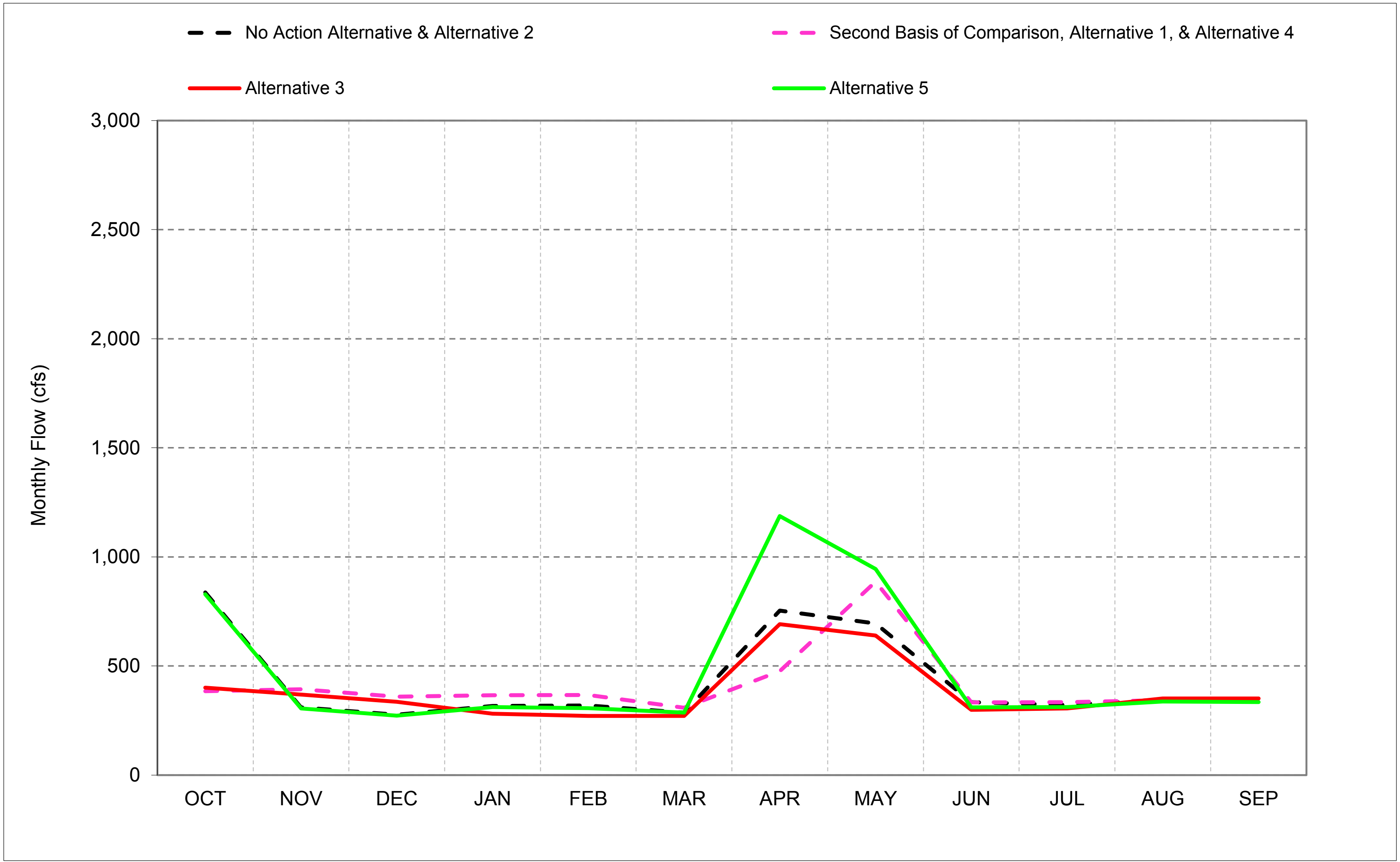


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-36-6. Stanislaus River at Mouth, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-36-1. Stanislaus River at Mouth, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,122	463	442	576	1,084	1,969	1,886	1,989	1,536	751	587	646
20%	1,029	384	368	427	643	1,708	1,769	1,647	1,334	606	488	507
30%	982	348	319	368	472	520	1,696	1,536	1,221	502	462	473
40%	958	337	304	347	406	433	1,610	1,362	1,053	442	445	443
50%	879	319	290	337	369	367	1,485	1,289	635	412	445	439
60%	826	292	281	326	331	336	936	873	510	383	416	428
70%	772	267	262	312	279	314	806	755	406	372	395	389
80%	755	260	241	295	253	241	686	646	358	341	371	360
90%	676	248	224	273	230	207	572	576	311	308	331	318
Long Term												
Full Simulation Period[b]	903	398	448	630	719	903	1,279	1,207	883	546	505	533
Water Year Types[c]												
Wet (23%)	952	624	881	1,115	1,412	2,258	1,779	1,828	1,456	976	831	946
Above Normal (24%)	907	347	357	776	786	801	1,410	1,244	1,257	534	467	480
Below Normal (10%)	932	354	358	430	517	539	1,556	1,378	669	449	440	429
Dry (16%)	916	322	300	349	405	345	1,064	1,002	530	375	397	399
Critical (27%)	837	310	277	317	319	286	754	695	335	321	346	342

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	662	653	656	688	1,117	1,153	1,804	1,679	3,009	661	569	673
20%	582	548	522	557	694	613	1,608	1,592	2,016	555	485	508
30%	507	492	464	518	562	562	1,489	1,533	1,772	502	461	481
40%	471	459	427	473	512	522	1,040	1,423	1,092	444	445	457
50%	405	421	378	412	484	446	821	1,331	694	412	443	439
60%	377	388	341	364	423	394	637	1,049	572	386	416	431
70%	346	355	329	339	331	361	529	972	402	378	395	396
80%	327	312	311	318	296	295	440	865	352	350	373	373
90%	249	280	269	283	257	233	406	787	312	318	331	316
Long Term												
Full Simulation Period[b]	471	507	549	696	766	756	1,004	1,265	1,231	542	491	545
Water Year Types[c]												
Wet (23%)	530	737	980	1,176	1,407	1,704	1,731	1,634	2,632	939	772	985
Above Normal (24%)	494	463	451	840	852	680	1,126	1,323	1,495	535	463	484
Below Normal (10%)	480	503	506	532	589	489	1,057	1,443	807	452	440	443
Dry (16%)	487	437	415	433	484	407	616	1,166	555	377	404	408
Critical (27%)	384	393	360	366	367	309	476	887	334	335	343	338

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-461	190	214	112	33	-816	-82	-311	1,473	-90	-18	28
20%	-447	165	154	130	51	-1,094	-161	-55	682	-51	-3	1
30%	-475	145	146	150	89	42	-208	-3	551	0	-1	9
40%	-488	122	123	125	106	89	-570	61	39	2	0	13
50%	-474	102	88	74	115	80	-663	42	59	0	-2	0
60%	-449	96	61	38	92	59	-299	176	62	2	0	3
70%	-426	88	67	27	52	48	-277	218	-4	5	0	8
80%	-427	52	70	23	43	54	-247	219	-5	9	2	12
90%	-427	32	46	9	27	26	-165	211	1	9	0	-2
Long Term												
Full Simulation Period[b]	-432	110	101	66	47	-147	-275	58	348	-4	-15	12
Water Year Types[c]												
Wet (23%)	-421	113	99	61	-5	-554	-48	-195	1,176	-37	-59	39
Above Normal (24%)	-413	116	94	63	66	-122	-284	79	238	1	-4	4
Below Normal (10%)	-453	148	148	101	72	-50	-500	65	138	2	0	14
Dry (16%)	-429	115	115	84	79	62	-449	164	25	1	6	9
Critical (27%)	-453	83	83	49	47	23	-277	192	-1	14	-3	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-36-2. Stanislaus River at Mouth, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,122	463	442	576	1,084	1,969	1,886	1,989	1,536	751	587	646
20%	1,029	384	368	427	643	1,708	1,769	1,647	1,334	606	488	507
30%	982	348	319	368	472	520	1,696	1,536	1,221	502	462	473
40%	958	337	304	347	406	433	1,610	1,362	1,053	442	445	443
50%	879	319	290	337	369	367	1,485	1,289	635	412	445	439
60%	826	292	281	326	331	336	936	873	510	383	416	428
70%	772	267	262	312	279	314	806	755	406	372	395	389
80%	755	260	241	295	253	241	686	646	358	341	371	360
90%	676	248	224	273	230	207	572	576	311	308	331	318
Long Term												
Full Simulation Period[b]	903	398	448	630	719	903	1,279	1,207	883	546	505	533
Water Year Types[c]												
Wet (23%)	952	624	881	1,115	1,412	2,258	1,779	1,828	1,456	976	831	946
Above Normal (24%)	907	347	357	776	786	801	1,410	1,244	1,257	534	467	480
Below Normal (10%)	932	354	358	430	517	539	1,556	1,378	669	449	440	429
Dry (16%)	916	322	300	349	405	345	1,064	1,002	530	375	397	399
Critical (27%)	837	310	277	317	319	286	754	695	335	321	346	342

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	679	485	722	1,267	2,628	1,444	1,865	1,414	950	885	571	1,146
20%	557	456	438	518	1,301	734	1,634	1,306	679	535	480	489
30%	482	441	411	410	502	486	1,552	1,233	558	476	457	450
40%	448	424	400	374	416	419	1,240	1,043	428	424	445	439
50%	435	402	381	311	366	367	1,064	920	413	382	440	435
60%	392	372	362	275	308	334	996	882	374	374	410	415
70%	377	359	325	251	238	312	893	829	352	350	390	384
80%	360	333	300	232	201	238	575	550	304	327	367	360
90%	293	260	239	198	180	203	493	489	273	290	347	320
Long Term												
Full Simulation Period[b]	482	469	558	669	938	770	1,180	995	693	573	535	578
Water Year Types[c]												
Wet (23%)	539	714	1,096	1,183	2,227	1,841	1,781	1,437	1,596	1,213	961	1,139
Above Normal (24%)	516	418	468	818	843	708	1,341	1,054	550	446	457	473
Below Normal (10%)	461	404	408	632	723	446	1,230	1,086	449	445	438	422
Dry (16%)	495	399	377	365	463	345	849	803	411	365	404	402
Critical (27%)	401	369	336	282	272	271	692	639	299	305	351	351

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-443	22	279	690	1,545	-525	-22	-575	-586	133	-16	500
20%	-472	72	71	92	658	-974	-135	-341	-654	-71	-8	-18
30%	-501	93	92	42	30	-34	-144	-303	-663	-25	-5	-23
40%	-511	87	95	26	11	-14	-370	-319	-626	-18	0	-4
50%	-444	83	91	-26	-3	0	-420	-368	-222	-29	-4	-5
60%	-434	80	81	-50	-23	-2	59	9	-136	-9	-5	-12
70%	-395	93	63	-61	-41	-2	87	74	-54	-22	-5	-5
80%	-395	73	59	-63	-52	-3	-112	-96	-54	-13	-3	0
90%	-383	12	16	-75	-50	-4	-78	-88	-39	-18	16	2
Long Term												
Full Simulation Period[b]	-421	71	110	39	219	-132	-99	-212	-190	27	30	45
Water Year Types[c]												
Wet (23%)	-413	90	215	67	815	-417	2	-392	139	237	130	193
Above Normal (24%)	-391	71	112	42	57	-93	-69	-191	-707	-88	-9	-7
Below Normal (10%)	-471	50	50	201	206	-93	-327	-292	-220	-4	-2	-7
Dry (16%)	-422	77	77	16	58	0	-215	-199	-119	-10	6	3
Critical (27%)	-436	59	59	-36	-47	-15	-61	-56	-35	-15	6	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-36-3. Stanislaus River at Mouth, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,122	463	442	576	1,084	1,969	1,886	1,989	1,536	751	587	646
20%	1,029	384	368	427	643	1,708	1,769	1,647	1,334	606	488	507
30%	982	348	319	368	472	520	1,696	1,536	1,221	502	462	473
40%	958	337	304	347	406	433	1,610	1,362	1,053	442	445	443
50%	879	319	290	337	369	367	1,485	1,289	635	412	445	439
60%	826	292	281	326	331	336	936	873	510	383	416	428
70%	772	267	262	312	279	314	806	755	406	372	395	389
80%	755	260	241	295	253	241	686	646	358	341	371	360
90%	676	248	224	273	230	207	572	576	311	308	331	318
Long Term												
Full Simulation Period[b]	903	398	448	630	719	903	1,279	1,207	883	546	505	533
Water Year Types[c]												
Wet (23%)	952	624	881	1,115	1,412	2,258	1,779	1,828	1,456	976	831	946
Above Normal (24%)	907	347	357	776	786	801	1,410	1,244	1,257	534	467	480
Below Normal (10%)	932	354	358	430	517	539	1,556	1,378	669	449	440	429
Dry (16%)	916	322	300	349	405	345	1,064	1,002	530	375	397	399
Critical (27%)	837	310	277	317	319	286	754	695	335	321	346	342

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,121	456	442	570	1,081	1,952	1,950	2,148	1,536	719	571	659
20%	1,029	382	378	416	586	1,708	1,815	1,974	1,319	564	488	501
30%	979	348	319	363	483	495	1,707	1,806	1,139	502	461	473
40%	903	336	304	347	401	415	1,630	1,672	1,034	442	445	443
50%	854	318	290	337	368	365	1,529	1,434	635	407	443	439
60%	818	292	281	326	319	333	1,311	1,290	485	382	413	428
70%	764	267	262	312	272	312	1,168	1,183	383	371	389	389
80%	748	260	241	295	245	241	1,044	962	343	339	367	356
90%	681	248	224	270	230	207	865	752	300	307	305	316
Long Term												
Full Simulation Period[b]	891	396	428	631	704	860	1,437	1,458	863	521	476	522
Water Year Types[c]												
Wet (23%)	937	624	784	1,115	1,380	2,073	1,744	1,866	1,409	880	716	909
Above Normal (24%)	898	342	372	790	770	801	1,356	1,651	1,257	534	467	480
Below Normal (10%)	925	354	358	430	516	539	1,518	1,444	656	449	440	429
Dry (16%)	900	322	300	347	403	345	1,488	1,442	522	375	397	399
Critical (27%)	829	306	272	311	306	286	1,187	944	310	311	337	335

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-2	-7	0	-6	-3	-17	64	158	0	-32	-16	13
20%	0	-2	10	-11	-57	0	46	327	-15	-42	0	-6
30%	-4	0	0	-6	10	-25	10	270	-82	0	-1	0
40%	-56	-1	0	-1	-4	-18	21	310	-19	0	0	0
50%	-25	-1	0	0	-1	-2	44	145	0	-4	-2	0
60%	-8	0	0	0	-12	-3	375	417	-25	-1	-3	0
70%	-7	0	0	0	-8	-2	362	428	-23	-2	-6	0
80%	-6	0	0	0	-8	0	357	316	-15	-2	-3	-4
90%	5	0	0	-3	0	0	293	176	-12	-1	-25	-2
Long Term												
Full Simulation Period[b]	-11	-2	-20	1	-15	-43	159	251	-20	-25	-29	-11
Water Year Types[c]												
Wet (23%)	-15	0	-97	0	-33	-185	-34	38	-47	-96	-115	-38
Above Normal (24%)	-9	-5	16	13	-17	0	-55	407	0	0	0	0
Below Normal (10%)	-7	0	0	-1	-1	0	-38	66	-13	0	0	0
Dry (16%)	-17	0	0	-1	-2	0	424	440	-8	0	0	0
Critical (27%)	-8	-5	-5	-6	-13	0	434	250	-24	-10	-9	-7

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-36-4. Stanislaus River at Mouth, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	662	653	656	688	1,117	1,153	1,804	1,679	3,009	661	569	673
20%	582	548	522	557	694	613	1,608	1,592	2,016	555	485	508
30%	507	492	464	518	562	562	1,489	1,533	1,772	502	461	481
40%	471	459	427	473	512	522	1,040	1,423	1,092	444	445	457
50%	405	421	378	412	484	446	821	1,331	694	412	443	439
60%	377	388	341	364	423	394	637	1,049	572	386	416	431
70%	346	355	329	339	331	361	529	972	402	378	395	396
80%	327	312	311	318	296	295	440	865	352	350	373	373
90%	249	280	269	283	257	233	406	787	312	318	331	316
Long Term												
Full Simulation Period[b]	471	507	549	696	766	756	1,004	1,265	1,231	542	491	545
Water Year Types[c]												
Wet (23%)	530	737	980	1,176	1,407	1,704	1,731	1,634	2,632	939	772	985
Above Normal (24%)	494	463	451	840	852	680	1,126	1,323	1,495	535	463	484
Below Normal (10%)	480	503	506	532	589	489	1,057	1,443	807	452	440	443
Dry (16%)	487	437	415	433	484	407	616	1,166	555	377	404	408
Critical (27%)	384	393	360	366	367	309	476	887	334	335	343	338

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,122	463	442	576	1,084	1,969	1,886	1,989	1,536	751	587	646
20%	1,029	384	368	427	643	1,708	1,769	1,647	1,334	606	488	507
30%	982	348	319	368	472	520	1,696	1,536	1,221	502	462	473
40%	958	337	304	347	406	433	1,610	1,362	1,053	442	445	443
50%	879	319	290	337	369	367	1,485	1,289	635	412	445	439
60%	826	292	281	326	331	336	936	873	510	383	416	428
70%	772	267	262	312	279	314	806	755	406	372	395	389
80%	755	260	241	295	253	241	686	646	358	341	371	360
90%	676	248	224	273	230	207	572	576	311	308	331	318
Long Term												
Full Simulation Period[b]	903	398	448	630	719	903	1,279	1,207	883	546	505	533
Water Year Types[c]												
Wet (23%)	952	624	881	1,115	1,412	2,258	1,779	1,828	1,456	976	831	946
Above Normal (24%)	907	347	357	776	786	801	1,410	1,244	1,257	534	467	480
Below Normal (10%)	932	354	358	430	517	539	1,556	1,378	669	449	440	429
Dry (16%)	916	322	300	349	405	345	1,064	1,002	530	375	397	399
Critical (27%)	837	310	277	317	319	286	754	695	335	321	346	342

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	461	-190	-214	-112	-33	816	82	311	-1,473	90	18	-28
20%	447	-165	-154	-130	-51	1,094	161	55	-682	51	3	-1
30%	475	-145	-146	-150	-89	-42	208	3	-551	0	1	-9
40%	488	-122	-123	-125	-106	-89	570	-61	-39	-2	0	-13
50%	474	-102	-88	-74	-115	-80	663	-42	-59	0	2	0
60%	449	-96	-61	-38	-92	-59	299	-176	-62	-2	0	-3
70%	426	-88	-67	-27	-52	-48	277	-218	4	-5	0	-8
80%	427	-52	-70	-23	-43	-54	247	-219	5	-9	-2	-12
90%	427	-32	-46	-9	-27	-26	165	-211	-1	-9	0	2
Long Term												
Full Simulation Period[b]	432	-110	-101	-66	-47	147	275	-58	-348	4	15	-12
Water Year Types[c]												
Wet (23%)	421	-113	-99	-61	5	554	48	195	-1,176	37	59	-39
Above Normal (24%)	413	-116	-94	-63	-66	122	284	-79	-238	-1	4	-4
Below Normal (10%)	453	-148	-148	-101	-72	50	500	-65	-138	-2	0	-14
Dry (16%)	429	-115	-115	-84	-79	-62	449	-164	-25	-1	-6	-9
Critical (27%)	453	-83	-83	-49	-47	-23	277	-192	1	-14	3	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-36-5. Stanislaus River at Mouth, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	662	653	656	688	1,117	1,153	1,804	1,679	3,009	661	569	673
20%	582	548	522	557	694	613	1,608	1,592	2,016	555	485	508
30%	507	492	464	518	562	562	1,489	1,533	1,772	502	461	481
40%	471	459	427	473	512	522	1,040	1,423	1,092	444	445	457
50%	405	421	378	412	484	446	821	1,331	694	412	443	439
60%	377	388	341	364	423	394	637	1,049	572	386	416	431
70%	346	355	329	339	331	361	529	972	402	378	395	396
80%	327	312	311	318	296	295	440	865	352	350	373	373
90%	249	280	269	283	257	233	406	787	312	318	331	316
Long Term												
Full Simulation Period[b]	471	507	549	696	766	756	1,004	1,265	1,231	542	491	545
Water Year Types[c]												
Wet (23%)	530	737	980	1,176	1,407	1,704	1,731	1,634	2,632	939	772	985
Above Normal (24%)	494	463	451	840	852	680	1,126	1,323	1,495	535	463	484
Below Normal (10%)	480	503	506	532	589	489	1,057	1,443	807	452	440	443
Dry (16%)	487	437	415	433	484	407	616	1,166	555	377	404	408
Critical (27%)	384	393	360	366	367	309	476	887	334	335	343	338

Alternative 3

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	679	485	722	1,267	2,628	1,444	1,865	1,414	950	885	571	1,146
20%	557	456	438	518	1,301	734	1,634	1,306	679	535	480	489
30%	482	441	411	410	502	486	1,552	1,233	558	476	457	450
40%	448	424	400	374	416	419	1,240	1,043	428	424	445	439
50%	435	402	381	311	366	367	1,064	920	413	382	440	435
60%	392	372	362	275	308	334	996	882	374	374	410	415
70%	377	359	325	251	238	312	893	829	352	350	390	384
80%	360	333	300	232	201	238	575	550	304	327	367	360
90%	293	260	239	198	180	203	493	489	273	290	347	320
Long Term												
Full Simulation Period[b]	482	469	558	669	938	770	1,180	995	693	573	535	578
Water Year Types[c]												
Wet (23%)	539	714	1,096	1,183	2,227	1,841	1,781	1,437	1,596	1,213	961	1,139
Above Normal (24%)	516	418	468	818	843	708	1,341	1,054	550	446	457	473
Below Normal (10%)	461	404	408	632	723	446	1,230	1,086	449	445	438	422
Dry (16%)	495	399	377	365	463	345	849	803	411	365	404	402
Critical (27%)	401	369	336	282	272	271	692	639	299	305	351	351

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	17	-168	65	578	1,512	291	60	-265	-2,059	223	2	473
20%	-26	-93	-84	-39	607	121	26	-286	-1,336	-20	-5	-19
30%	-26	-51	-53	-108	-59	-76	63	-300	-1,214	-25	-4	-32
40%	-23	-36	-28	-99	-96	-103	200	-380	-664	-20	0	-17
50%	30	-19	2	-100	-119	-80	243	-410	-281	-29	-2	-5
60%	15	-16	20	-89	-115	-61	359	-167	-199	-12	-5	-15
70%	31	4	-4	-88	-93	-49	364	-143	-50	-28	-5	-13
80%	33	21	-11	-86	-95	-56	135	-315	-49	-23	-5	-12
90%	44	-20	-30	-84	-77	-30	87	-299	-39	-27	16	4
Long Term												
Full Simulation Period[b]	11	-38	9	-27	172	15	176	-270	-538	32	45	33
Water Year Types[c]												
Wet (23%)	8	-23	116	6	820	137	50	-197	-1,037	274	189	154
Above Normal (24%)	22	-45	18	-21	-9	29	215	-269	-945	-89	-5	-11
Below Normal (10%)	-19	-98	-98	100	134	-43	173	-356	-358	-7	-2	-21
Dry (16%)	7	-38	-38	-68	-21	-62	234	-364	-144	-11	0	-6
Critical (27%)	17	-24	-24	-84	-95	-38	216	-247	-35	-29	9	12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-36-6. Stanislaus River at Mouth, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	662	653	656	688	1,117	1,153	1,804	1,679	3,009	661	569	673
20%	582	548	522	557	694	613	1,608	1,592	2,016	555	485	508
30%	507	492	464	518	562	562	1,489	1,533	1,772	502	461	481
40%	471	459	427	473	512	522	1,040	1,423	1,092	444	445	457
50%	405	421	378	412	484	446	821	1,331	694	412	443	439
60%	377	388	341	364	423	394	637	1,049	572	386	416	431
70%	346	355	329	339	331	361	529	972	402	378	395	396
80%	327	312	311	318	296	295	440	865	352	350	373	373
90%	249	280	269	283	257	233	406	787	312	318	331	316
Long Term												
Full Simulation Period[b]	471	507	549	696	766	756	1,004	1,265	1,231	542	491	545
Water Year Types[c]												
Wet (23%)	530	737	980	1,176	1,407	1,704	1,731	1,634	2,632	939	772	985
Above Normal (24%)	494	463	451	840	852	680	1,126	1,323	1,495	535	463	484
Below Normal (10%)	480	503	506	532	589	489	1,057	1,443	807	452	440	443
Dry (16%)	487	437	415	433	484	407	616	1,166	555	377	404	408
Critical (27%)	384	393	360	366	367	309	476	887	334	335	343	338

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	1,121	456	442	570	1,081	1,952	1,950	2,148	1,536	719	571	659
20%	1,029	382	378	416	586	1,708	1,815	1,974	1,319	564	488	501
30%	979	348	319	363	483	495	1,707	1,806	1,139	502	461	473
40%	903	336	304	347	401	415	1,630	1,672	1,034	442	445	443
50%	854	318	290	337	368	365	1,529	1,434	635	407	443	439
60%	818	292	281	326	319	333	1,311	1,290	485	382	413	428
70%	764	267	262	312	272	312	1,168	1,183	383	371	389	389
80%	748	260	241	295	245	241	1,044	962	343	339	367	356
90%	681	248	224	270	230	207	865	752	300	307	305	316
Long Term												
Full Simulation Period[b]	891	396	428	631	704	860	1,437	1,458	863	521	476	522
Water Year Types[c]												
Wet (23%)	937	624	784	1,115	1,380	2,073	1,744	1,866	1,409	880	716	909
Above Normal (24%)	898	342	372	790	770	801	1,356	1,651	1,257	534	467	480
Below Normal (10%)	925	354	358	430	516	539	1,518	1,444	656	449	440	429
Dry (16%)	900	322	300	347	403	345	1,488	1,442	522	375	397	399
Critical (27%)	829	306	272	311	306	286	1,187	944	310	311	337	335

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	459	-197	-214	-118	-36	799	146	469	-1,473	58	2	-15
20%	447	-166	-144	-141	-109	1,094	207	381	-697	9	3	-7
30%	471	-145	-146	-155	-79	-67	218	273	-633	0	0	-9
40%	432	-123	-123	-126	-110	-107	590	248	-58	-2	0	-13
50%	449	-103	-88	-74	-116	-82	708	103	-59	-4	0	0
60%	441	-96	-61	-38	-104	-61	674	241	-87	-4	-3	-3
70%	418	-88	-67	-27	-60	-49	639	211	-19	-7	-6	-8
80%	421	-52	-70	-23	-50	-54	604	97	-9	-11	-5	-16
90%	432	-32	-46	-13	-27	-26	459	-35	-13	-11	-25	0
Long Term												
Full Simulation Period[b]	421	-112	-121	-65	-62	104	433	193	-368	-21	-15	-22
Water Year Types[c]												
Wet (23%)	407	-113	-196	-61	-27	369	14	233	-1,223	-59	-56	-76
Above Normal (24%)	404	-121	-78	-50	-83	122	230	328	-238	-1	4	-4
Below Normal (10%)	445	-148	-148	-102	-73	50	462	2	-151	-2	0	-14
Dry (16%)	412	-115	-115	-86	-80	-62	873	276	-34	-1	-6	-9
Critical (27%)	445	-87	-87	-55	-60	-23	711	58	-23	-23	-6	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

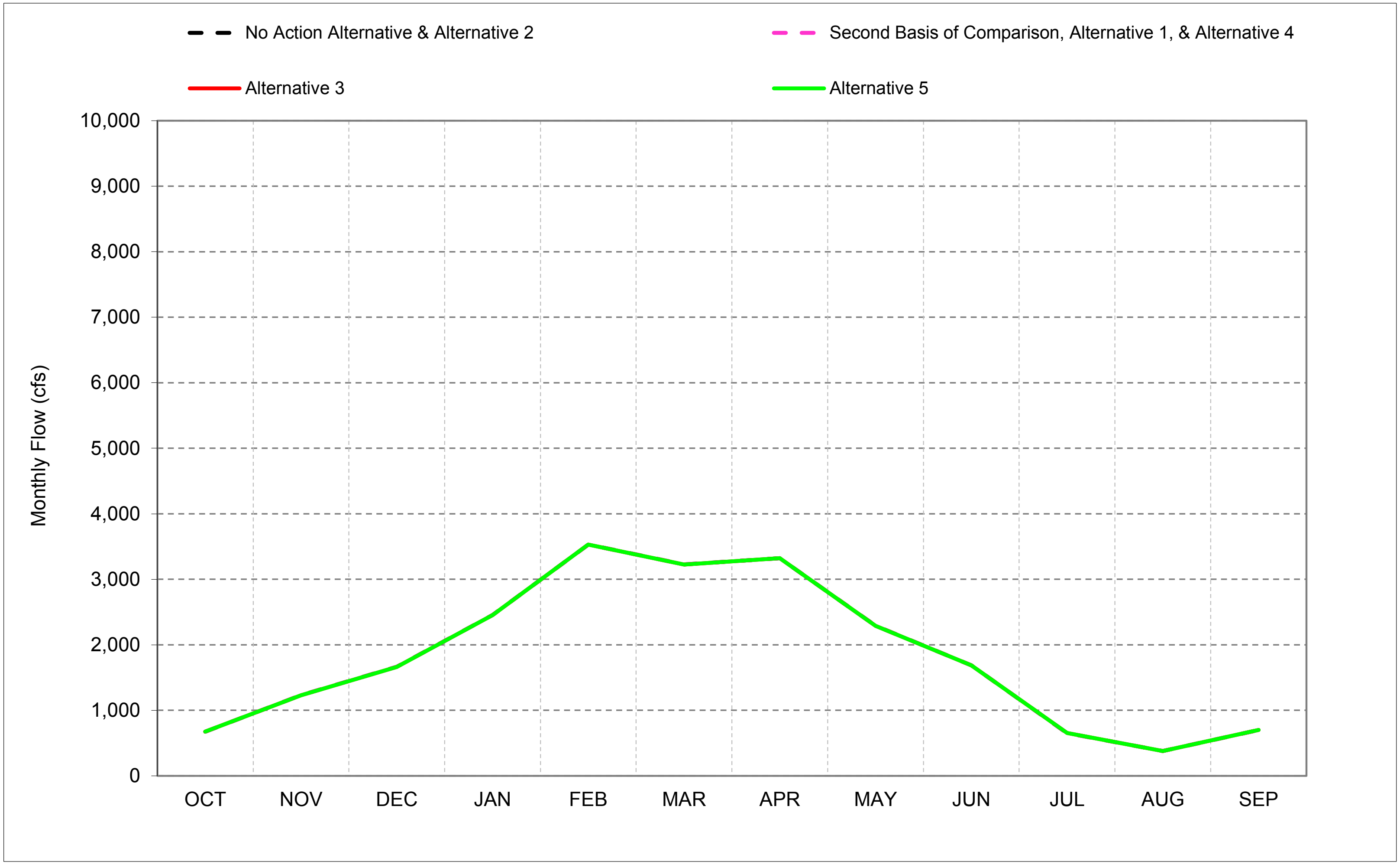
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

C.37. San Joaquin River Flow downstream of Merced River Confluence

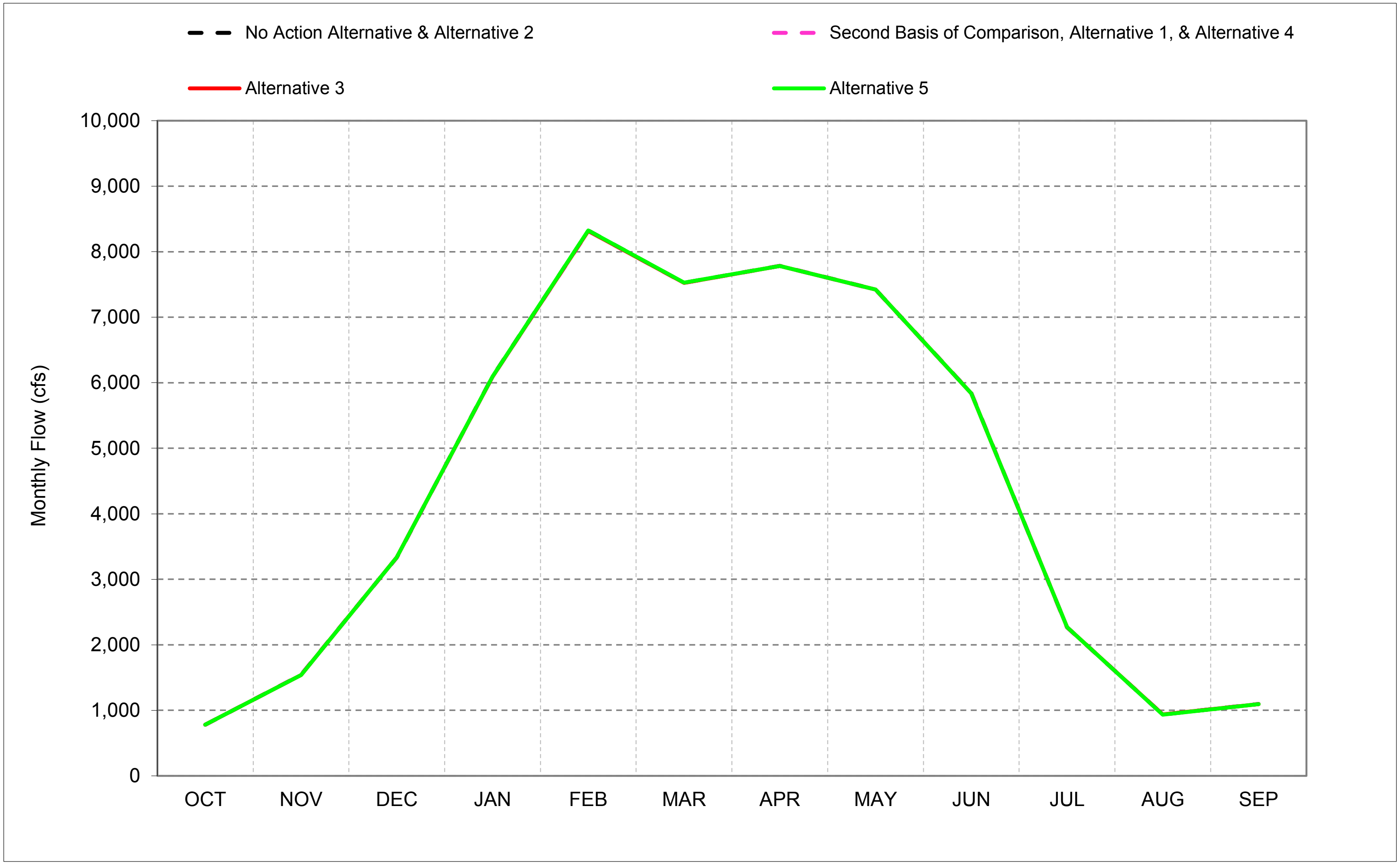
Figure C-37-1. San Joaquin River d/s of Merced Confluence, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-37-2. San Joaquin River d/s of Merced Confluence, Wet Year* Long-Term Average Flow**

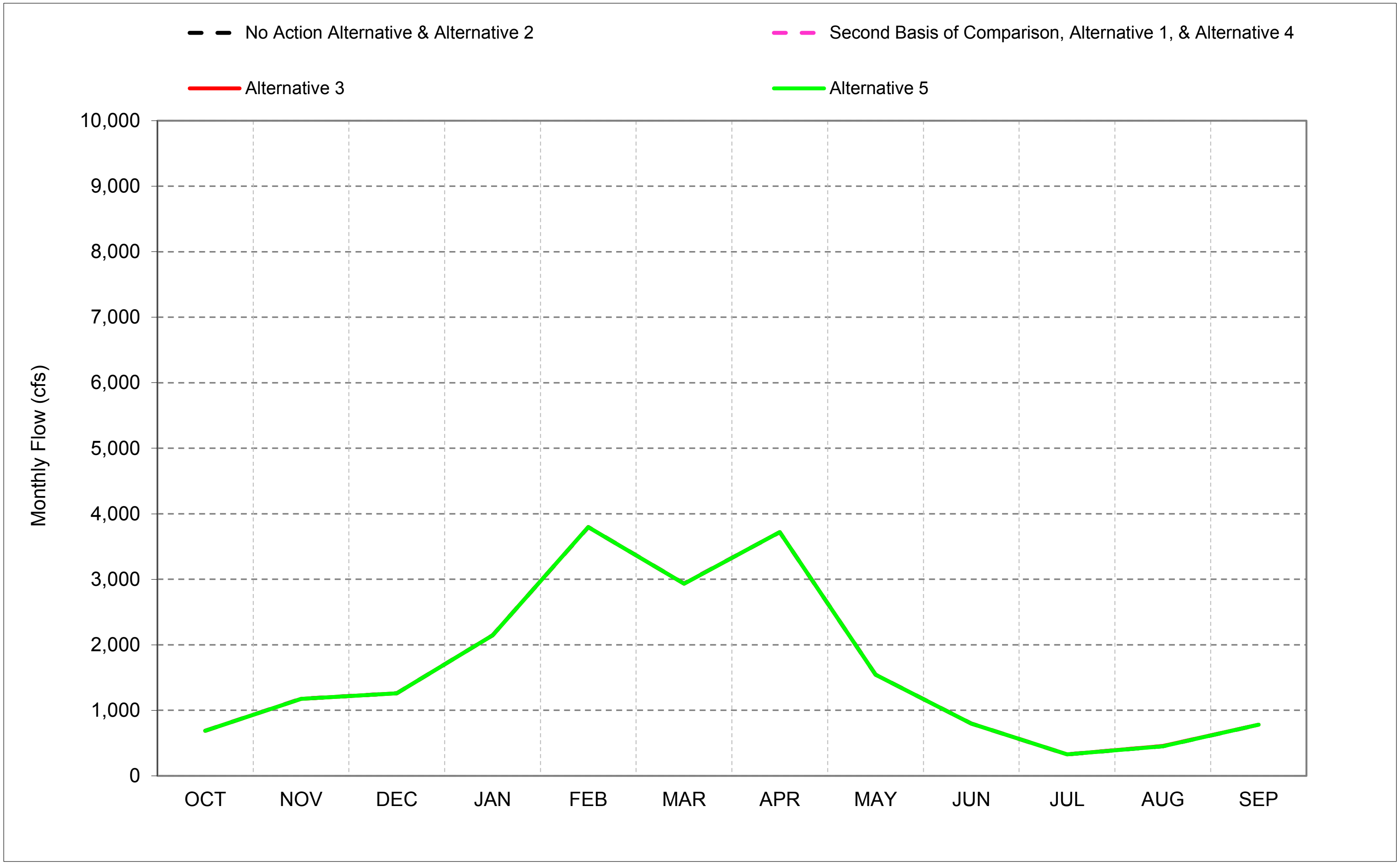


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-37-3. San Joaquin River d/s of Merced Confluence, Above Normal Year* Long-Term Average Flow**

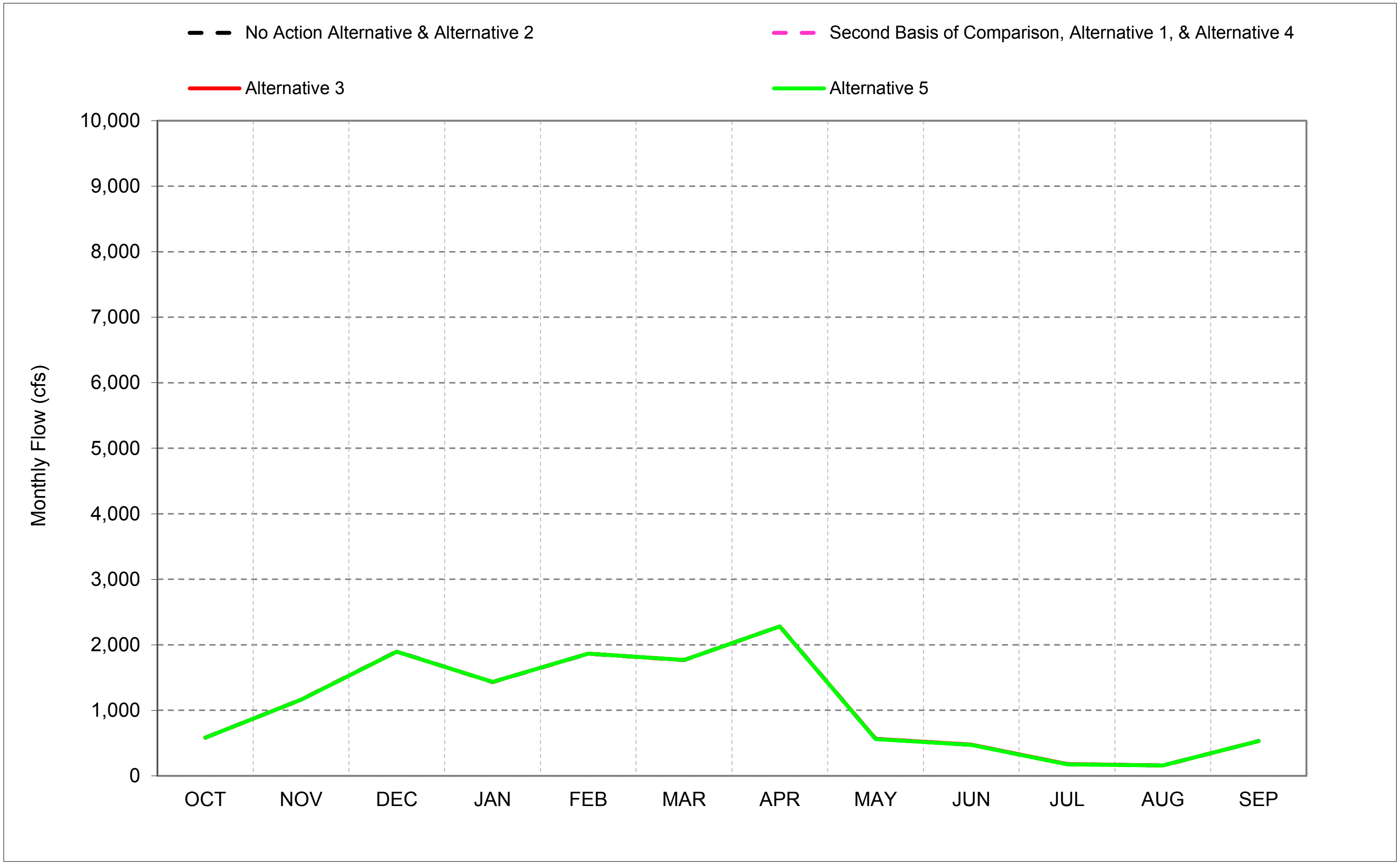


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-37-4. San Joaquin River d/s of Merced Confluence, Below Normal Year* Long-Term Average Flow**

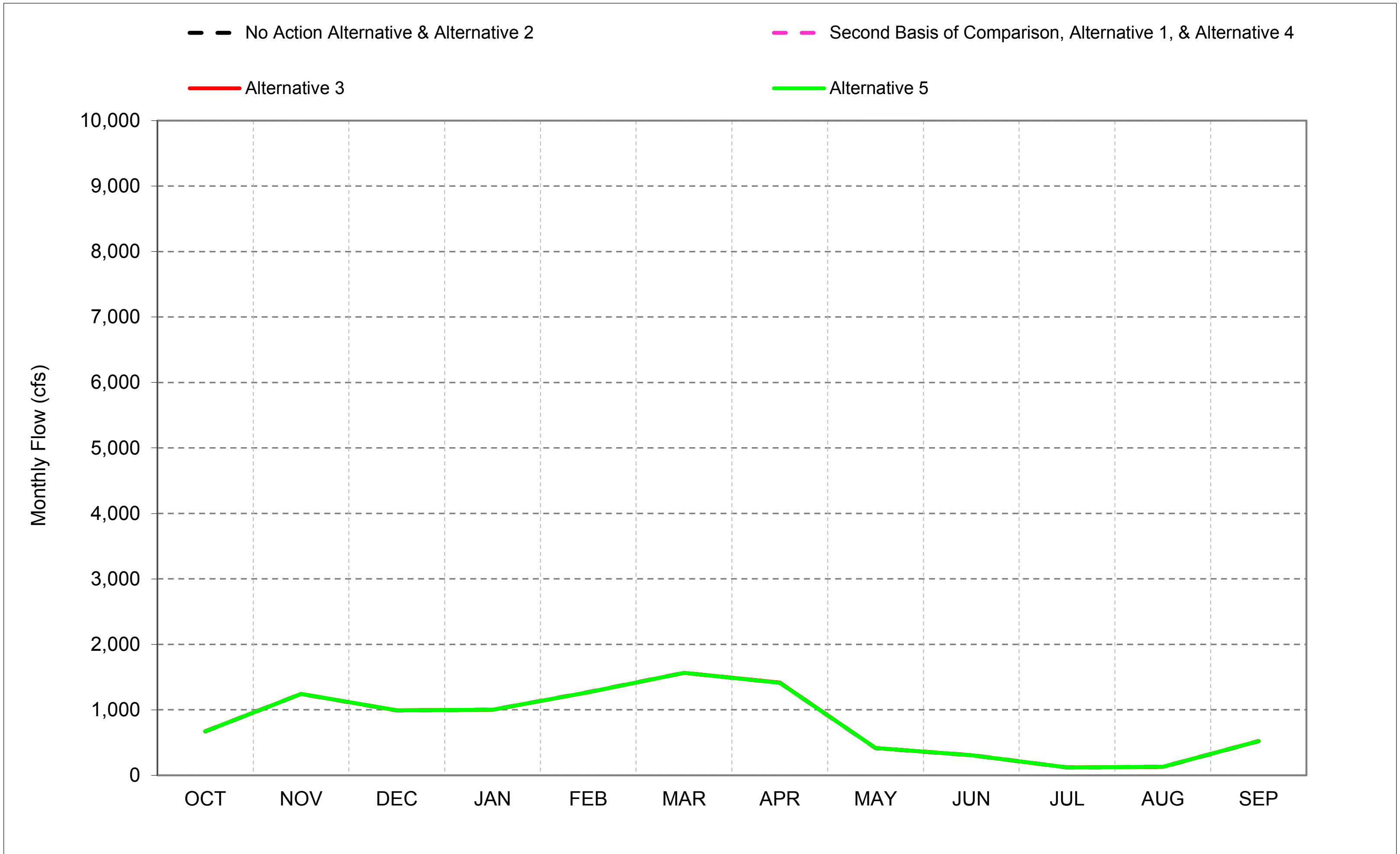


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-37-5. San Joaquin River d/s of Merced Confluence, Dry Year* Long-Term Average Flow**

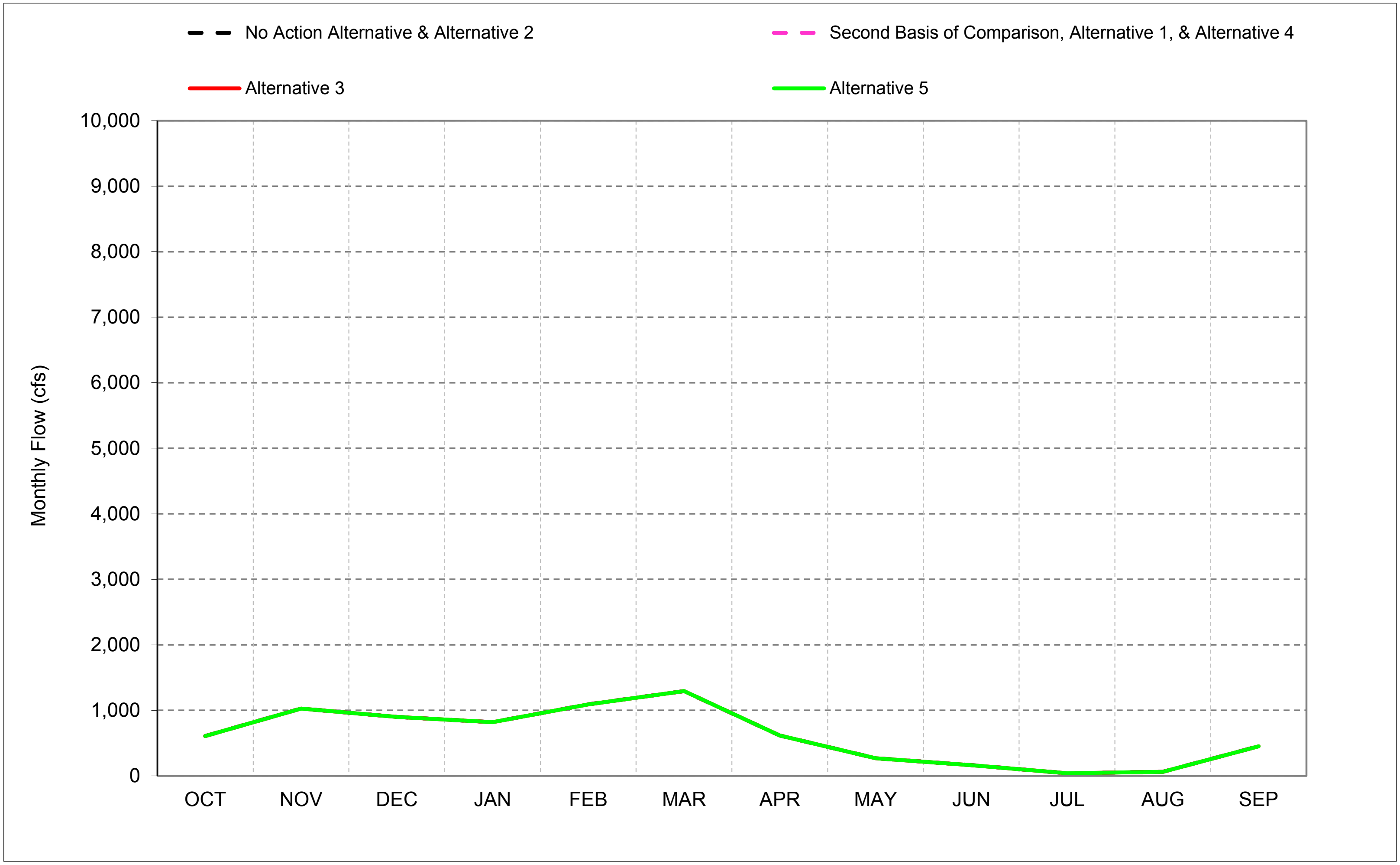


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-37-6. San Joaquin River d/s of Merced Confluence, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-37-1. San Joaquin River d/s of Merced Confluence, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,518	6,030	7,514	7,799	3,969	1,656	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,720	2,395	825	906	994
30%	691	1,173	1,020	1,846	3,057	2,816	3,739	1,695	669	268	305	891
40%	660	1,114	970	1,219	2,220	2,088	3,329	786	494	215	206	604
50%	587	1,087	935	1,002	1,583	1,813	2,337	577	424	160	151	554
60%	559	1,064	902	926	1,421	1,608	1,761	458	371	147	133	535
70%	504	1,033	890	852	1,222	1,478	1,262	398	296	106	118	521
80%	486	1,004	870	819	1,116	1,378	857	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	10	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,531	3,227	3,322	2,290	1,686	652	379	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,096	8,323	7,527	7,783	7,422	5,839	2,267	935	1,095
Above Normal (24%)	688	1,177	1,261	2,146	3,796	2,934	3,719	1,544	798	328	453	780
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,281	562	473	177	157	532
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	416	307	120	129	522
Critical (27%)	609	1,028	901	819	1,092	1,293	615	270	163	39	60	451

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,509	6,029	7,513	7,799	3,969	1,657	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,720	2,395	826	906	994
30%	691	1,174	1,020	1,845	3,057	2,816	3,740	1,695	670	270	306	891
40%	660	1,114	970	1,219	2,212	2,088	3,330	787	496	217	208	605
50%	588	1,087	935	1,002	1,583	1,813	2,337	578	425	162	152	555
60%	559	1,064	902	926	1,421	1,608	1,762	459	372	148	135	536
70%	504	1,034	890	852	1,222	1,478	1,262	399	297	107	119	521
80%	486	1,004	870	819	1,116	1,378	858	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	11	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,528	3,227	3,322	2,290	1,687	653	380	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,094	8,315	7,525	7,782	7,421	5,839	2,267	936	1,096
Above Normal (24%)	688	1,177	1,261	2,146	3,795	2,934	3,720	1,544	799	329	454	781
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,282	564	475	179	158	533
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	417	308	121	130	523
Critical (27%)	609	1,029	901	819	1,092	1,293	615	270	164	40	61	451

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	0	-9	-1	-1	0	0	1	0	0
20%	0	0	0	0	0	0	0	1	0	1	0	0
30%	0	0	0	0	0	0	1	0	1	2	0	0
40%	0	0	0	0	-8	0	1	1	2	1	2	0
50%	0	0	0	0	0	0	0	1	1	2	1	1
60%	0	0	0	0	0	0	1	1	2	1	1	1
70%	0	0	0	0	0	0	0	1	1	1	2	0
80%	0	0	0	0	0	0	1	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	1	0
Long Term												
Full Simulation Period[b]	0	0	0	0	-2	0	0	0	1	1	1	0
Water Year Types[c]												
Wet (23%)	0	0	0	-1	-8	-2	0	-1	0	0	0	0
Above Normal (24%)	0	0	0	0	-2	0	0	0	1	1	1	0
Below Normal (10%)	0	0	0	0	0	0	1	1	2	2	2	1
Dry (16%)	0	0	0	0	0	0	1	1	1	2	1	1
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-37-2. San Joaquin River d/s of Merced Confluence, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,518	6,030	7,514	7,799	3,969	1,656	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,720	2,395	825	906	994
30%	691	1,173	1,020	1,846	3,057	2,816	3,739	1,695	669	268	305	891
40%	660	1,114	970	1,219	2,220	2,088	3,329	786	494	215	206	604
50%	587	1,087	935	1,002	1,583	1,813	2,337	577	424	160	151	554
60%	559	1,064	902	926	1,421	1,608	1,761	458	371	147	133	535
70%	504	1,033	890	852	1,222	1,478	1,262	398	296	106	118	521
80%	486	1,004	870	819	1,116	1,378	857	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	10	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,531	3,227	3,322	2,290	1,686	652	379	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,096	8,323	7,527	7,783	7,422	5,839	2,267	935	1,095
Above Normal (24%)	688	1,177	1,261	2,146	3,796	2,934	3,719	1,544	798	328	453	780
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,281	562	473	177	157	532
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	416	307	120	129	522
Critical (27%)	609	1,028	901	819	1,092	1,293	615	270	163	39	60	451

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,501	6,029	7,512	7,799	3,969	1,657	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,721	2,395	827	907	994
30%	691	1,174	1,020	1,846	3,057	2,816	3,740	1,695	670	270	306	892
40%	660	1,114	970	1,219	2,213	2,088	3,330	787	495	216	208	605
50%	587	1,087	935	1,002	1,583	1,813	2,337	577	425	162	152	555
60%	559	1,064	902	926	1,421	1,608	1,762	459	372	147	135	536
70%	504	1,034	890	852	1,222	1,478	1,262	399	297	107	119	521
80%	486	1,004	870	819	1,116	1,378	858	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	10	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,529	3,227	3,322	2,290	1,687	653	380	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,095	8,317	7,525	7,782	7,421	5,839	2,267	936	1,096
Above Normal (24%)	688	1,177	1,261	2,146	3,795	2,934	3,720	1,544	799	329	453	781
Below Normal (10%)	581	1,161	1,897	1,433	1,865	1,766	2,282	564	474	179	158	533
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	417	308	121	129	523
Critical (27%)	609	1,028	901	819	1,092	1,293	615	270	163	40	60	451

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	0	-17	0	-2	0	0	1	0	0
20%	0	0	0	0	0	0	0	1	0	2	1	0
30%	0	0	0	0	0	0	1	0	1	2	1	1
40%	0	0	0	0	-7	0	1	1	1	1	2	0
50%	0	0	0	0	0	0	1	0	1	2	2	0
60%	0	0	0	0	0	0	1	1	1	0	1	1
70%	0	0	0	0	0	0	0	1	1	1	1	0
80%	0	0	0	0	0	0	1	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	-2	0	0	0	1	1	1	0
Water Year Types[c]												
Wet (23%)	0	0	0	-1	-7	-2	-1	-1	0	0	0	0
Above Normal (24%)	0	0	0	0	-1	0	0	0	1	1	1	0
Below Normal (10%)	0	0	0	0	0	0	1	1	1	2	1	1
Dry (16%)	0	0	0	0	0	0	0	1	1	1	1	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-37-3. San Joaquin River d/s of Merced Confluence, Monthly Flow

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,518	6,030	7,514	7,799	3,969	1,656	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,720	2,395	825	906	994
30%	691	1,173	1,020	1,846	3,057	2,816	3,739	1,695	669	268	305	891
40%	660	1,114	970	1,219	2,220	2,088	3,329	786	494	215	206	604
50%	587	1,087	935	1,002	1,583	1,813	2,337	577	424	160	151	554
60%	559	1,064	902	926	1,421	1,608	1,761	458	371	147	133	535
70%	504	1,033	890	852	1,222	1,478	1,262	398	296	106	118	521
80%	486	1,004	870	819	1,116	1,378	857	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	10	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,531	3,227	3,322	2,290	1,686	652	379	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,096	8,323	7,527	7,783	7,422	5,839	2,267	935	1,095
Above Normal (24%)	688	1,177	1,261	2,146	3,796	2,934	3,719	1,544	798	328	453	780
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,281	562	473	177	157	532
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	416	307	120	129	522
Critical (27%)	609	1,028	901	819	1,092	1,293	615	270	163	39	60	451

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,519	6,030	7,517	7,800	3,969	1,657	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,719	2,395	825	906	994
30%	691	1,173	1,020	1,845	3,057	2,816	3,739	1,695	669	268	305	891
40%	660	1,114	970	1,219	2,220	2,088	3,329	786	494	215	207	604
50%	587	1,087	935	1,002	1,583	1,813	2,337	577	424	160	151	554
60%	559	1,064	902	926	1,421	1,608	1,761	458	371	147	133	535
70%	504	1,033	890	852	1,222	1,478	1,261	397	296	106	118	521
80%	486	1,004	870	819	1,116	1,378	857	320	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	10	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,531	3,227	3,322	2,290	1,686	652	379	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,096	8,324	7,527	7,783	7,423	5,839	2,268	935	1,095
Above Normal (24%)	688	1,177	1,261	2,146	3,796	2,934	3,719	1,544	798	328	453	780
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,281	562	473	177	157	532
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	416	307	120	128	522
Critical (27%)	609	1,028	901	819	1,092	1,293	615	269	163	39	60	451

Alternative 5 minus No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	1	0	3	1	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-37-4. San Joaquin River d/s of Merced Confluence, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,509	6,029	7,513	7,799	3,969	1,657	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,720	2,395	826	906	994
30%	691	1,174	1,020	1,845	3,057	2,816	3,740	1,695	670	270	306	891
40%	660	1,114	970	1,219	2,212	2,088	3,330	787	496	217	208	605
50%	588	1,087	935	1,002	1,583	1,813	2,337	578	425	162	152	555
60%	559	1,064	902	926	1,421	1,608	1,762	459	372	148	135	536
70%	504	1,034	890	852	1,222	1,478	1,262	399	297	107	119	521
80%	486	1,004	870	819	1,116	1,378	858	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	11	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,528	3,227	3,322	2,290	1,687	653	380	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,094	8,315	7,525	7,782	7,421	5,839	2,267	936	1,096
Above Normal (24%)	688	1,177	1,261	2,146	3,795	2,934	3,720	1,544	799	329	454	781
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,282	564	475	179	158	533
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	417	308	121	130	523
Critical (27%)	609	1,029	901	819	1,092	1,293	615	270	164	40	61	451

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,518	6,030	7,514	7,799	3,969	1,656	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,720	2,395	825	906	994
30%	691	1,173	1,020	1,846	3,057	2,816	3,739	1,695	669	268	305	891
40%	660	1,114	970	1,219	2,220	2,088	3,329	786	494	215	206	604
50%	587	1,087	935	1,002	1,583	1,813	2,337	577	424	160	151	554
60%	559	1,064	902	926	1,421	1,608	1,761	458	371	147	133	535
70%	504	1,033	890	852	1,222	1,478	1,262	398	296	106	118	521
80%	486	1,004	870	819	1,116	1,378	857	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	10	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,531	3,227	3,322	2,290	1,686	652	379	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,096	8,323	7,527	7,783	7,422	5,839	2,267	935	1,095
Above Normal (24%)	688	1,177	1,261	2,146	3,796	2,934	3,719	1,544	798	328	453	780
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,281	562	473	177	157	532
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	416	307	120	129	522
Critical (27%)	609	1,028	901	819	1,092	1,293	615	270	163	39	60	451

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	9	1	1	0	0	-1	0	0
20%	0	0	0	0	0	0	0	-1	0	-1	0	0
30%	0	0	0	0	0	0	-1	0	-1	-2	0	0
40%	0	0	0	0	8	0	-1	-1	-2	-1	-2	0
50%	0	0	0	0	0	0	0	-1	-1	-2	-1	-1
60%	0	0	0	0	0	0	-1	-1	-2	-1	-1	-1
70%	0	0	0	0	0	0	0	-1	-1	-1	-2	0
80%	0	0	0	0	0	0	-1	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	-1	0
Long Term												
Full Simulation Period[b]	0	0	0	0	2	0	0	0	-1	-1	-1	0
Water Year Types[c]												
Wet (23%)	0	0	0	1	8	2	0	1	0	0	0	0
Above Normal (24%)	0	0	0	0	2	0	0	0	-1	-1	-1	0
Below Normal (10%)	0	0	0	0	0	0	-1	-1	-2	-2	-2	-1
Dry (16%)	0	0	0	0	0	0	-1	-1	-1	-2	-1	-1
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-37-5. San Joaquin River d/s of Merced Confluence, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,509	6,029	7,513	7,799	3,969	1,657	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,720	2,395	826	906	994
30%	691	1,174	1,020	1,845	3,057	2,816	3,740	1,695	670	270	306	891
40%	660	1,114	970	1,219	2,212	2,088	3,330	787	496	217	208	605
50%	588	1,087	935	1,002	1,583	1,813	2,337	578	425	162	152	555
60%	559	1,064	902	926	1,421	1,608	1,762	459	372	148	135	536
70%	504	1,034	890	852	1,222	1,478	1,262	399	297	107	119	521
80%	486	1,004	870	819	1,116	1,378	858	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	11	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,528	3,227	3,322	2,290	1,687	653	380	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,094	8,315	7,525	7,782	7,421	5,839	2,267	936	1,096
Above Normal (24%)	688	1,177	1,261	2,146	3,795	2,934	3,720	1,544	799	329	454	781
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,282	564	475	179	158	533
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	417	308	121	130	523
Critical (27%)	609	1,029	901	819	1,092	1,293	615	270	164	40	61	451

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,501	6,029	7,512	7,799	3,969	1,657	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,721	2,395	827	907	994
30%	691	1,174	1,020	1,846	3,057	2,816	3,740	1,695	670	270	306	892
40%	660	1,114	970	1,219	2,213	2,088	3,330	787	495	216	208	605
50%	587	1,087	935	1,002	1,583	1,813	2,337	577	425	162	152	555
60%	559	1,064	902	926	1,421	1,608	1,762	459	372	147	135	536
70%	504	1,034	890	852	1,222	1,478	1,262	399	297	107	119	521
80%	486	1,004	870	819	1,116	1,378	858	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	10	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,529	3,227	3,322	2,290	1,687	653	380	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,095	8,317	7,525	7,782	7,421	5,839	2,267	936	1,096
Above Normal (24%)	688	1,177	1,261	2,146	3,795	2,934	3,720	1,544	799	329	453	781
Below Normal (10%)	581	1,161	1,897	1,433	1,865	1,766	2,282	564	474	179	158	533
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	417	308	121	129	523
Critical (27%)	609	1,028	901	819	1,092	1,293	615	270	163	40	60	451

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	0	-8	0	-1	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	1	1	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	1	0	0	0	-1	-1	0	0
50%	0	0	0	0	0	0	0	-1	0	0	0	0
60%	0	0	0	0	0	0	0	0	-1	-1	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	-1	0	0
90%	0	0	0	0	0	0	0	0	0	0	-1	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	1	0	-1	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-37-6. San Joaquin River d/s of Merced Confluence, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,509	6,029	7,513	7,799	3,969	1,657	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,720	2,395	826	906	994
30%	691	1,174	1,020	1,845	3,057	2,816	3,740	1,695	670	270	306	891
40%	660	1,114	970	1,219	2,212	2,088	3,330	787	496	217	208	605
50%	588	1,087	935	1,002	1,583	1,813	2,337	578	425	162	152	555
60%	559	1,064	902	926	1,421	1,608	1,762	459	372	148	135	536
70%	504	1,034	890	852	1,222	1,478	1,262	399	297	107	119	521
80%	486	1,004	870	819	1,116	1,378	858	321	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	11	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,528	3,227	3,322	2,290	1,687	653	380	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,094	8,315	7,525	7,782	7,421	5,839	2,267	936	1,096
Above Normal (24%)	688	1,177	1,261	2,146	3,795	2,934	3,720	1,544	799	329	454	781
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,282	564	475	179	158	533
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	417	308	121	130	523
Critical (27%)	609	1,029	901	819	1,092	1,293	615	270	164	40	61	451

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	961	1,382	3,009	4,348	9,519	6,030	7,517	7,800	3,969	1,657	1,016	1,095
20%	792	1,288	1,482	2,766	4,303	3,738	4,295	2,719	2,395	825	906	994
30%	691	1,173	1,020	1,845	3,057	2,816	3,739	1,695	669	268	305	891
40%	660	1,114	970	1,219	2,220	2,088	3,329	786	494	215	207	604
50%	587	1,087	935	1,002	1,583	1,813	2,337	577	424	160	151	554
60%	559	1,064	902	926	1,421	1,608	1,761	458	371	147	133	535
70%	504	1,033	890	852	1,222	1,478	1,261	397	296	106	118	521
80%	486	1,004	870	819	1,116	1,378	857	320	219	34	74	495
90%	438	895	810	748	1,018	1,273	326	229	130	0	10	444
Long Term												
Full Simulation Period[b]	675	1,230	1,664	2,454	3,531	3,227	3,322	2,290	1,686	652	379	700
Water Year Types[c]												
Wet (23%)	780	1,541	3,334	6,096	8,324	7,527	7,783	7,423	5,839	2,268	935	1,095
Above Normal (24%)	688	1,177	1,261	2,146	3,796	2,934	3,719	1,544	798	328	453	780
Below Normal (10%)	581	1,161	1,896	1,433	1,865	1,766	2,281	562	473	177	157	532
Dry (16%)	672	1,243	991	1,000	1,270	1,565	1,414	416	307	120	128	522
Critical (27%)	609	1,028	901	819	1,092	1,293	615	269	163	39	60	451

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	10	1	4	1	0	-1	0	0
20%	0	0	0	0	0	0	0	-1	0	-1	0	0
30%	0	0	0	0	0	0	-1	0	-1	-2	0	-1
40%	0	0	0	0	7	0	-1	-1	-2	-1	-2	0
50%	0	0	0	0	0	0	0	-1	-1	-2	-1	-1
60%	0	0	0	0	0	0	-1	-1	-2	-1	-1	-1
70%	0	0	0	0	0	0	0	-1	-1	-1	-2	0
80%	0	0	0	0	0	0	-1	-1	0	0	0	0
90%	0	0	0	0	0	0	0	-1	0	0	-1	0
Long Term												
Full Simulation Period[b]	0	0	0	0	2	0	0	0	-1	-1	-1	0
Water Year Types[c]												
Wet (23%)	0	0	0	1	8	2	0	2	1	0	0	0
Above Normal (24%)	0	0	0	0	2	0	0	0	-1	-1	-1	0
Below Normal (10%)	0	0	0	0	0	0	-1	-1	-2	-2	-2	-1
Dry (16%)	0	0	0	0	0	0	-1	-1	-1	-2	-1	-1
Critical (27%)	0	0	0	0	0	0	0	-1	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

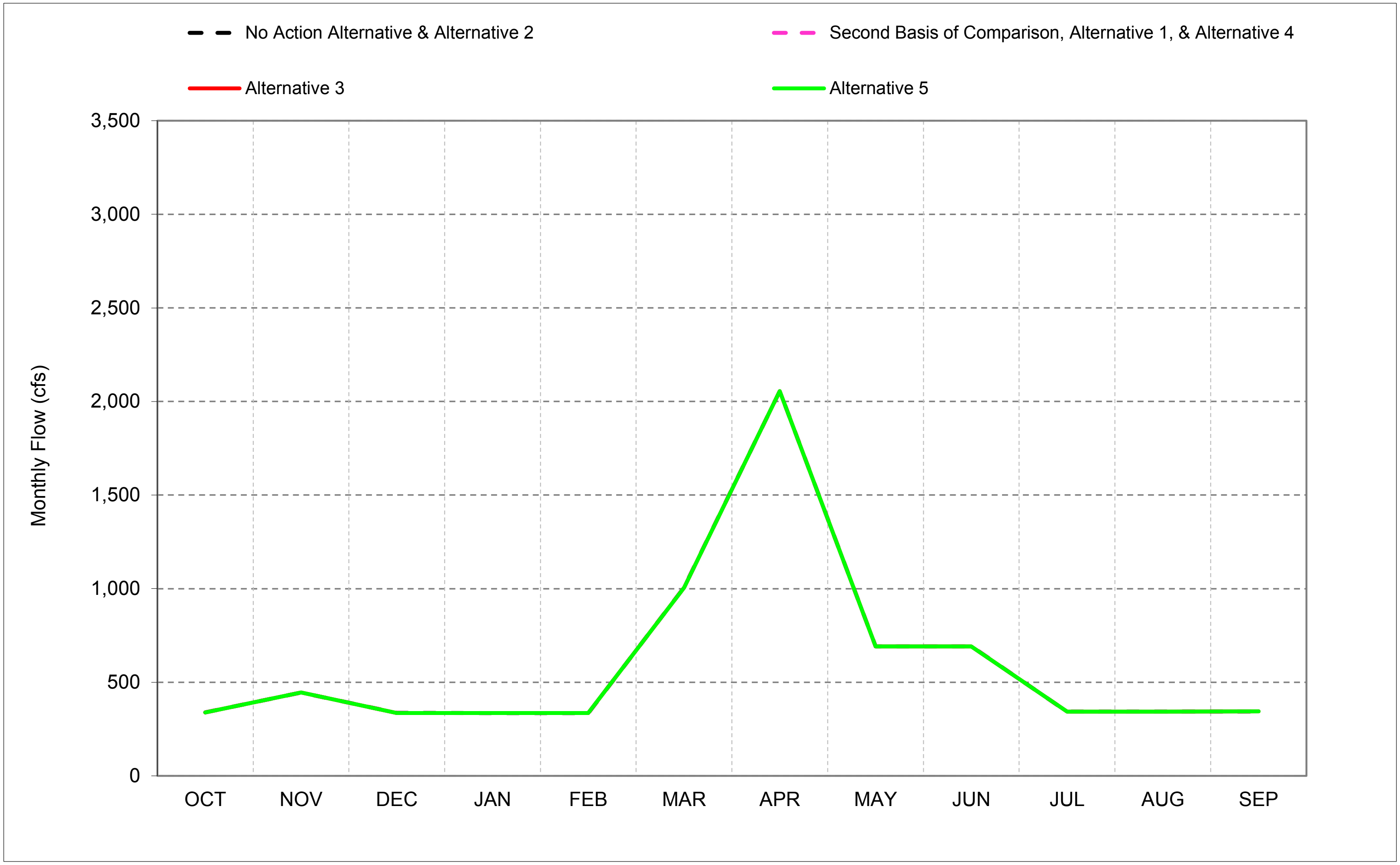
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

C.38. San Joaquin River Restoration Flow

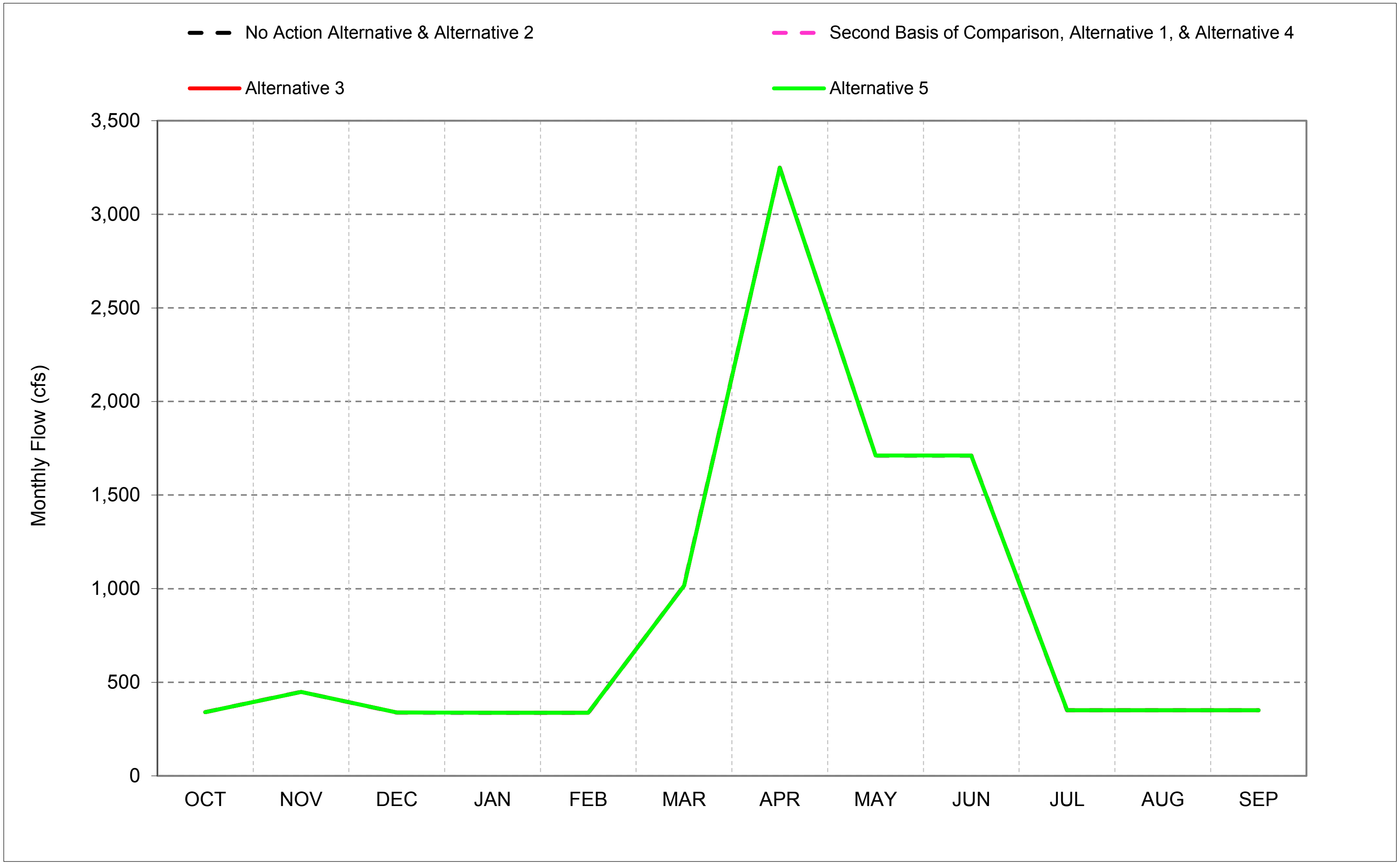
Figure C-38-1. San Joaquin River Restoration Flows, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-38-2. San Joaquin River Restoration Flows, Wet Year* Long-Term Average Flow**

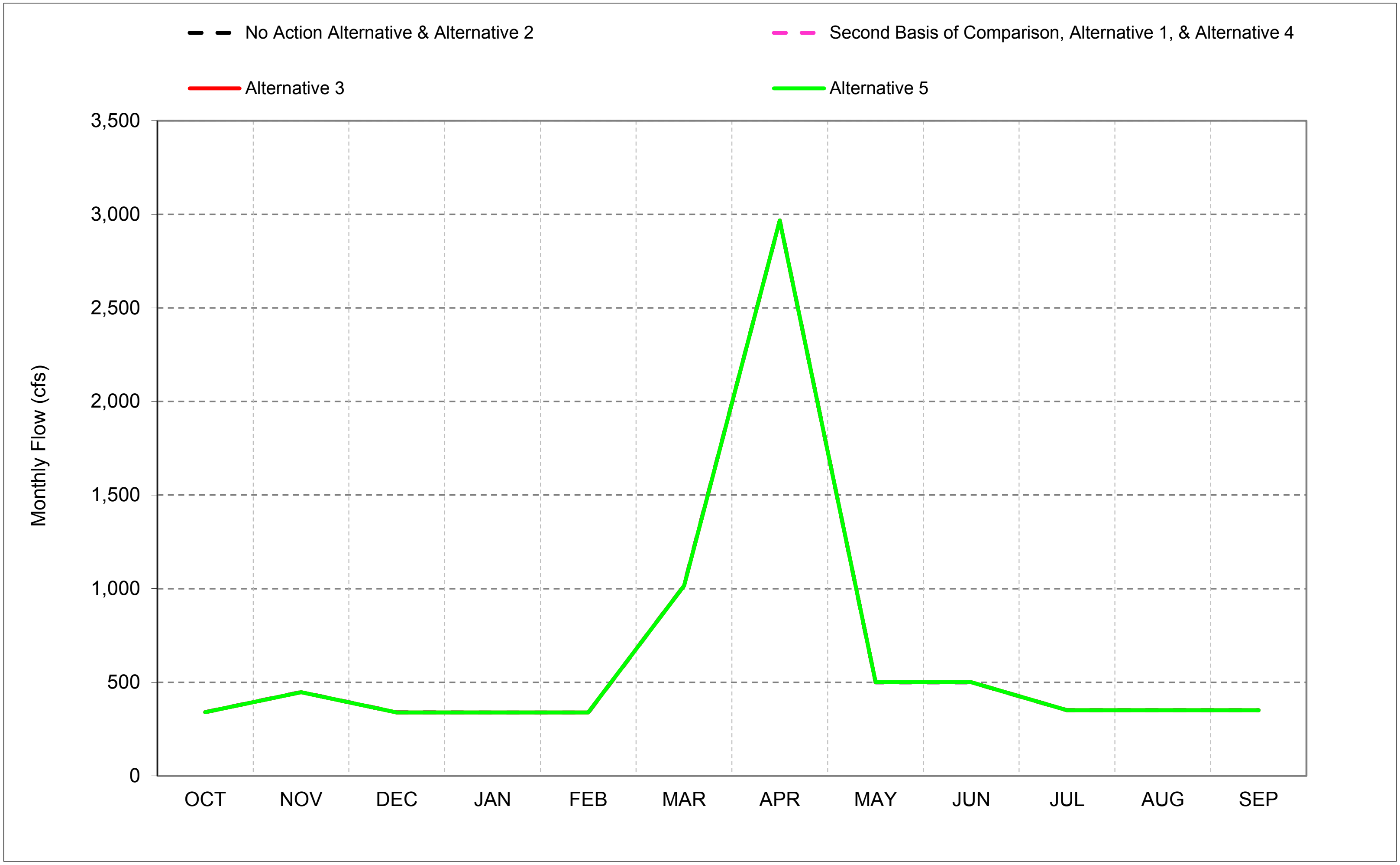


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-38-3. San Joaquin River Restoration Flows, Above Normal Year* Long-Term Average Flow**

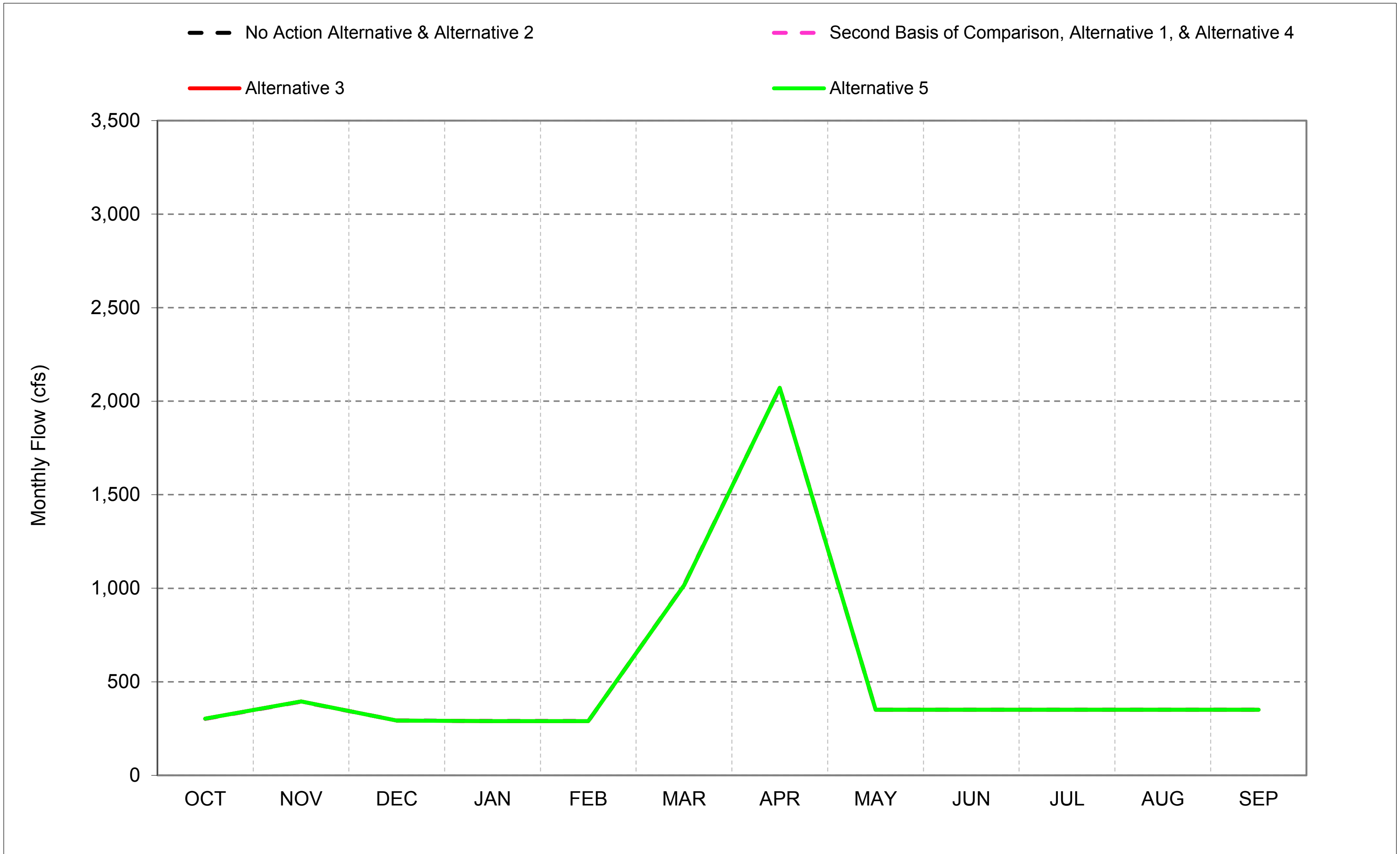


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-38-4. San Joaquin River Restoration Flows, Below Normal Year* Long-Term Average Flow**

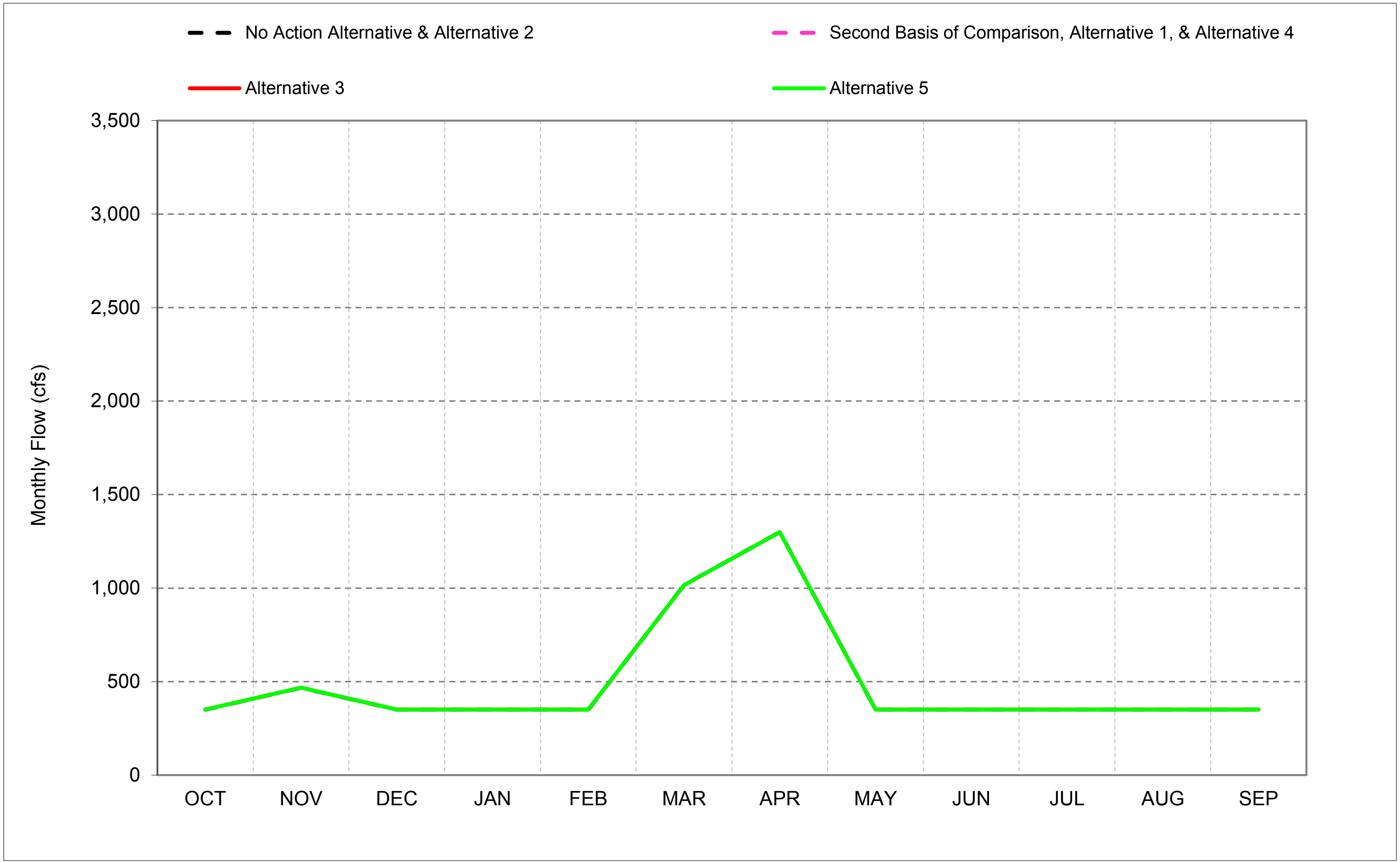


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-38-5. San Joaquin River Restoration Flows, Dry Year* Long-Term Average Flow**

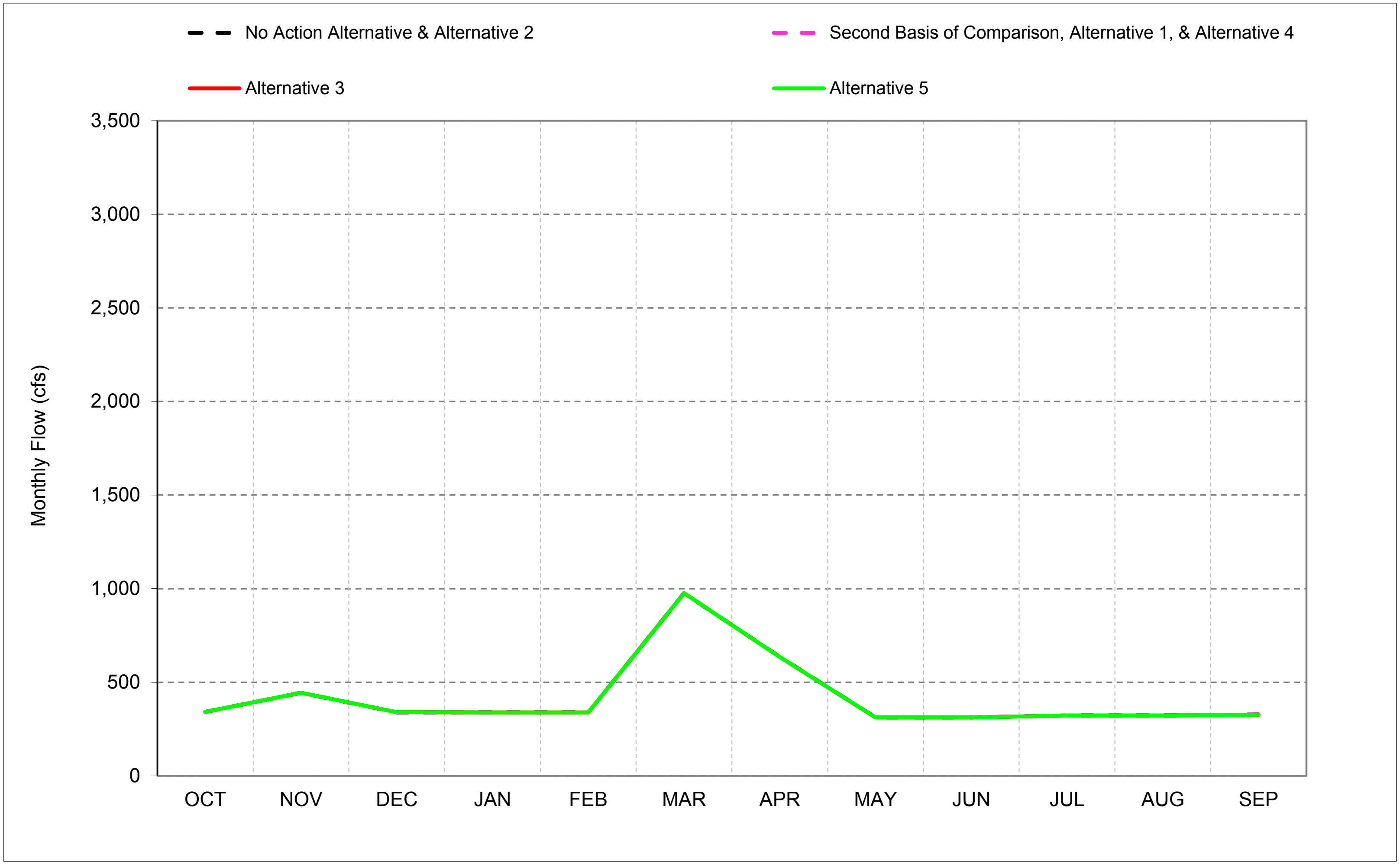


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-38-6. San Joaquin River Restoration Flows, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-38-1. San Joaquin River Restoration Flows, Monthly Flow

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 1

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 1 minus No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-38-2. San Joaquin River Restoration Flows, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-38-3. San Joaquin River Restoration Flows, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-38-4. San Joaquin River Restoration Flows, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

No Action Alternative

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-38-5. San Joaquin River Restoration Flows, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 3

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-38-6. San Joaquin River Restoration Flows, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	350	467	350	350	350	1,016	3,249	2,000	2,000	350	350	350
20%	350	467	350	350	350	1,016	3,249	771	771	350	350	350
30%	350	467	350	350	350	1,016	3,249	435	435	350	350	350
40%	350	467	350	350	350	1,016	2,970	350	350	350	350	350
50%	350	467	350	350	350	1,016	2,008	350	350	350	350	350
60%	350	467	350	350	350	1,016	1,543	350	350	350	350	350
70%	350	467	350	350	350	1,016	1,281	350	350	350	350	350
80%	350	467	350	350	350	1,016	817	350	350	350	350	350
90%	350	467	350	350	350	1,016	388	350	350	350	350	350
Long Term												
Full Simulation Period[b]	338	445	336	335	335	1,005	2,055	692	692	343	343	344
Water Year Types[c]												
Wet (23%)	340	449	338	337	337	1,016	3,249	1,711	1,711	350	350	350
Above Normal (24%)	341	447	339	338	338	1,016	2,967	500	500	350	350	350
Below Normal (10%)	303	394	293	290	290	1,016	2,071	350	350	350	350	350
Dry (16%)	350	467	350	350	350	1,016	1,300	350	350	350	350	350
Critical (27%)	341	444	340	339	339	976	636	312	312	323	323	327

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[b]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[c]												
Wet (23%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (24%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (10%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (27%)	0	0	0	0	0	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

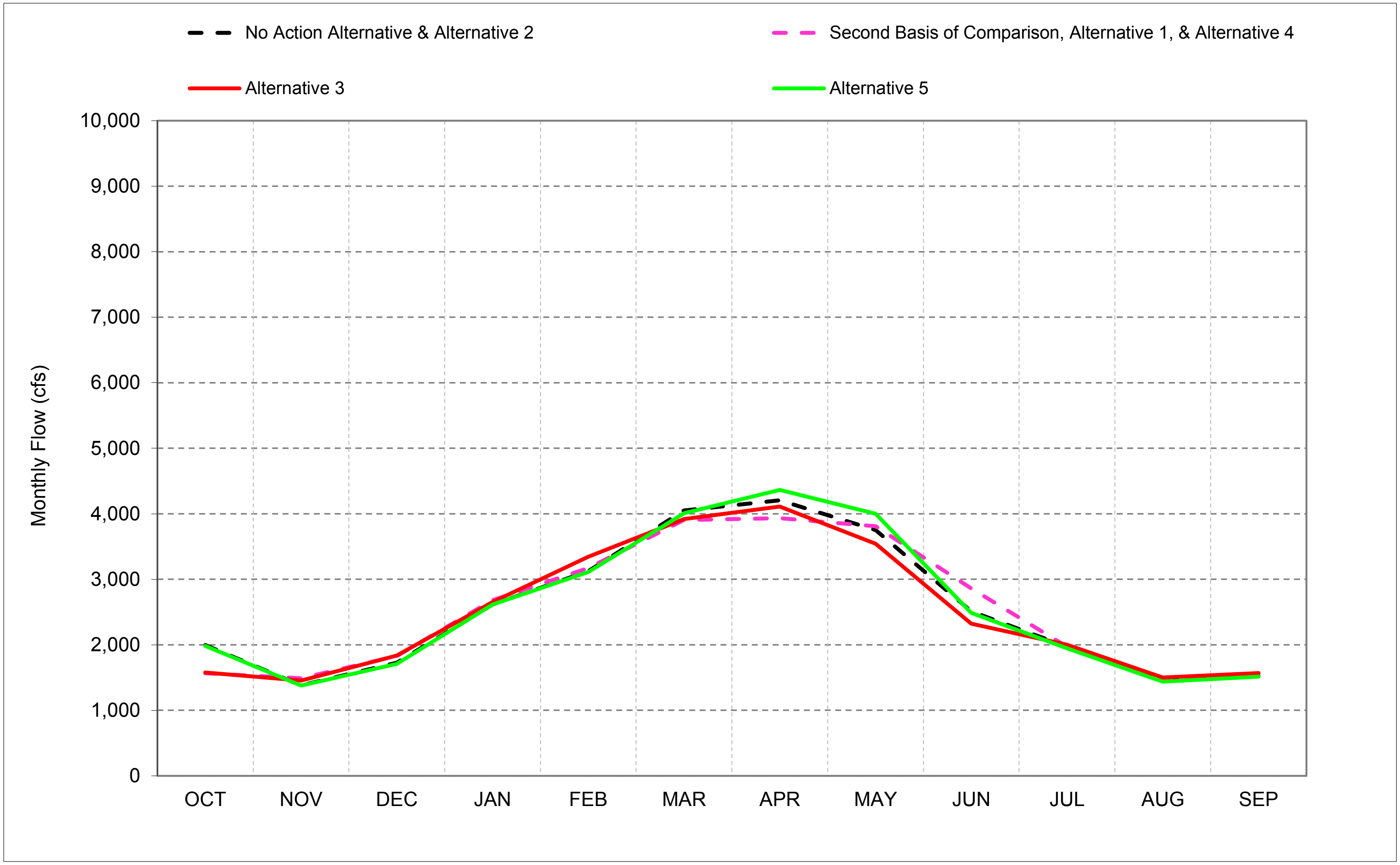
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

C.39. San Joaquin River Flow at Vernalis minus San Joaquin River Flow downstream of Merced River Confluence

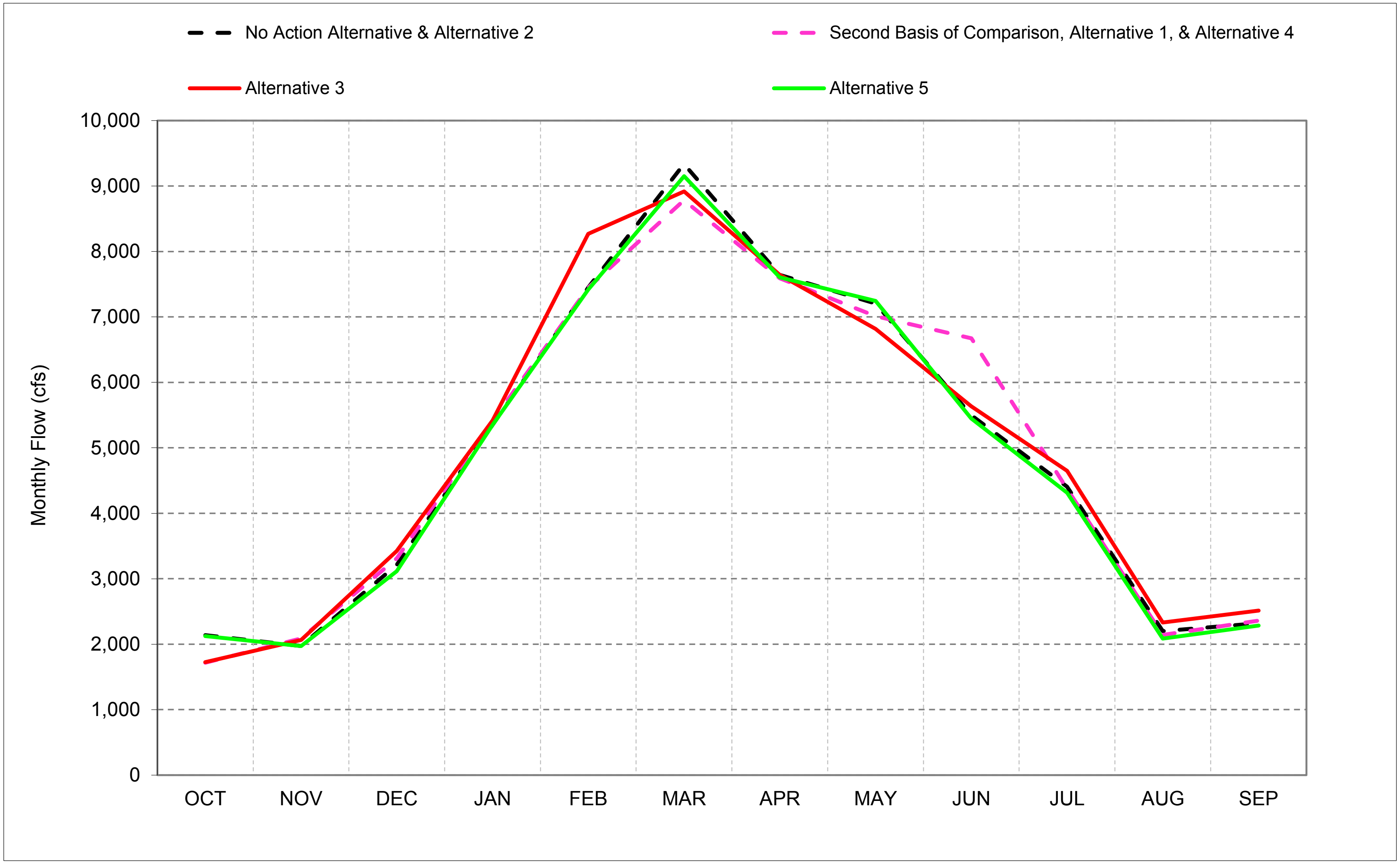
Figure C-39-1. San Joaquin River at Vernalis - Joaquin River d/s of Merced Confluence, Long-Term* Average Flow



*Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-39-2. San Joaquin River at Vernalis - Joaquin River d/s of Merced Confluence, Wet Year* Long-Term Average Flow**

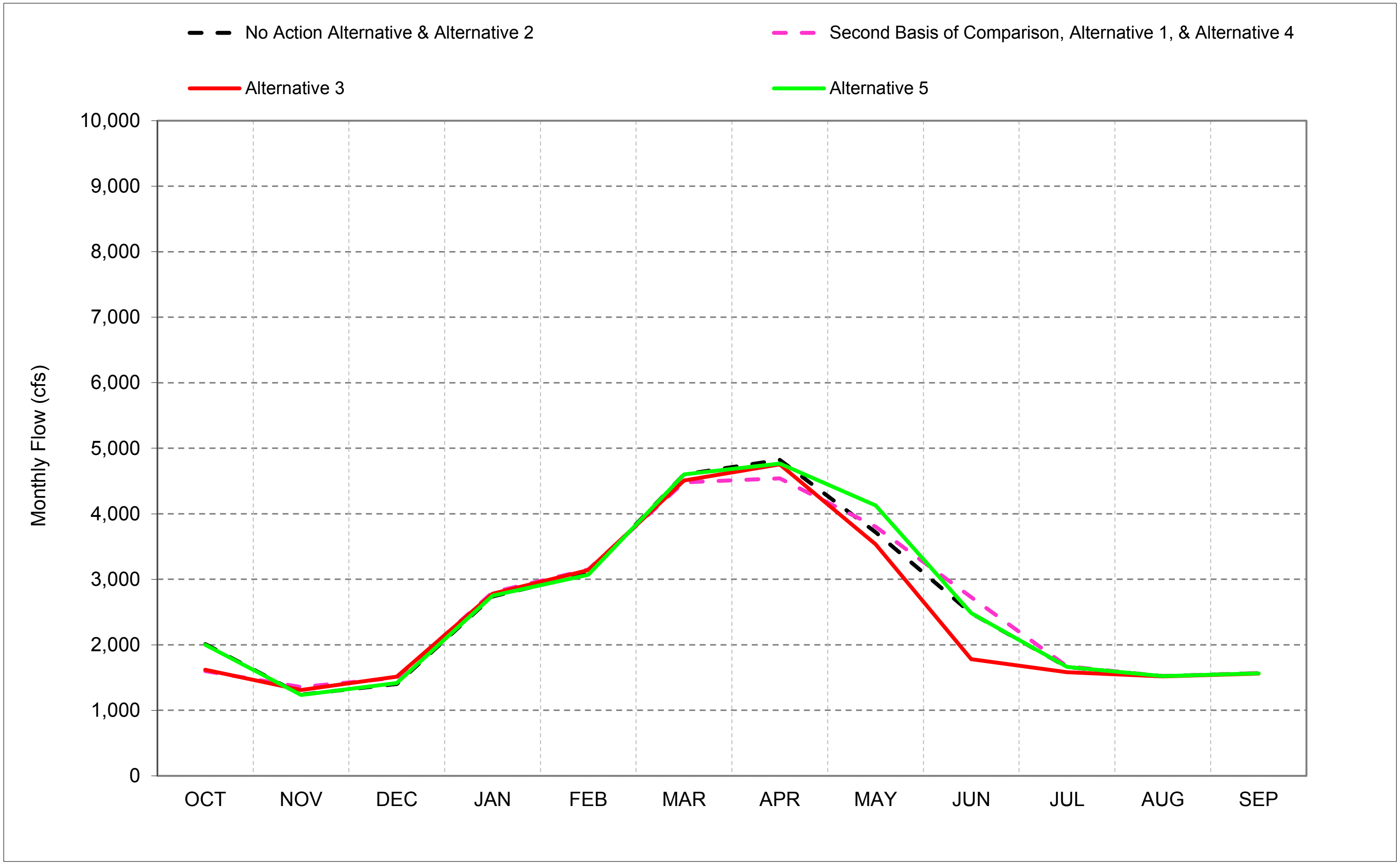


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-39-3. San Joaquin River at Vernalis - Joaquin River d/s of Merced Confluence, Above Normal Year* Long-Term Average Flow**

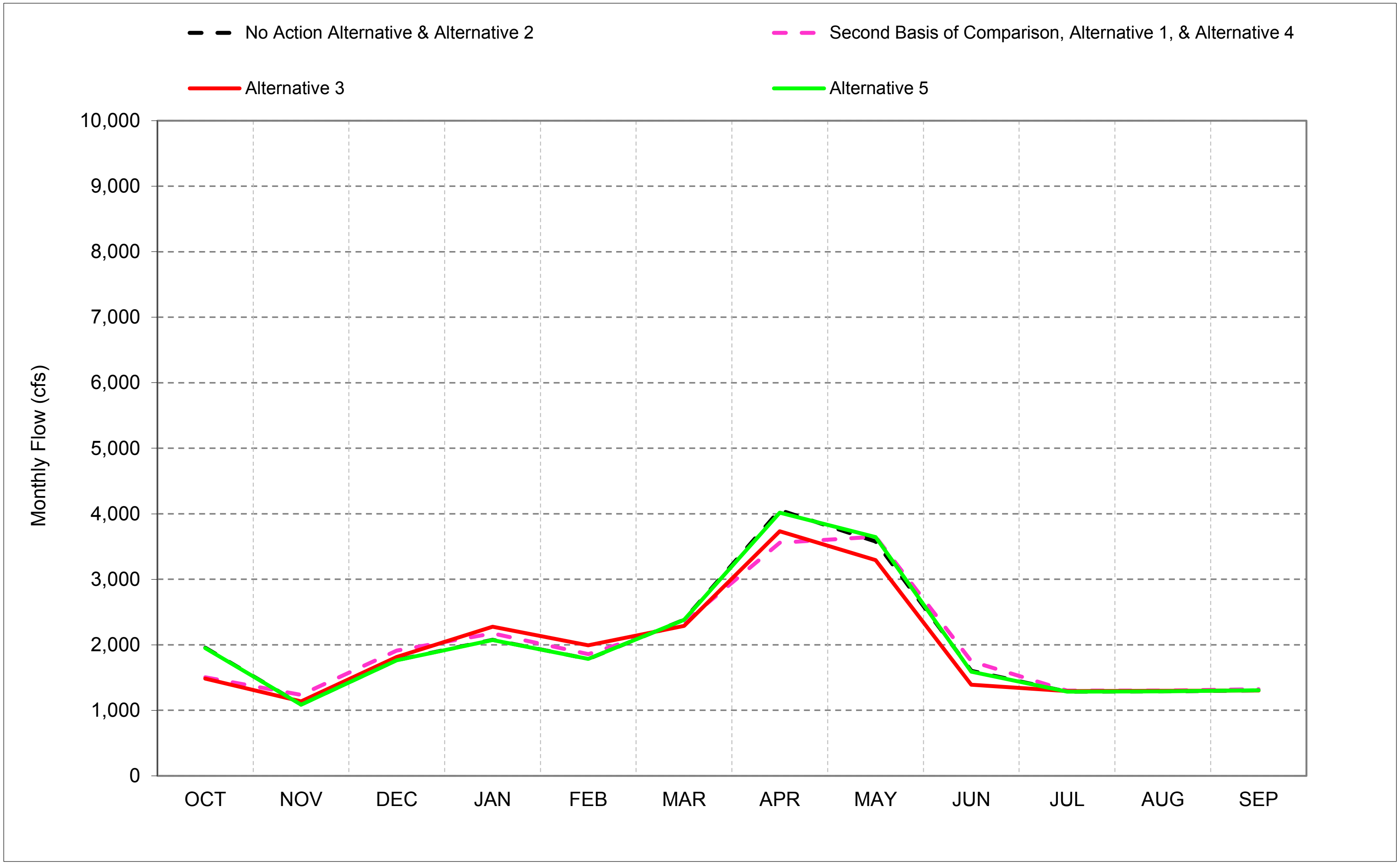


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-39-4. San Joaquin River at Vernalis - Joaquin River d/s of Merced Confluence, Below Normal Year* Long-Term Average Flow**

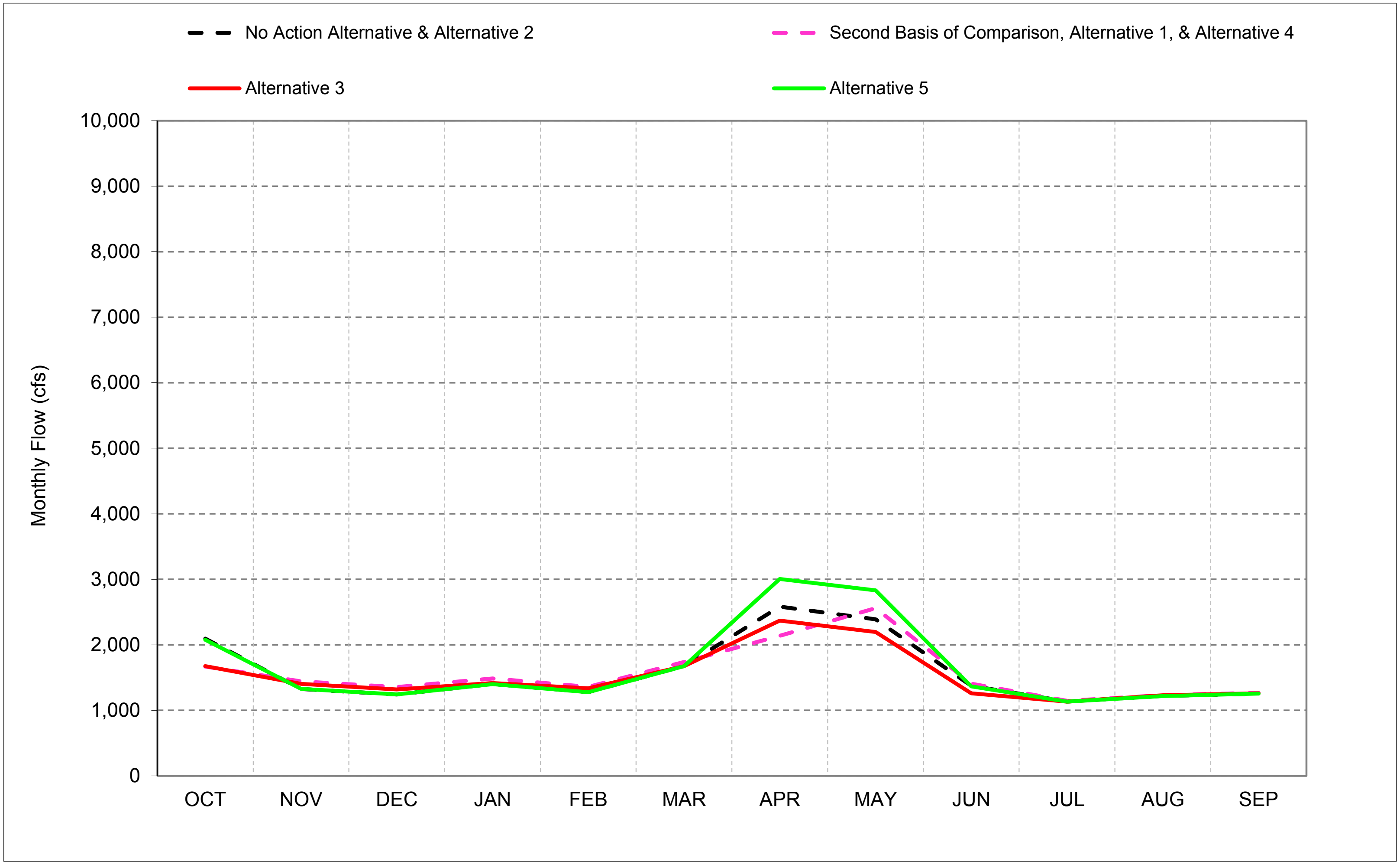


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-39-5. San Joaquin River at Vernalis - Joaquin River d/s of Merced Confluence, Dry Year* Long-Term Average Flow**

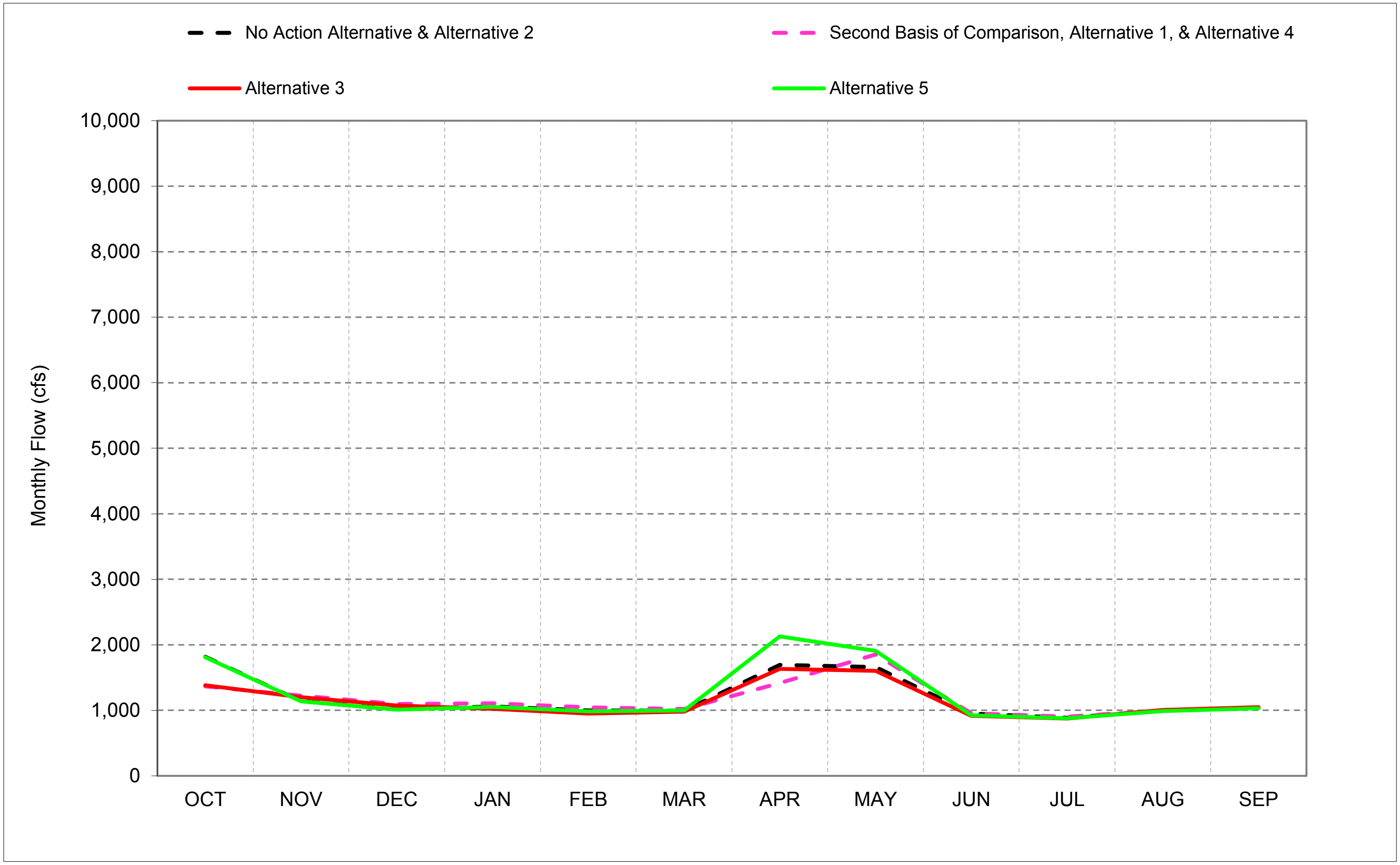


*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-39-6. San Joaquin River at Vernalis - Joaquin River d/s of Merced Confluence, Critical Year* Long-Term Average Flow**



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

**Based on the 82-year simulation period.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-39-1. San Joaquin River at Vernalis - San Joaquin River d/s of Merced Confluence, Monthly Flow

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,505	1,686	2,261	4,481	8,588	9,439	7,674	7,184	5,515	4,577	1,821	1,918
20%	2,335	1,468	1,469	2,369	4,963	6,708	6,148	4,646	3,168	2,020	1,670	1,665
30%	2,208	1,301	1,329	1,606	2,516	5,262	5,007	4,152	2,696	1,654	1,571	1,591
40%	2,111	1,199	1,200	1,485	1,609	3,567	4,388	3,639	2,299	1,537	1,466	1,473
50%	1,994	1,129	1,125	1,387	1,375	2,036	3,598	3,113	1,799	1,305	1,334	1,382
60%	1,822	1,079	1,105	1,255	1,259	1,609	2,904	2,543	1,390	1,184	1,243	1,284
70%	1,671	1,000	1,033	1,108	1,134	1,199	2,245	2,213	1,163	1,112	1,192	1,219
80%	1,581	932	971	1,018	1,022	1,076	1,832	1,772	1,095	990	1,088	1,146
90%	1,337	843	854	888	895	909	1,496	1,509	904	860	996	1,019
Long Term												
Full Simulation Period[b]	1,997	1,381	1,727	2,616	3,124	4,051	4,206	3,750	2,508	1,970	1,468	1,523
Water Year Types[c]												
Wet (23%)	2,138	1,972	3,211	5,350	7,453	9,336	7,641	7,206	5,495	4,409	2,200	2,321
Above Normal (24%)	2,012	1,239	1,402	2,737	3,085	4,602	4,823	3,720	2,482	1,662	1,522	1,564
Below Normal (10%)	1,957	1,088	1,765	2,074	1,785	2,383	4,056	3,577	1,603	1,286	1,289	1,305
Dry (16%)	2,095	1,326	1,241	1,402	1,279	1,676	2,582	2,389	1,374	1,134	1,218	1,254
Critical (27%)	1,817	1,139	1,014	1,058	999	995	1,692	1,659	951	886	999	1,036

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,056	1,892	2,379	4,517	8,588	8,333	7,534	7,093	6,724	4,063	1,810	2,005
20%	1,882	1,616	1,613	2,452	5,143	6,125	5,907	4,546	3,985	2,031	1,668	1,681
30%	1,754	1,411	1,461	1,695	2,701	4,985	4,748	4,121	2,812	1,658	1,570	1,591
40%	1,648	1,330	1,340	1,625	1,750	3,378	4,029	3,788	2,430	1,546	1,470	1,494
50%	1,511	1,256	1,231	1,483	1,481	2,117	3,199	3,223	1,861	1,317	1,341	1,397
60%	1,343	1,148	1,167	1,302	1,326	1,662	2,392	2,757	1,394	1,198	1,252	1,289
70%	1,248	1,078	1,139	1,162	1,201	1,259	1,796	2,398	1,173	1,115	1,203	1,227
80%	1,127	981	1,025	1,055	1,078	1,095	1,552	1,965	1,102	1,001	1,092	1,147
90%	921	885	885	927	920	935	1,311	1,726	907	869	980	1,023
Long Term												
Full Simulation Period[b]	1,565	1,491	1,828	2,682	3,172	3,904	3,933	3,811	2,860	1,972	1,458	1,537
Water Year Types[c]												
Wet (23%)	1,717	2,086	3,310	5,411	7,448	8,783	7,592	7,012	6,673	4,374	2,142	2,360
Above Normal (24%)	1,600	1,356	1,496	2,801	3,151	4,481	4,540	3,803	2,725	1,670	1,524	1,571
Below Normal (10%)	1,505	1,236	1,913	2,176	1,858	2,335	3,560	3,650	1,750	1,302	1,299	1,323
Dry (16%)	1,667	1,442	1,356	1,486	1,358	1,739	2,137	2,559	1,406	1,145	1,232	1,267
Critical (27%)	1,365	1,222	1,097	1,107	1,047	1,018	1,416	1,852	953	903	998	1,034

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	-448	207	118	36	0	-1,106	-141	-91	1,209	-514	-12	87
20%	-453	148	144	83	180	-583	-240	-100	817	12	-2	16
30%	-454	110	132	88	184	-277	-259	-31	116	4	-2	-1
40%	-464	131	140	139	141	-189	-359	149	131	10	4	20
50%	-483	127	106	96	106	81	-399	110	62	13	7	15
60%	-478	70	62	47	67	53	-512	214	4	14	9	5
70%	-422	78	106	54	68	61	-449	185	10	3	10	8
80%	-454	49	55	37	56	20	-280	193	7	11	4	1
90%	-416	42	32	39	25	26	-186	217	4	8	-16	4
Long Term												
Full Simulation Period[b]	-431	110	101	66	47	-146	-273	61	352	2	-10	14
Water Year Types[c]												
Wet (23%)	-420	114	99	61	-5	-554	-49	-193	1,177	-35	-57	39
Above Normal (24%)	-413	116	94	63	66	-121	-283	83	243	9	1	7
Below Normal (10%)	-452	148	148	102	72	-49	-496	72	147	16	10	18
Dry (16%)	-428	115	115	85	79	63	-446	170	32	11	13	13
Critical (27%)	-452	83	83	49	48	23	-276	193	1	17	-1	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-39-2. San Joaquin River at Vernalis - San Joaquin River d/s of Merced Confluence, Monthly Flow

No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,505	1,686	2,261	4,481	8,588	9,439	7,674	7,184	5,515	4,577	1,821	1,918
20%	2,335	1,468	1,469	2,369	4,963	6,708	6,148	4,646	3,168	2,020	1,670	1,665
30%	2,208	1,301	1,329	1,606	2,516	5,262	5,007	4,152	2,696	1,654	1,571	1,591
40%	2,111	1,199	1,200	1,485	1,609	3,567	4,388	3,639	2,299	1,537	1,466	1,473
50%	1,994	1,129	1,125	1,387	1,375	2,036	3,598	3,113	1,799	1,305	1,334	1,382
60%	1,822	1,079	1,105	1,255	1,259	1,609	2,904	2,543	1,390	1,184	1,243	1,284
70%	1,671	1,000	1,033	1,108	1,134	1,199	2,245	2,213	1,163	1,112	1,192	1,219
80%	1,581	932	971	1,018	1,022	1,076	1,832	1,772	1,095	990	1,088	1,146
90%	1,337	843	854	888	895	909	1,496	1,509	904	860	996	1,019
Long Term												
Full Simulation Period[b]	1,997	1,381	1,727	2,616	3,124	4,051	4,206	3,750	2,508	1,970	1,468	1,523
Water Year Types[c]												
Wet (23%)	2,138	1,972	3,211	5,350	7,453	9,336	7,641	7,206	5,495	4,409	2,200	2,321
Above Normal (24%)	2,012	1,239	1,402	2,737	3,085	4,602	4,823	3,720	2,482	1,662	1,522	1,564
Below Normal (10%)	1,957	1,088	1,765	2,074	1,785	2,383	4,056	3,577	1,603	1,286	1,289	1,305
Dry (16%)	2,095	1,326	1,241	1,402	1,279	1,676	2,582	2,389	1,374	1,134	1,218	1,254
Critical (27%)	1,817	1,139	1,014	1,058	999	995	1,692	1,659	951	886	999	1,036

Alternative 3

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,042	1,844	2,484	5,349	8,588	8,881	7,550	6,797	5,625	4,924	2,340	2,418
20%	1,863	1,547	1,542	2,459	5,856	6,228	6,133	4,336	2,364	1,873	1,653	1,667
30%	1,740	1,374	1,398	1,640	2,799	4,941	5,081	3,850	1,900	1,614	1,570	1,561
40%	1,655	1,277	1,300	1,525	1,684	3,279	4,146	3,453	1,709	1,517	1,468	1,473
50%	1,495	1,222	1,211	1,386	1,347	2,037	3,450	2,840	1,416	1,290	1,339	1,380
60%	1,374	1,127	1,159	1,224	1,186	1,632	2,578	2,458	1,192	1,177	1,248	1,286
70%	1,280	1,087	1,110	1,059	1,050	1,199	2,146	2,040	1,141	1,069	1,199	1,224
80%	1,147	995	1,030	981	901	1,076	1,815	1,831	987	954	1,083	1,147
90%	959	880	891	812	811	903	1,401	1,397	899	855	1,002	1,021
Long Term												
Full Simulation Period[b]	1,576	1,453	1,837	2,654	3,344	3,919	4,109	3,541	2,322	2,002	1,502	1,570
Water Year Types[c]												
Wet (23%)	1,725	2,063	3,426	5,417	8,268	8,920	7,644	6,816	5,637	4,649	2,332	2,515
Above Normal (24%)	1,622	1,311	1,514	2,779	3,142	4,510	4,756	3,534	1,780	1,581	1,518	1,560
Below Normal (10%)	1,486	1,138	1,815	2,276	1,992	2,291	3,734	3,292	1,391	1,293	1,296	1,302
Dry (16%)	1,674	1,403	1,318	1,418	1,337	1,676	2,370	2,194	1,260	1,132	1,230	1,260
Critical (27%)	1,382	1,199	1,073	1,023	952	980	1,632	1,604	917	872	1,006	1,046

Alternative 3 minus No Action Alternative

	Monthly Flow (cfs)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-463	159	222	867	0	-558	-124	-387	110	347	519	500
20%	-472	79	73	90	892	-480	-15	-310	-804	-147	-17	2
30%	-468	73	69	34	283	-321	74	-302	-797	-40	-1	-30
40%	-456	79	100	39	75	-288	-242	-186	-590	-20	3	0
50%	-499	94	86	-2	-27	1	-148	-273	-383	-15	5	-1
60%	-448	48	54	-31	-73	23	-327	-85	-198	-7	5	1
70%	-390	86	77	-49	-83	0	-100	-173	-22	-43	7	5
80%	-434	63	60	-37	-121	0	-17	59	-108	-37	-5	0
90%	-378	38	37	-75	-84	-6	-95	-112	-5	-5	6	2
Long Term												
Full Simulation Period[b]	-420	71	110	39	219	-132	-97	-209	-186	32	34	47
Water Year Types[c]												
Wet (23%)	-412	91	215	67	815	-417	3	-390	141	240	132	194
Above Normal (24%)	-390	72	112	42	57	-93	-67	-186	-702	-81	-4	-5
Below Normal (10%)	-471	50	50	201	206	-92	-322	-285	-212	7	6	-3
Dry (16%)	-421	77	77	17	58	0	-212	-195	-113	-3	12	6
Critical (27%)	-435	59	59	-35	-47	-15	-61	-55	-34	-14	7	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-39-3. San Joaquin River at Vernalis - San Joaquin River d/s of Merced Confluence, Monthly Flow

No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,505	1,686	2,261	4,481	8,588	9,439	7,674	7,184	5,515	4,577	1,821	1,918
20%	2,335	1,468	1,469	2,369	4,963	6,708	6,148	4,646	3,168	2,020	1,670	1,665
30%	2,208	1,301	1,329	1,606	2,516	5,262	5,007	4,152	2,696	1,654	1,571	1,591
40%	2,111	1,199	1,200	1,485	1,609	3,567	4,388	3,639	2,299	1,537	1,466	1,473
50%	1,994	1,129	1,125	1,387	1,375	2,036	3,598	3,113	1,799	1,305	1,334	1,382
60%	1,822	1,079	1,105	1,255	1,259	1,609	2,904	2,543	1,390	1,184	1,243	1,284
70%	1,671	1,000	1,033	1,108	1,134	1,199	2,245	2,213	1,163	1,112	1,192	1,219
80%	1,581	932	971	1,018	1,022	1,076	1,832	1,772	1,095	990	1,088	1,146
90%	1,337	843	854	888	895	909	1,496	1,509	904	860	996	1,019
Long Term												
Full Simulation Period[b]	1,997	1,381	1,727	2,616	3,124	4,051	4,206	3,750	2,508	1,970	1,468	1,523
Water Year Types[c]												
Wet (23%)	2,138	1,972	3,211	5,350	7,453	9,336	7,641	7,206	5,495	4,409	2,200	2,321
Above Normal (24%)	2,012	1,239	1,402	2,737	3,085	4,602	4,823	3,720	2,482	1,662	1,522	1,564
Below Normal (10%)	1,957	1,088	1,765	2,074	1,785	2,383	4,056	3,577	1,603	1,286	1,289	1,305
Dry (16%)	2,095	1,326	1,241	1,402	1,279	1,676	2,582	2,389	1,374	1,134	1,218	1,254
Critical (27%)	1,817	1,139	1,014	1,058	999	995	1,692	1,659	951	886	999	1,036

Alternative 5

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,505	1,686	2,261	4,481	8,588	9,439	7,488	7,184	5,515	4,295	1,797	1,944
20%	2,335	1,452	1,469	2,369	4,963	6,662	6,052	4,957	3,168	2,021	1,664	1,665
30%	2,201	1,301	1,323	1,606	2,517	5,262	5,002	4,380	2,697	1,654	1,572	1,591
40%	2,071	1,199	1,200	1,485	1,584	3,567	4,421	4,045	2,299	1,537	1,466	1,473
50%	1,960	1,129	1,125	1,387	1,370	2,036	3,637	3,505	1,763	1,305	1,333	1,381
60%	1,817	1,079	1,105	1,249	1,259	1,609	3,176	3,153	1,390	1,183	1,243	1,284
70%	1,671	1,000	1,033	1,108	1,134	1,199	2,549	2,322	1,151	1,090	1,192	1,219
80%	1,547	932	971	1,018	984	1,076	2,229	2,070	1,072	978	1,075	1,121
90%	1,337	843	854	888	892	909	2,109	1,989	902	860	996	1,019
Long Term												
Full Simulation Period[b]	1,985	1,379	1,707	2,617	3,109	4,008	4,364	4,001	2,488	1,945	1,439	1,513
Water Year Types[c]												
Wet (23%)	2,123	1,972	3,114	5,350	7,420	9,152	7,606	7,244	5,448	4,312	2,084	2,283
Above Normal (24%)	2,003	1,234	1,418	2,751	3,068	4,602	4,768	4,127	2,482	1,662	1,522	1,564
Below Normal (10%)	1,949	1,088	1,765	2,073	1,785	2,383	4,018	3,643	1,589	1,286	1,289	1,305
Dry (16%)	2,078	1,326	1,241	1,400	1,277	1,676	3,006	2,829	1,365	1,134	1,218	1,253
Critical (27%)	1,809	1,135	1,009	1,052	986	995	2,126	1,907	927	877	991	1,029

Alternative 5 minus No Action Alternative

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0	0	0	-1	0	0	-186	0	0	-282	-25	26
20%	0	-16	0	0	0	-46	-96	311	0	1	-7	0
30%	-8	0	-7	0	0	0	-5	228	0	0	0	0
40%	-41	0	0	0	-25	0	33	406	0	0	0	0
50%	-34	0	0	0	-5	0	39	393	-35	0	0	0
60%	-5	0	0	-6	0	0	272	610	0	-1	0	0
70%	0	0	0	0	0	0	304	109	-12	-21	0	0
80%	-34	0	0	0	-38	0	397	298	-23	-12	-13	-26
90%	0	0	0	0	-3	0	612	480	-2	0	0	0
Long Term												
Full Simulation Period[b]	-11	-2	-20	1	-15	-43	158	251	-20	-25	-29	-11
Water Year Types[c]												
Wet (23%)	-15	0	-97	0	-33	-185	-35	38	-47	-97	-115	-38
Above Normal (24%)	-9	-5	16	13	-17	0	-55	407	0	0	0	0
Below Normal (10%)	-7	0	0	-1	-1	0	-38	66	-14	0	0	0
Dry (16%)	-17	0	0	-2	-2	0	424	440	-9	-1	0	0
Critical (27%)	-8	-5	-5	-6	-13	0	434	248	-24	-10	-9	-7

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-39-4. San Joaquin River at Vernalis - San Joaquin River d/s of Merced Confluence, Monthly Flow

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,056	1,892	2,379	4,517	8,588	8,333	7,534	7,093	6,724	4,063	1,810	2,005
20%	1,882	1,616	1,613	2,452	5,143	6,125	5,907	4,546	3,985	2,031	1,668	1,681
30%	1,754	1,411	1,461	1,695	2,701	4,985	4,748	4,121	2,812	1,658	1,570	1,591
40%	1,648	1,330	1,340	1,625	1,750	3,378	4,029	3,788	2,430	1,546	1,470	1,494
50%	1,511	1,256	1,231	1,483	1,481	2,117	3,199	3,223	1,861	1,317	1,341	1,397
60%	1,343	1,148	1,167	1,302	1,326	1,662	2,392	2,757	1,394	1,198	1,252	1,289
70%	1,248	1,078	1,139	1,162	1,201	1,259	1,796	2,398	1,173	1,115	1,203	1,227
80%	1,127	981	1,025	1,055	1,078	1,095	1,552	1,965	1,102	1,001	1,092	1,147
90%	921	885	885	927	920	935	1,311	1,726	907	869	980	1,023
Long Term												
Full Simulation Period[b]	1,565	1,491	1,828	2,682	3,172	3,904	3,933	3,811	2,860	1,972	1,458	1,537
Water Year Types[c]												
Wet (23%)	1,717	2,086	3,310	5,411	7,448	8,783	7,592	7,012	6,673	4,374	2,142	2,360
Above Normal (24%)	1,600	1,356	1,496	2,801	3,151	4,481	4,540	3,803	2,725	1,670	1,524	1,571
Below Normal (10%)	1,505	1,236	1,913	2,176	1,858	2,335	3,560	3,650	1,750	1,302	1,299	1,323
Dry (16%)	1,667	1,442	1,356	1,486	1,358	1,739	2,137	2,559	1,406	1,145	1,232	1,267
Critical (27%)	1,365	1,222	1,097	1,107	1,047	1,018	1,416	1,852	953	903	998	1,034

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	2,505	1,686	2,261	4,481	8,588	9,439	7,674	7,184	5,515	4,577	1,821	1,918
20%	2,335	1,468	1,469	2,369	4,963	6,708	6,148	4,646	3,168	2,020	1,670	1,665
30%	2,208	1,301	1,329	1,606	2,516	5,262	5,007	4,152	2,696	1,654	1,571	1,591
40%	2,111	1,199	1,200	1,485	1,609	3,567	4,388	3,639	2,299	1,537	1,466	1,473
50%	1,994	1,129	1,125	1,387	1,375	2,036	3,598	3,113	1,799	1,305	1,334	1,382
60%	1,822	1,079	1,105	1,255	1,259	1,609	2,904	2,543	1,390	1,184	1,243	1,284
70%	1,671	1,000	1,033	1,108	1,134	1,199	2,245	2,213	1,163	1,112	1,192	1,219
80%	1,581	932	971	1,018	1,022	1,076	1,832	1,772	1,095	990	1,088	1,146
90%	1,337	843	854	888	895	909	1,496	1,509	904	860	996	1,019
Long Term												
Full Simulation Period[b]	1,997	1,381	1,727	2,616	3,124	4,051	4,206	3,750	2,508	1,970	1,468	1,523
Water Year Types[c]												
Wet (23%)	2,138	1,972	3,211	5,350	7,453	9,336	7,641	7,206	5,495	4,409	2,200	2,321
Above Normal (24%)	2,012	1,239	1,402	2,737	3,085	4,602	4,823	3,720	2,482	1,662	1,522	1,564
Below Normal (10%)	1,957	1,088	1,765	2,074	1,785	2,383	4,056	3,577	1,603	1,286	1,289	1,305
Dry (16%)	2,095	1,326	1,241	1,402	1,279	1,676	2,582	2,389	1,374	1,134	1,218	1,254
Critical (27%)	1,817	1,139	1,014	1,058	999	995	1,692	1,659	951	886	999	1,036

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Flow (cfs)											
Probability of Exceedance[a]												
10%	448	-207	-118	-36	0	1,106	141	91	-1,209	514	12	-87
20%	453	-148	-144	-83	-180	583	240	100	-817	-12	2	-16
30%	454	-110	-132	-88	-184	277	259	31	-116	-4	2	1
40%	464	-131	-140	-139	-141	189	359	-149	-131	-10	-4	-20
50%	483	-127	-106	-96	-106	-81	399	-110	-62	-13	-7	-15
60%	478	-70	-62	-47	-67	-53	512	-214	-4	-14	-9	-5
70%	422	-78	-106	-54	-68	-61	449	-185	-10	-3	-10	-8
80%	454	-49	-55	-37	-56	-20	280	-193	-7	-11	-4	-1
90%	416	-42	-32	-39	-25	-26	186	-217	-4	-8	16	-4
Long Term												
Full Simulation Period[b]	431	-110	-101	-66	-47	146	273	-61	-352	-2	10	-14
Water Year Types[c]												
Wet (23%)	420	-114	-99	-61	5	554	49	193	-1,177	35	57	-39
Above Normal (24%)	413	-116	-94	-63	-66	121	283	-83	-243	-9	-1	-7
Below Normal (10%)	452	-148	-148	-102	-72	49	496	-72	-147	-16	-10	-18
Dry (16%)	428	-115	-115	-85	-79	-63	446	-170	-32	-11	-13	-13
Critical (27%)	452	-83	-83	-49	-48	-23	276	-193	-1	-17	1	2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-39-5. San Joaquin River at Vernalis - San Joaquin River d/s of Merced Confluence, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,056	1,892	2,379	4,517	8,588	8,333	7,534	7,093	6,724	4,063	1,810	2,005
20%	1,882	1,616	1,613	2,452	5,143	6,125	5,907	4,546	3,985	2,031	1,668	1,681
30%	1,754	1,411	1,461	1,695	2,701	4,985	4,748	4,121	2,812	1,658	1,570	1,591
40%	1,648	1,330	1,340	1,625	1,750	3,378	4,029	3,788	2,430	1,546	1,470	1,494
50%	1,511	1,256	1,231	1,483	1,481	2,117	3,199	3,223	1,861	1,317	1,341	1,397
60%	1,343	1,148	1,167	1,302	1,326	1,662	2,392	2,757	1,394	1,198	1,252	1,289
70%	1,248	1,078	1,139	1,162	1,201	1,259	1,796	2,398	1,173	1,115	1,203	1,227
80%	1,127	981	1,025	1,055	1,078	1,095	1,552	1,965	1,102	1,001	1,092	1,147
90%	921	885	885	927	920	935	1,311	1,726	907	869	980	1,023
Long Term												
Full Simulation Period[b]	1,565	1,491	1,828	2,682	3,172	3,904	3,933	3,811	2,860	1,972	1,458	1,537
Water Year Types[c]												
Wet (23%)	1,717	2,086	3,310	5,411	7,448	8,783	7,592	7,012	6,673	4,374	2,142	2,360
Above Normal (24%)	1,600	1,356	1,496	2,801	3,151	4,481	4,540	3,803	2,725	1,670	1,524	1,571
Below Normal (10%)	1,505	1,236	1,913	2,176	1,858	2,335	3,560	3,650	1,750	1,302	1,299	1,323
Dry (16%)	1,667	1,442	1,356	1,486	1,358	1,739	2,137	2,559	1,406	1,145	1,232	1,267
Critical (27%)	1,365	1,222	1,097	1,107	1,047	1,018	1,416	1,852	953	903	998	1,034

Alternative 3

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,042	1,844	2,484	5,349	8,588	8,881	7,550	6,797	5,625	4,924	2,340	2,418
20%	1,863	1,547	1,542	2,459	5,856	6,228	6,133	4,336	2,364	1,873	1,653	1,667
30%	1,740	1,374	1,398	1,640	2,799	4,941	5,081	3,850	1,900	1,614	1,570	1,561
40%	1,655	1,277	1,300	1,525	1,684	3,279	4,146	3,453	1,709	1,517	1,468	1,473
50%	1,495	1,222	1,211	1,386	1,347	2,037	3,450	2,840	1,416	1,290	1,339	1,380
60%	1,374	1,127	1,159	1,224	1,186	1,632	2,578	2,458	1,192	1,177	1,248	1,286
70%	1,280	1,087	1,110	1,059	1,050	1,199	2,146	2,040	1,141	1,069	1,199	1,224
80%	1,147	995	1,030	981	901	1,076	1,815	1,831	987	954	1,083	1,147
90%	959	880	891	812	811	903	1,401	1,397	899	855	1,002	1,021
Long Term												
Full Simulation Period[b]	1,576	1,453	1,837	2,654	3,344	3,919	4,109	3,541	2,322	2,002	1,502	1,570
Water Year Types[c]												
Wet (23%)	1,725	2,063	3,426	5,417	8,268	8,920	7,644	6,816	5,637	4,649	2,332	2,515
Above Normal (24%)	1,622	1,311	1,514	2,779	3,142	4,510	4,756	3,534	1,780	1,581	1,518	1,560
Below Normal (10%)	1,486	1,138	1,815	2,276	1,992	2,291	3,734	3,292	1,391	1,293	1,296	1,302
Dry (16%)	1,674	1,403	1,318	1,418	1,337	1,676	2,370	2,194	1,260	1,132	1,230	1,260
Critical (27%)	1,382	1,199	1,073	1,023	952	980	1,632	1,604	917	872	1,006	1,046

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-14	-48	104	832	0	548	16	-296	-1,099	861	530	413
20%	-19	-69	-71	7	713	103	226	-210	-1,621	-158	-15	-14
30%	-15	-37	-63	-55	98	-44	333	-271	-913	-44	1	-30
40%	8	-53	-40	-100	-66	-99	117	-335	-722	-29	-1	-20
50%	-16	-33	-20	-98	-134	-80	251	-383	-445	-27	-2	-16
60%	31	-21	-8	-78	-140	-30	185	-298	-202	-21	-4	-4
70%	32	8	-29	-103	-151	-60	349	-357	-32	-46	-4	-3
80%	20	14	5	-74	-176	-19	263	-134	-115	-48	-10	0
90%	38	-5	5	-114	-109	-32	90	-329	-8	-14	22	-2
Long Term												
Full Simulation Period[b]	11	-38	9	-27	172	14	176	-271	-538	31	44	33
Water Year Types[c]												
Wet (23%)	8	-23	116	6	820	137	52	-197	-1,036	275	189	154
Above Normal (24%)	22	-45	18	-21	-9	29	216	-270	-945	-89	-5	-11
Below Normal (10%)	-19	-98	-98	100	134	-44	173	-357	-359	-8	-3	-22
Dry (16%)	7	-38	-38	-68	-21	-62	233	-365	-146	-14	-2	-7
Critical (27%)	16	-24	-24	-84	-95	-38	215	-248	-36	-31	8	12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

Table C-39-6. San Joaquin River at Vernalis - San Joaquin River d/s of Merced Confluence, Monthly Flow

Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,056	1,892	2,379	4,517	8,588	8,333	7,534	7,093	6,724	4,063	1,810	2,005
20%	1,882	1,616	1,613	2,452	5,143	6,125	5,907	4,546	3,985	2,031	1,668	1,681
30%	1,754	1,411	1,461	1,695	2,701	4,985	4,748	4,121	2,812	1,658	1,570	1,591
40%	1,648	1,330	1,340	1,625	1,750	3,378	4,029	3,788	2,430	1,546	1,470	1,494
50%	1,511	1,256	1,231	1,483	1,481	2,117	3,199	3,223	1,861	1,317	1,341	1,397
60%	1,343	1,148	1,167	1,302	1,326	1,662	2,392	2,757	1,394	1,198	1,252	1,289
70%	1,248	1,078	1,139	1,162	1,201	1,259	1,796	2,398	1,173	1,115	1,203	1,227
80%	1,127	981	1,025	1,055	1,078	1,095	1,552	1,965	1,102	1,001	1,092	1,147
90%	921	885	885	927	920	935	1,311	1,726	907	869	980	1,023
Long Term												
Full Simulation Period[b]	1,565	1,491	1,828	2,682	3,172	3,904	3,933	3,811	2,860	1,972	1,458	1,537
Water Year Types[c]												
Wet (23%)	1,717	2,086	3,310	5,411	7,448	8,783	7,592	7,012	6,673	4,374	2,142	2,360
Above Normal (24%)	1,600	1,356	1,496	2,801	3,151	4,481	4,540	3,803	2,725	1,670	1,524	1,571
Below Normal (10%)	1,505	1,236	1,913	2,176	1,858	2,335	3,560	3,650	1,750	1,302	1,299	1,323
Dry (16%)	1,667	1,442	1,356	1,486	1,358	1,739	2,137	2,559	1,406	1,145	1,232	1,267
Critical (27%)	1,365	1,222	1,097	1,107	1,047	1,018	1,416	1,852	953	903	998	1,034

Alternative 5

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,505	1,686	2,261	4,481	8,588	9,439	7,488	7,184	5,515	4,295	1,797	1,944
20%	2,335	1,452	1,469	2,369	4,963	6,662	6,052	4,957	3,168	2,021	1,664	1,665
30%	2,201	1,301	1,323	1,606	2,517	5,262	5,002	4,380	2,697	1,654	1,572	1,591
40%	2,071	1,199	1,200	1,485	1,584	3,567	4,421	4,045	2,299	1,537	1,466	1,473
50%	1,960	1,129	1,125	1,387	1,370	2,036	3,637	3,505	1,763	1,305	1,333	1,381
60%	1,817	1,079	1,105	1,249	1,259	1,609	3,176	3,153	1,390	1,183	1,243	1,284
70%	1,671	1,000	1,033	1,108	1,134	1,199	2,549	2,322	1,151	1,090	1,192	1,219
80%	1,547	932	971	1,018	984	1,076	2,229	2,070	1,072	978	1,075	1,121
90%	1,337	843	854	888	892	909	2,109	1,989	902	860	996	1,019
Long Term												
Full Simulation Period[b]	1,985	1,379	1,707	2,617	3,109	4,008	4,364	4,001	2,488	1,945	1,439	1,513
Water Year Types[c]												
Wet (23%)	2,123	1,972	3,114	5,350	7,420	9,152	7,606	7,244	5,448	4,312	2,084	2,283
Above Normal (24%)	2,003	1,234	1,418	2,751	3,068	4,602	4,768	4,127	2,482	1,662	1,522	1,564
Below Normal (10%)	1,949	1,088	1,765	2,073	1,785	2,383	4,018	3,643	1,589	1,286	1,289	1,305
Dry (16%)	2,078	1,326	1,241	1,400	1,277	1,676	3,006	2,829	1,365	1,134	1,218	1,253
Critical (27%)	1,809	1,135	1,009	1,052	986	995	2,126	1,907	927	877	991	1,029

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Flow (cfs) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	448	-207	-118	-36	0	1,106	-45	91	-1,209	232	-13	-62
20%	453	-164	-144	-83	-180	537	145	411	-816	-11	-5	-16
30%	446	-110	-139	-88	-184	277	254	259	-116	-4	2	0
40%	423	-131	-140	-139	-166	189	392	257	-131	-10	-4	-21
50%	448	-127	-106	-96	-111	-81	438	282	-97	-12	-8	-15
60%	474	-70	-62	-53	-67	-53	784	396	-4	-15	-9	-5
70%	422	-78	-106	-54	-68	-61	753	-76	-21	-25	-11	-8
80%	420	-49	-55	-37	-93	-20	677	105	-29	-24	-17	-26
90%	416	-42	-32	-39	-28	-26	798	264	-6	-8	16	-4
Long Term												
Full Simulation Period[b]	420	-112	-121	-65	-63	104	432	189	-372	-27	-19	-25
Water Year Types[c]												
Wet (23%)	406	-114	-196	-62	-28	369	14	231	-1,225	-61	-58	-77
Above Normal (24%)	403	-121	-79	-50	-83	121	228	324	-243	-9	-2	-7
Below Normal (10%)	445	-148	-148	-102	-73	49	458	-6	-161	-16	-10	-19
Dry (16%)	411	-115	-115	-86	-81	-63	869	270	-41	-12	-14	-13
Critical (27%)	443	-88	-88	-55	-61	-23	710	55	-26	-26	-8	-5

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

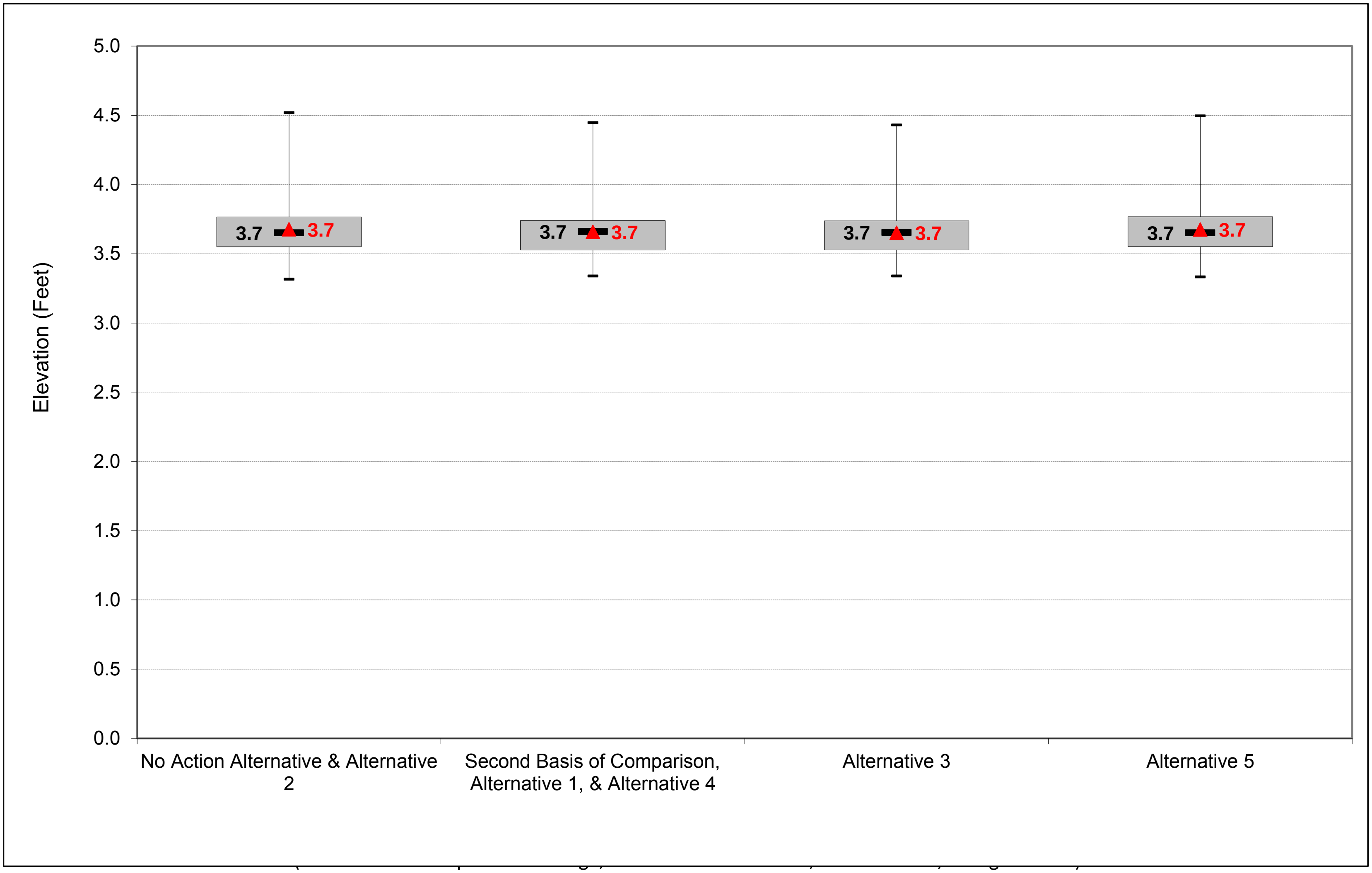
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in text.

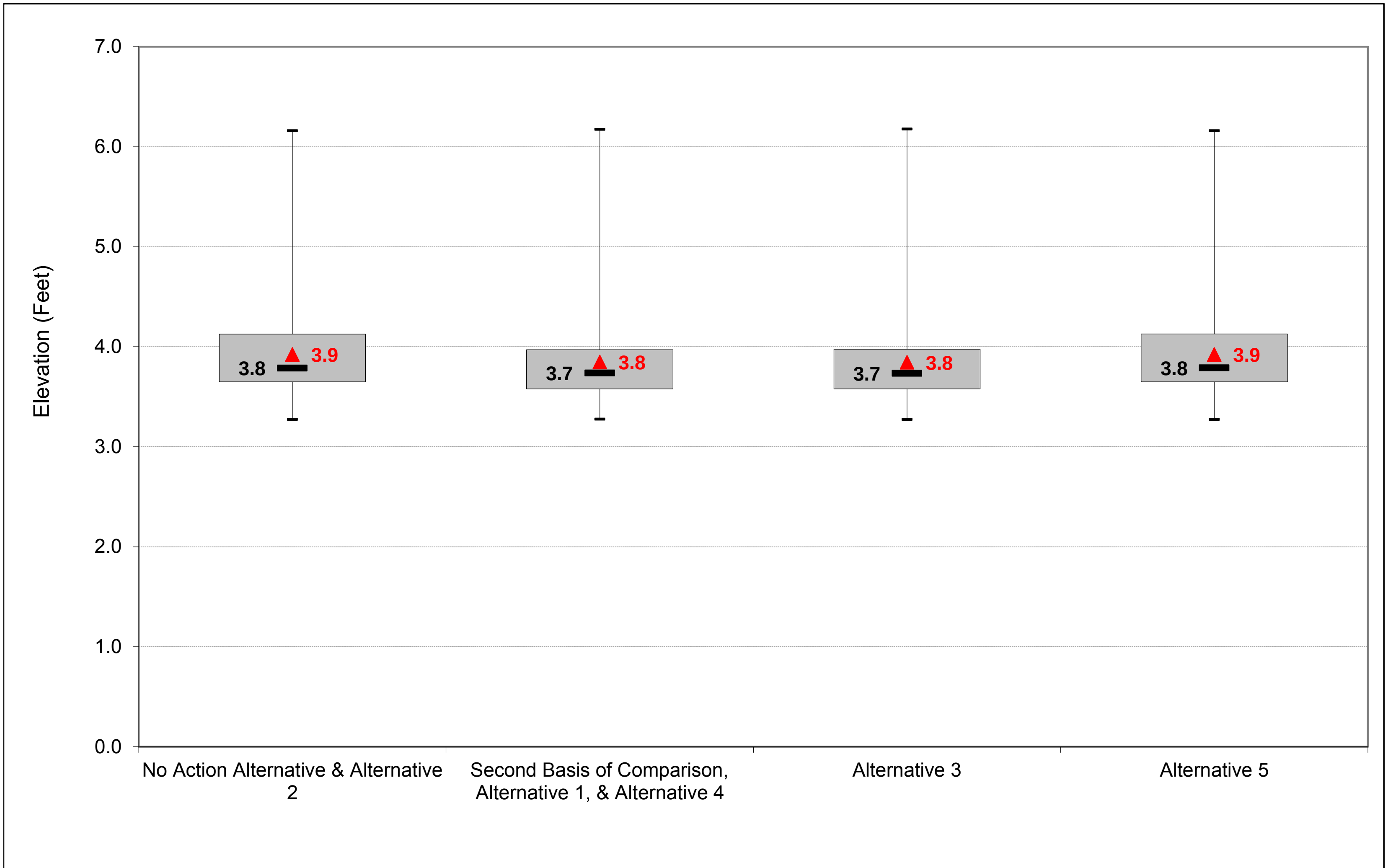
C.40. Steamboat Slough downstream of Sutter Slough Water Surface Elevation

Figure C-40-1-1. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, October



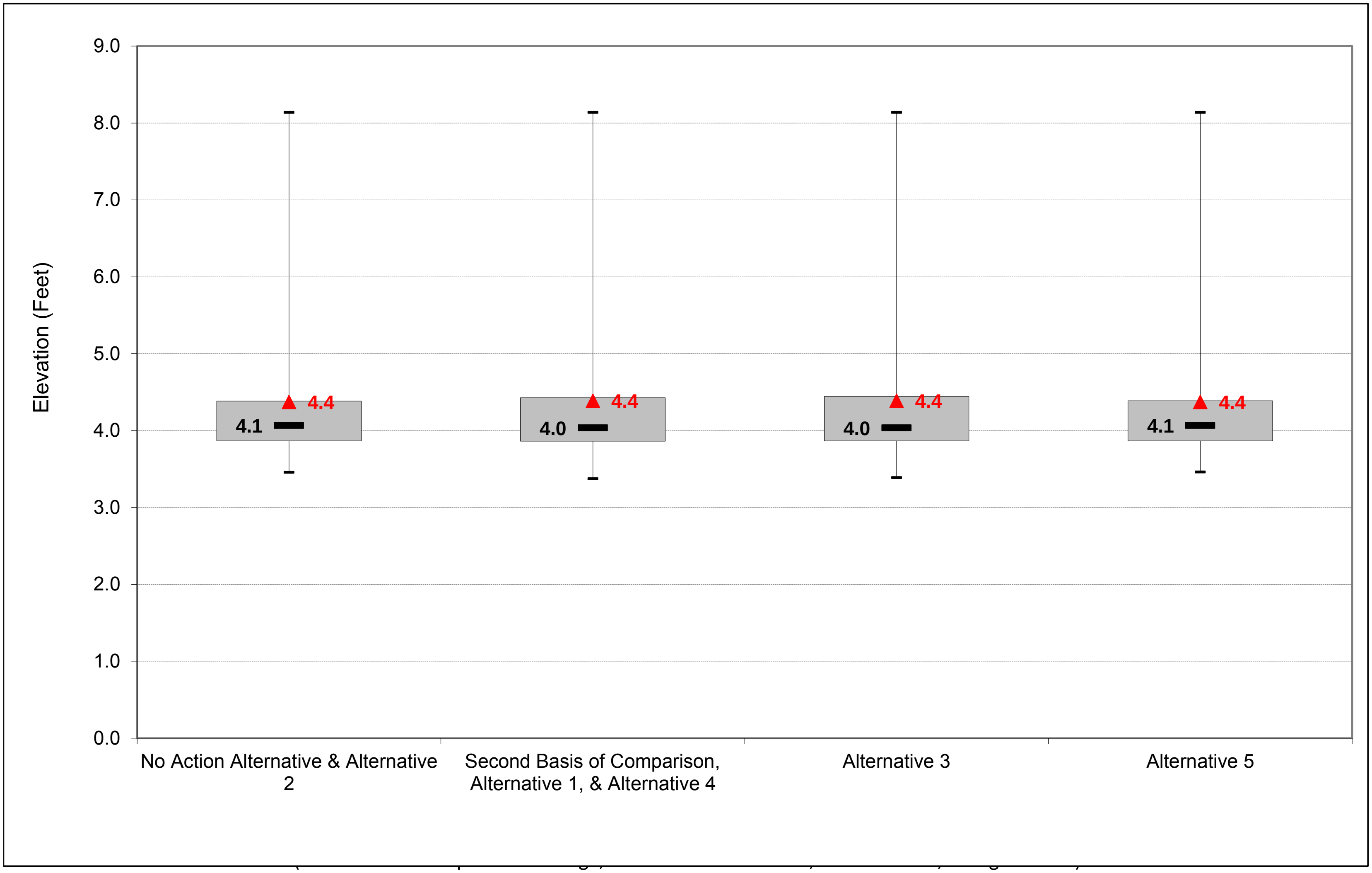
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-2. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, November



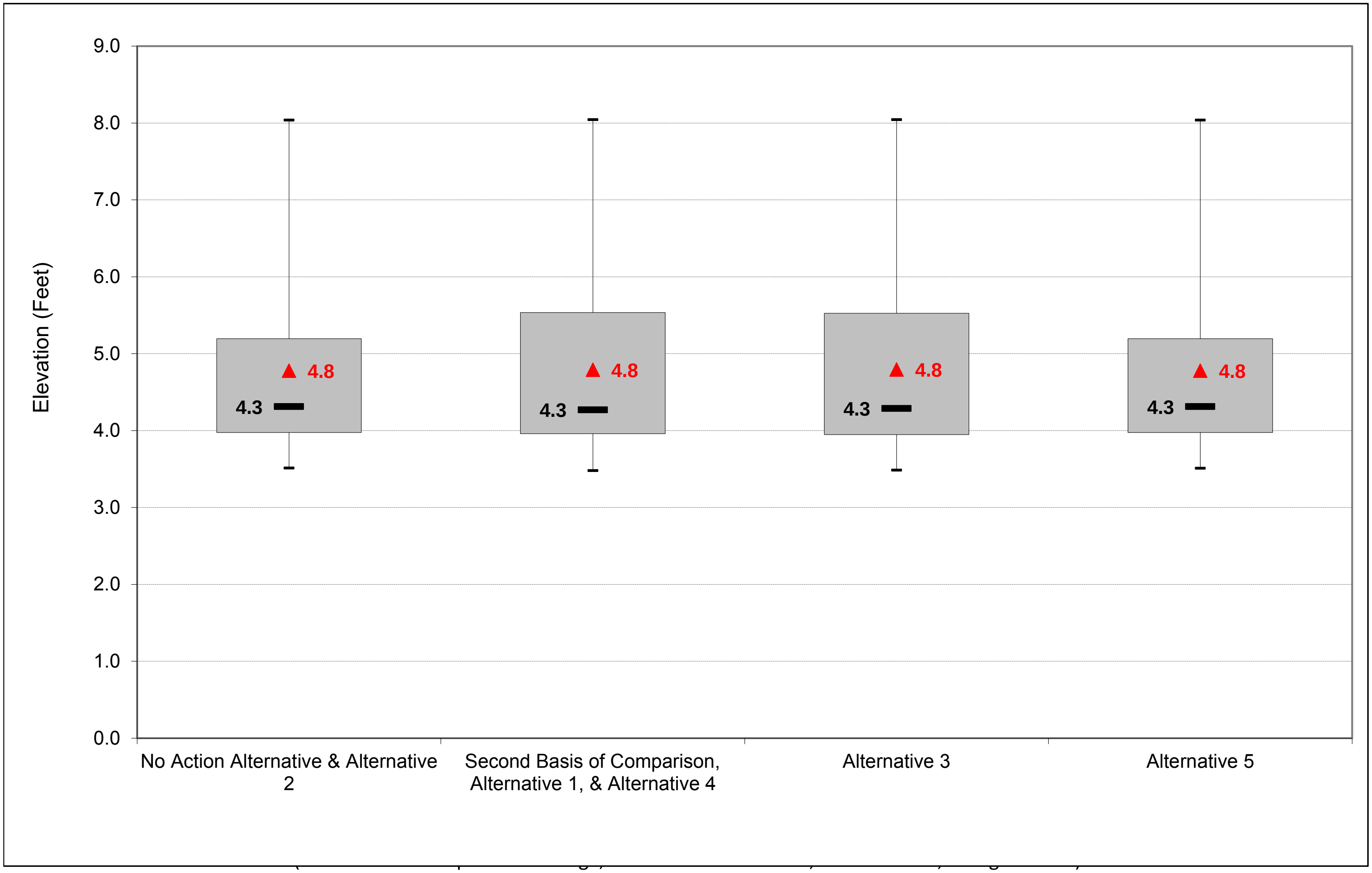
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-3. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, December



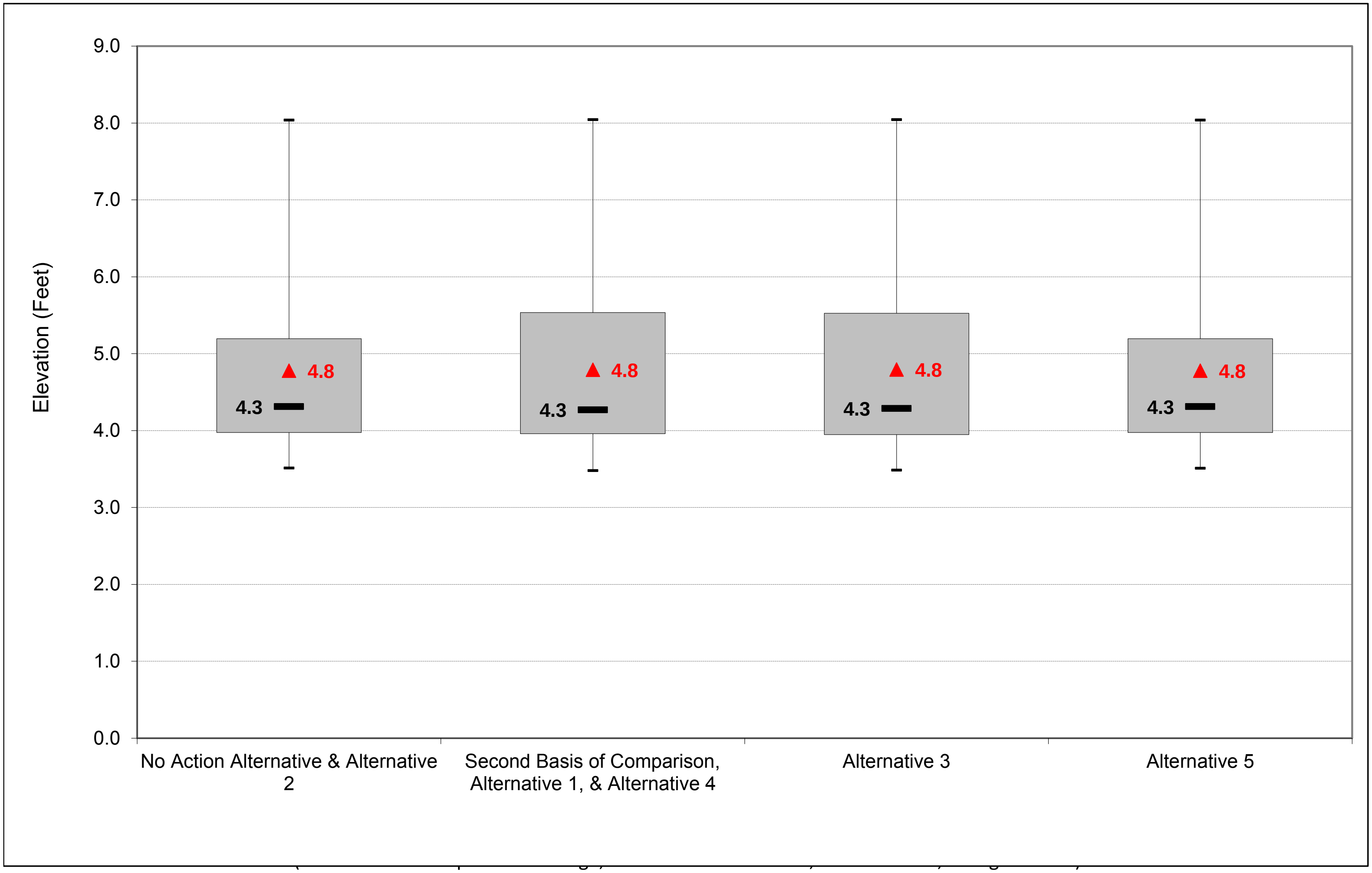
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-4. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, January



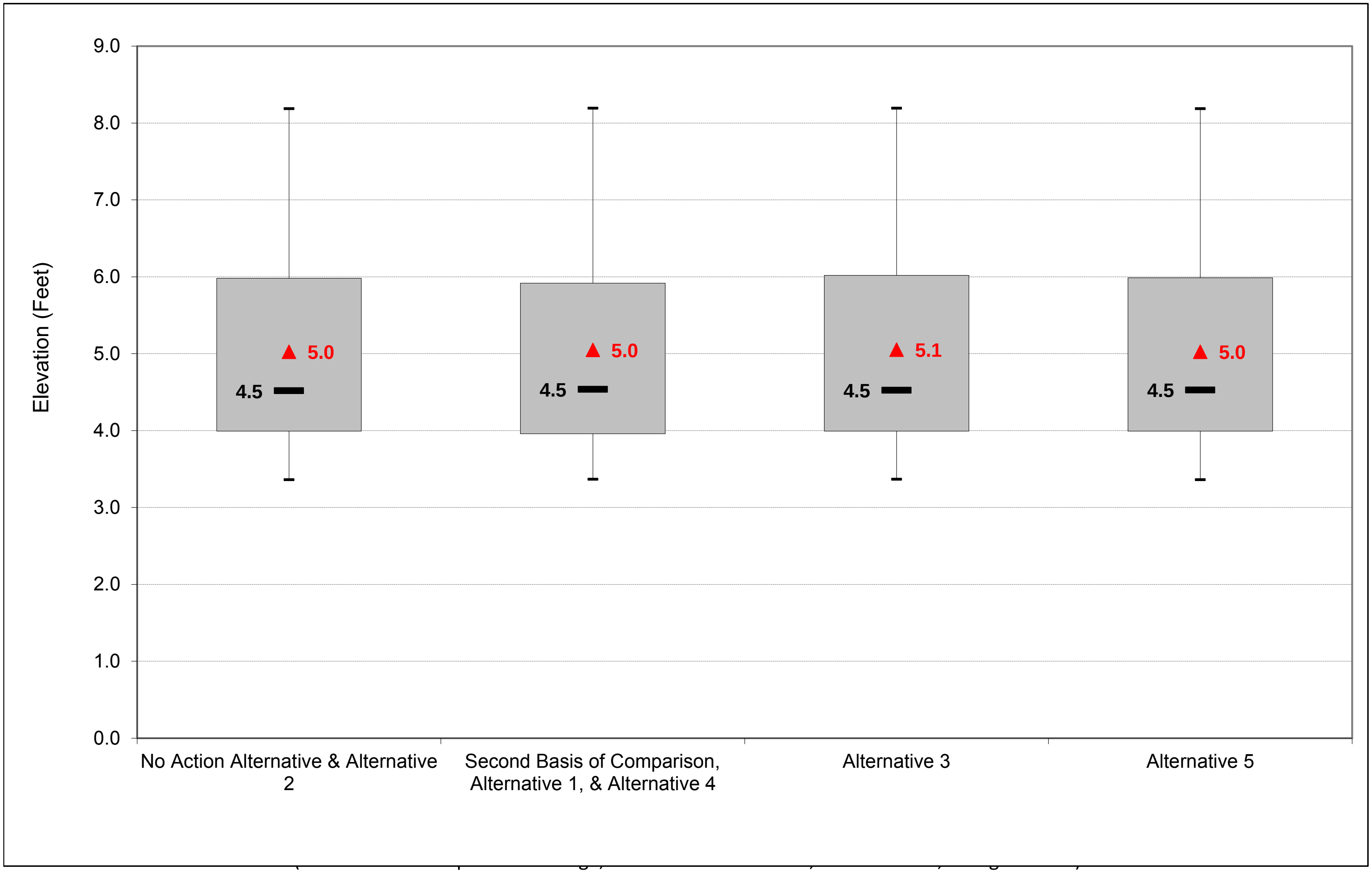
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-5. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, February



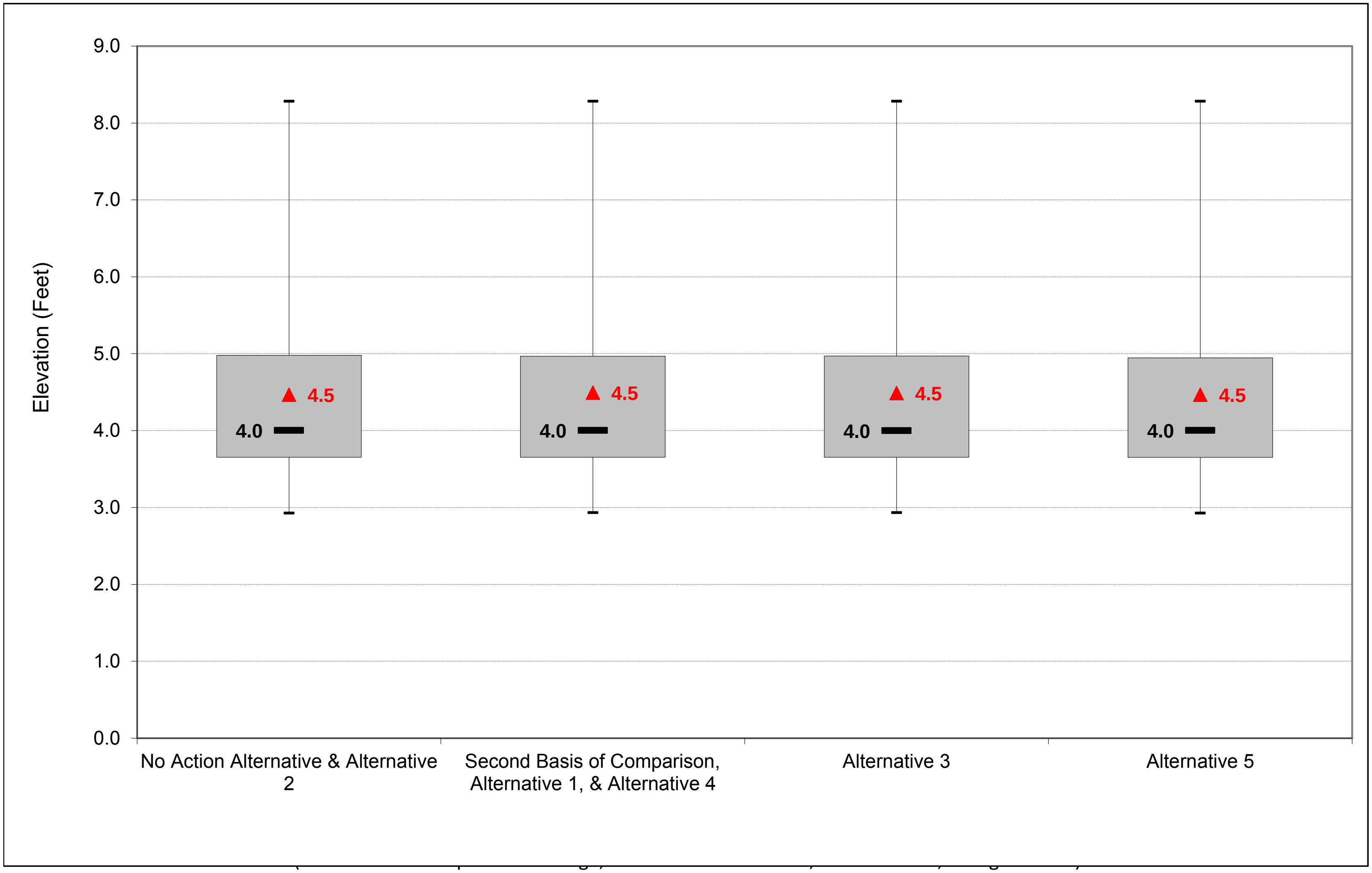
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-6. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, March



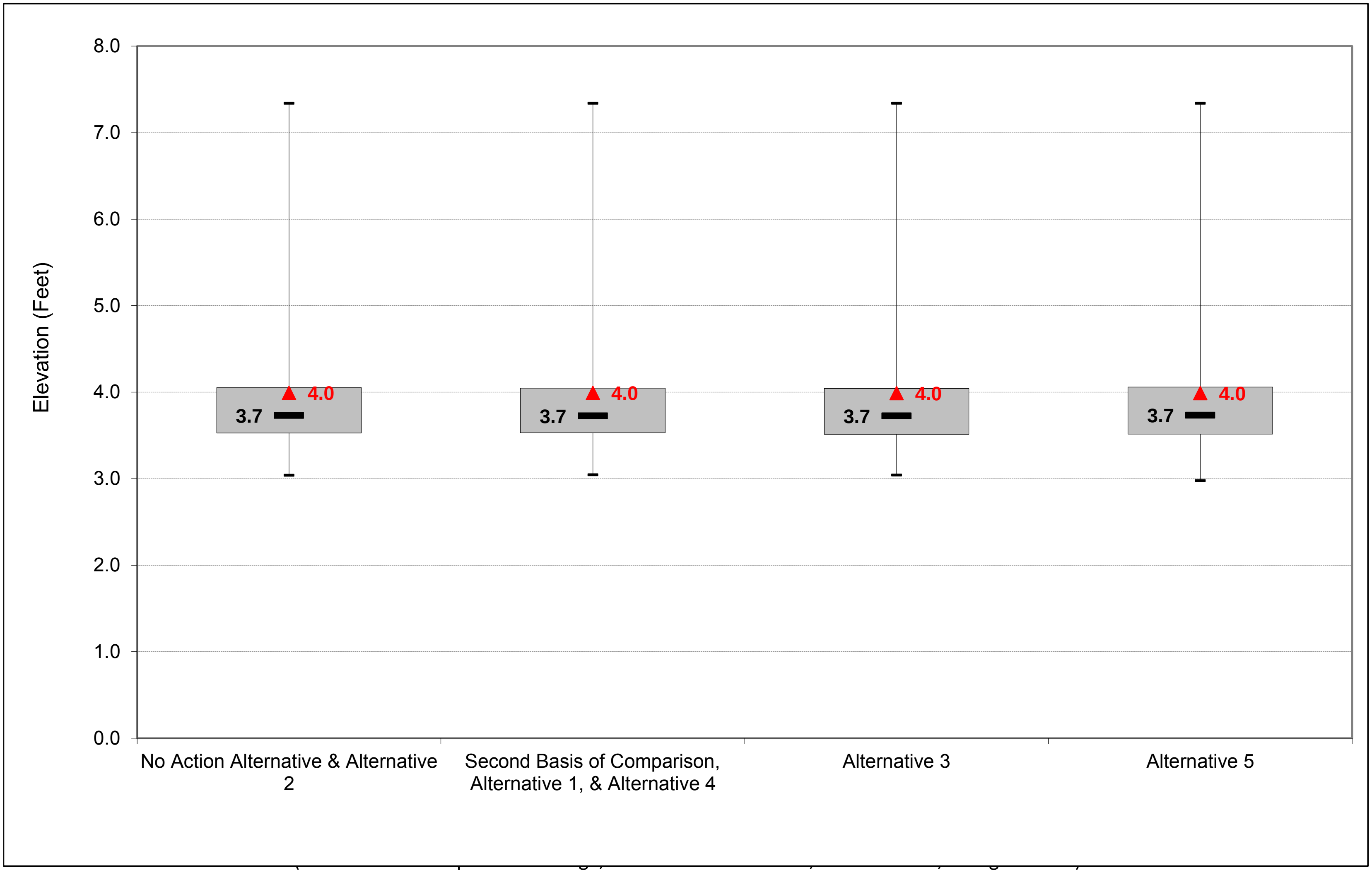
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-7. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, April



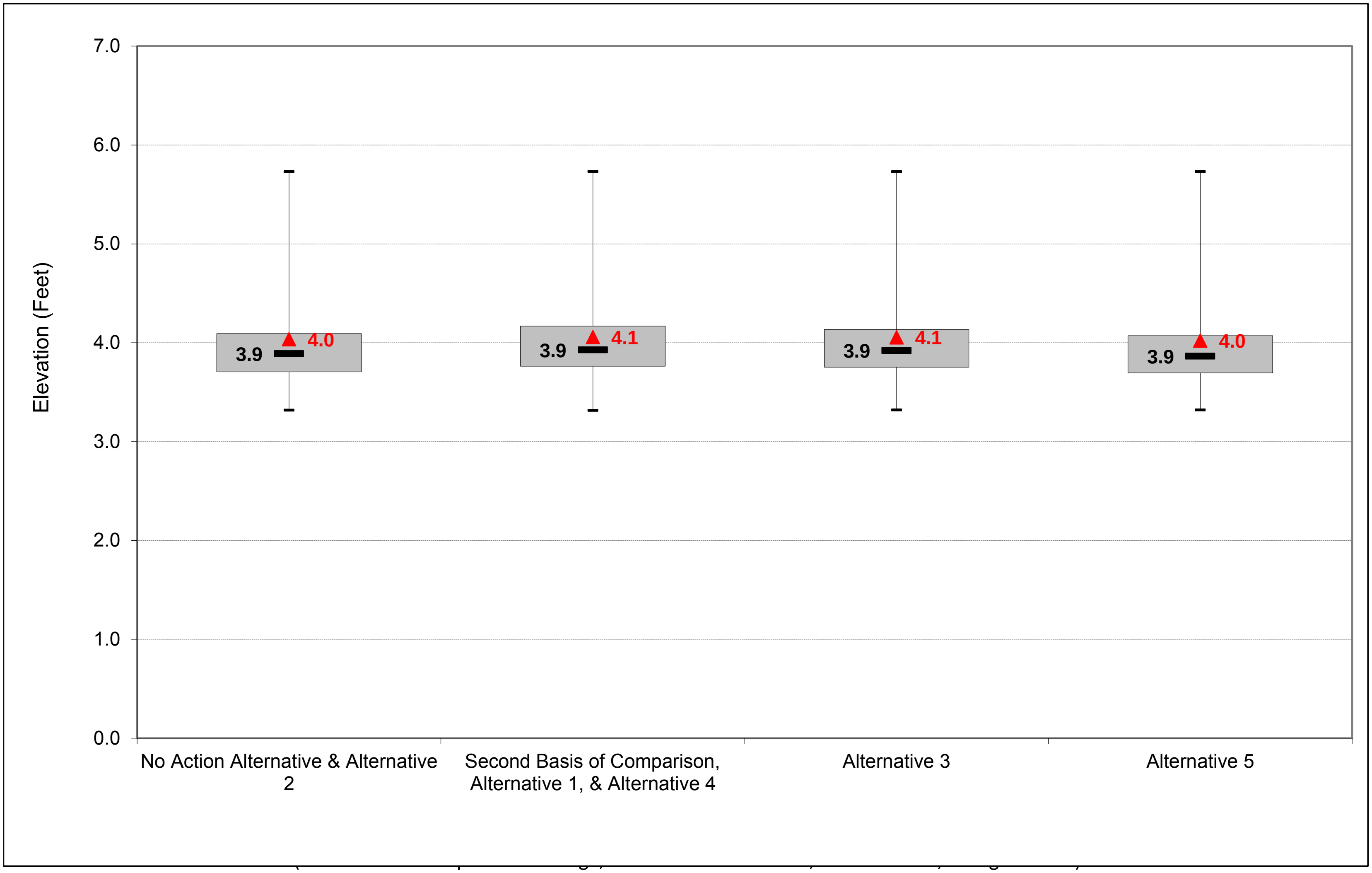
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-8. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, May



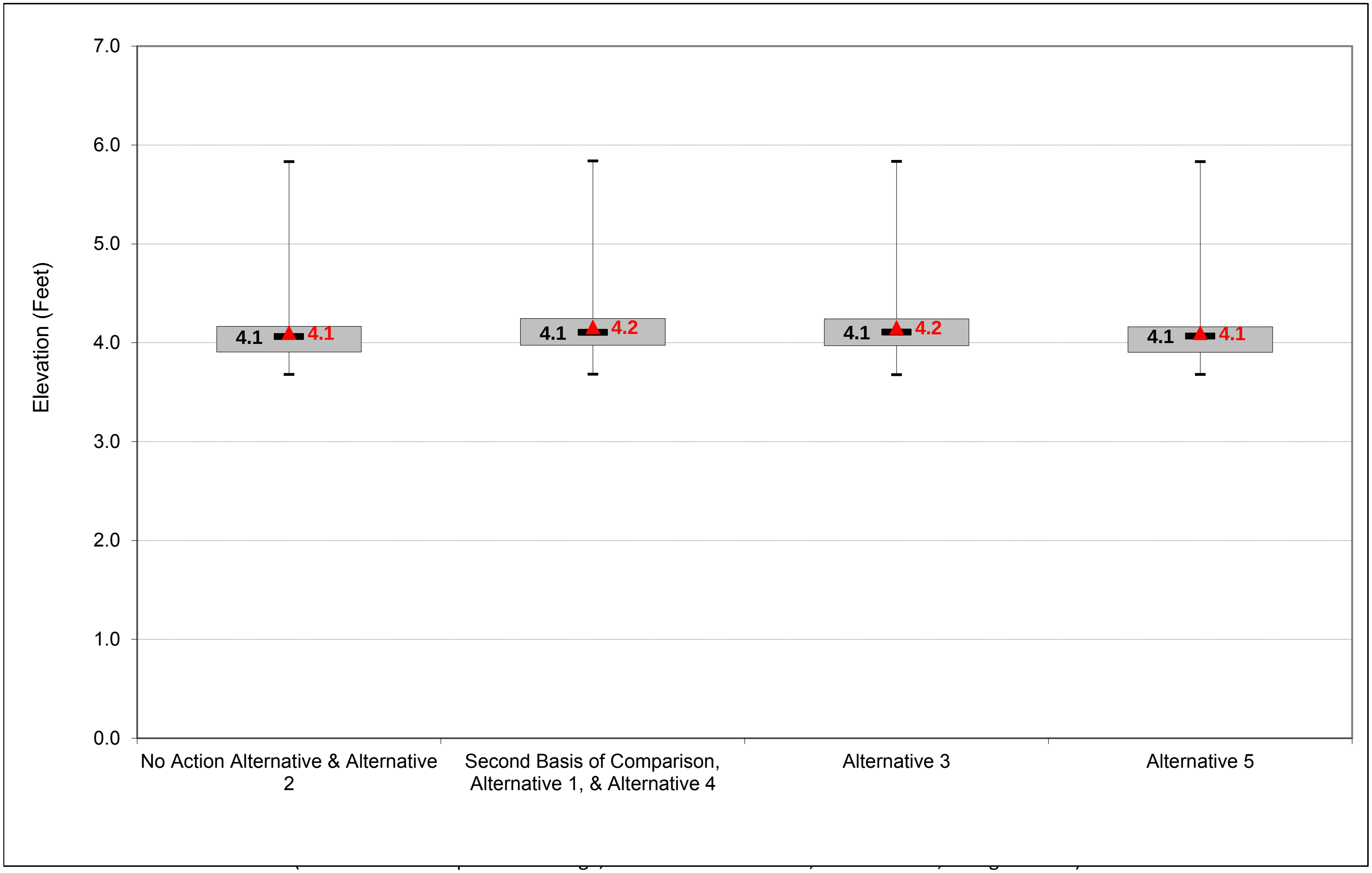
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-9. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, June



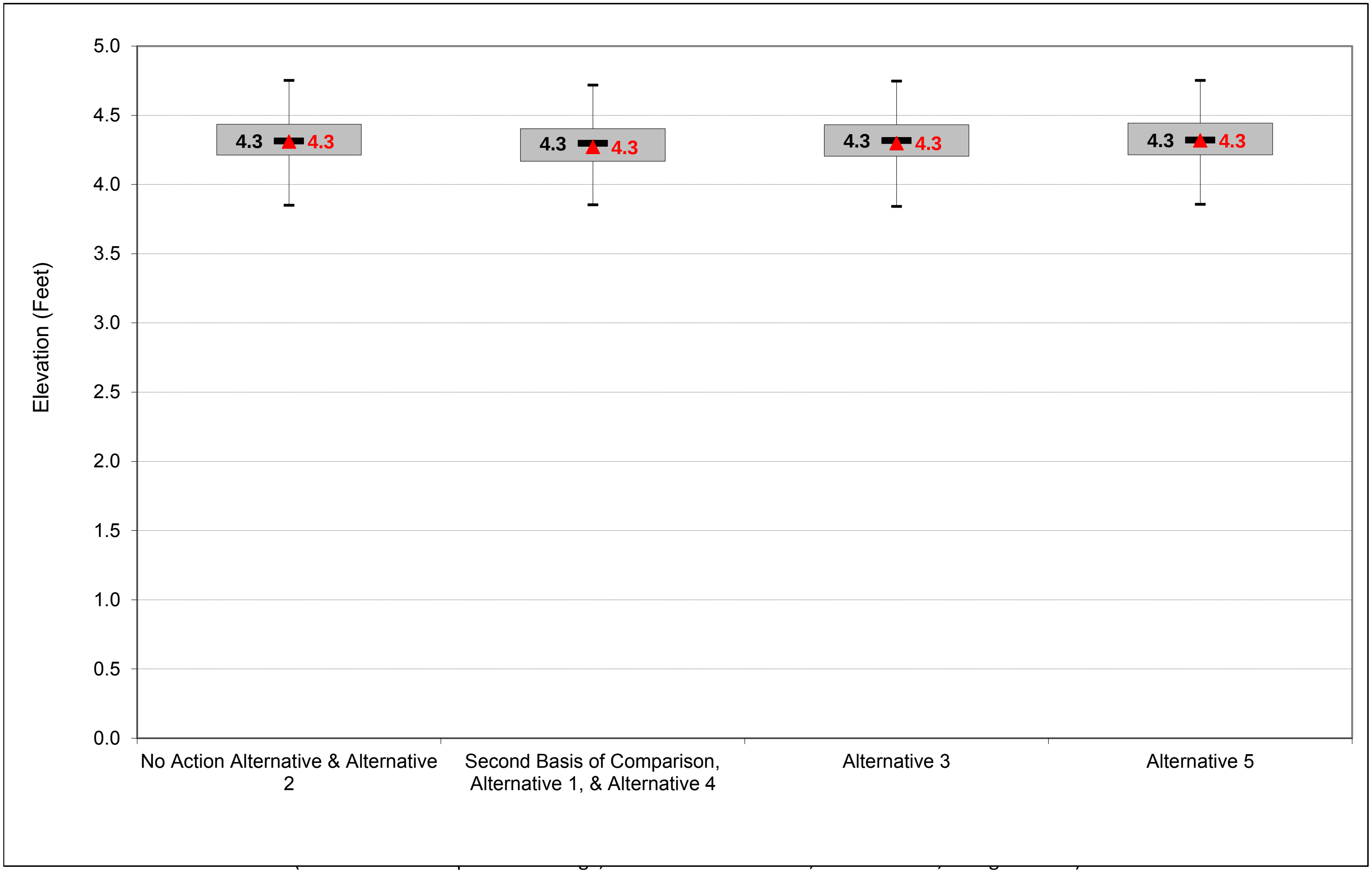
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-10. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, July



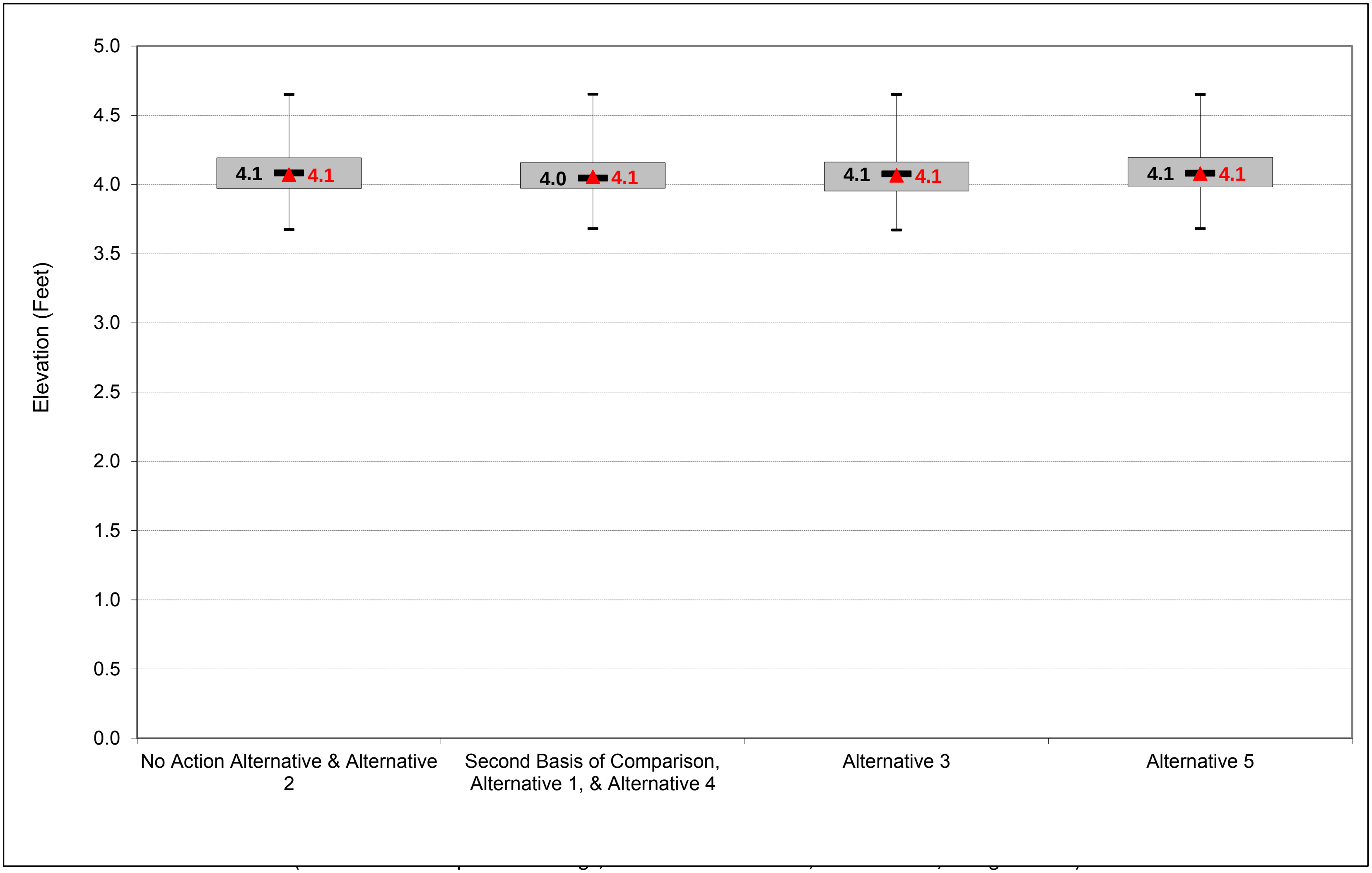
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-11. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-1-12. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-1-1. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.4	5.6	6.8	7.1	6.4	5.3	4.7	4.4	4.5	4.2	4.5
20%	3.8	4.2	4.8	5.7	6.4	5.4	4.4	4.3	4.2	4.4	4.2	4.3
30%	3.8	4.0	4.3	5.0	5.6	4.5	3.9	4.1	4.1	4.4	4.2	4.2
40%	3.7	3.9	4.1	4.4	5.0	4.2	3.8	4.0	4.1	4.4	4.1	4.1
50%	3.7	3.8	4.1	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.1	4.0
60%	3.6	3.8	4.0	4.1	4.2	3.8	3.6	3.8	4.0	4.3	4.0	3.9
70%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.8	3.9	4.3	4.0	3.8
80%	3.5	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.8	3.5	3.4	3.6	3.8	4.1	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.9	4.4	4.8	5.0	4.5	4.0	4.0	4.1	4.3	4.1	4.0
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.1	5.8	6.1	5.4	4.6	4.5	4.3	4.4	4.2	4.4
Above Normal (16%)	3.6	4.0	4.5	5.1	5.6	4.8	4.0	4.0	4.1	4.4	4.2	4.1
Below Normal (13%)	3.7	3.9	4.1	4.1	4.5	3.7	3.6	3.8	4.0	4.4	4.1	3.9
Dry (24%)	3.6	3.7	3.9	4.0	4.1	3.9	3.6	3.8	4.0	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	4.0	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7

Alternative 1

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.3	5.9	6.8	7.2	6.5	5.3	4.7	4.5	4.4	4.2	4.1
20%	3.8	4.0	4.9	6.0	6.4	5.4	4.4	4.3	4.3	4.4	4.2	4.0
30%	3.7	3.9	4.3	5.0	5.6	4.8	3.9	4.1	4.2	4.4	4.1	4.0
40%	3.7	3.8	4.1	4.4	5.2	4.2	3.8	4.0	4.1	4.3	4.1	3.9
50%	3.7	3.7	4.0	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.0	3.9
60%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.1	4.3	4.0	3.8
70%	3.6	3.6	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.8	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7
90%	3.4	3.5	3.7	3.7	3.7	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.8	4.4	4.8	5.0	4.5	4.0	4.1	4.2	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.7	4.1	5.2	5.9	6.2	5.5	4.6	4.5	4.3	4.4	4.1	4.0
Above Normal (16%)	3.6	3.9	4.4	5.1	5.7	4.9	4.0	4.1	4.1	4.4	4.1	3.9
Below Normal (13%)	3.7	3.8	4.0	4.1	4.6	3.7	3.6	3.9	4.2	4.3	4.1	3.9
Dry (24%)	3.6	3.6	3.9	4.0	4.1	3.9	3.6	3.8	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7

Alternative 1 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.4
20%	0.0	-0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.3
30%	0.0	-0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	-0.2
40%	0.0	-0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
60%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
70%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	-0.1
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.2
Water Year Types[c]												
Wet (32%)	0.0	-0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4
Above Normal (16%)	0.0	-0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	-0.2
Below Normal (13%)	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Dry (24%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-1-2. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.4	5.6	6.8	7.1	6.4	5.3	4.7	4.4	4.5	4.2	4.5
20%	3.8	4.2	4.8	5.7	6.4	5.4	4.4	4.3	4.2	4.4	4.2	4.3
30%	3.8	4.0	4.3	5.0	5.6	4.5	3.9	4.1	4.1	4.4	4.2	4.2
40%	3.7	3.9	4.1	4.4	5.0	4.2	3.8	4.0	4.1	4.4	4.1	4.1
50%	3.7	3.8	4.1	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.1	4.0
60%	3.6	3.8	4.0	4.1	4.2	3.8	3.6	3.8	4.0	4.3	4.0	3.9
70%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.8	3.9	4.3	4.0	3.8
80%	3.5	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.8	3.5	3.4	3.6	3.8	4.1	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.9	4.4	4.8	5.0	4.5	4.0	4.0	4.1	4.3	4.1	4.0
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.1	5.8	6.1	5.4	4.6	4.5	4.3	4.4	4.2	4.4
Above Normal (16%)	3.6	4.0	4.5	5.1	5.6	4.8	4.0	4.0	4.1	4.4	4.2	4.1
Below Normal (13%)	3.7	3.9	4.1	4.1	4.5	3.7	3.6	3.8	4.0	4.4	4.1	3.9
Dry (24%)	3.6	3.7	3.9	4.0	4.1	3.9	3.6	3.8	4.0	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	4.0	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7

Alternative 3

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.3	5.9	6.8	7.2	6.5	5.3	4.7	4.4	4.5	4.2	4.1
20%	3.8	4.0	5.0	6.0	6.4	5.4	4.4	4.3	4.3	4.4	4.2	4.0
30%	3.7	3.8	4.3	5.0	5.6	4.7	3.9	4.1	4.2	4.4	4.1	4.0
40%	3.7	3.8	4.1	4.5	5.2	4.2	3.8	4.0	4.2	4.3	4.1	3.9
50%	3.7	3.7	4.0	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.1	3.9
60%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.1	4.3	4.0	3.8
70%	3.5	3.6	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.2	3.9	3.7
90%	3.4	3.5	3.7	3.7	3.7	3.5	3.4	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.8	4.4	4.8	5.1	4.5	4.0	4.1	4.2	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.7	4.1	5.2	5.9	6.1	5.5	4.6	4.5	4.4	4.4	4.1	4.0
Above Normal (16%)	3.6	3.9	4.4	5.1	5.7	4.9	4.0	4.1	4.1	4.4	4.1	3.9
Below Normal (13%)	3.7	3.8	4.0	4.1	4.6	3.7	3.6	3.8	4.1	4.4	4.2	3.9
Dry (24%)	3.6	3.6	3.9	4.0	4.1	3.9	3.6	3.8	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.6	3.9	3.9	3.9	3.6	3.5	3.7	4.0	4.1	3.9	3.7

Alternative 3 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	-0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4
20%	-0.1	-0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3
30%	0.0	-0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	-0.3
40%	0.0	-0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.0	0.0	-0.1
50%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
60%	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.1
70%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.1
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.2
Water Year Types[c]												
Wet (32%)	0.0	-0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4
Above Normal (16%)	0.0	-0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	-0.2
Below Normal (13%)	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Dry (24%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-1-3. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.4	5.6	6.8	7.1	6.4	5.3	4.7	4.4	4.5	4.2	4.5
20%	3.8	4.2	4.8	5.7	6.4	5.4	4.4	4.3	4.2	4.4	4.2	4.3
30%	3.8	4.0	4.3	5.0	5.6	4.5	3.9	4.1	4.1	4.4	4.2	4.2
40%	3.7	3.9	4.1	4.4	5.0	4.2	3.8	4.0	4.1	4.4	4.1	4.1
50%	3.7	3.8	4.1	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.1	4.0
60%	3.6	3.8	4.0	4.1	4.2	3.8	3.6	3.8	4.0	4.3	4.0	3.9
70%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.8	3.9	4.3	4.0	3.8
80%	3.5	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.8	3.5	3.4	3.6	3.8	4.1	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.9	4.4	4.8	5.0	4.5	4.0	4.0	4.1	4.3	4.1	4.0
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.1	5.8	6.1	5.4	4.6	4.5	4.3	4.4	4.2	4.4
Above Normal (16%)	3.6	4.0	4.5	5.1	5.6	4.8	4.0	4.0	4.1	4.4	4.2	4.1
Below Normal (13%)	3.7	3.9	4.1	4.1	4.5	3.7	3.6	3.8	4.0	4.4	4.1	3.9
Dry (24%)	3.6	3.7	3.9	4.0	4.1	3.9	3.6	3.8	4.0	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	4.0	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7

Alternative 5

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.4	5.6	6.8	7.1	6.4	5.3	4.7	4.4	4.5	4.3	4.5
20%	3.8	4.2	4.8	5.7	6.4	5.4	4.4	4.3	4.2	4.5	4.2	4.3
30%	3.7	4.0	4.3	5.0	5.6	4.5	3.9	4.0	4.1	4.4	4.2	4.2
40%	3.7	3.9	4.1	4.4	5.0	4.2	3.8	4.0	4.1	4.4	4.1	4.1
50%	3.7	3.8	4.1	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.1	4.0
60%	3.6	3.8	4.0	4.1	4.2	3.8	3.6	3.8	4.0	4.3	4.0	3.9
70%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.7	3.9	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.9	3.9	3.6	3.5	3.6	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.8	3.5	3.3	3.6	3.8	4.1	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.9	4.4	4.8	5.0	4.5	4.0	4.0	4.1	4.3	4.1	4.0
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.1	5.8	6.1	5.4	4.6	4.5	4.3	4.4	4.2	4.4
Above Normal (16%)	3.7	4.0	4.5	5.1	5.6	4.8	4.0	4.0	4.1	4.4	4.1	4.1
Below Normal (13%)	3.7	3.9	4.1	4.1	4.5	3.7	3.6	3.8	4.0	4.4	4.2	3.9
Dry (24%)	3.6	3.7	3.9	4.0	4.1	3.9	3.6	3.8	4.0	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	4.0	3.9	3.6	3.5	3.6	3.9	4.1	3.9	3.7

Alternative 5 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-1-4. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.3	5.9	6.8	7.2	6.5	5.3	4.7	4.5	4.4	4.2	4.1
20%	3.8	4.0	4.9	6.0	6.4	5.4	4.4	4.3	4.3	4.4	4.2	4.0
30%	3.7	3.9	4.3	5.0	5.6	4.8	3.9	4.1	4.2	4.4	4.1	4.0
40%	3.7	3.8	4.1	4.4	5.2	4.2	3.8	4.0	4.1	4.3	4.1	3.9
50%	3.7	3.7	4.0	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.0	3.9
60%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.1	4.3	4.0	3.8
70%	3.6	3.6	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.8	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7
90%	3.4	3.5	3.7	3.7	3.7	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.8	4.4	4.8	5.0	4.5	4.0	4.1	4.2	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.7	4.1	5.2	5.9	6.2	5.5	4.6	4.5	4.3	4.4	4.1	4.0
Above Normal (16%)	3.6	3.9	4.4	5.1	5.7	4.9	4.0	4.1	4.1	4.4	4.1	3.9
Below Normal (13%)	3.7	3.8	4.0	4.1	4.6	3.7	3.6	3.9	4.2	4.3	4.1	3.9
Dry (24%)	3.6	3.6	3.9	4.0	4.1	3.9	3.6	3.8	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.4	5.6	6.8	7.1	6.4	5.3	4.7	4.4	4.5	4.2	4.5
20%	3.8	4.2	4.8	5.7	6.4	5.4	4.4	4.3	4.2	4.4	4.2	4.3
30%	3.8	4.0	4.3	5.0	5.6	4.5	3.9	4.1	4.1	4.4	4.2	4.2
40%	3.7	3.9	4.1	4.4	5.0	4.2	3.8	4.0	4.1	4.4	4.1	4.1
50%	3.7	3.8	4.1	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.1	4.0
60%	3.6	3.8	4.0	4.1	4.2	3.8	3.6	3.8	4.0	4.3	4.0	3.9
70%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.8	3.9	4.3	4.0	3.8
80%	3.5	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.8	3.5	3.4	3.6	3.8	4.1	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.9	4.4	4.8	5.0	4.5	4.0	4.0	4.1	4.3	4.1	4.0
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.1	5.8	6.1	5.4	4.6	4.5	4.3	4.4	4.2	4.4
Above Normal (16%)	3.6	4.0	4.5	5.1	5.6	4.8	4.0	4.0	4.1	4.4	4.2	4.1
Below Normal (13%)	3.7	3.9	4.1	4.1	4.5	3.7	3.6	3.8	4.0	4.4	4.1	3.9
Dry (24%)	3.6	3.7	3.9	4.0	4.1	3.9	3.6	3.8	4.0	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	4.0	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4
20%	0.0	0.1	-0.2	-0.3	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.3
30%	0.0	0.2	0.0	0.0	0.0	-0.2	0.0	0.0	-0.1	0.0	0.0	0.2
40%	0.0	0.1	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
70%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.1
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.2
Water Year Types[c]												
Wet (32%)	0.0	0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Above Normal (16%)	0.0	0.1	0.0	0.0	-0.1	-0.1	0.0	0.0	-0.1	0.0	0.0	0.2
Below Normal (13%)	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0
Dry (24%)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-1-5. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.3	5.9	6.8	7.2	6.5	5.3	4.7	4.5	4.4	4.2	4.1
20%	3.8	4.0	4.9	6.0	6.4	5.4	4.4	4.3	4.3	4.4	4.2	4.0
30%	3.7	3.9	4.3	5.0	5.6	4.8	3.9	4.1	4.2	4.4	4.1	4.0
40%	3.7	3.8	4.1	4.4	5.2	4.2	3.8	4.0	4.1	4.3	4.1	3.9
50%	3.7	3.7	4.0	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.0	3.9
60%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.1	4.3	4.0	3.8
70%	3.6	3.6	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.8	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7
90%	3.4	3.5	3.7	3.7	3.7	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.8	4.4	4.8	5.0	4.5	4.0	4.1	4.2	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.7	4.1	5.2	5.9	6.2	5.5	4.6	4.5	4.3	4.4	4.1	4.0
Above Normal (16%)	3.6	3.9	4.4	5.1	5.7	4.9	4.0	4.1	4.1	4.4	4.1	3.9
Below Normal (13%)	3.7	3.8	4.0	4.1	4.6	3.7	3.6	3.9	4.2	4.3	4.1	3.9
Dry (24%)	3.6	3.6	3.9	4.0	4.1	3.9	3.6	3.8	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.3	5.9	6.8	7.2	6.5	5.3	4.7	4.4	4.5	4.2	4.1
20%	3.8	4.0	5.0	6.0	6.4	5.4	4.4	4.3	4.3	4.4	4.2	4.0
30%	3.7	3.8	4.3	5.0	5.6	4.7	3.9	4.1	4.2	4.4	4.1	4.0
40%	3.7	3.8	4.1	4.5	5.2	4.2	3.8	4.0	4.2	4.3	4.1	3.9
50%	3.7	3.7	4.0	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.1	3.9
60%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.1	4.3	4.0	3.8
70%	3.5	3.6	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.2	3.9	3.7
90%	3.4	3.5	3.7	3.7	3.7	3.5	3.4	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.8	4.4	4.8	5.1	4.5	4.0	4.1	4.2	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.7	4.1	5.2	5.9	6.1	5.5	4.6	4.5	4.4	4.4	4.1	4.0
Above Normal (16%)	3.6	3.9	4.4	5.1	5.7	4.9	4.0	4.1	4.1	4.4	4.1	3.9
Below Normal (13%)	3.7	3.8	4.0	4.1	4.6	3.7	3.6	3.8	4.1	4.4	4.2	3.9
Dry (24%)	3.6	3.6	3.9	4.0	4.1	3.9	3.6	3.8	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.6	3.9	3.9	3.9	3.6	3.5	3.7	4.0	4.1	3.9	3.7

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-1-6. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.3	5.9	6.8	7.2	6.5	5.3	4.7	4.5	4.4	4.2	4.1
20%	3.8	4.0	4.9	6.0	6.4	5.4	4.4	4.3	4.3	4.4	4.2	4.0
30%	3.7	3.9	4.3	5.0	5.6	4.8	3.9	4.1	4.2	4.4	4.1	4.0
40%	3.7	3.8	4.1	4.4	5.2	4.2	3.8	4.0	4.1	4.3	4.1	3.9
50%	3.7	3.7	4.0	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.0	3.9
60%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.1	4.3	4.0	3.8
70%	3.6	3.6	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.8	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7
90%	3.4	3.5	3.7	3.7	3.7	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.8	4.4	4.8	5.0	4.5	4.0	4.1	4.2	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.7	4.1	5.2	5.9	6.2	5.5	4.6	4.5	4.3	4.4	4.1	4.0
Above Normal (16%)	3.6	3.9	4.4	5.1	5.7	4.9	4.0	4.1	4.1	4.4	4.1	3.9
Below Normal (13%)	3.7	3.8	4.0	4.1	4.6	3.7	3.6	3.9	4.2	4.3	4.1	3.9
Dry (24%)	3.6	3.6	3.9	4.0	4.1	3.9	3.6	3.8	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.7

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.4	5.6	6.8	7.1	6.4	5.3	4.7	4.4	4.5	4.3	4.5
20%	3.8	4.2	4.8	5.7	6.4	5.4	4.4	4.3	4.2	4.5	4.2	4.3
30%	3.7	4.0	4.3	5.0	5.6	4.5	3.9	4.0	4.1	4.4	4.2	4.2
40%	3.7	3.9	4.1	4.4	5.0	4.2	3.8	4.0	4.1	4.4	4.1	4.1
50%	3.7	3.8	4.1	4.3	4.5	4.0	3.7	3.9	4.1	4.3	4.1	4.0
60%	3.6	3.8	4.0	4.1	4.2	3.8	3.6	3.8	4.0	4.3	4.0	3.9
70%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.7	3.9	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.9	3.9	3.6	3.5	3.6	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.8	3.5	3.3	3.6	3.8	4.1	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.9	4.4	4.8	5.0	4.5	4.0	4.0	4.1	4.3	4.1	4.0
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.1	5.8	6.1	5.4	4.6	4.5	4.3	4.4	4.2	4.4
Above Normal (16%)	3.7	4.0	4.5	5.1	5.6	4.8	4.0	4.0	4.1	4.4	4.1	4.1
Below Normal (13%)	3.7	3.9	4.1	4.1	4.5	3.7	3.6	3.8	4.0	4.4	4.2	3.9
Dry (24%)	3.6	3.7	3.9	4.0	4.1	3.9	3.6	3.8	4.0	4.2	4.0	3.8
Critical (15%)	3.6	3.7	3.9	4.0	3.9	3.6	3.5	3.6	3.9	4.1	3.9	3.7

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4
20%	0.0	0.1	-0.2	-0.3	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.3
30%	0.0	0.2	0.0	0.0	0.0	-0.2	0.0	0.0	-0.1	0.0	0.0	0.2
40%	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	0.0	-0.1	0.0	0.0	0.1
50%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.1
60%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
70%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.1
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.1
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.2
Water Year Types[c]												
Wet (32%)	0.0	0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Above Normal (16%)	0.0	0.1	0.0	0.0	-0.1	-0.1	0.0	0.0	-0.1	0.0	0.0	0.2
Below Normal (13%)	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0
Dry (24%)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

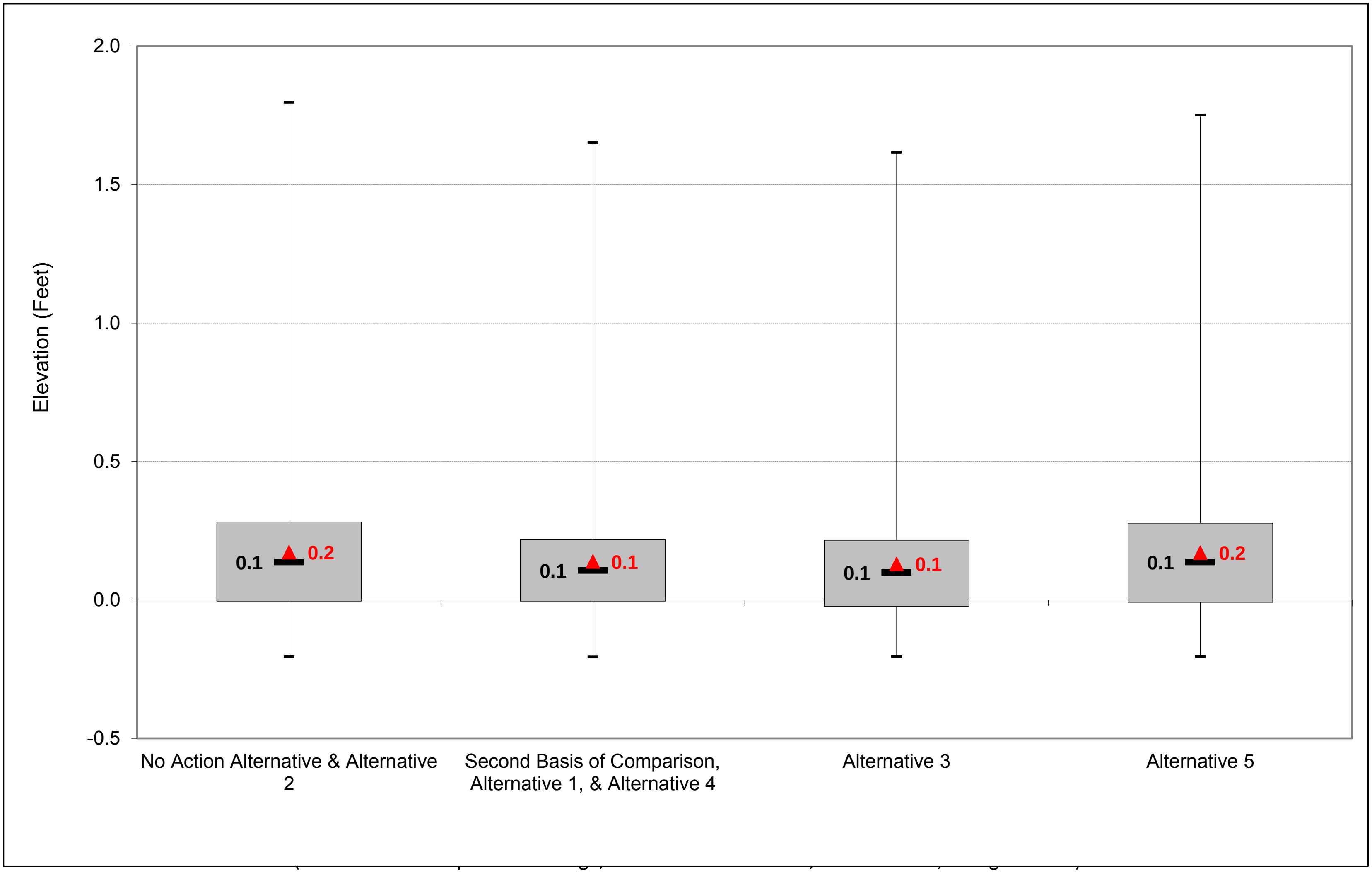
a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

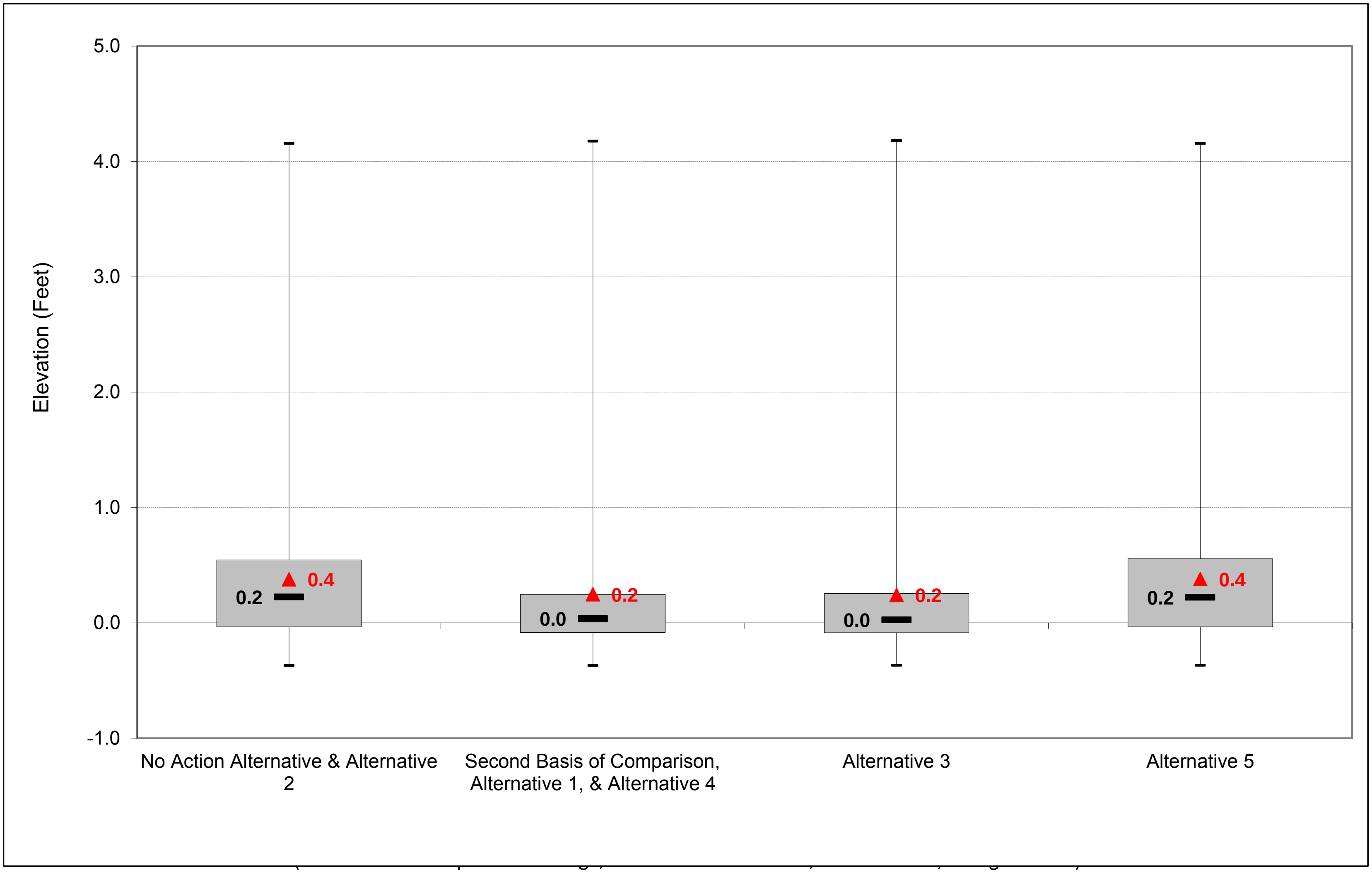
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-1. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, October



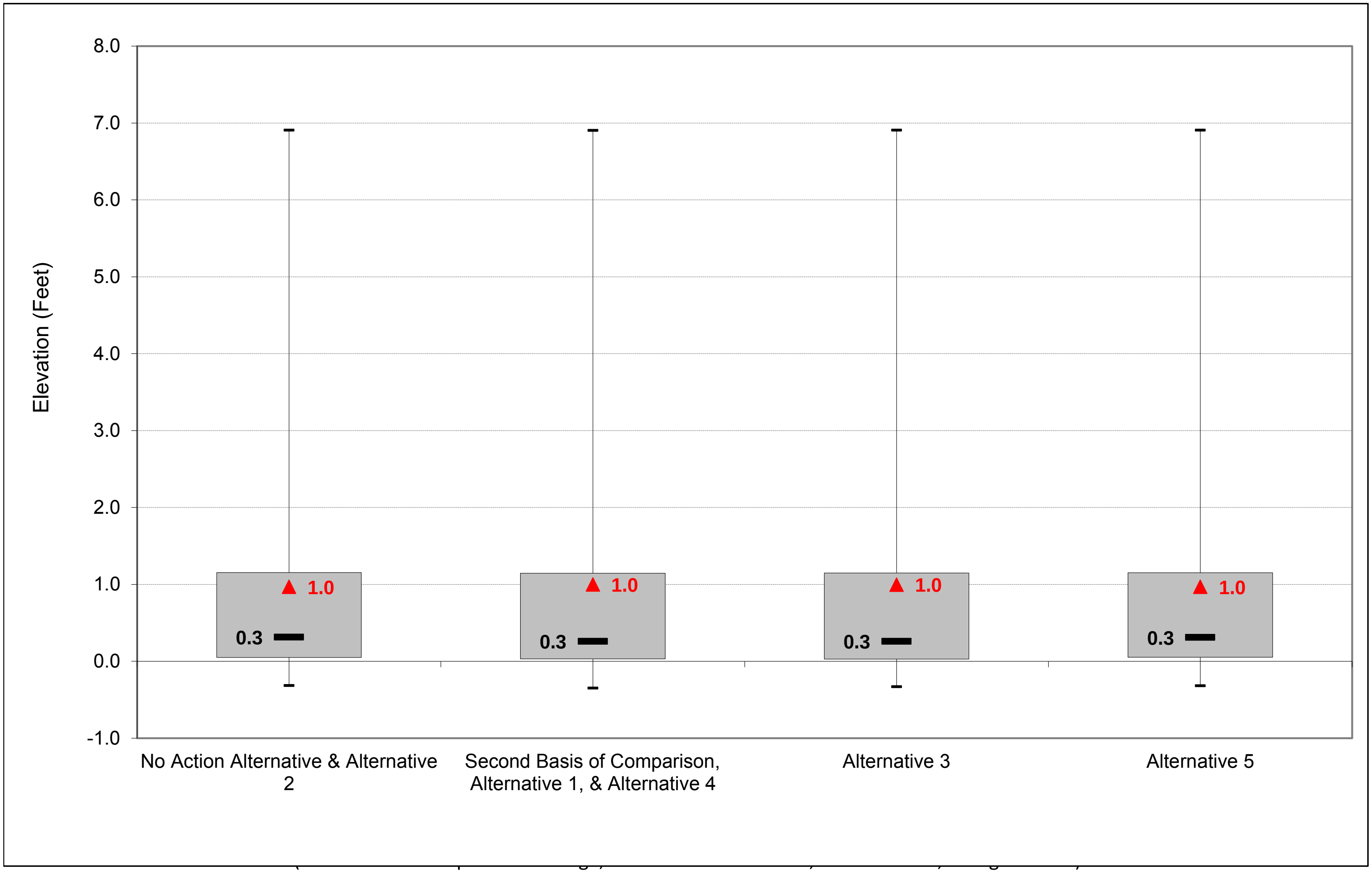
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-2. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, November



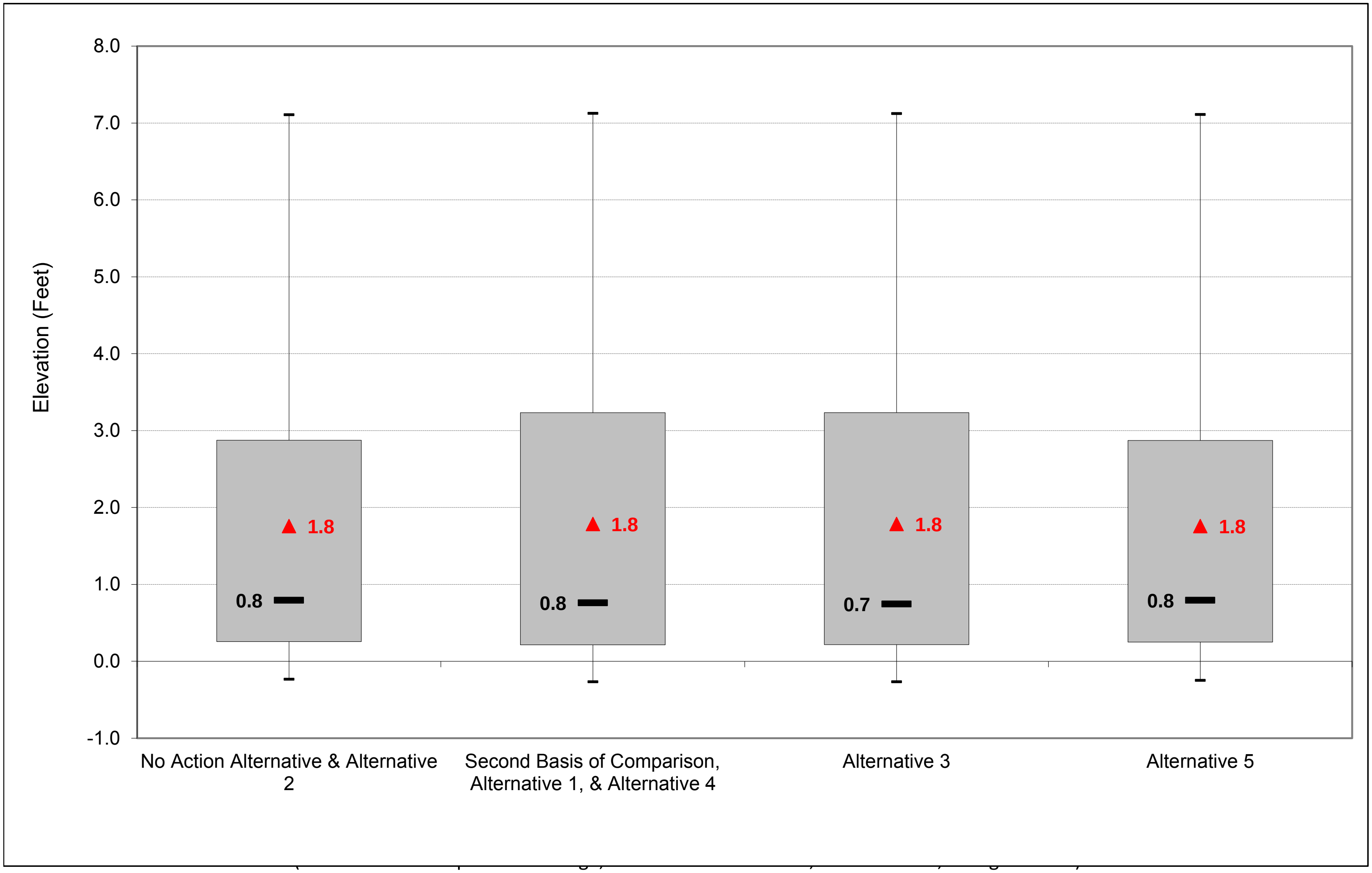
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-3. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, December



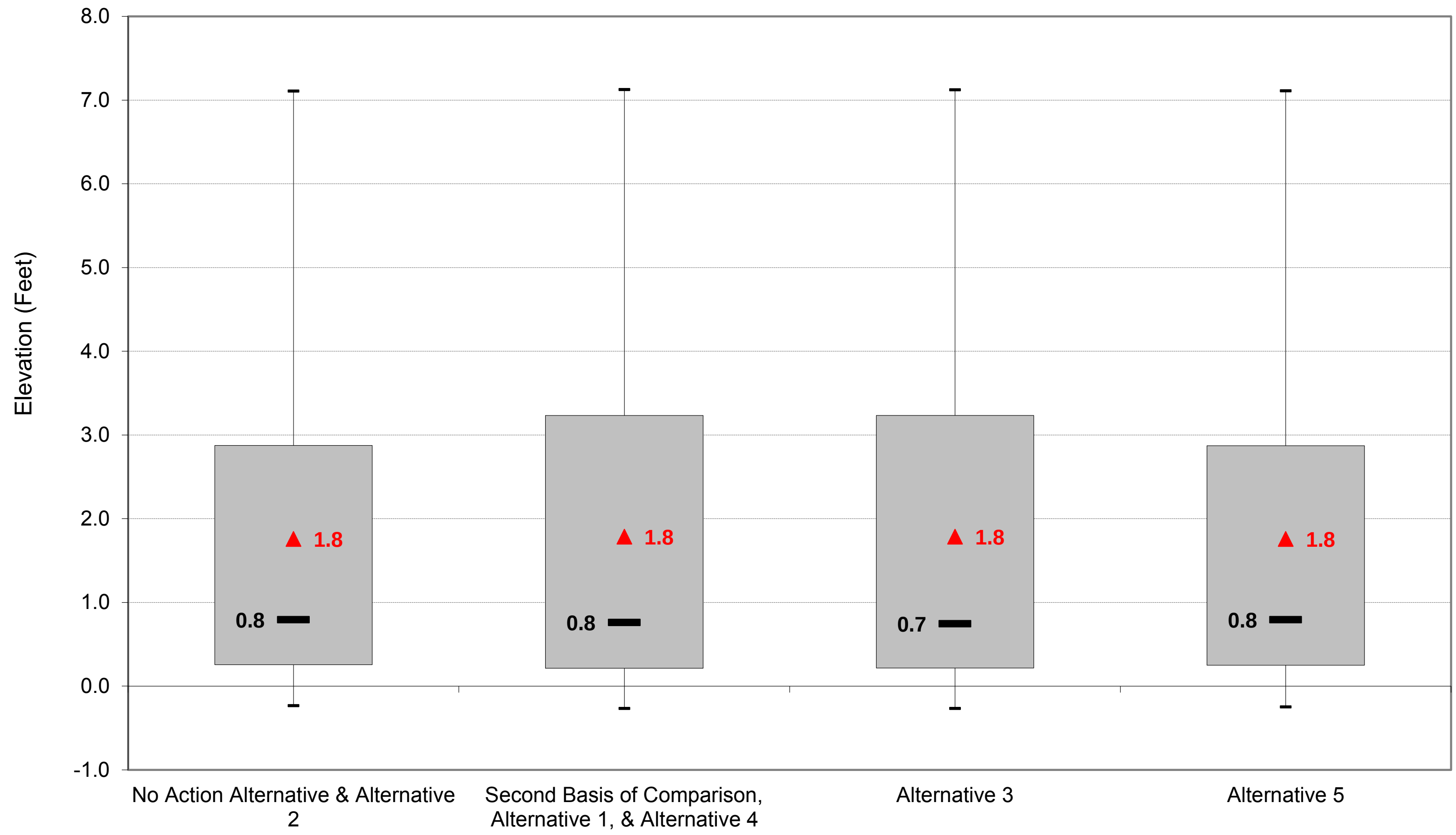
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-4. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, January



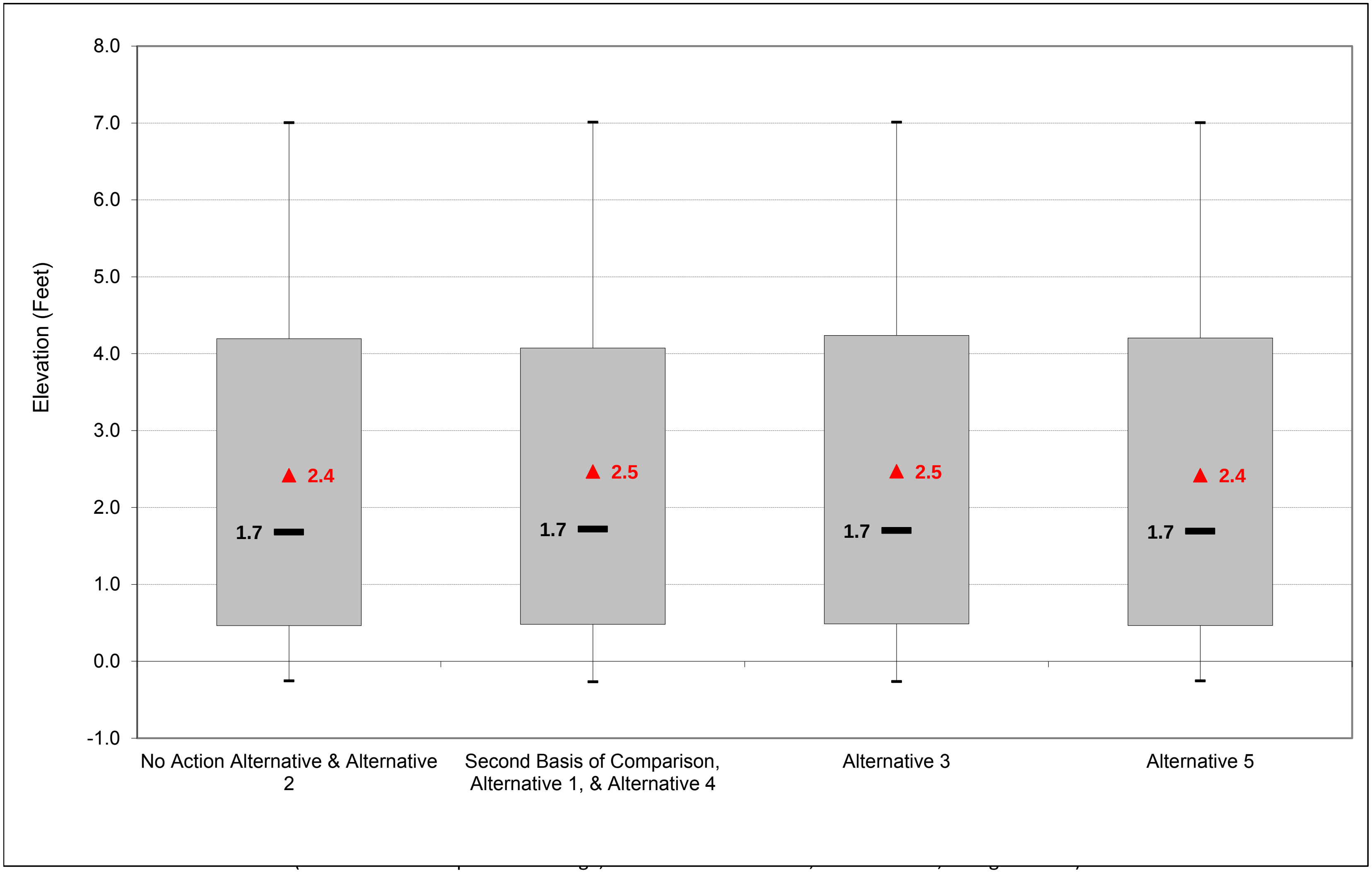
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-5. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, February



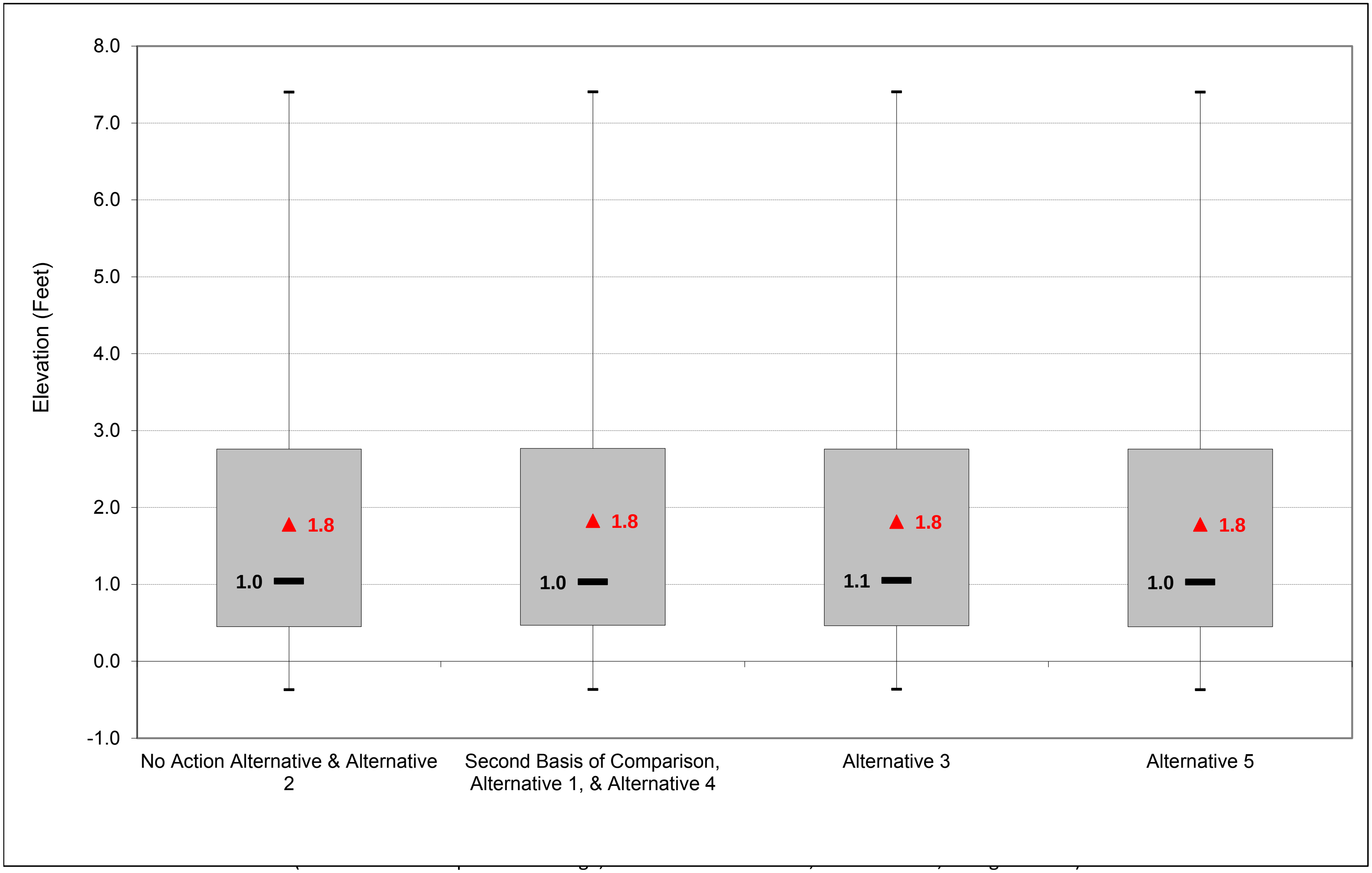
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-6. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, March



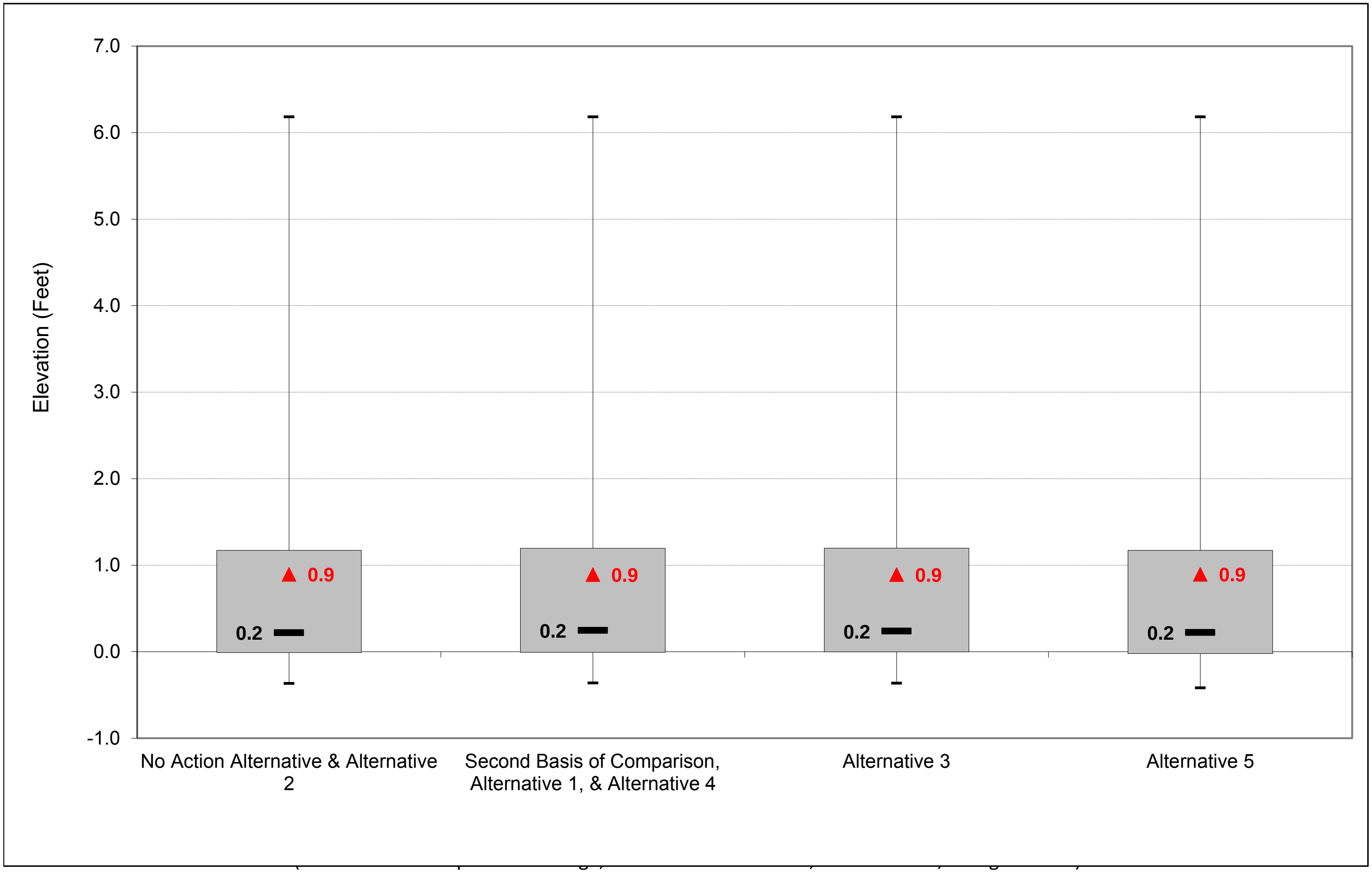
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-7. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, April



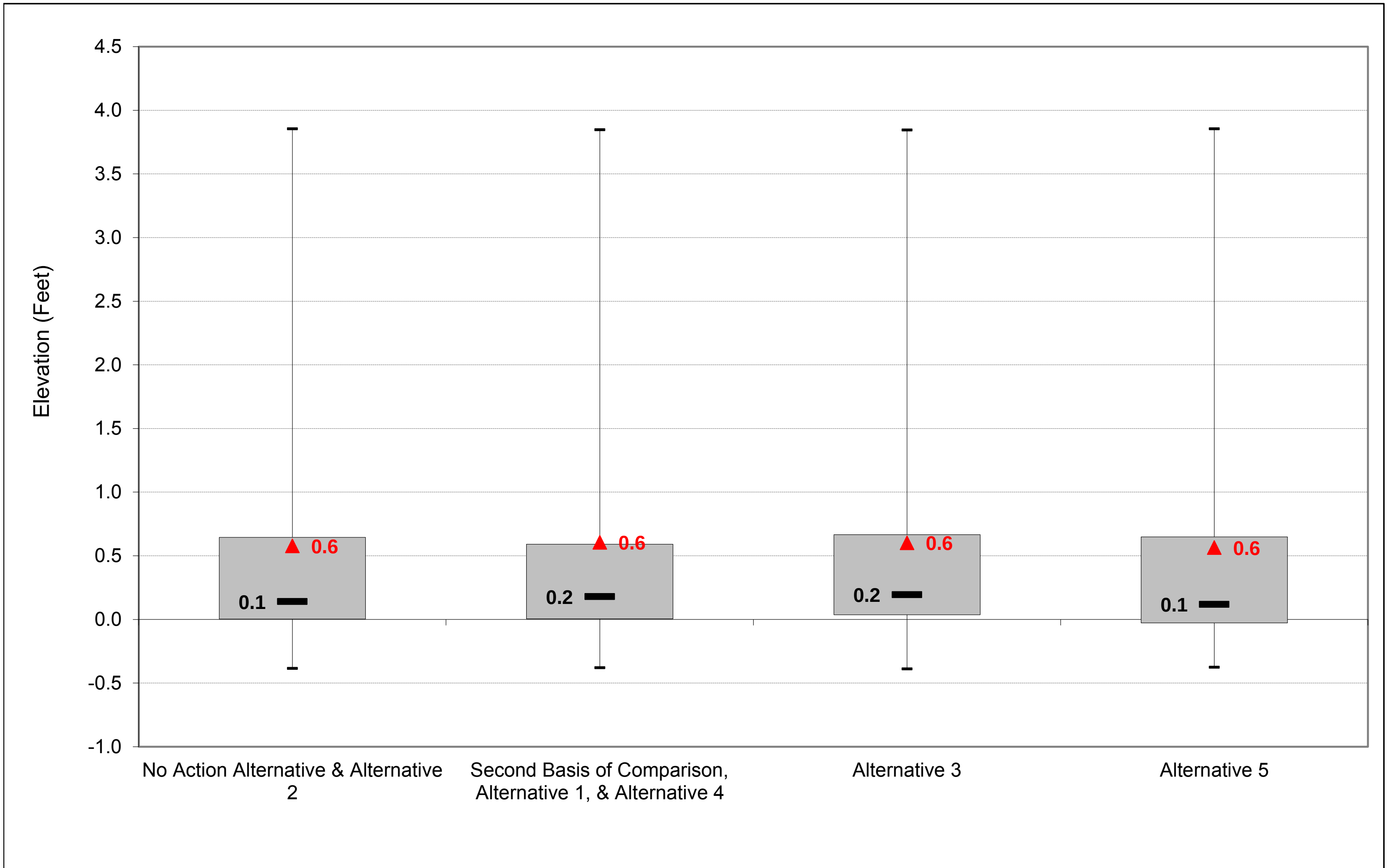
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-8. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, May



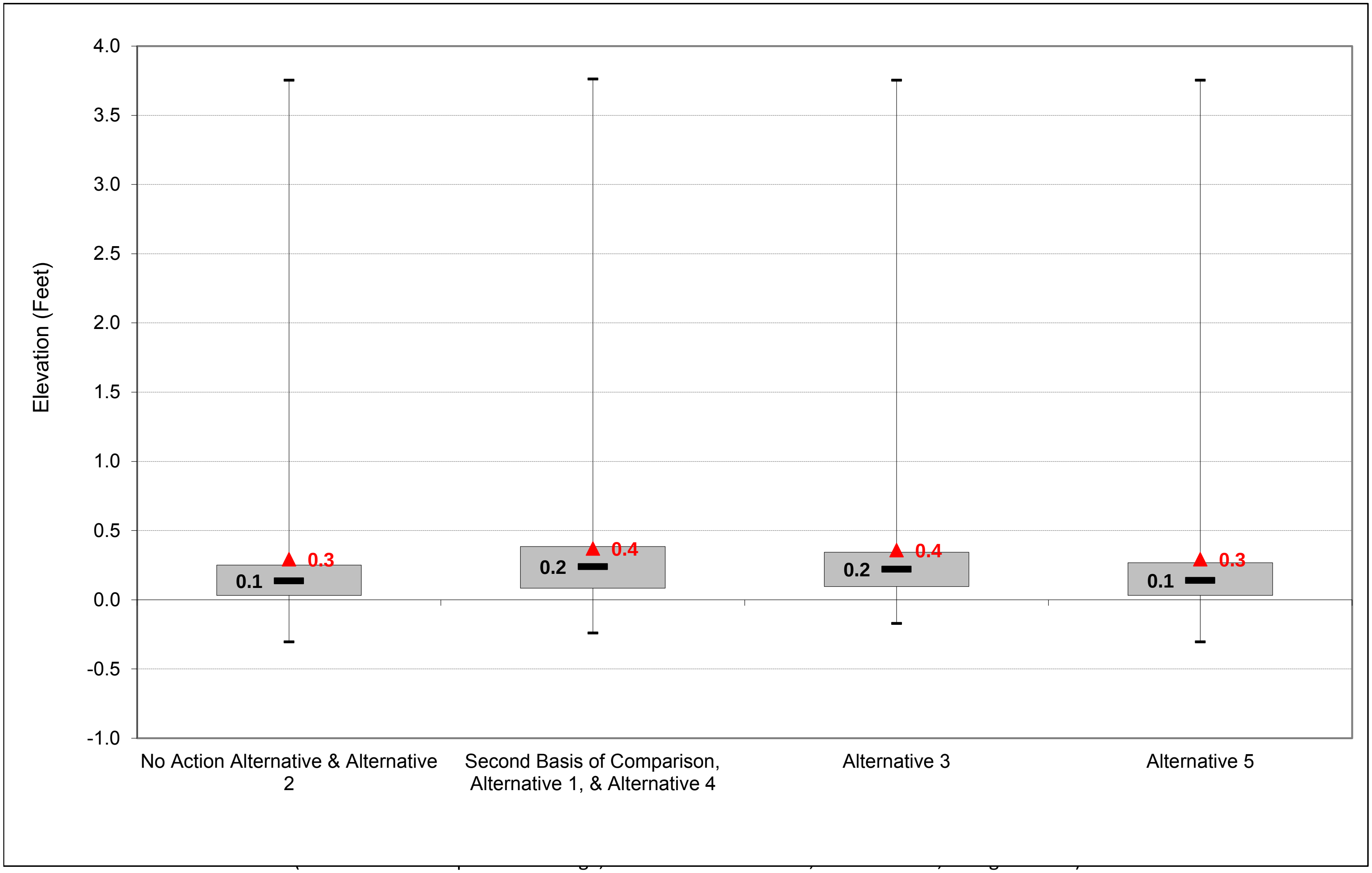
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-9. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, June



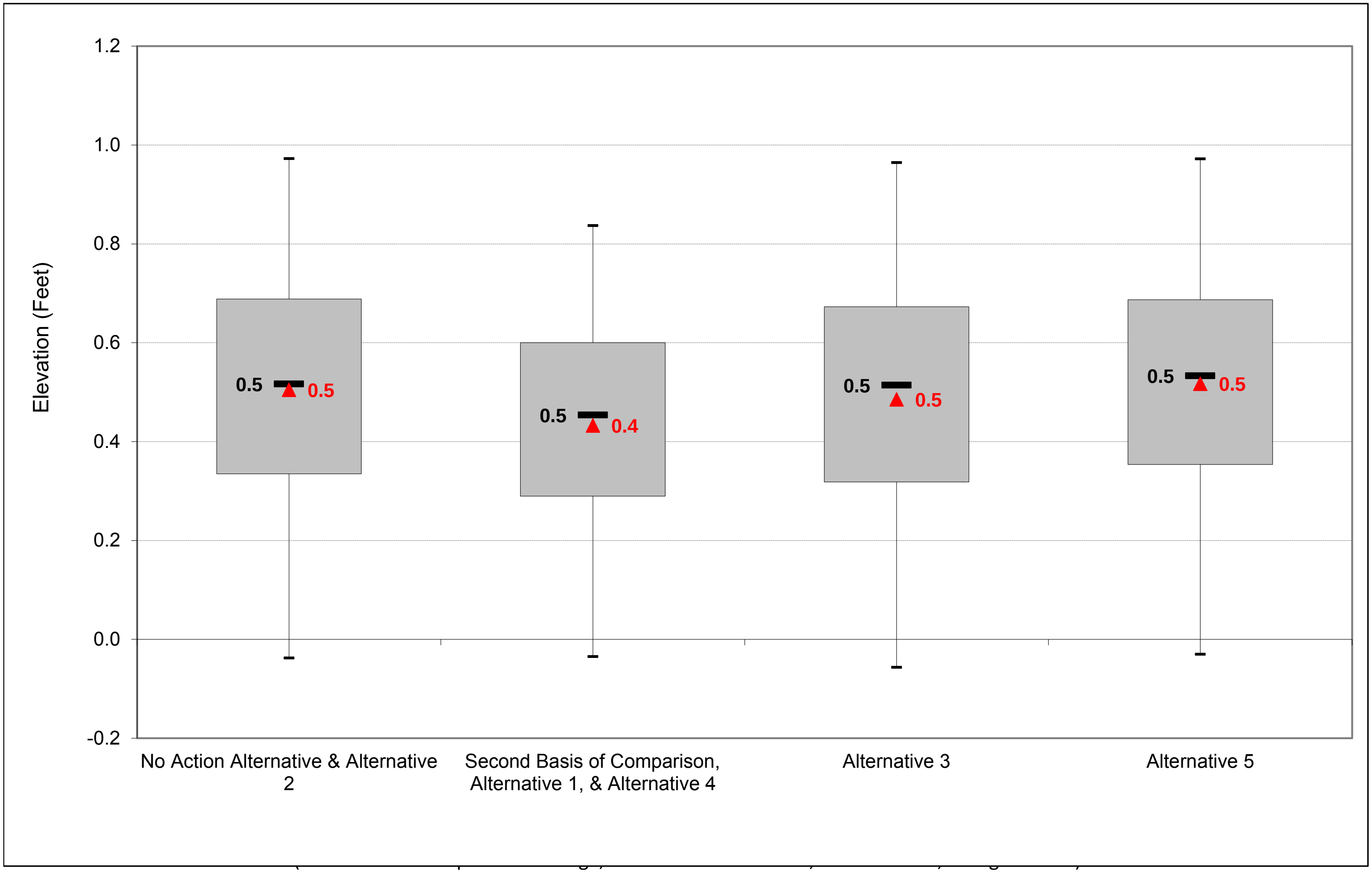
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-10. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, July



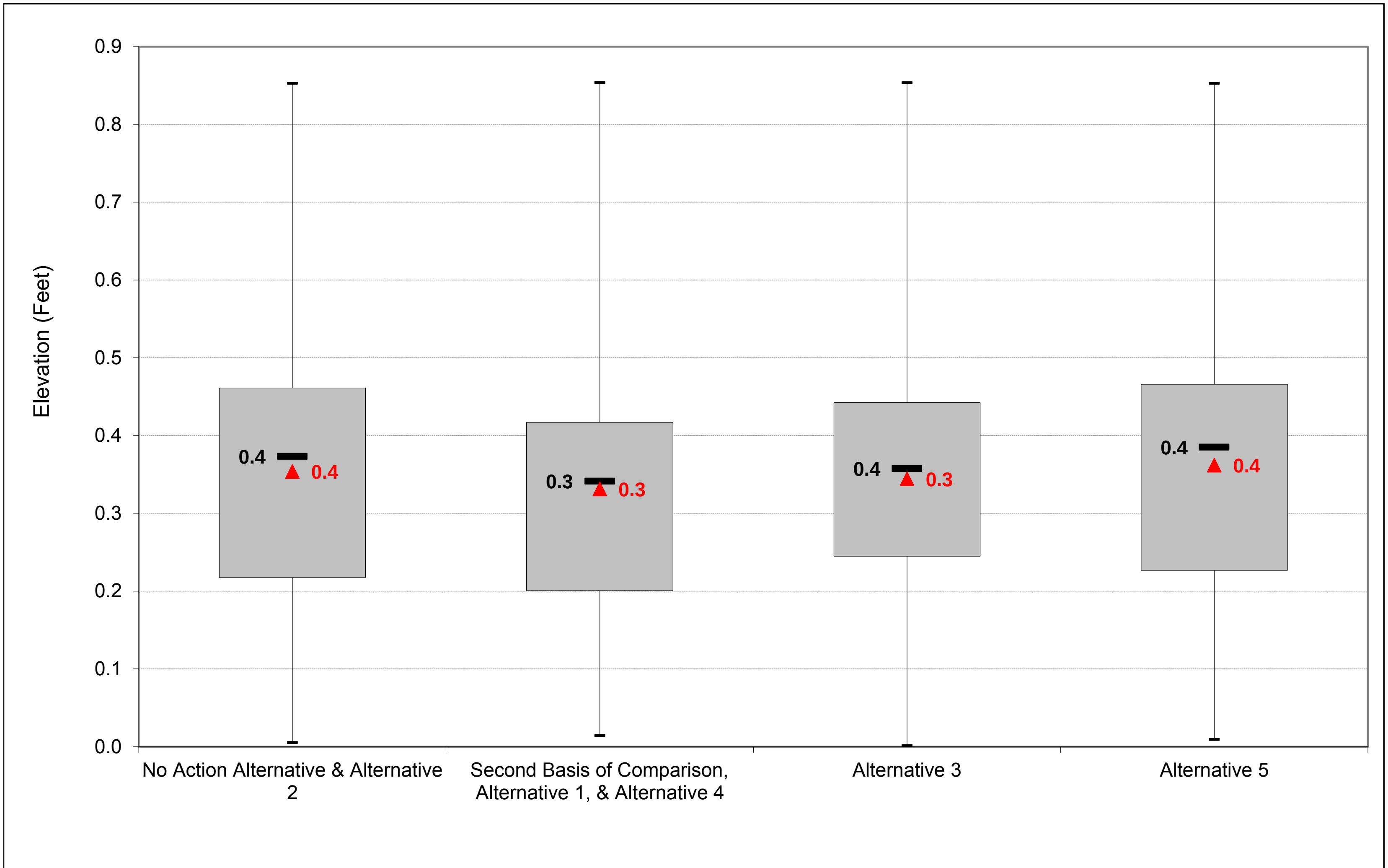
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-11. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-40-2-12. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-2-1. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.9	3.4	5.0	5.9	5.0	3.3	2.2	0.6	0.8	0.5	1.5
20%	0.3	0.6	1.6	3.7	4.8	3.6	1.8	1.0	0.3	0.7	0.5	1.4
30%	0.3	0.5	0.8	2.3	3.5	2.0	0.9	0.4	0.2	0.7	0.4	0.9
40%	0.2	0.4	0.5	1.2	2.7	1.4	0.5	0.3	0.2	0.6	0.4	0.7
50%	0.1	0.2	0.3	0.8	1.7	1.0	0.2	0.1	0.1	0.5	0.4	0.5
60%	0.1	0.1	0.2	0.5	1.0	0.7	0.1	0.1	0.1	0.5	0.3	0.3
70%	0.0	0.0	0.1	0.3	0.7	0.5	0.0	0.0	0.1	0.4	0.3	0.3
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.0	0.3	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.3	0.0	-0.1	-0.1	-0.1	0.2	0.1	0.1
Long Term												
Full Simulation Period[b]	0.2	0.4	1.0	1.8	2.4	1.8	0.9	0.6	0.3	0.5	0.4	0.7
Water Year Types[c]												
Wet (32%)	0.3	0.8	2.2	3.6	4.3	3.4	2.1	1.5	0.7	0.6	0.5	1.4
Above Normal (16%)	0.1	0.5	1.1	2.4	3.3	2.6	1.0	0.5	0.2	0.7	0.5	0.7
Below Normal (13%)	0.2	0.3	0.4	0.6	1.7	0.5	0.2	0.1	0.1	0.6	0.4	0.4
Dry (24%)	0.1	0.1	0.1	0.5	1.0	0.8	0.2	0.1	0.1	0.4	0.2	0.2
Critical (15%)	0.0	-0.1	0.1	0.3	0.4	0.2	0.0	-0.1	0.0	0.2	0.2	0.2

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.8	3.9	5.1	5.9	5.0	3.3	2.1	0.6	0.7	0.5	0.6
20%	0.2	0.3	1.9	4.1	4.8	3.6	1.8	1.2	0.4	0.6	0.4	0.5
30%	0.2	0.2	0.8	2.5	3.6	2.6	0.8	0.5	0.3	0.6	0.4	0.4
40%	0.1	0.1	0.4	1.2	3.0	1.5	0.5	0.3	0.3	0.5	0.4	0.4
50%	0.1	0.0	0.3	0.8	1.7	1.0	0.2	0.2	0.2	0.5	0.3	0.3
60%	0.1	0.0	0.1	0.4	1.0	0.7	0.1	0.1	0.2	0.4	0.3	0.3
70%	0.0	-0.1	0.1	0.2	0.6	0.6	0.0	0.0	0.1	0.3	0.3	0.2
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.1	0.2	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.2	0.0	-0.1	-0.1	0.0	0.1	0.1	0.1
Long Term												
Full Simulation Period[b]	0.1	0.2	1.0	1.8	2.5	1.8	0.9	0.6	0.4	0.4	0.3	0.3
Water Year Types[c]												
Wet (32%)	0.3	0.6	2.4	3.7	4.3	3.4	2.0	1.5	0.8	0.6	0.4	0.5
Above Normal (16%)	0.1	0.4	1.1	2.5	3.4	2.7	1.0	0.5	0.3	0.6	0.4	0.4
Below Normal (13%)	0.1	0.2	0.3	0.6	1.8	0.6	0.2	0.2	0.3	0.6	0.4	0.4
Dry (24%)	0.1	0.0	0.1	0.4	1.0	0.8	0.2	0.1	0.2	0.3	0.2	0.2
Critical (15%)	0.0	-0.1	0.0	0.2	0.4	0.2	0.0	-0.1	0.0	0.1	0.2	0.2

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	-0.1	0.5	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-1.0
20%	-0.1	-0.3	0.3	0.4	0.0	0.0	0.0	0.2	0.1	-0.1	0.0	-1.0
30%	-0.1	-0.3	0.0	0.3	0.1	0.5	0.0	0.0	0.1	-0.1	0.0	-0.5
40%	-0.1	-0.2	-0.1	0.0	0.3	0.0	0.0	0.0	0.1	-0.1	0.0	-0.3
50%	0.0	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	-0.1
60%	0.0	-0.1	-0.1	0.0	0.1	0.0	0.0	0.1	0.1	-0.1	0.0	0.0
70%	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
90%	0.0	0.0	-0.1	0.0	-0.1	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	-0.4
Water Year Types[c]												
Wet (32%)	-0.1	-0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.9
Above Normal (16%)	0.0	-0.2	-0.1	0.1	0.1	0.2	0.0	0.1	0.1	-0.1	0.0	-0.3
Below Normal (13%)	0.0	-0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.2	-0.1	-0.1	0.0
Dry (24%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-2-2. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.9	3.4	5.0	5.9	5.0	3.3	2.2	0.6	0.8	0.5	1.5
20%	0.3	0.6	1.6	3.7	4.8	3.6	1.8	1.0	0.3	0.7	0.5	1.4
30%	0.3	0.5	0.8	2.3	3.5	2.0	0.9	0.4	0.2	0.7	0.4	0.9
40%	0.2	0.4	0.5	1.2	2.7	1.4	0.5	0.3	0.2	0.6	0.4	0.7
50%	0.1	0.2	0.3	0.8	1.7	1.0	0.2	0.1	0.1	0.5	0.4	0.5
60%	0.1	0.1	0.2	0.5	1.0	0.7	0.1	0.1	0.1	0.5	0.3	0.3
70%	0.0	0.0	0.1	0.3	0.7	0.5	0.0	0.0	0.1	0.4	0.3	0.3
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.0	0.3	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.3	0.0	-0.1	-0.1	-0.1	0.2	0.1	0.1
Long Term												
Full Simulation Period[b]	0.2	0.4	1.0	1.8	2.4	1.8	0.9	0.6	0.3	0.5	0.4	0.7
Water Year Types[c]												
Wet (32%)	0.3	0.8	2.2	3.6	4.3	3.4	2.1	1.5	0.7	0.6	0.5	1.4
Above Normal (16%)	0.1	0.5	1.1	2.4	3.3	2.6	1.0	0.5	0.2	0.7	0.5	0.7
Below Normal (13%)	0.2	0.3	0.4	0.6	1.7	0.5	0.2	0.1	0.1	0.6	0.4	0.4
Dry (24%)	0.1	0.1	0.1	0.5	1.0	0.8	0.2	0.1	0.1	0.4	0.2	0.2
Critical (15%)	0.0	-0.1	0.1	0.3	0.4	0.2	0.0	-0.1	0.0	0.2	0.2	0.2

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.8	3.9	5.1	5.9	5.0	3.2	2.1	0.6	0.7	0.5	0.6
20%	0.2	0.3	2.0	4.0	4.8	3.6	1.8	1.1	0.4	0.7	0.5	0.5
30%	0.2	0.2	0.8	2.5	3.6	2.3	0.8	0.5	0.3	0.7	0.4	0.4
40%	0.1	0.1	0.4	1.2	3.0	1.5	0.5	0.3	0.3	0.6	0.4	0.4
50%	0.1	0.0	0.3	0.7	1.7	1.1	0.2	0.2	0.2	0.5	0.4	0.3
60%	0.1	0.0	0.1	0.4	1.0	0.7	0.1	0.1	0.2	0.5	0.3	0.3
70%	0.0	-0.1	0.0	0.3	0.7	0.6	0.0	0.0	0.1	0.4	0.3	0.2
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.1	0.2	0.2	0.2
90%	-0.1	-0.2	-0.1	0.0	0.3	0.0	-0.1	-0.1	0.0	0.1	0.1	0.1
Long Term												
Full Simulation Period[b]	0.1	0.2	1.0	1.8	2.5	1.8	0.9	0.6	0.4	0.5	0.3	0.3
Water Year Types[c]												
Wet (32%)	0.2	0.6	2.4	3.7	4.3	3.4	2.0	1.5	0.8	0.6	0.4	0.5
Above Normal (16%)	0.1	0.4	1.1	2.4	3.4	2.7	1.0	0.5	0.3	0.6	0.4	0.4
Below Normal (13%)	0.1	0.2	0.3	0.6	1.8	0.6	0.2	0.2	0.2	0.7	0.4	0.4
Dry (24%)	0.1	0.0	0.1	0.4	1.0	0.8	0.2	0.1	0.2	0.3	0.2	0.2
Critical (15%)	0.0	-0.1	0.0	0.2	0.4	0.2	0.0	-0.1	0.0	0.1	0.2	0.2

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0
20%	-0.1	-0.3	0.4	0.4	0.0	0.0	0.0	0.1	0.1	0.0	0.0	-1.0
30%	-0.1	-0.3	0.0	0.3	0.1	0.3	0.0	0.1	0.1	0.0	0.0	-0.5
40%	-0.1	-0.3	-0.1	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0	-0.3
50%	0.0	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	-0.1
60%	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
70%	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
80%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
90%	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	-0.3
Water Year Types[c]												
Wet (32%)	-0.1	-0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-1.0
Above Normal (16%)	0.0	-0.2	-0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	-0.3
Below Normal (13%)	-0.1	-0.2	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0
Dry (24%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-2-3. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.9	3.4	5.0	5.9	5.0	3.3	2.2	0.6	0.8	0.5	1.5
20%	0.3	0.6	1.6	3.7	4.8	3.6	1.8	1.0	0.3	0.7	0.5	1.4
30%	0.3	0.5	0.8	2.3	3.5	2.0	0.9	0.4	0.2	0.7	0.4	0.9
40%	0.2	0.4	0.5	1.2	2.7	1.4	0.5	0.3	0.2	0.6	0.4	0.7
50%	0.1	0.2	0.3	0.8	1.7	1.0	0.2	0.1	0.1	0.5	0.4	0.5
60%	0.1	0.1	0.2	0.5	1.0	0.7	0.1	0.1	0.1	0.5	0.3	0.3
70%	0.0	0.0	0.1	0.3	0.7	0.5	0.0	0.0	0.1	0.4	0.3	0.3
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.0	0.3	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.3	0.0	-0.1	-0.1	-0.1	0.2	0.1	0.1
Long Term												
Full Simulation Period[b]	0.2	0.4	1.0	1.8	2.4	1.8	0.9	0.6	0.3	0.5	0.4	0.7
Water Year Types[c]												
Wet (32%)	0.3	0.8	2.2	3.6	4.3	3.4	2.1	1.5	0.7	0.6	0.5	1.4
Above Normal (16%)	0.1	0.5	1.1	2.4	3.3	2.6	1.0	0.5	0.2	0.7	0.5	0.7
Below Normal (13%)	0.2	0.3	0.4	0.6	1.7	0.5	0.2	0.1	0.1	0.6	0.4	0.4
Dry (24%)	0.1	0.1	0.1	0.5	1.0	0.8	0.2	0.1	0.1	0.4	0.2	0.2
Critical (15%)	0.0	-0.1	0.1	0.3	0.4	0.2	0.0	-0.1	0.0	0.2	0.2	0.2

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.9	3.4	5.0	5.9	5.0	3.3	2.2	0.6	0.8	0.5	1.5
20%	0.3	0.6	1.6	3.7	4.8	3.6	1.8	1.0	0.3	0.7	0.5	1.4
30%	0.2	0.5	0.8	2.3	3.5	2.0	0.9	0.4	0.2	0.7	0.4	0.9
40%	0.2	0.4	0.5	1.2	2.7	1.4	0.5	0.2	0.2	0.6	0.4	0.7
50%	0.1	0.2	0.3	0.8	1.7	1.0	0.2	0.1	0.1	0.5	0.4	0.5
60%	0.1	0.1	0.2	0.5	1.0	0.7	0.1	0.0	0.1	0.5	0.3	0.3
70%	0.0	0.0	0.1	0.3	0.7	0.5	0.0	0.0	0.1	0.4	0.3	0.3
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	-0.1	0.0	0.3	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.3	0.0	-0.1	-0.2	-0.1	0.2	0.1	0.1
Long Term												
Full Simulation Period[b]	0.2	0.4	1.0	1.8	2.4	1.8	0.9	0.6	0.3	0.5	0.4	0.7
Water Year Types[c]												
Wet (32%)	0.3	0.8	2.2	3.6	4.3	3.4	2.1	1.5	0.7	0.7	0.5	1.4
Above Normal (16%)	0.1	0.5	1.1	2.4	3.3	2.6	1.0	0.5	0.2	0.7	0.5	0.7
Below Normal (13%)	0.2	0.3	0.4	0.6	1.7	0.5	0.2	0.1	0.1	0.6	0.4	0.4
Dry (24%)	0.1	0.1	0.1	0.5	1.0	0.8	0.2	0.0	0.1	0.4	0.2	0.2
Critical (15%)	0.0	-0.1	0.1	0.3	0.4	0.2	-0.1	-0.1	0.0	0.2	0.2	0.2

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-2-4. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.8	3.9	5.1	5.9	5.0	3.3	2.1	0.6	0.7	0.5	0.6
20%	0.2	0.3	1.9	4.1	4.8	3.6	1.8	1.2	0.4	0.6	0.4	0.5
30%	0.2	0.2	0.8	2.5	3.6	2.6	0.8	0.5	0.3	0.6	0.4	0.4
40%	0.1	0.1	0.4	1.2	3.0	1.5	0.5	0.3	0.3	0.5	0.4	0.4
50%	0.1	0.0	0.3	0.8	1.7	1.0	0.2	0.2	0.2	0.5	0.3	0.3
60%	0.1	0.0	0.1	0.4	1.0	0.7	0.1	0.1	0.2	0.4	0.3	0.3
70%	0.0	-0.1	0.1	0.2	0.6	0.6	0.0	0.0	0.1	0.3	0.3	0.2
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.1	0.2	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.2	0.0	-0.1	-0.1	0.0	0.1	0.1	0.1
Long Term												
Full Simulation Period[b]	0.1	0.2	1.0	1.8	2.5	1.8	0.9	0.6	0.4	0.4	0.3	0.3
Water Year Types[c]												
Wet (32%)	0.3	0.6	2.4	3.7	4.3	3.4	2.0	1.5	0.8	0.6	0.4	0.5
Above Normal (16%)	0.1	0.4	1.1	2.5	3.4	2.7	1.0	0.5	0.3	0.6	0.4	0.4
Below Normal (13%)	0.1	0.2	0.3	0.6	1.8	0.6	0.2	0.2	0.3	0.6	0.4	0.4
Dry (24%)	0.1	0.0	0.1	0.4	1.0	0.8	0.2	0.1	0.2	0.3	0.2	0.2
Critical (15%)	0.0	-0.1	0.0	0.2	0.4	0.2	0.0	-0.1	0.0	0.1	0.2	0.2

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.9	3.4	5.0	5.9	5.0	3.3	2.2	0.6	0.8	0.5	1.5
20%	0.3	0.6	1.6	3.7	4.8	3.6	1.8	1.0	0.3	0.7	0.5	1.4
30%	0.3	0.5	0.8	2.3	3.5	2.0	0.9	0.4	0.2	0.7	0.4	0.9
40%	0.2	0.4	0.5	1.2	2.7	1.4	0.5	0.3	0.2	0.6	0.4	0.7
50%	0.1	0.2	0.3	0.8	1.7	1.0	0.2	0.1	0.1	0.5	0.4	0.5
60%	0.1	0.1	0.2	0.5	1.0	0.7	0.1	0.1	0.1	0.5	0.3	0.3
70%	0.0	0.0	0.1	0.3	0.7	0.5	0.0	0.0	0.1	0.4	0.3	0.3
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.0	0.3	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.3	0.0	-0.1	-0.1	-0.1	0.2	0.1	0.1
Long Term												
Full Simulation Period[b]	0.2	0.4	1.0	1.8	2.4	1.8	0.9	0.6	0.3	0.5	0.4	0.7
Water Year Types[c]												
Wet (32%)	0.3	0.8	2.2	3.6	4.3	3.4	2.1	1.5	0.7	0.6	0.5	1.4
Above Normal (16%)	0.1	0.5	1.1	2.4	3.3	2.6	1.0	0.5	0.2	0.7	0.5	0.7
Below Normal (13%)	0.2	0.3	0.4	0.6	1.7	0.5	0.2	0.1	0.1	0.6	0.4	0.4
Dry (24%)	0.1	0.1	0.1	0.5	1.0	0.8	0.2	0.1	0.1	0.4	0.2	0.2
Critical (15%)	0.0	-0.1	0.1	0.3	0.4	0.2	0.0	-0.1	0.0	0.2	0.2	0.2

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.1	**-0.5**	**-0.1**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.1	0.0	1.0
20%	0.1	0.3	**-0.3**	**-0.4**	**0.0**	**0.0**	0.0	**-0.2**	**-0.1**	0.1	0.0	1.0
30%	0.1	0.3	0.0	**-0.3**	**-0.1**	**-0.5**	0.0	**0.0**	**-0.1**	0.1	0.0	0.5
40%	0.1	0.2	0.1	**0.0**	**-0.3**	**0.0**	0.0	**0.0**	**-0.1**	0.1	0.0	0.3
50%	0.0	0.2	0.1	0.0	**0.0**	0.0	**0.0**	**0.0**	**-0.1**	0.1	0.0	0.1
60%	0.0	0.1	0.1	0.0	**-0.1**	**0.0**	**0.0**	**-0.1**	**-0.1**	0.1	0.0	0.0
70%	**0.0**	0.1	0.1	0.0	0.0	**0.0**	**0.0**	**0.0**	**-0.1**	0.0	0.0	0.0
80%	**0.0**	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**-0.1**	0.1	**0.0**	0.0
90%	0.0	0.0	0.1	0.0	0.1	0.0	**0.0**	**0.0**	**-0.1**	0.1	**0.0**	**0.0**
Long Term												
Full Simulation Period[b]	0.0	0.1	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	**-0.1**	0.1	0.0	0.4
Water Year Types[c]												
Wet (32%)	0.1	0.2	**-0.2**	**-0.1**	**0.0**	**0.0**	0.0	**0.0**	**0.0**	0.1	0.0	0.9
Above Normal (16%)	0.0	0.2	0.1	**-0.1**	**-0.1**	**-0.2**	**0.0**	**-0.1**	**-0.1**	0.1	0.0	0.3
Below Normal (13%)	0.0	0.1	0.0	**0.0**	**-0.1**	**-0.1**	**0.0**	**-0.1**	**-0.2**	0.1	0.1	0.0
Dry (24%)	0.0	0.1	0.0	0.0	**0.0**	**0.0**	0.0	**0.0**	**-0.1**	0.1	**0.0**	**0.0**
Critical (15%)	**0.0**	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**	**0.0**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-2-5. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.8	3.9	5.1	5.9	5.0	3.3	2.1	0.6	0.7	0.5	0.6
20%	0.2	0.3	1.9	4.1	4.8	3.6	1.8	1.2	0.4	0.6	0.4	0.5
30%	0.2	0.2	0.8	2.5	3.6	2.6	0.8	0.5	0.3	0.6	0.4	0.4
40%	0.1	0.1	0.4	1.2	3.0	1.5	0.5	0.3	0.3	0.5	0.4	0.4
50%	0.1	0.0	0.3	0.8	1.7	1.0	0.2	0.2	0.2	0.5	0.3	0.3
60%	0.1	0.0	0.1	0.4	1.0	0.7	0.1	0.1	0.2	0.4	0.3	0.3
70%	0.0	-0.1	0.1	0.2	0.6	0.6	0.0	0.0	0.1	0.3	0.3	0.2
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.1	0.2	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.2	0.0	-0.1	-0.1	0.0	0.1	0.1	0.1
Long Term												
Full Simulation Period[b]	0.1	0.2	1.0	1.8	2.5	1.8	0.9	0.6	0.4	0.4	0.3	0.3
Water Year Types[c]												
Wet (32%)	0.3	0.6	2.4	3.7	4.3	3.4	2.0	1.5	0.8	0.6	0.4	0.5
Above Normal (16%)	0.1	0.4	1.1	2.5	3.4	2.7	1.0	0.5	0.3	0.6	0.4	0.4
Below Normal (13%)	0.1	0.2	0.3	0.6	1.8	0.6	0.2	0.2	0.3	0.6	0.4	0.4
Dry (24%)	0.1	0.0	0.1	0.4	1.0	0.8	0.2	0.1	0.2	0.3	0.2	0.2
Critical (15%)	0.0	-0.1	0.0	0.2	0.4	0.2	0.0	-0.1	0.0	0.1	0.2	0.2

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.4	0.8	3.9	5.1	5.9	5.0	3.2	2.1	0.6	0.7	0.5	0.6
20%	0.2	0.3	2.0	4.0	4.8	3.6	1.8	1.1	0.4	0.7	0.5	0.5
30%	0.2	0.2	0.8	2.5	3.6	2.3	0.8	0.5	0.3	0.7	0.4	0.4
40%	0.1	0.1	0.4	1.2	3.0	1.5	0.5	0.3	0.3	0.6	0.4	0.4
50%	0.1	0.0	0.3	0.7	1.7	1.1	0.2	0.2	0.2	0.5	0.4	0.3
60%	0.1	0.0	0.1	0.4	1.0	0.7	0.1	0.1	0.2	0.5	0.3	0.3
70%	0.0	-0.1	0.0	0.3	0.7	0.6	0.0	0.0	0.1	0.4	0.3	0.2
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.1	0.2	0.2	0.2
90%	-0.1	-0.2	-0.1	0.0	0.3	0.0	-0.1	-0.1	0.0	0.1	0.1	0.1
Long Term												
Full Simulation Period[b]	0.1	0.2	1.0	1.8	2.5	1.8	0.9	0.6	0.4	0.5	0.3	0.3
Water Year Types[c]												
Wet (32%)	0.2	0.6	2.4	3.7	4.3	3.4	2.0	1.5	0.8	0.6	0.4	0.5
Above Normal (16%)	0.1	0.4	1.1	2.4	3.4	2.7	1.0	0.5	0.3	0.6	0.4	0.4
Below Normal (13%)	0.1	0.2	0.3	0.6	1.8	0.6	0.2	0.2	0.2	0.7	0.4	0.4
Dry (24%)	0.1	0.0	0.1	0.4	1.0	0.8	0.2	0.1	0.2	0.3	0.2	0.2
Critical (15%)	0.0	-0.1	0.0	0.2	0.4	0.2	0.0	-0.1	0.0	0.1	0.2	0.2

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	**0.0**	0.0	**0.0**	**0.0**	0.0	0.0	**0.0**	**0.0**	**0.0**	0.1	0.0	**0.0**
20%	**0.0**	0.0	0.1	**0.0**	**0.0**	**0.0**	**0.0**	**-0.1**	0.0	0.1	0.0	**0.0**
30%	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**-0.2**	0.0	0.0	**0.0**	0.1	0.0	**0.0**
40%	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.1	0.0	**0.0**
50%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**	0.1	0.0	0.0
60%	**0.0**	0.0	0.0	0.0	**0.0**	0.0	0.0	**0.0**	**0.0**	0.1	0.0	0.0
70%	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0
80%	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**	0.0	**0.0**	**0.0**	0.1	0.0	0.0
90%	0.0	**0.0**	**0.0**	**0.0**	0.1	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	**0.0**
Long Term												
Full Simulation Period[b]	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.1	0.0	0.0
Water Year Types[c]												
Wet (32%)	**0.0**	0.0	**0.0**	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	0.0	**0.0**
Above Normal (16%)	**0.0**	0.0	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.1	0.0	0.0
Below Normal (13%)	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**	0.0	**0.0**	**-0.1**	0.1	0.1	0.0
Dry (24%)	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**	0.0	0.0	0.1	**0.0**	**0.0**
Critical (15%)	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**	**0.0**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-40-2-6. Steamboat Sl d/s of Sutter Sl, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.4	0.8	3.9	5.1	5.9	5.0	3.3	2.1	0.6	0.7	0.5	0.6
20%	0.2	0.3	1.9	4.1	4.8	3.6	1.8	1.2	0.4	0.6	0.4	0.5
30%	0.2	0.2	0.8	2.5	3.6	2.6	0.8	0.5	0.3	0.6	0.4	0.4
40%	0.1	0.1	0.4	1.2	3.0	1.5	0.5	0.3	0.3	0.5	0.4	0.4
50%	0.1	0.0	0.3	0.8	1.7	1.0	0.2	0.2	0.2	0.5	0.3	0.3
60%	0.1	0.0	0.1	0.4	1.0	0.7	0.1	0.1	0.2	0.4	0.3	0.3
70%	0.0	-0.1	0.1	0.2	0.6	0.6	0.0	0.0	0.1	0.3	0.3	0.2
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.1	0.2	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.2	0.0	-0.1	-0.1	0.0	0.1	0.1	0.1
Long Term												
Full Simulation Period[b]	0.1	0.2	1.0	1.8	2.5	1.8	0.9	0.6	0.4	0.4	0.3	0.3
Water Year Types[c]												
Wet (32%)	0.3	0.6	2.4	3.7	4.3	3.4	2.0	1.5	0.8	0.6	0.4	0.5
Above Normal (16%)	0.1	0.4	1.1	2.5	3.4	2.7	1.0	0.5	0.3	0.6	0.4	0.4
Below Normal (13%)	0.1	0.2	0.3	0.6	1.8	0.6	0.2	0.2	0.3	0.6	0.4	0.4
Dry (24%)	0.1	0.0	0.1	0.4	1.0	0.8	0.2	0.1	0.2	0.3	0.2	0.2
Critical (15%)	0.0	-0.1	0.0	0.2	0.4	0.2	0.0	-0.1	0.0	0.1	0.2	0.2

Alternative 5

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.4	0.9	3.4	5.0	5.9	5.0	3.3	2.2	0.6	0.8	0.5	1.5
20%	0.3	0.6	1.6	3.7	4.8	3.6	1.8	1.0	0.3	0.7	0.5	1.4
30%	0.2	0.5	0.8	2.3	3.5	2.0	0.9	0.4	0.2	0.7	0.4	0.9
40%	0.2	0.4	0.5	1.2	2.7	1.4	0.5	0.2	0.2	0.6	0.4	0.7
50%	0.1	0.2	0.3	0.8	1.7	1.0	0.2	0.1	0.1	0.5	0.4	0.5
60%	0.1	0.1	0.2	0.5	1.0	0.7	0.1	0.0	0.1	0.5	0.3	0.3
70%	0.0	0.0	0.1	0.3	0.7	0.5	0.0	0.0	0.1	0.4	0.3	0.3
80%	0.0	-0.1	0.0	0.2	0.4	0.3	0.0	-0.1	0.0	0.3	0.2	0.2
90%	-0.1	-0.2	-0.1	0.1	0.3	0.0	-0.1	-0.2	-0.1	0.2	0.1	0.1
Long Term												
Full Simulation Period[b]	0.2	0.4	1.0	1.8	2.4	1.8	0.9	0.6	0.3	0.5	0.4	0.7
Water Year Types[c]												
Wet (32%)	0.3	0.8	2.2	3.6	4.3	3.4	2.1	1.5	0.7	0.7	0.5	1.4
Above Normal (16%)	0.1	0.5	1.1	2.4	3.3	2.6	1.0	0.5	0.2	0.7	0.5	0.7
Below Normal (13%)	0.2	0.3	0.4	0.6	1.7	0.5	0.2	0.1	0.1	0.6	0.4	0.4
Dry (24%)	0.1	0.1	0.1	0.5	1.0	0.8	0.2	0.0	0.1	0.4	0.2	0.2
Critical (15%)	0.0	-0.1	0.1	0.3	0.4	0.2	-0.1	-0.1	0.0	0.2	0.2	0.2

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.1	0.1	-0.4	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.0
20%	0.1	0.3	-0.3	-0.4	0.0	0.0	0.0	-0.2	-0.1	0.1	0.0	0.9
30%	0.0	0.3	0.0	-0.3	-0.1	-0.5	0.0	0.0	-0.1	0.1	0.1	0.5
40%	0.1	0.2	0.1	0.0	-0.3	0.0	0.0	0.0	-0.1	0.1	0.0	0.3
50%	0.0	0.2	0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.1
60%	0.0	0.1	0.1	0.0	-0.1	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
70%	0.0	0.1	0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0
90%	0.0	0.0	0.1	0.0	0.1	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.3
Water Year Types[c]												
Wet (32%)	0.1	0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.9
Above Normal (16%)	0.0	0.2	0.1	-0.1	-0.1	-0.2	0.0	-0.1	-0.1	0.1	0.0	0.3
Below Normal (13%)	0.0	0.1	0.0	0.0	-0.1	-0.1	0.0	-0.1	-0.2	0.1	0.1	0.0
Dry (24%)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

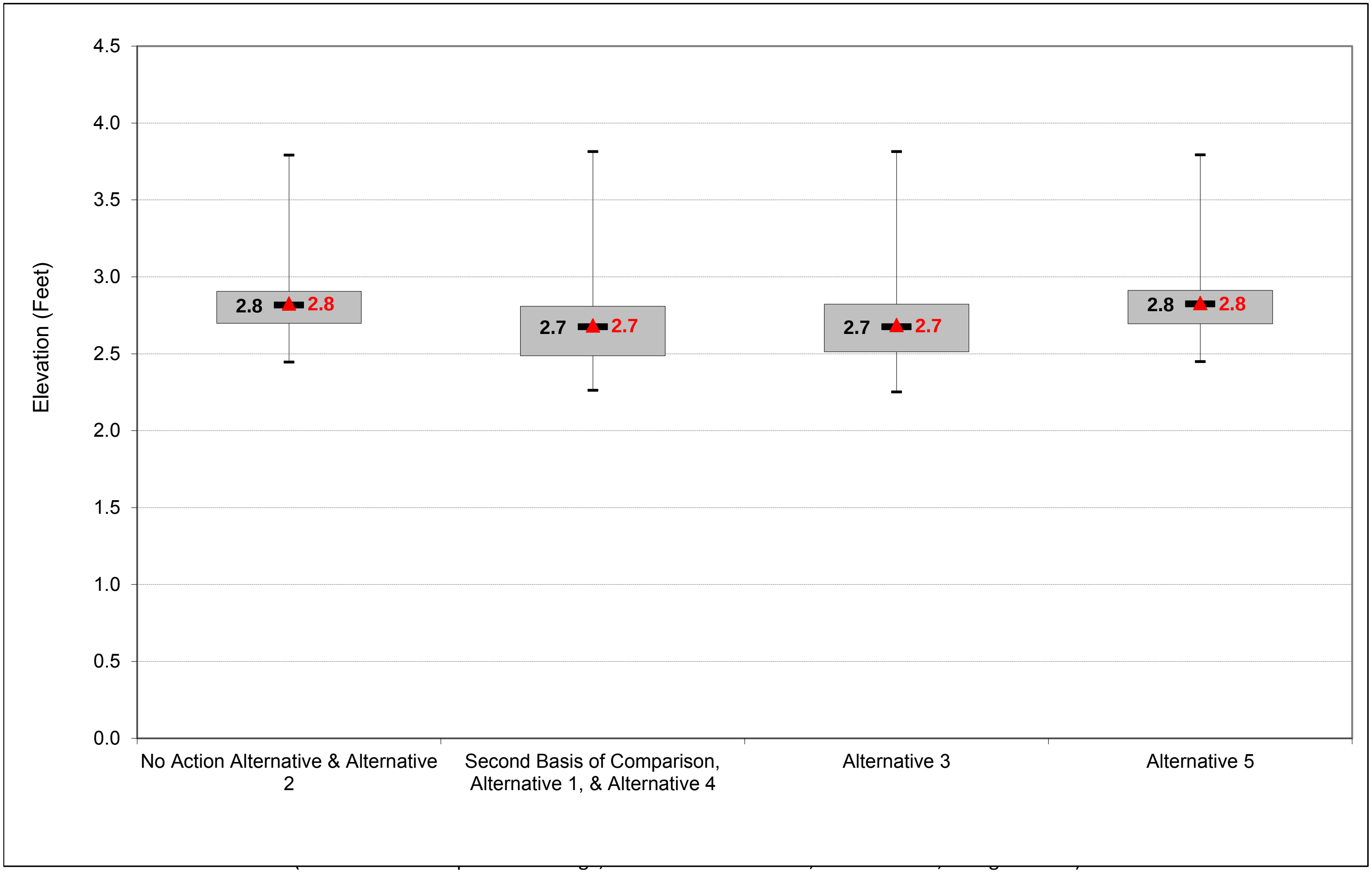
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

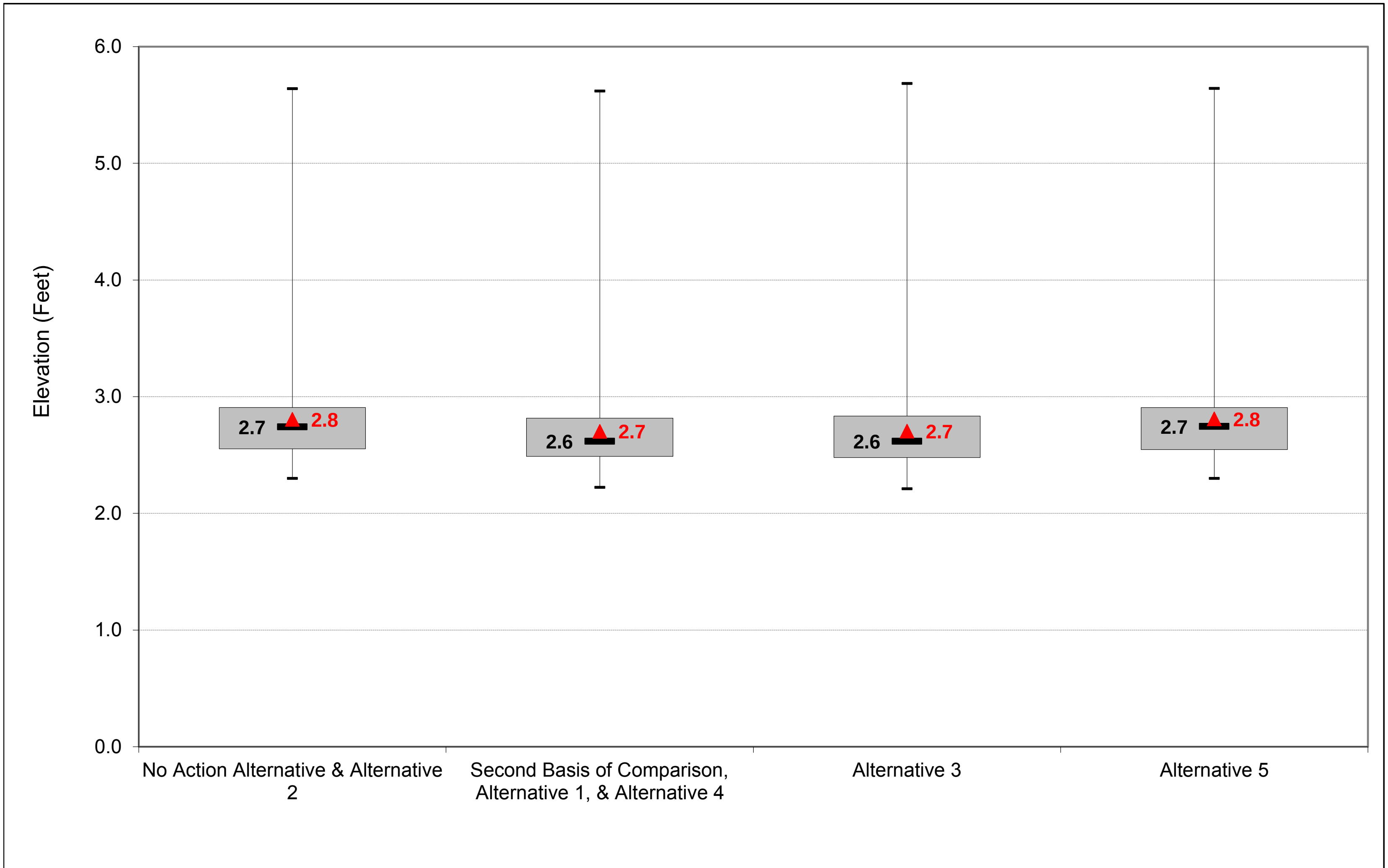
C.41. Old River at Tracy Boulevard Water Surface Elevation

Figure C-41-1-1. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, October



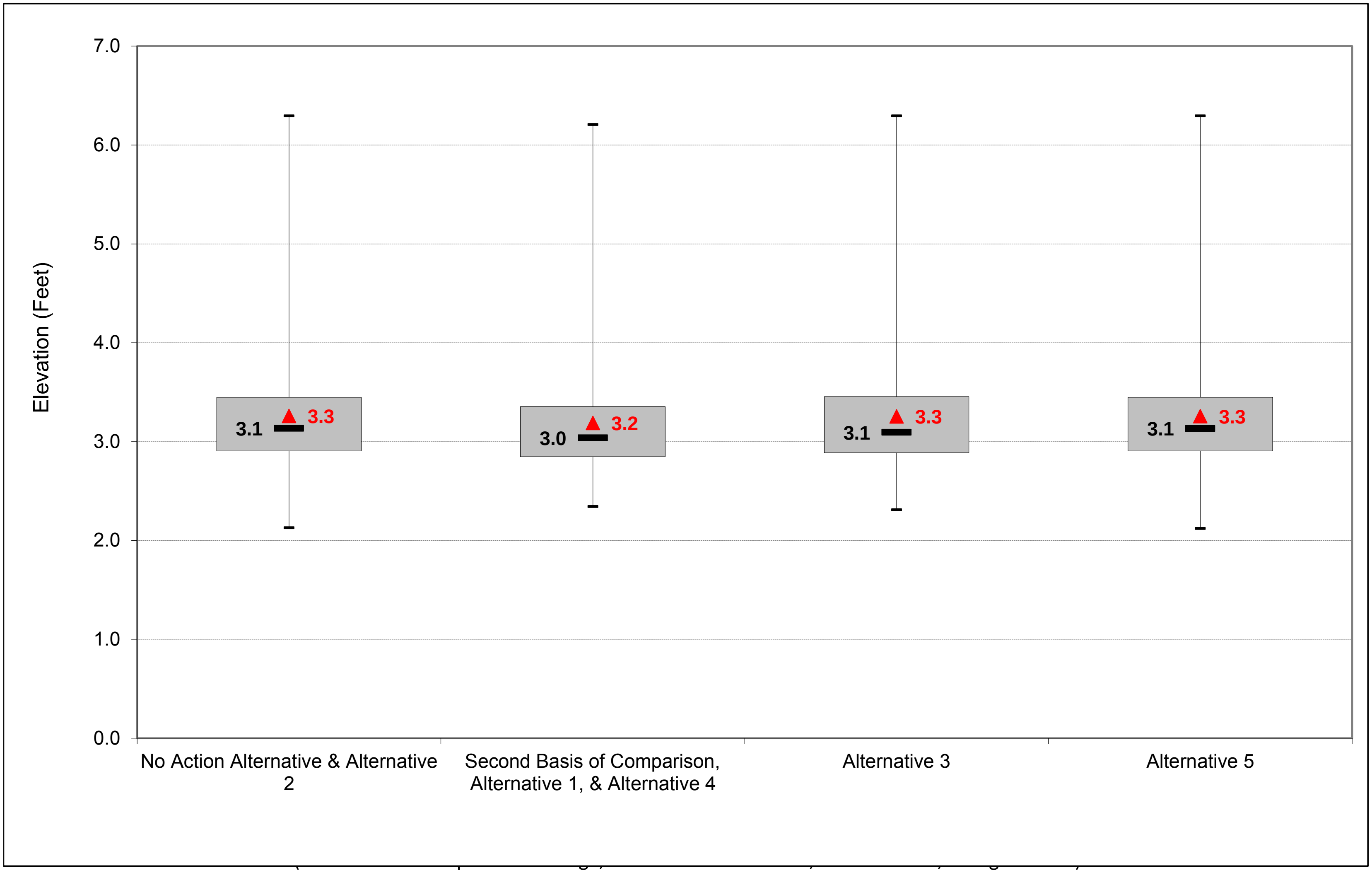
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-2. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, November



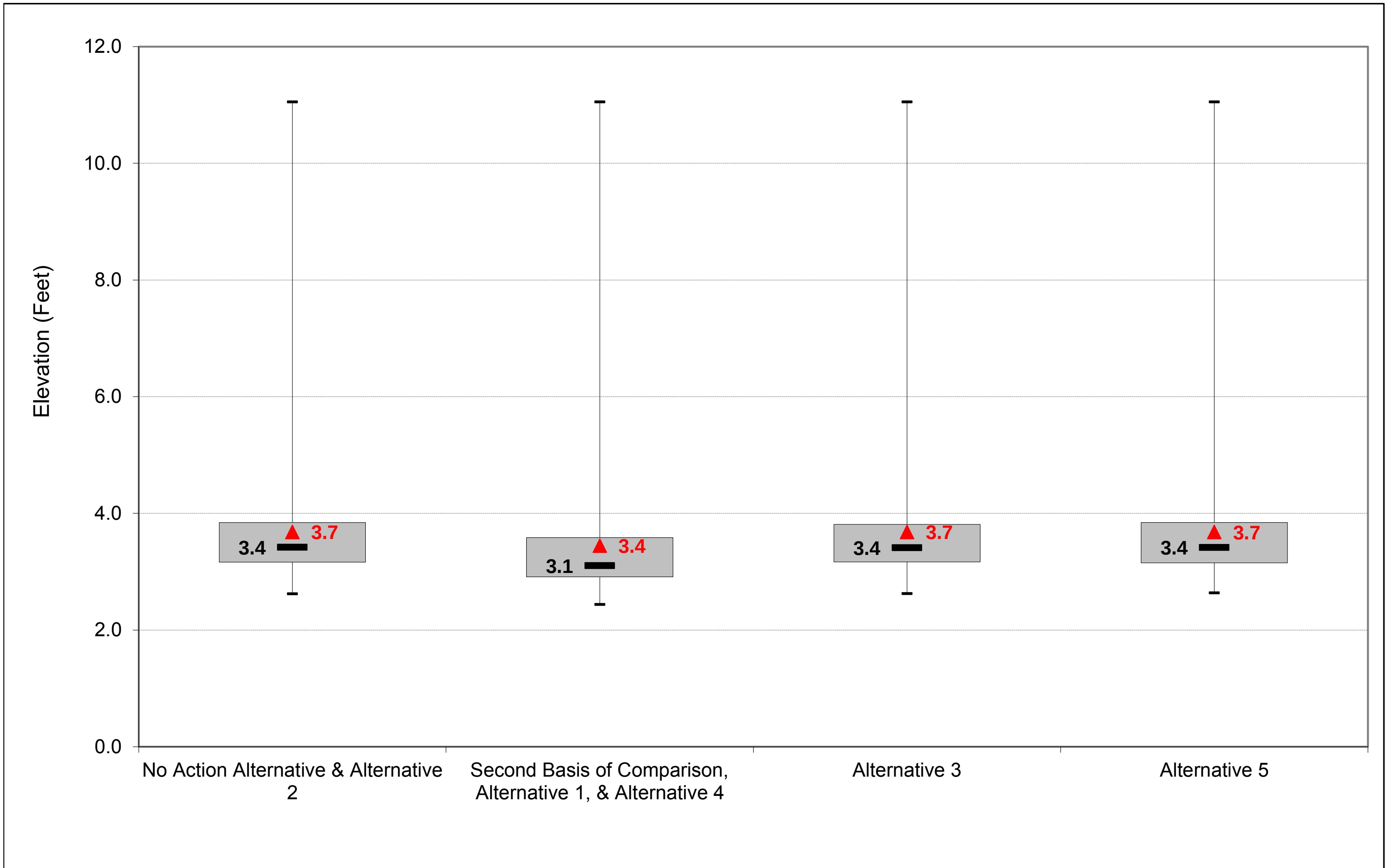
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-3. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, December



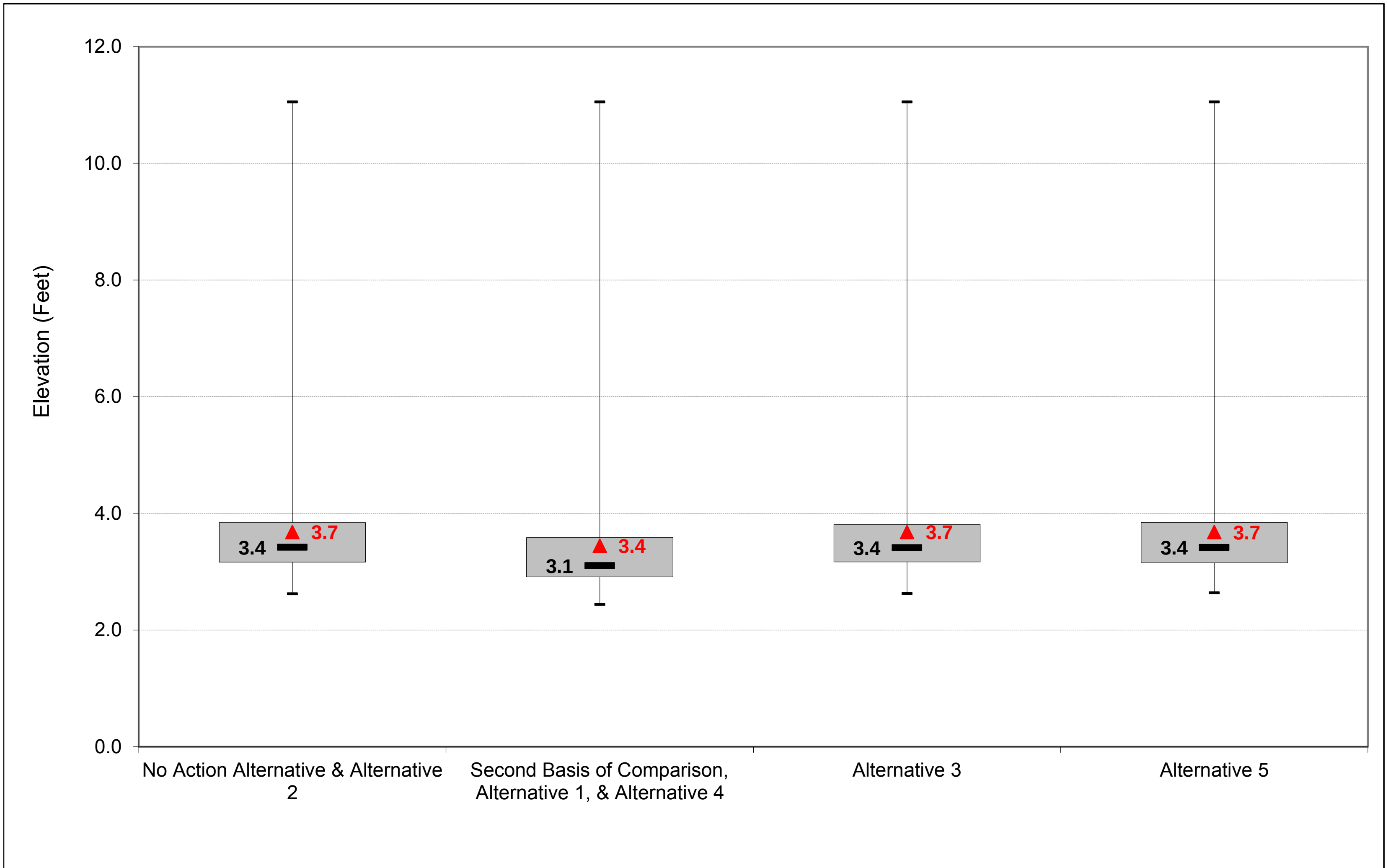
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-4. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, January



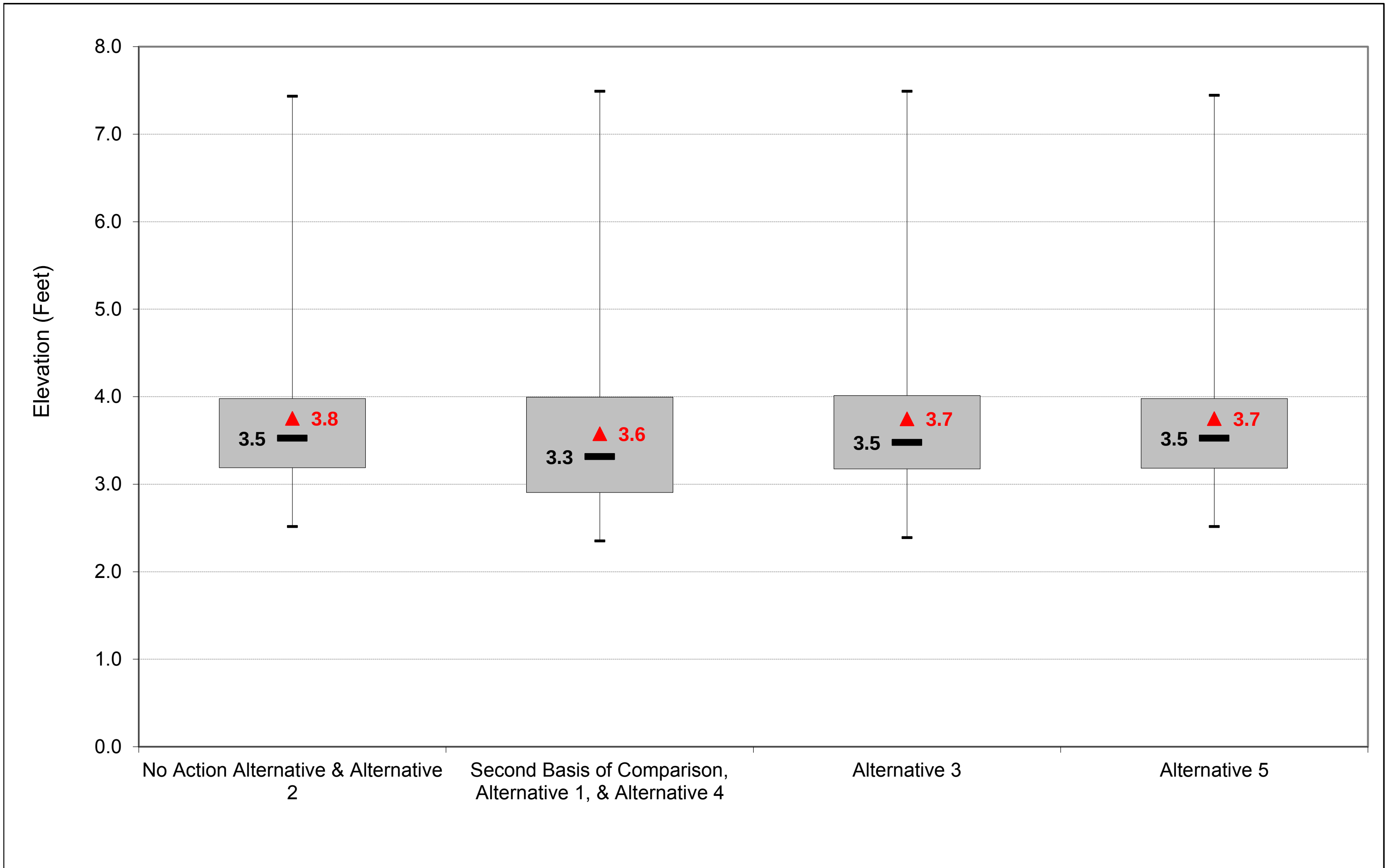
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-5. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, February



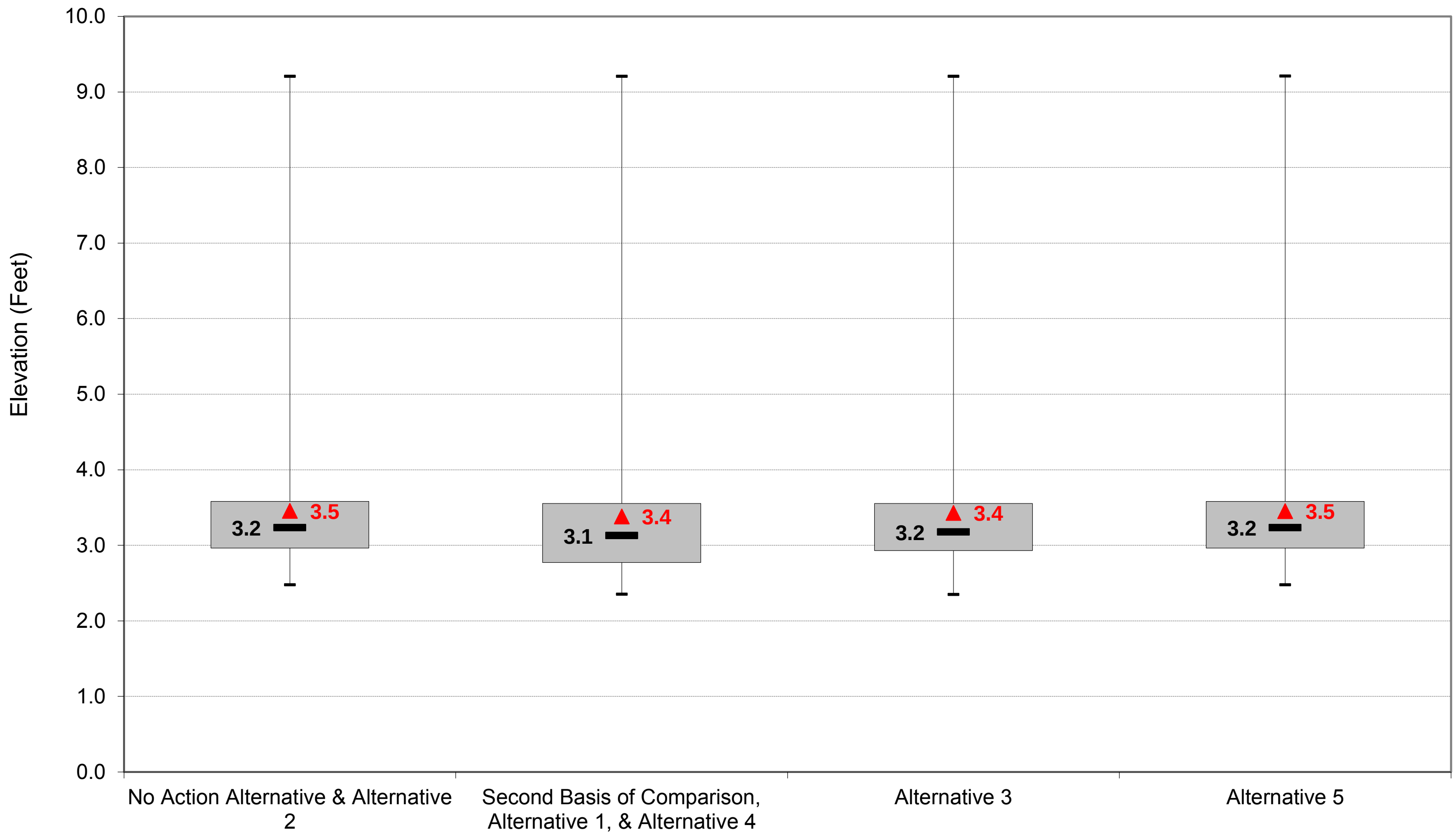
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-6. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, March



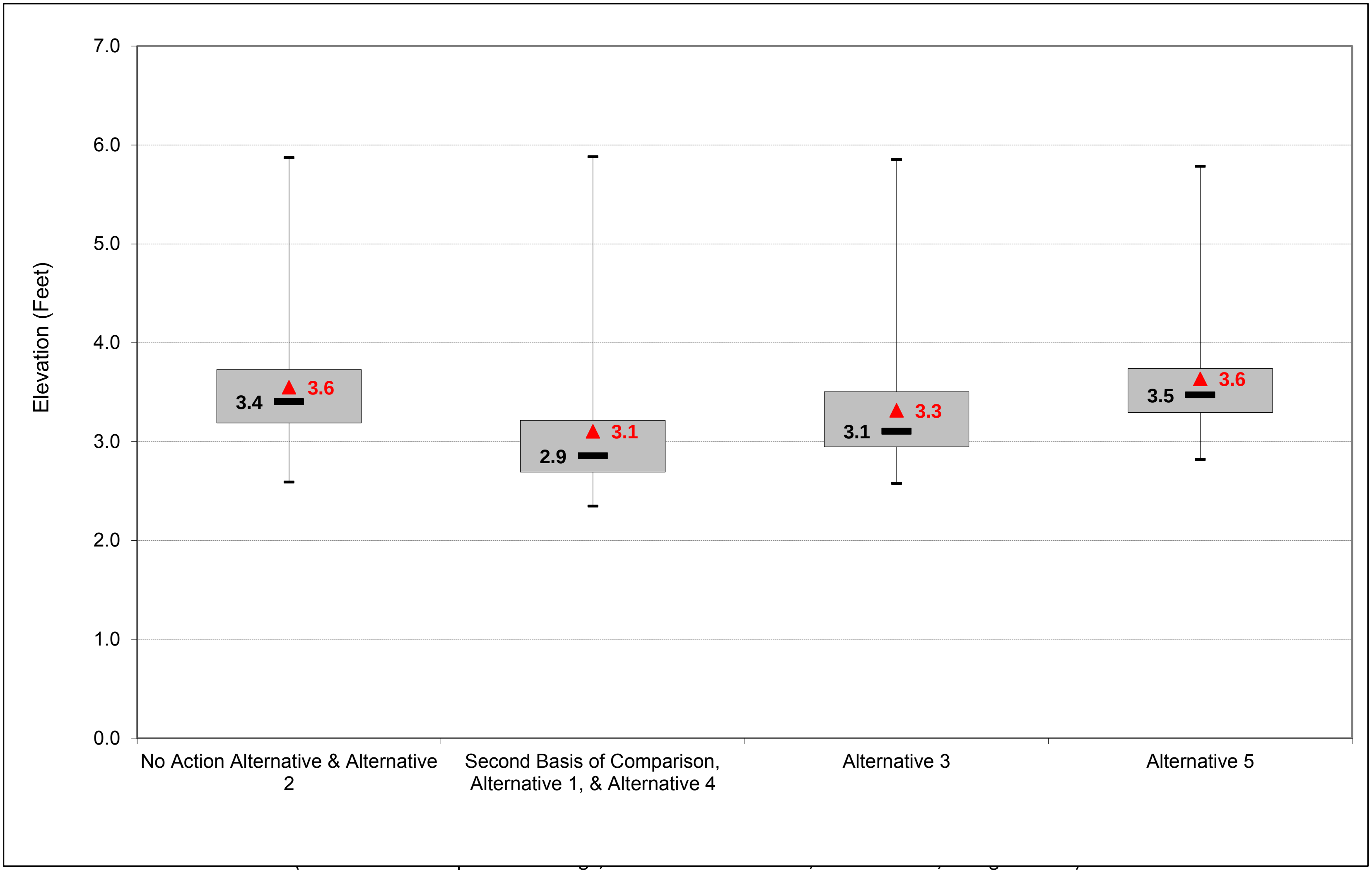
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-7. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, April



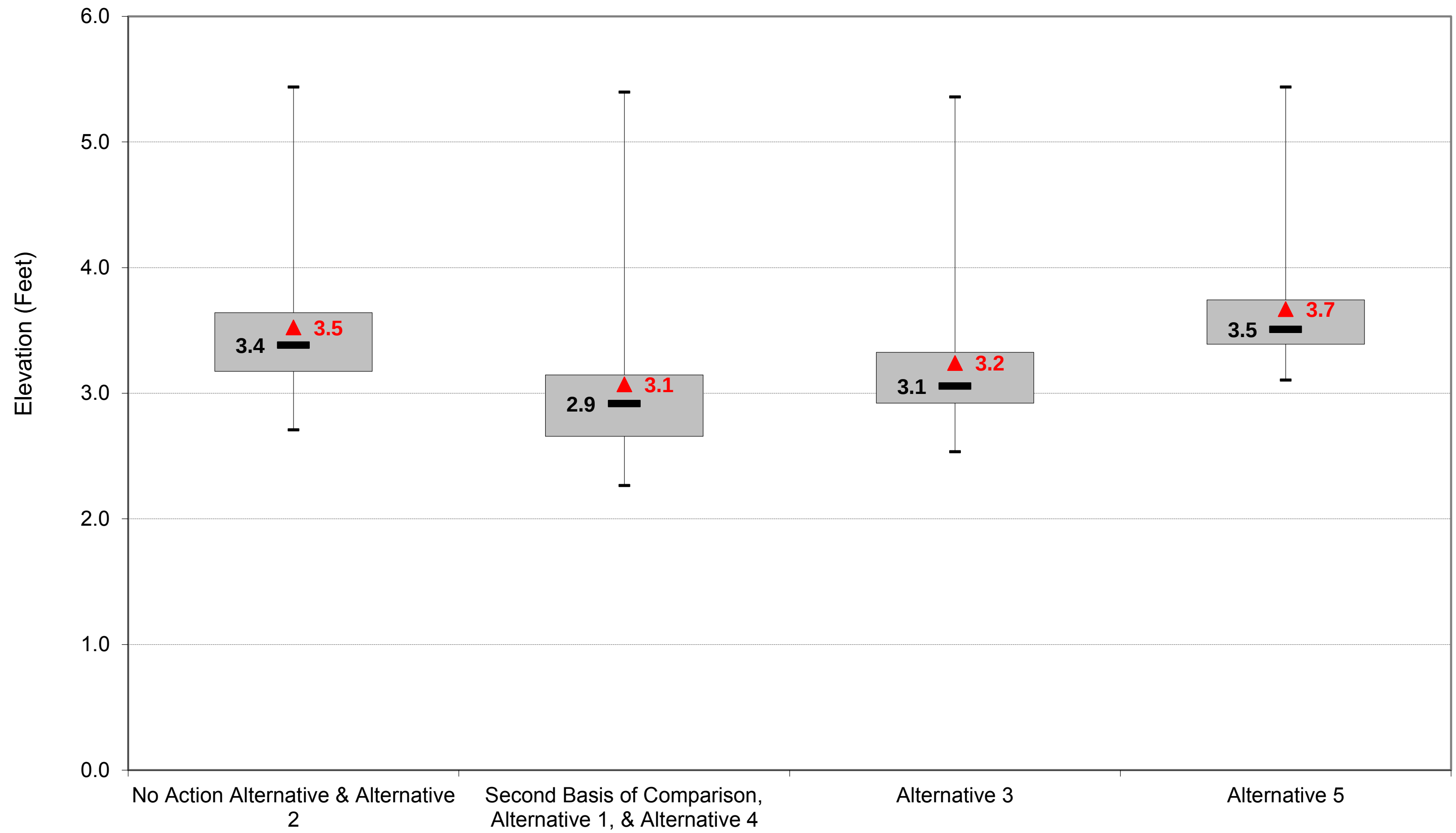
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-8. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, May



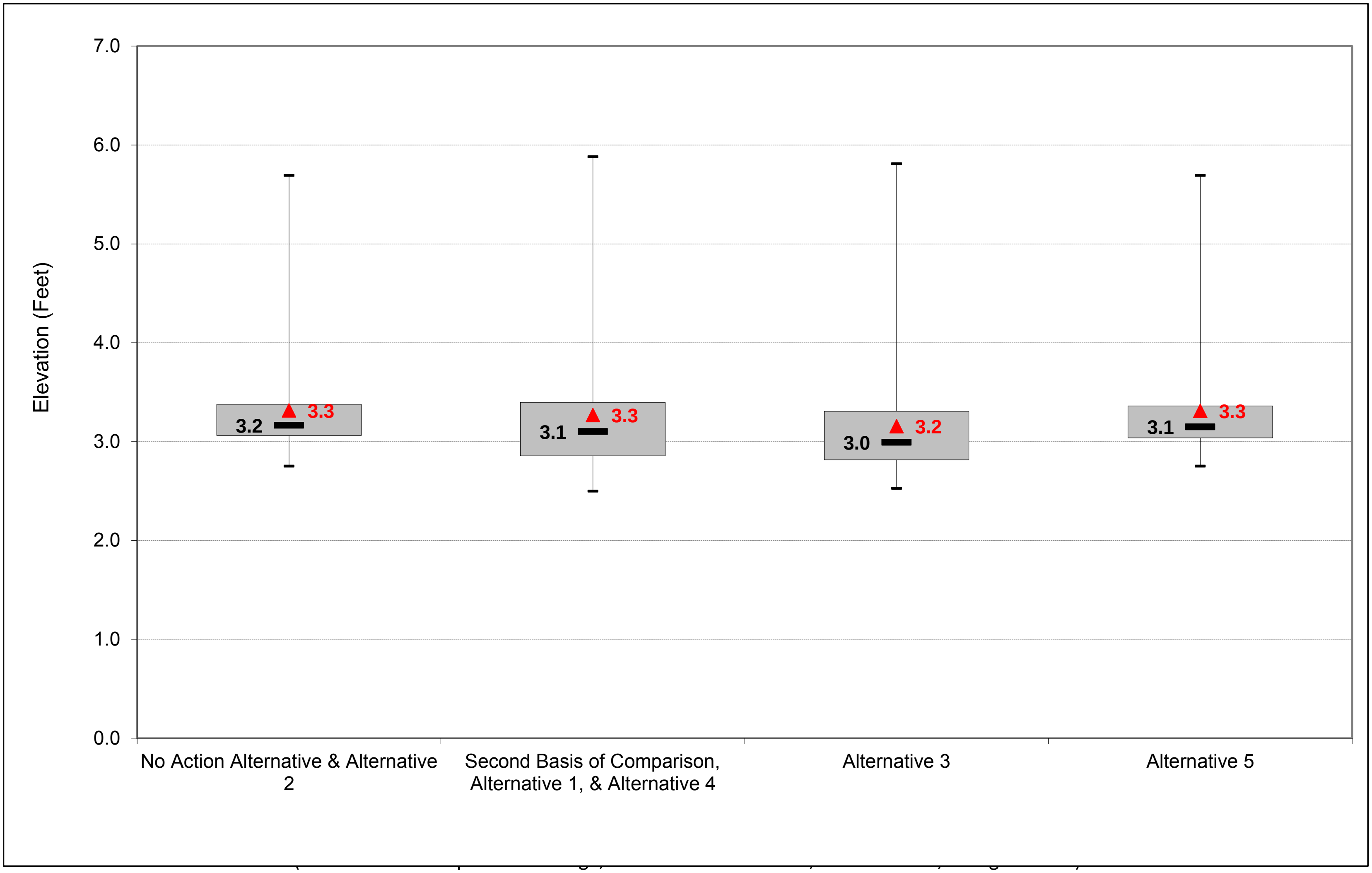
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-9. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, June



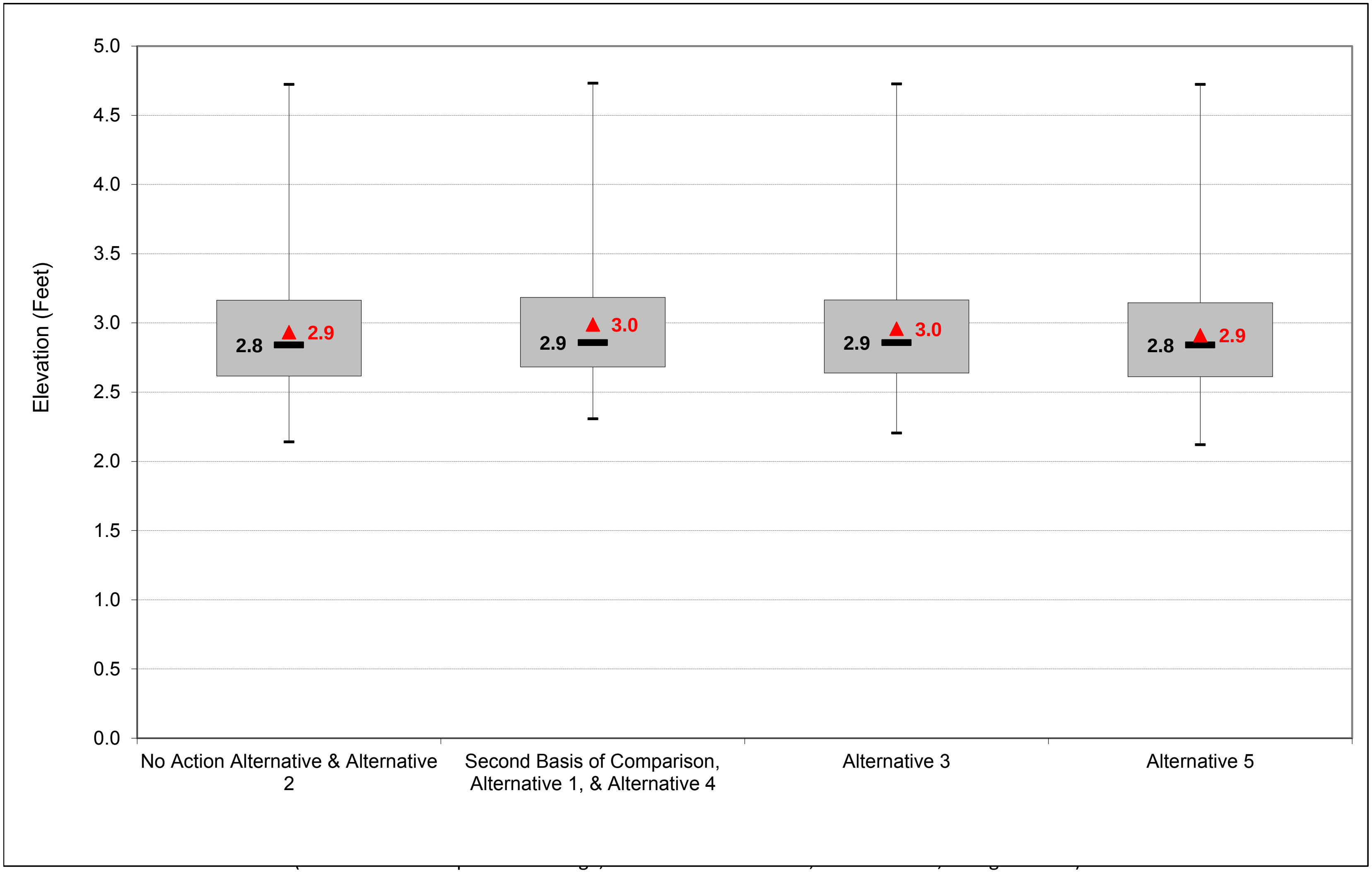
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-10. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, July



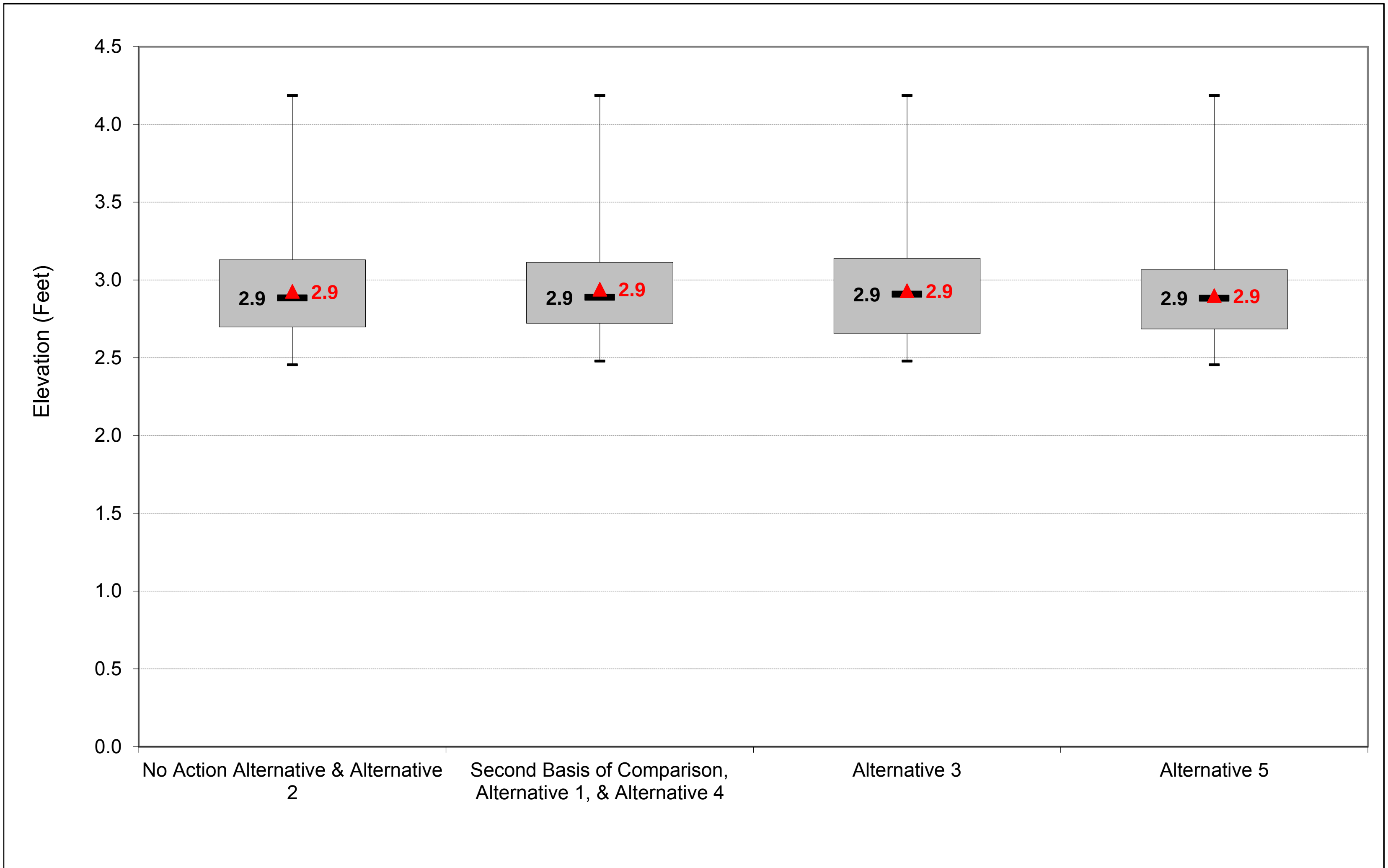
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-11. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-1-12. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-1-1. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.1	3.1	3.9	4.4	4.5	4.4	4.4	4.4	3.9	3.5	3.3	3.2
20%	2.9	2.9	3.5	4.1	4.2	3.8	3.9	3.8	3.5	3.2	3.1	3.1
30%	2.9	2.9	3.4	3.7	3.9	3.5	3.6	3.6	3.3	3.1	3.1	3.0
40%	2.9	2.8	3.3	3.5	3.7	3.3	3.5	3.5	3.2	3.0	3.0	2.9
50%	2.8	2.7	3.1	3.4	3.5	3.2	3.4	3.4	3.2	2.8	2.9	2.8
60%	2.8	2.7	3.1	3.3	3.4	3.1	3.3	3.3	3.1	2.7	2.8	2.8
70%	2.7	2.6	3.0	3.2	3.3	3.0	3.2	3.2	3.1	2.6	2.7	2.7
80%	2.7	2.5	2.8	3.1	3.2	2.9	3.1	3.1	3.0	2.6	2.7	2.7
90%	2.6	2.5	2.7	3.0	2.9	2.8	3.0	3.0	2.9	2.5	2.6	2.6
Long Term												
Full Simulation Period[b]	2.8	2.8	3.3	3.7	3.8	3.5	3.6	3.5	3.3	2.9	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.9	2.9	3.6	4.4	4.4	4.1	4.1	4.0	3.7	3.3	2.9	3.0
Above Normal (16%)	2.8	2.7	3.2	3.8	3.9	3.4	3.6	3.5	3.2	2.9	2.7	2.7
Below Normal (13%)	2.8	2.7	3.1	3.3	3.5	3.0	3.3	3.3	3.1	2.6	2.8	2.8
Dry (24%)	2.7	2.7	3.0	3.2	3.3	3.2	3.2	3.2	3.1	2.6	3.0	2.8
Critical (15%)	2.9	2.9	3.2	3.2	3.3	3.1	3.1	3.2	3.2	3.0	3.1	3.1

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.0	3.0	3.7	4.2	4.7	4.5	4.2	4.1	4.2	3.5	3.3	3.1
20%	2.8	2.9	3.4	3.8	4.2	3.9	3.3	3.3	3.5	3.2	3.1	3.0
30%	2.8	2.8	3.2	3.4	3.8	3.5	3.1	3.1	3.3	3.1	3.1	3.0
40%	2.7	2.7	3.1	3.2	3.5	3.2	2.9	3.0	3.2	3.0	3.0	2.9
50%	2.7	2.6	3.0	3.1	3.3	3.1	2.9	2.9	3.1	2.9	2.9	2.8
60%	2.6	2.6	2.9	3.0	3.1	3.0	2.8	2.8	3.0	2.8	2.8	2.8
70%	2.5	2.5	2.9	2.9	3.0	2.9	2.7	2.7	2.9	2.7	2.8	2.7
80%	2.5	2.5	2.8	2.9	2.8	2.7	2.7	2.6	2.8	2.7	2.7	2.6
90%	2.4	2.4	2.7	2.8	2.6	2.6	2.6	2.5	2.7	2.6	2.6	2.6
Long Term												
Full Simulation Period[b]	2.7	2.7	3.2	3.4	3.6	3.4	3.1	3.1	3.3	3.0	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.7	2.8	3.5	4.2	4.3	4.2	3.7	3.5	3.9	3.3	3.0	2.9
Above Normal (16%)	2.7	2.7	3.1	3.4	3.7	3.3	2.9	2.9	3.1	2.9	2.7	2.6
Below Normal (13%)	2.6	2.6	3.0	3.0	3.4	2.9	2.8	2.7	2.9	2.6	2.9	2.8
Dry (24%)	2.6	2.6	2.9	3.0	3.0	3.0	2.8	2.8	3.0	2.8	3.0	2.8
Critical (15%)	2.8	2.8	3.1	3.1	3.1	2.9	2.9	3.0	3.0	3.1	3.1	3.1

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.1	-0.1	-0.2	0.2	0.1	-0.1	-0.3	0.3	0.0	0.0	-0.1
20%	-0.1	-0.1	-0.1	-0.3	0.0	0.1	-0.6	-0.5	0.0	0.0	0.0	-0.1
30%	-0.1	-0.1	-0.1	-0.3	-0.1	0.0	-0.5	-0.5	0.0	0.0	0.0	0.0
40%	-0.1	-0.1	-0.1	-0.3	-0.3	-0.1	-0.6	-0.5	-0.1	0.0	0.0	0.0
50%	-0.1	-0.1	-0.1	-0.3	-0.2	-0.1	-0.5	-0.5	-0.1	0.0	0.0	0.0
60%	-0.1	-0.1	-0.1	-0.3	-0.3	-0.1	-0.5	-0.5	-0.1	0.1	0.0	0.0
70%	-0.2	-0.1	-0.1	-0.3	-0.3	-0.1	-0.5	-0.5	-0.2	0.1	0.0	0.0
80%	-0.2	-0.1	0.0	-0.3	-0.3	-0.2	-0.5	-0.5	-0.2	0.1	0.0	0.0
90%	-0.2	-0.1	0.0	-0.2	-0.3	-0.2	-0.4	-0.5	-0.2	0.1	0.1	-0.1
Long Term												
Full Simulation Period[b]	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.4	-0.5	0.0	0.1	0.0	0.0
Water Year Types[c]												
Wet (32%)	-0.2	-0.1	-0.1	-0.2	-0.1	0.0	-0.4	-0.5	0.1	0.0	0.0	-0.1
Above Normal (16%)	-0.1	-0.1	-0.1	-0.4	-0.2	0.0	-0.7	-0.7	-0.1	0.0	0.1	-0.1
Below Normal (13%)	-0.2	-0.2	0.0	-0.3	-0.1	-0.1	-0.5	-0.6	-0.2	0.0	0.1	0.0
Dry (24%)	-0.1	-0.1	0.0	-0.2	-0.3	-0.2	-0.4	-0.4	-0.1	0.1	0.0	0.0
Critical (15%)	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.1	0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-1-2. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.1	3.1	3.9	4.4	4.5	4.4	4.4	4.4	3.9	3.5	3.3	3.2
20%	2.9	2.9	3.5	4.1	4.2	3.8	3.9	3.8	3.5	3.2	3.1	3.1
30%	2.9	2.9	3.4	3.7	3.9	3.5	3.6	3.6	3.3	3.1	3.1	3.0
40%	2.9	2.8	3.3	3.5	3.7	3.3	3.5	3.5	3.2	3.0	3.0	2.9
50%	2.8	2.7	3.1	3.4	3.5	3.2	3.4	3.4	3.2	2.8	2.9	2.8
60%	2.8	2.7	3.1	3.3	3.4	3.1	3.3	3.3	3.1	2.7	2.8	2.8
70%	2.7	2.6	3.0	3.2	3.3	3.0	3.2	3.2	3.1	2.6	2.7	2.7
80%	2.7	2.5	2.8	3.1	3.2	2.9	3.1	3.1	3.0	2.6	2.7	2.7
90%	2.6	2.5	2.7	3.0	2.9	2.8	3.0	3.0	2.9	2.5	2.6	2.6
Long Term												
Full Simulation Period[b]	2.8	2.8	3.3	3.7	3.8	3.5	3.6	3.5	3.3	2.9	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.9	2.9	3.6	4.4	4.4	4.1	4.1	4.0	3.7	3.3	2.9	3.0
Above Normal (16%)	2.8	2.7	3.2	3.8	3.9	3.4	3.6	3.5	3.2	2.9	2.7	2.7
Below Normal (13%)	2.8	2.7	3.1	3.3	3.5	3.0	3.3	3.3	3.1	2.6	2.8	2.8
Dry (24%)	2.7	2.7	3.0	3.2	3.3	3.2	3.2	3.2	3.1	2.6	3.0	2.8
Critical (15%)	2.9	2.9	3.2	3.2	3.3	3.1	3.1	3.2	3.2	3.0	3.1	3.1

Alternative 3

Statistic	Monthly Averaged Daily Maximum Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.0	3.0	3.8	4.4	4.7	4.6	4.2	4.0	3.8	3.6	3.3	3.2
20%	2.9	2.8	3.5	4.2	4.2	3.8	3.6	3.4	3.4	3.2	3.2	3.1
30%	2.8	2.8	3.3	3.7	3.9	3.5	3.3	3.2	3.2	3.1	3.1	3.0
40%	2.7	2.7	3.2	3.5	3.7	3.4	3.2	3.2	3.1	2.9	3.0	2.9
50%	2.7	2.6	3.1	3.4	3.5	3.2	3.1	3.1	3.0	2.9	2.9	2.8
60%	2.6	2.6	3.0	3.3	3.4	3.1	3.0	3.0	2.9	2.8	2.8	2.8
70%	2.6	2.5	2.9	3.2	3.2	3.0	3.0	3.0	2.8	2.7	2.7	2.7
80%	2.4	2.4	2.9	3.1	3.1	2.9	2.9	2.9	2.8	2.6	2.6	2.6
90%	2.4	2.4	2.8	3.0	2.9	2.7	2.8	2.8	2.7	2.5	2.6	2.6
Long Term												
Full Simulation Period[b]	2.7	2.7	3.3	3.7	3.7	3.4	3.3	3.2	3.2	3.0	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.7	2.8	3.6	4.4	4.4	4.1	3.8	3.6	3.6	3.3	3.0	2.9
Above Normal (16%)	2.7	2.7	3.2	3.8	3.9	3.3	3.2	3.1	3.0	2.8	2.7	2.6
Below Normal (13%)	2.6	2.6	3.1	3.3	3.5	2.9	3.1	3.0	2.9	2.6	2.7	2.8
Dry (24%)	2.6	2.6	3.0	3.2	3.3	3.1	3.0	3.0	2.9	2.7	3.0	2.8
Critical (15%)	2.9	2.8	3.2	3.2	3.3	3.1	3.1	3.2	3.0	3.1	3.1	3.1

Alternative 3 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet) Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	-0.1	0.0	0.0	0.2	0.1	-0.1	-0.3	0.0	0.1	0.0	0.0
20%	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.3	-0.4	-0.2	0.0	0.0	0.0
30%	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.3	-0.3	-0.1	0.0	0.0	0.0
40%	-0.1	-0.1	-0.1	0.0	0.0	0.0	-0.3	-0.3	-0.2	0.0	0.0	0.0
50%	-0.1	-0.1	0.0	0.0	0.0	-0.1	-0.3	-0.3	-0.2	0.0	0.0	0.0
60%	-0.1	-0.1	-0.1	0.0	0.0	0.0	-0.3	-0.3	-0.2	0.1	0.0	0.0
70%	-0.2	-0.1	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.2	0.0	0.0	0.0
80%	-0.2	-0.1	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.2	0.0	0.0	0.0
90%	-0.2	-0.1	0.1	0.0	-0.1	-0.1	-0.2	-0.3	-0.3	0.0	0.0	-0.1
Long Term												
Full Simulation Period[b]	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.2	-0.3	-0.2	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	-0.2	-0.1	0.0	0.0	0.0	0.0	-0.3	-0.4	-0.1	0.0	0.0	0.0
Above Normal (16%)	-0.1	-0.1	0.0	0.0	0.0	-0.1	-0.4	-0.5	-0.2	0.0	0.0	-0.1
Below Normal (13%)	-0.2	-0.2	0.0	0.0	0.0	-0.1	-0.3	-0.3	-0.2	0.0	0.0	-0.1
Dry (24%)	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.2	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-1-3. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.1	3.1	3.9	4.4	4.5	4.4	4.4	4.4	3.9	3.5	3.3	3.2
20%	2.9	2.9	3.5	4.1	4.2	3.8	3.9	3.8	3.5	3.2	3.1	3.1
30%	2.9	2.9	3.4	3.7	3.9	3.5	3.6	3.6	3.3	3.1	3.1	3.0
40%	2.9	2.8	3.3	3.5	3.7	3.3	3.5	3.5	3.2	3.0	3.0	2.9
50%	2.8	2.7	3.1	3.4	3.5	3.2	3.4	3.4	3.2	2.8	2.9	2.8
60%	2.8	2.7	3.1	3.3	3.4	3.1	3.3	3.3	3.1	2.7	2.8	2.8
70%	2.7	2.6	3.0	3.2	3.3	3.0	3.2	3.2	3.1	2.6	2.7	2.7
80%	2.7	2.5	2.8	3.1	3.2	2.9	3.1	3.1	3.0	2.6	2.7	2.7
90%	2.6	2.5	2.7	3.0	2.9	2.8	3.0	3.0	2.9	2.5	2.6	2.6
Long Term												
Full Simulation Period[b]	2.8	2.8	3.3	3.7	3.8	3.5	3.6	3.5	3.3	2.9	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.9	2.9	3.6	4.4	4.4	4.1	4.1	4.0	3.7	3.3	2.9	3.0
Above Normal (16%)	2.8	2.7	3.2	3.8	3.9	3.4	3.6	3.5	3.2	2.9	2.7	2.7
Below Normal (13%)	2.8	2.7	3.1	3.3	3.5	3.0	3.3	3.3	3.1	2.6	2.8	2.8
Dry (24%)	2.7	2.7	3.0	3.2	3.3	3.2	3.2	3.2	3.1	2.6	3.0	2.8
Critical (15%)	2.9	2.9	3.2	3.2	3.3	3.1	3.1	3.2	3.2	3.0	3.1	3.1

Alternative 5

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.1	3.1	3.9	4.4	4.5	4.4	4.4	4.4	3.9	3.5	3.2	3.2
20%	2.9	2.9	3.5	4.1	4.2	3.8	3.9	3.8	3.5	3.2	3.1	3.1
30%	2.9	2.9	3.4	3.7	3.9	3.5	3.7	3.7	3.3	3.1	3.0	3.0
40%	2.8	2.8	3.3	3.5	3.7	3.3	3.6	3.6	3.2	2.9	3.0	2.9
50%	2.8	2.7	3.1	3.4	3.5	3.2	3.5	3.5	3.1	2.8	2.9	2.8
60%	2.8	2.7	3.1	3.3	3.4	3.1	3.4	3.5	3.1	2.7	2.8	2.8
70%	2.7	2.6	3.0	3.2	3.3	3.0	3.3	3.4	3.1	2.6	2.7	2.7
80%	2.7	2.5	2.8	3.1	3.2	2.9	3.3	3.4	3.0	2.6	2.7	2.7
90%	2.6	2.5	2.7	3.0	2.9	2.8	3.2	3.3	2.9	2.4	2.6	2.6
Long Term												
Full Simulation Period[b]	2.8	2.8	3.3	3.7	3.7	3.5	3.6	3.7	3.3	2.9	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.9	2.9	3.6	4.4	4.4	4.1	4.1	4.0	3.7	3.3	2.9	3.0
Above Normal (16%)	2.8	2.8	3.2	3.8	3.9	3.4	3.6	3.6	3.2	2.9	2.7	2.7
Below Normal (13%)	2.8	2.7	3.1	3.3	3.5	3.0	3.4	3.5	3.1	2.6	2.8	2.8
Dry (24%)	2.7	2.7	3.0	3.2	3.3	3.2	3.4	3.5	3.0	2.6	3.0	2.8
Critical (15%)	2.9	2.9	3.2	3.2	3.3	3.1	3.3	3.4	3.1	3.0	3.1	3.0

Alternative 5 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	-0.1	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-1-4. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.0	3.0	3.7	4.2	4.7	4.5	4.2	4.1	4.2	3.5	3.3	3.1
20%	2.8	2.9	3.4	3.8	4.2	3.9	3.3	3.3	3.5	3.2	3.1	3.0
30%	2.8	2.8	3.2	3.4	3.8	3.5	3.1	3.1	3.3	3.1	3.1	3.0
40%	2.7	2.7	3.1	3.2	3.5	3.2	2.9	3.0	3.2	3.0	3.0	2.9
50%	2.7	2.6	3.0	3.1	3.3	3.1	2.9	2.9	3.1	2.9	2.9	2.8
60%	2.6	2.6	2.9	3.0	3.1	3.0	2.8	2.8	3.0	2.8	2.8	2.8
70%	2.5	2.5	2.9	2.9	3.0	2.9	2.7	2.7	2.9	2.7	2.8	2.7
80%	2.5	2.5	2.8	2.9	2.8	2.7	2.7	2.6	2.8	2.7	2.7	2.6
90%	2.4	2.4	2.7	2.8	2.6	2.6	2.6	2.5	2.7	2.6	2.6	2.6
Long Term												
Full Simulation Period[b]	2.7	2.7	3.2	3.4	3.6	3.4	3.1	3.1	3.3	3.0	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.7	2.8	3.5	4.2	4.3	4.2	3.7	3.5	3.9	3.3	3.0	2.9
Above Normal (16%)	2.7	2.7	3.1	3.4	3.7	3.3	2.9	2.9	3.1	2.9	2.7	2.6
Below Normal (13%)	2.6	2.6	3.0	3.0	3.4	2.9	2.8	2.7	2.9	2.6	2.9	2.8
Dry (24%)	2.6	2.6	2.9	3.0	3.0	3.0	2.8	2.8	3.0	2.8	3.0	2.8
Critical (15%)	2.8	2.8	3.1	3.1	3.1	2.9	2.9	3.0	3.0	3.1	3.1	3.1

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.1	3.1	3.9	4.4	4.5	4.4	4.4	4.4	3.9	3.5	3.3	3.2
20%	2.9	2.9	3.5	4.1	4.2	3.8	3.9	3.8	3.5	3.2	3.1	3.1
30%	2.9	2.9	3.4	3.7	3.9	3.5	3.6	3.6	3.3	3.1	3.1	3.0
40%	2.9	2.8	3.3	3.5	3.7	3.3	3.5	3.5	3.2	3.0	3.0	2.9
50%	2.8	2.7	3.1	3.4	3.5	3.2	3.4	3.4	3.2	2.8	2.9	2.8
60%	2.8	2.7	3.1	3.3	3.4	3.1	3.3	3.3	3.1	2.7	2.8	2.8
70%	2.7	2.6	3.0	3.2	3.3	3.0	3.2	3.2	3.1	2.6	2.7	2.7
80%	2.7	2.5	2.8	3.1	3.2	2.9	3.1	3.1	3.0	2.6	2.7	2.7
90%	2.6	2.5	2.7	3.0	2.9	2.8	3.0	3.0	2.9	2.5	2.6	2.6
Long Term												
Full Simulation Period[b]	2.8	2.8	3.3	3.7	3.8	3.5	3.6	3.5	3.3	2.9	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.9	2.9	3.6	4.4	4.4	4.1	4.1	4.0	3.7	3.3	2.9	3.0
Above Normal (16%)	2.8	2.7	3.2	3.8	3.9	3.4	3.6	3.5	3.2	2.9	2.7	2.7
Below Normal (13%)	2.8	2.7	3.1	3.3	3.5	3.0	3.3	3.3	3.1	2.6	2.8	2.8
Dry (24%)	2.7	2.7	3.0	3.2	3.3	3.2	3.2	3.2	3.1	2.6	3.0	2.8
Critical (15%)	2.9	2.9	3.2	3.2	3.3	3.1	3.1	3.2	3.2	3.0	3.1	3.1

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.1	0.1	0.1	0.2	-0.2	-0.1	0.1	0.3	-0.3	0.0	0.0	0.1
20%	0.1	0.1	0.1	0.3	0.0	-0.1	0.6	0.5	0.0	0.0	0.0	0.1
30%	0.1	0.1	0.1	0.3	0.1	0.0	0.5	0.5	0.0	0.0	0.0	0.0
40%	0.1	0.1	0.1	0.3	0.3	0.1	0.6	0.5	0.1	0.0	0.0	0.0
50%	0.1	0.1	0.1	0.3	0.2	0.1	0.5	0.5	0.1	0.0	0.0	0.0
60%	0.1	0.1	0.1	0.3	0.3	0.1	0.5	0.5	0.1	-0.1	0.0	0.0
70%	0.2	0.1	0.1	0.3	0.3	0.1	0.5	0.5	0.2	-0.1	0.0	0.0
80%	0.2	0.1	0.0	0.3	0.3	0.2	0.5	0.5	0.2	-0.1	0.0	0.0
90%	0.2	0.1	0.0	0.2	0.3	0.2	0.4	0.5	0.2	-0.1	-0.1	0.1
Long Term												
Full Simulation Period[b]	0.1	0.1	0.1	0.2	0.2	0.1	0.4	0.5	0.0	-0.1	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.2	0.1	0.1	0.2	0.1	0.0	0.4	0.5	-0.1	0.0	0.0	0.1
Above Normal (16%)	0.1	0.1	0.1	0.4	0.2	0.0	0.7	0.7	0.1	0.0	-0.1	0.1
Below Normal (13%)	0.2	0.2	0.0	0.3	0.1	0.1	0.5	0.6	0.2	0.0	-0.1	0.0
Dry (24%)	0.1	0.1	0.0	0.2	0.3	0.2	0.4	0.4	0.1	-0.1	0.0	0.0
Critical (15%)	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	-0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-1-5. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.0	3.0	3.7	4.2	4.7	4.5	4.2	4.1	4.2	3.5	3.3	3.1
20%	2.8	2.9	3.4	3.8	4.2	3.9	3.3	3.3	3.5	3.2	3.1	3.0
30%	2.8	2.8	3.2	3.4	3.8	3.5	3.1	3.1	3.3	3.1	3.1	3.0
40%	2.7	2.7	3.1	3.2	3.5	3.2	2.9	3.0	3.2	3.0	3.0	2.9
50%	2.7	2.6	3.0	3.1	3.3	3.1	2.9	2.9	3.1	2.9	2.9	2.8
60%	2.6	2.6	2.9	3.0	3.1	3.0	2.8	2.8	3.0	2.8	2.8	2.8
70%	2.5	2.5	2.9	2.9	3.0	2.9	2.7	2.7	2.9	2.7	2.8	2.7
80%	2.5	2.5	2.8	2.9	2.8	2.7	2.7	2.6	2.8	2.7	2.7	2.6
90%	2.4	2.4	2.7	2.8	2.6	2.6	2.6	2.5	2.7	2.6	2.6	2.6
Long Term												
Full Simulation Period[b]	2.7	2.7	3.2	3.4	3.6	3.4	3.1	3.1	3.3	3.0	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.7	2.8	3.5	4.2	4.3	4.2	3.7	3.5	3.9	3.3	3.0	2.9
Above Normal (16%)	2.7	2.7	3.1	3.4	3.7	3.3	2.9	2.9	3.1	2.9	2.7	2.6
Below Normal (13%)	2.6	2.6	3.0	3.0	3.4	2.9	2.8	2.7	2.9	2.6	2.9	2.8
Dry (24%)	2.6	2.6	2.9	3.0	3.0	3.0	2.8	2.8	3.0	2.8	3.0	2.8
Critical (15%)	2.8	2.8	3.1	3.1	3.1	2.9	2.9	3.0	3.0	3.1	3.1	3.1

Alternative 3

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.0	3.0	3.8	4.4	4.7	4.6	4.2	4.0	3.8	3.6	3.3	3.2
20%	2.9	2.8	3.5	4.2	4.2	3.8	3.6	3.4	3.4	3.2	3.2	3.1
30%	2.8	2.8	3.3	3.7	3.9	3.5	3.3	3.2	3.2	3.1	3.1	3.0
40%	2.7	2.7	3.2	3.5	3.7	3.4	3.2	3.2	3.1	2.9	3.0	2.9
50%	2.7	2.6	3.1	3.4	3.5	3.2	3.1	3.1	3.0	2.9	2.9	2.8
60%	2.6	2.6	3.0	3.3	3.4	3.1	3.0	3.0	2.9	2.8	2.8	2.8
70%	2.6	2.5	2.9	3.2	3.2	3.0	3.0	3.0	2.8	2.7	2.7	2.7
80%	2.4	2.4	2.9	3.1	3.1	2.9	2.9	2.9	2.8	2.6	2.6	2.6
90%	2.4	2.4	2.8	3.0	2.9	2.7	2.8	2.8	2.7	2.5	2.6	2.6
Long Term												
Full Simulation Period[b]	2.7	2.7	3.3	3.7	3.7	3.4	3.3	3.2	3.2	3.0	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.7	2.8	3.6	4.4	4.4	4.1	3.8	3.6	3.6	3.3	3.0	2.9
Above Normal (16%)	2.7	2.7	3.2	3.8	3.9	3.3	3.2	3.1	3.0	2.8	2.7	2.6
Below Normal (13%)	2.6	2.6	3.1	3.3	3.5	2.9	3.1	3.0	2.9	2.6	2.7	2.8
Dry (24%)	2.6	2.6	3.0	3.2	3.3	3.1	3.0	3.0	2.9	2.7	3.0	2.8
Critical (15%)	2.9	2.8	3.2	3.2	3.3	3.1	3.1	3.2	3.0	3.1	3.1	3.1

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.1	0.2	0.0	0.0	0.0	-0.1	-0.3	0.1	0.0	0.0
20%	0.0	0.0	0.1	0.4	0.0	-0.1	0.3	0.2	-0.2	0.0	0.0	0.0
30%	0.0	0.0	0.1	0.3	0.1	0.0	0.2	0.1	-0.1	0.0	0.0	0.0
40%	0.0	0.0	0.1	0.2	0.3	0.1	0.3	0.1	-0.1	-0.1	0.0	0.0
50%	0.0	0.0	0.1	0.3	0.2	0.0	0.2	0.1	-0.1	0.0	0.0	0.0
60%	0.0	0.0	0.1	0.3	0.2	0.1	0.2	0.2	-0.1	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.3	0.3	0.1	0.3	0.3	-0.1	0.0	-0.1	0.0
80%	0.0	0.0	0.1	0.2	0.3	0.1	0.2	0.3	-0.1	-0.1	-0.1	0.0
90%	0.0	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.0	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.1	0.2	0.2	0.0	0.2	0.2	-0.1	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.1	0.2	0.1	0.0	0.1	0.1	-0.3	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.1	0.4	0.2	0.0	0.3	0.2	-0.1	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.3	0.2	0.1	0.3	0.3	0.0	0.0	-0.1	-0.1
Dry (24%)	0.0	0.0	0.0	0.2	0.3	0.2	0.2	0.2	-0.1	-0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-1-6. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.0	3.0	3.7	4.2	4.7	4.5	4.2	4.1	4.2	3.5	3.3	3.1
20%	2.8	2.9	3.4	3.8	4.2	3.9	3.3	3.3	3.5	3.2	3.1	3.0
30%	2.8	2.8	3.2	3.4	3.8	3.5	3.1	3.1	3.3	3.1	3.1	3.0
40%	2.7	2.7	3.1	3.2	3.5	3.2	2.9	3.0	3.2	3.0	3.0	2.9
50%	2.7	2.6	3.0	3.1	3.3	3.1	2.9	2.9	3.1	2.9	2.9	2.8
60%	2.6	2.6	2.9	3.0	3.1	3.0	2.8	2.8	3.0	2.8	2.8	2.8
70%	2.5	2.5	2.9	2.9	3.0	2.9	2.7	2.7	2.9	2.7	2.8	2.7
80%	2.5	2.5	2.8	2.9	2.8	2.7	2.7	2.6	2.8	2.7	2.7	2.6
90%	2.4	2.4	2.7	2.8	2.6	2.6	2.6	2.5	2.7	2.6	2.6	2.6
Long Term												
Full Simulation Period[b]	2.7	2.7	3.2	3.4	3.6	3.4	3.1	3.1	3.3	3.0	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.7	2.8	3.5	4.2	4.3	4.2	3.7	3.5	3.9	3.3	3.0	2.9
Above Normal (16%)	2.7	2.7	3.1	3.4	3.7	3.3	2.9	2.9	3.1	2.9	2.7	2.6
Below Normal (13%)	2.6	2.6	3.0	3.0	3.4	2.9	2.8	2.7	2.9	2.6	2.9	2.8
Dry (24%)	2.6	2.6	2.9	3.0	3.0	3.0	2.8	2.8	3.0	2.8	3.0	2.8
Critical (15%)	2.8	2.8	3.1	3.1	3.1	2.9	2.9	3.0	3.0	3.1	3.1	3.1

Alternative 5

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.1	3.1	3.9	4.4	4.5	4.4	4.4	4.4	3.9	3.5	3.2	3.2
20%	2.9	2.9	3.5	4.1	4.2	3.8	3.9	3.8	3.5	3.2	3.1	3.1
30%	2.9	2.9	3.4	3.7	3.9	3.5	3.7	3.7	3.3	3.1	3.0	3.0
40%	2.8	2.8	3.3	3.5	3.7	3.3	3.6	3.6	3.2	2.9	3.0	2.9
50%	2.8	2.7	3.1	3.4	3.5	3.2	3.5	3.5	3.1	2.8	2.9	2.8
60%	2.8	2.7	3.1	3.3	3.4	3.1	3.4	3.5	3.1	2.7	2.8	2.8
70%	2.7	2.6	3.0	3.2	3.3	3.0	3.3	3.4	3.1	2.6	2.7	2.7
80%	2.7	2.5	2.8	3.1	3.2	2.9	3.3	3.4	3.0	2.6	2.7	2.7
90%	2.6	2.5	2.7	3.0	2.9	2.8	3.2	3.3	2.9	2.4	2.6	2.6
Long Term												
Full Simulation Period[b]	2.8	2.8	3.3	3.7	3.7	3.5	3.6	3.7	3.3	2.9	2.9	2.9
Water Year Types[c]												
Wet (32%)	2.9	2.9	3.6	4.4	4.4	4.1	4.1	4.0	3.7	3.3	2.9	3.0
Above Normal (16%)	2.8	2.8	3.2	3.8	3.9	3.4	3.6	3.6	3.2	2.9	2.7	2.7
Below Normal (13%)	2.8	2.7	3.1	3.3	3.5	3.0	3.4	3.5	3.1	2.6	2.8	2.8
Dry (24%)	2.7	2.7	3.0	3.2	3.3	3.2	3.4	3.5	3.0	2.6	3.0	2.8
Critical (15%)	2.9	2.9	3.2	3.2	3.3	3.1	3.3	3.4	3.1	3.0	3.1	3.0

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.1	0.1	0.1	0.2	**-0.2**	**-0.1**	0.1	0.2	**-0.3**	**0.0**	**-0.1**	0.0
20%	0.1	0.1	0.1	0.3	0.0	**-0.1**	0.6	0.5	**-0.1**	**0.0**	**0.0**	0.0
30%	0.1	0.1	0.1	0.3	0.1	0.0	0.6	0.6	0.0	**0.0**	**0.0**	0.0
40%	0.1	0.1	0.1	0.3	0.3	0.1	0.6	0.6	0.1	**-0.1**	**0.0**	0.1
50%	0.1	0.1	0.1	0.3	0.2	0.1	0.6	0.6	0.0	**0.0**	**0.0**	0.0
60%	0.2	0.1	0.1	0.3	0.3	0.1	0.6	0.7	0.1	**-0.1**	**-0.1**	0.0
70%	0.2	0.1	0.1	0.3	0.3	0.1	0.6	0.7	0.2	**-0.1**	**-0.1**	0.0
80%	0.2	0.1	0.0	0.2	0.3	0.2	0.6	0.8	0.2	**-0.1**	**0.0**	0.0
90%	0.2	0.1	**0.0**	0.2	0.3	0.2	0.6	0.8	0.2	**-0.2**	**-0.1**	0.0
Long Term												
Full Simulation Period[b]	0.1	0.1	0.1	0.2	0.2	0.1	0.5	0.6	0.0	**-0.1**	**0.0**	0.0
Water Year Types[c]												
Wet (32%)	0.2	0.1	0.1	0.2	0.1	**0.0**	0.4	0.5	**-0.1**	**0.0**	**-0.1**	0.1
Above Normal (16%)	0.1	0.1	0.1	0.3	0.2	0.0	0.7	0.8	0.1	0.0	**0.0**	0.1
Below Normal (13%)	0.2	0.2	0.0	0.3	0.1	0.1	0.6	0.8	0.3	**0.0**	**-0.1**	**0.0**
Dry (24%)	0.1	0.1	0.0	0.2	0.3	0.2	0.6	0.6	0.1	**-0.2**	0.0	0.0
Critical (15%)	0.1	0.1	0.1	0.1	0.2	0.1	0.4	0.5	0.1	**-0.2**	**0.0**	**0.0**

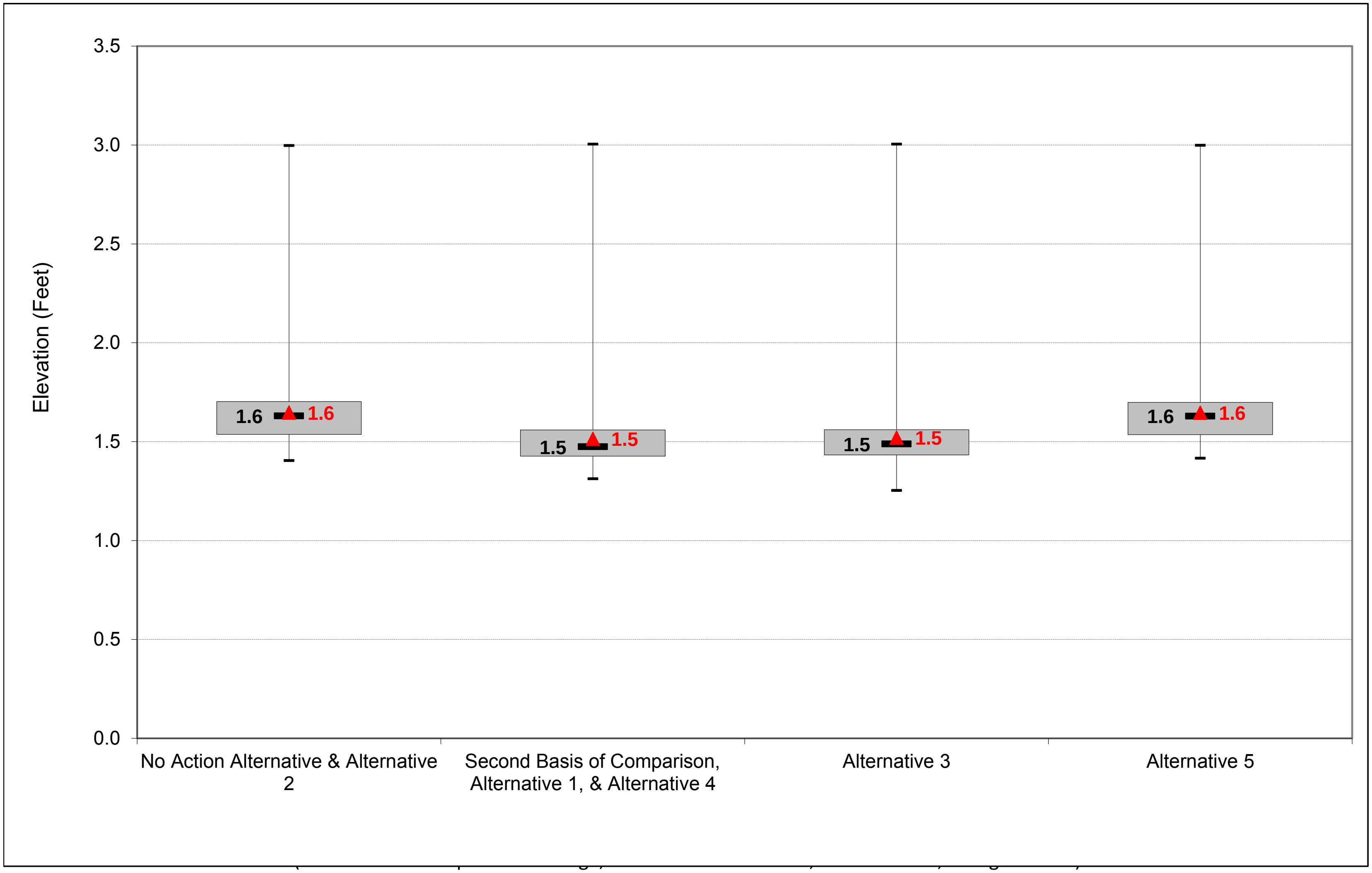
a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

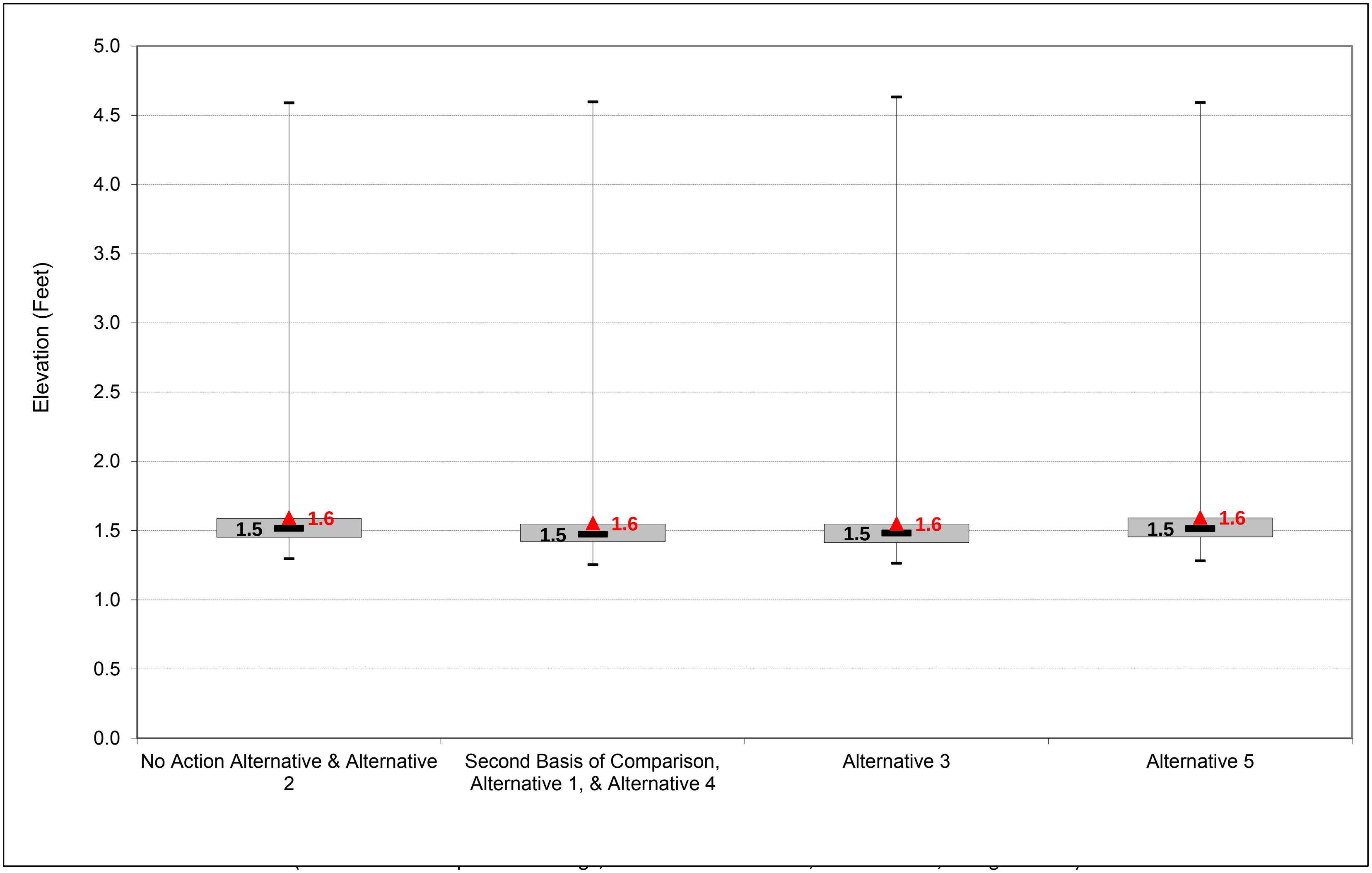
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-1. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, October



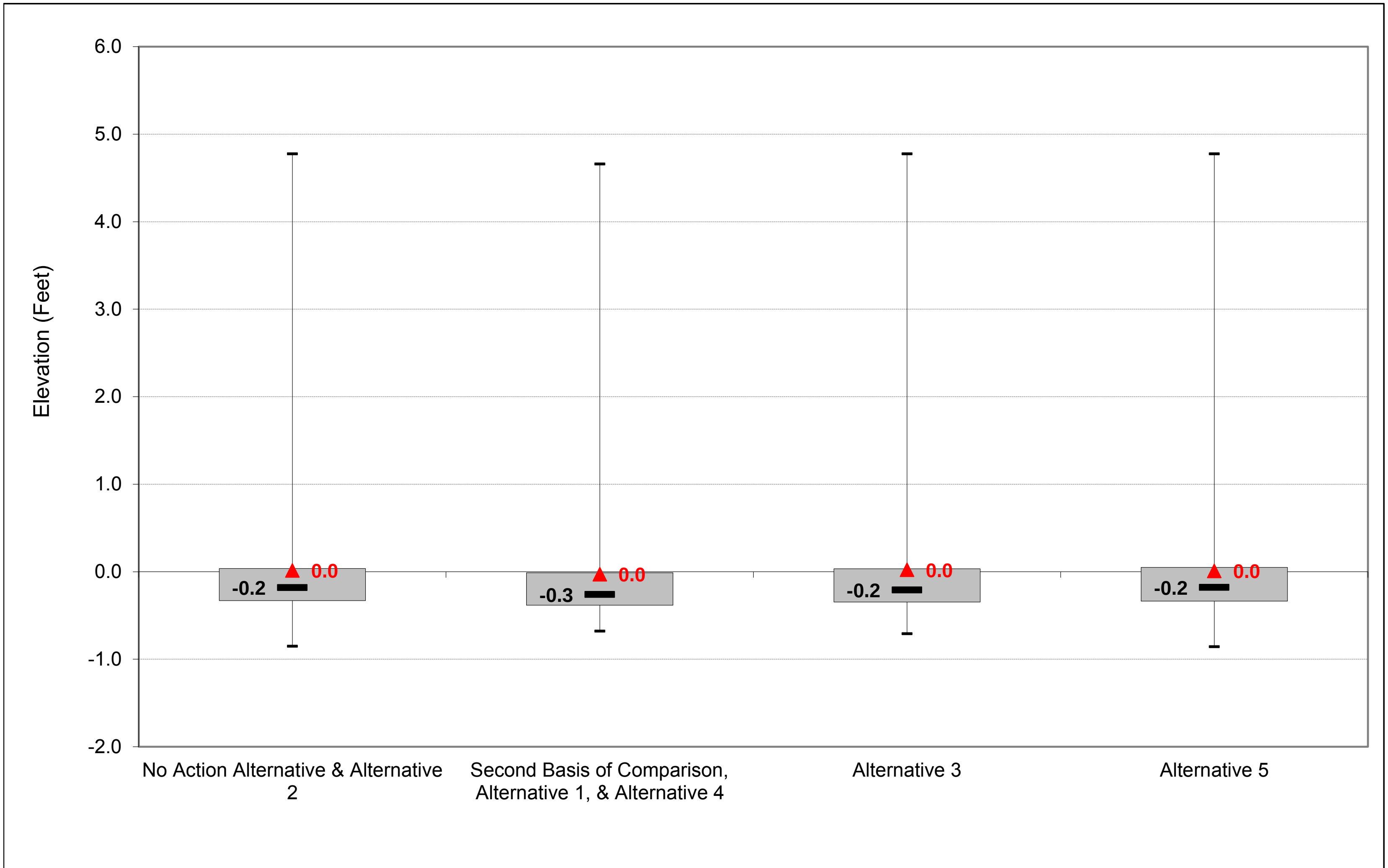
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-2. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, November



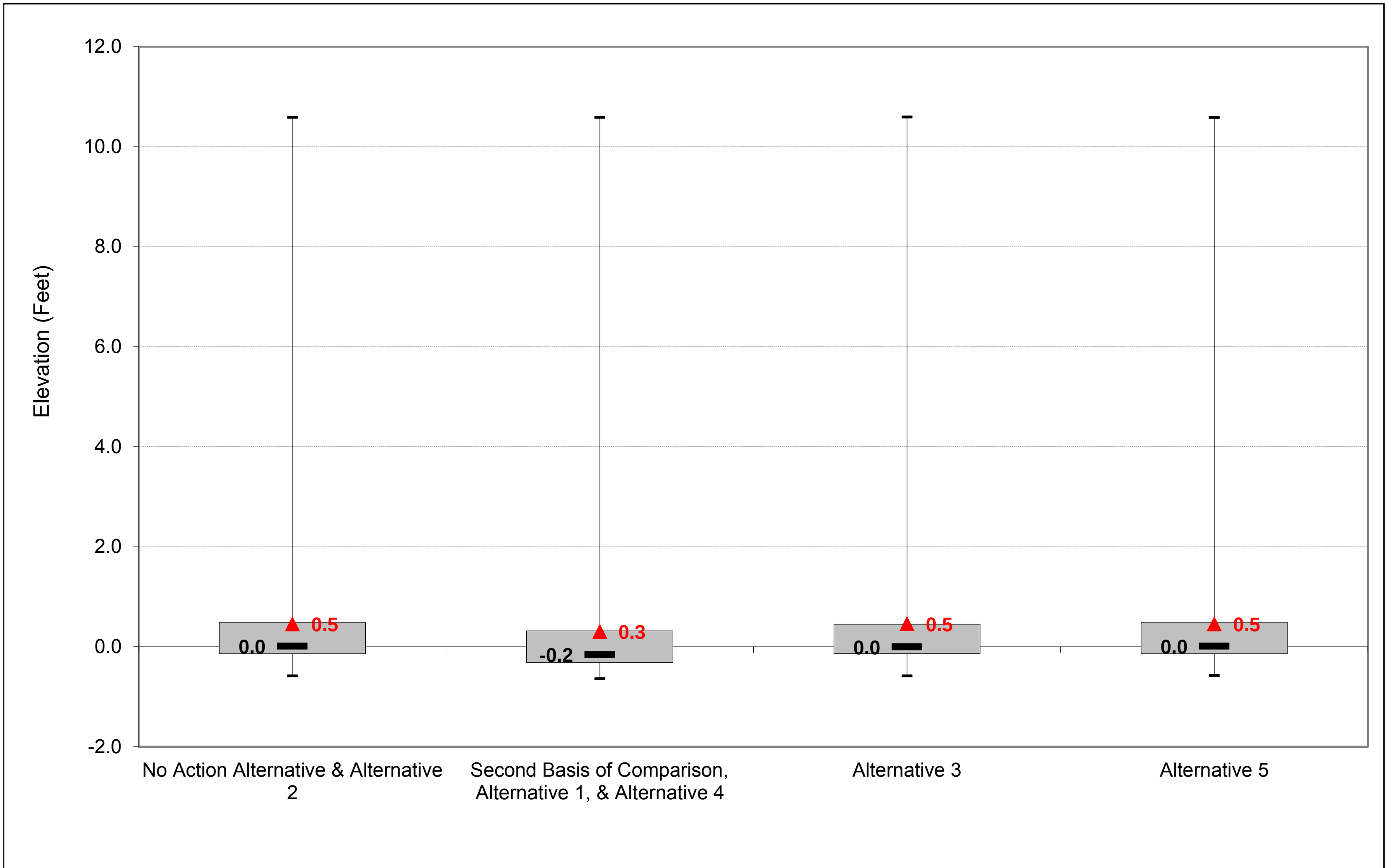
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-3. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, December



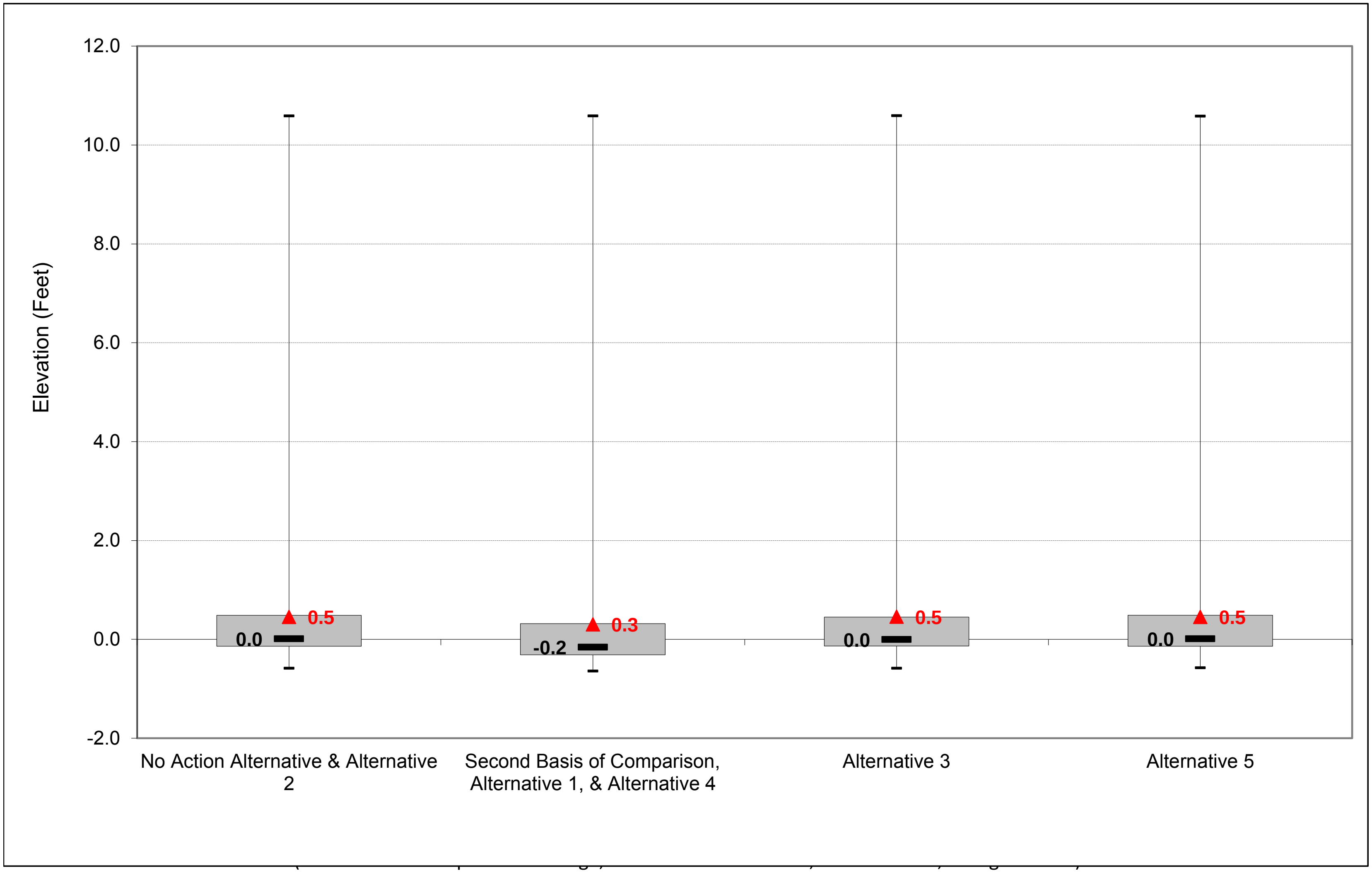
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-4. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, January



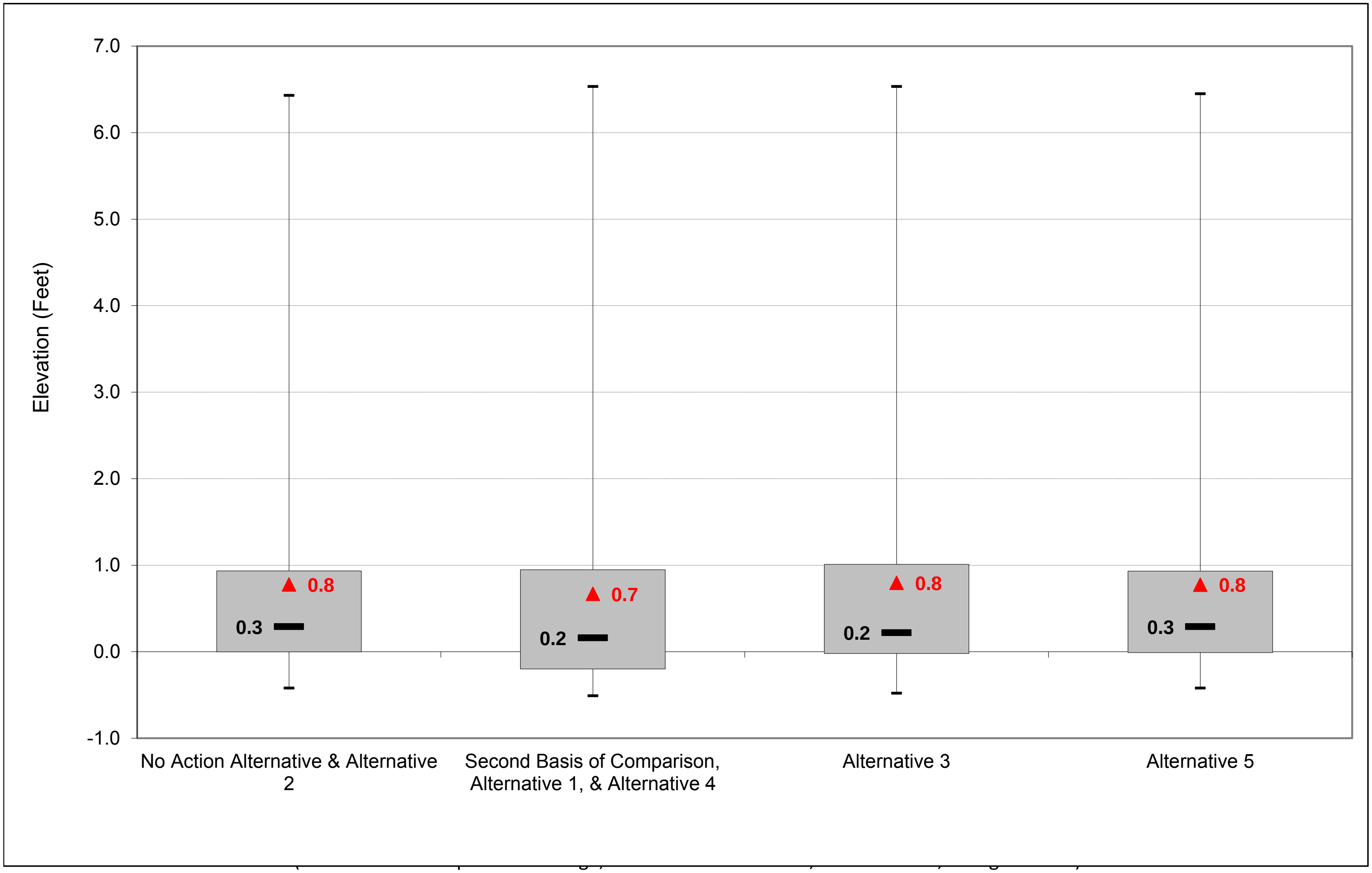
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-5. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, February



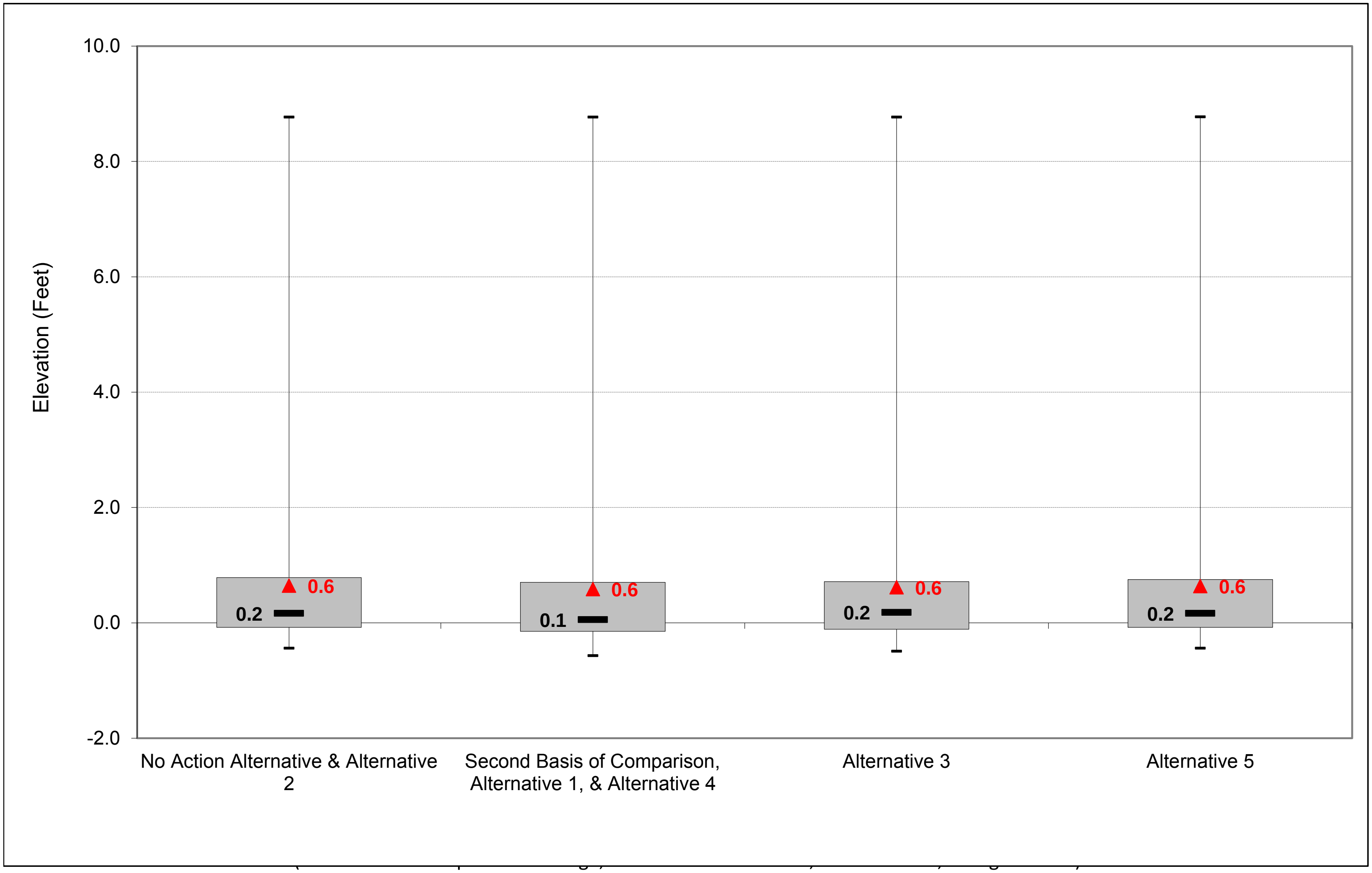
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-6. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, March



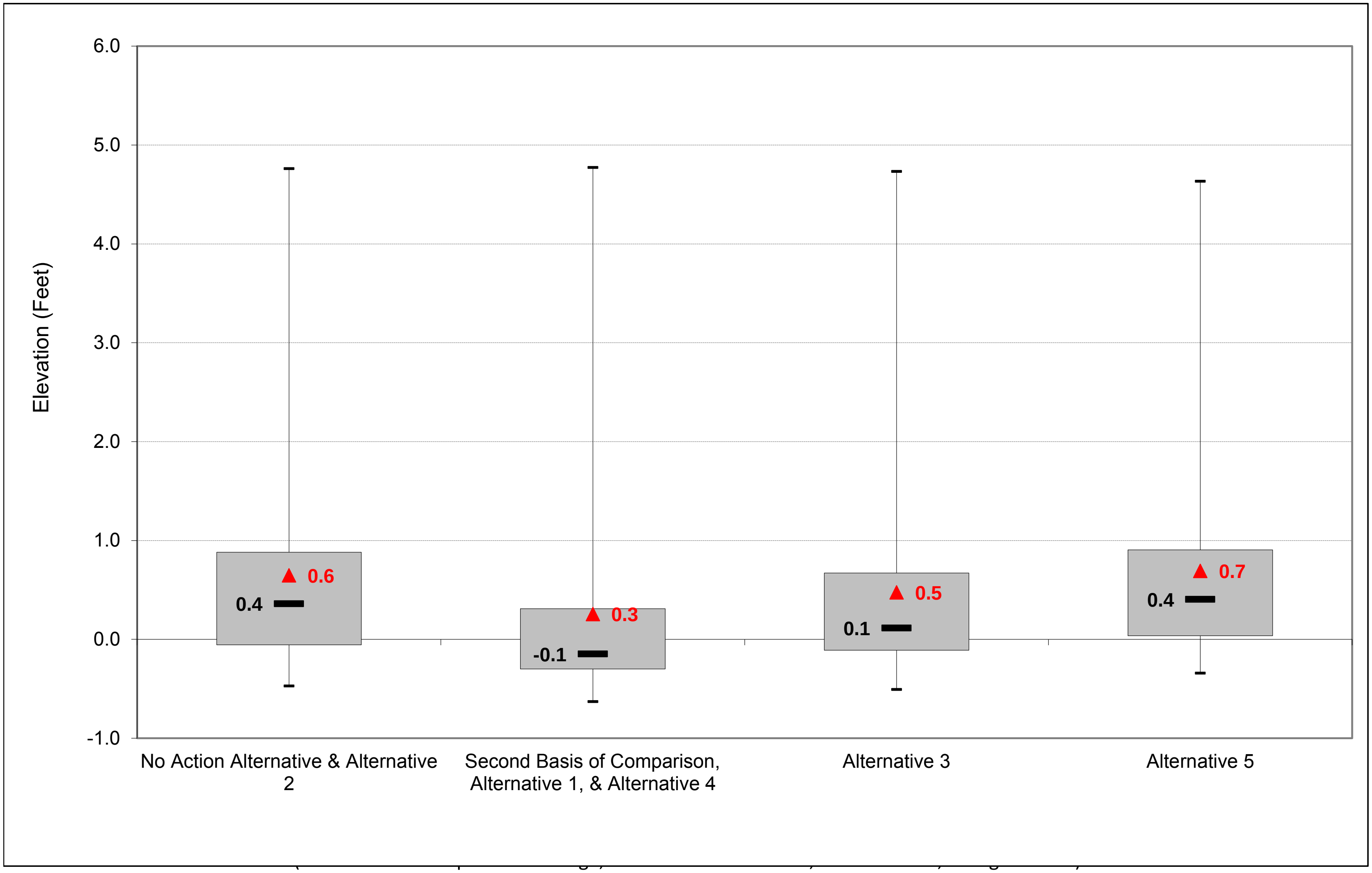
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-7. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, April



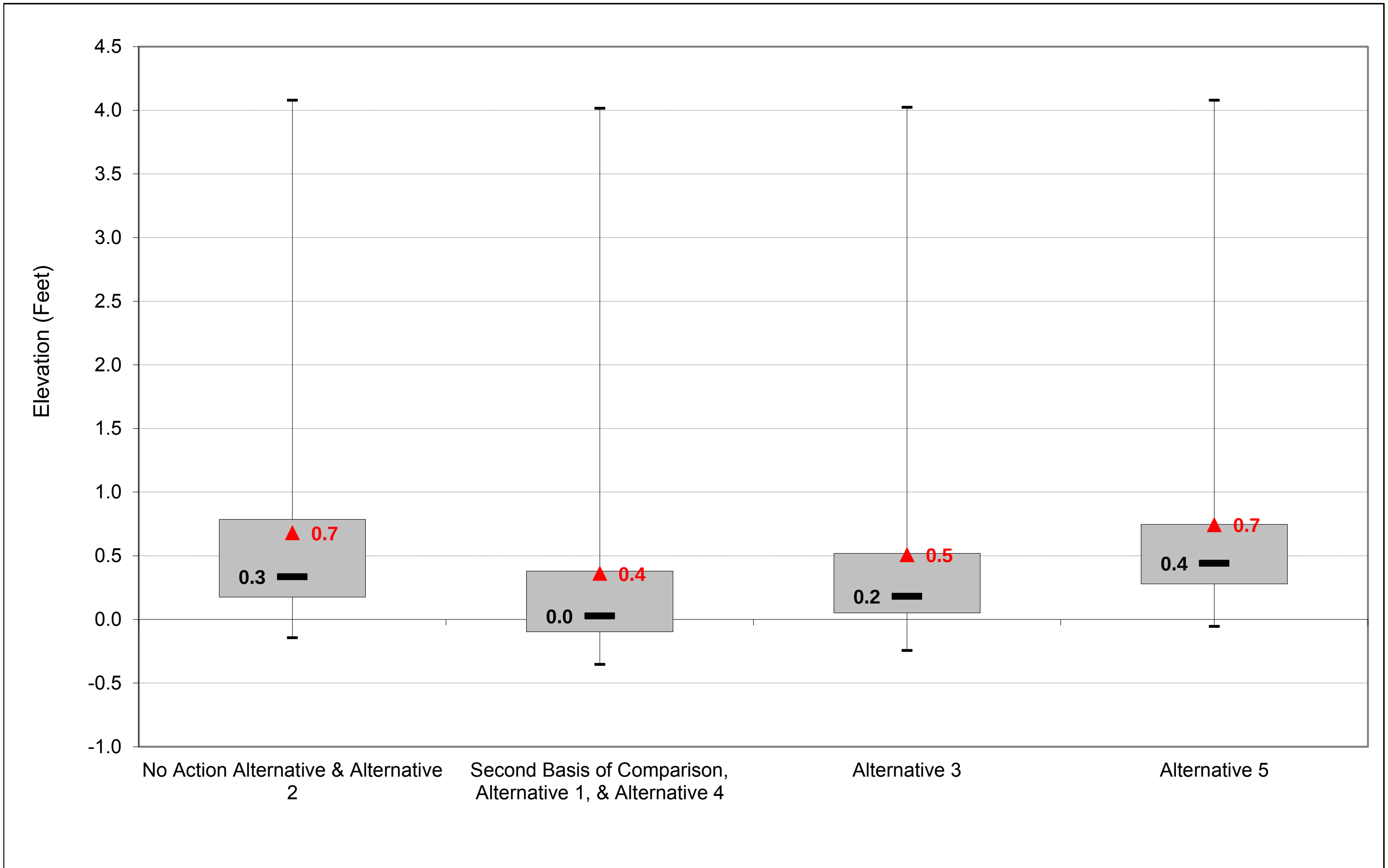
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-8. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, May



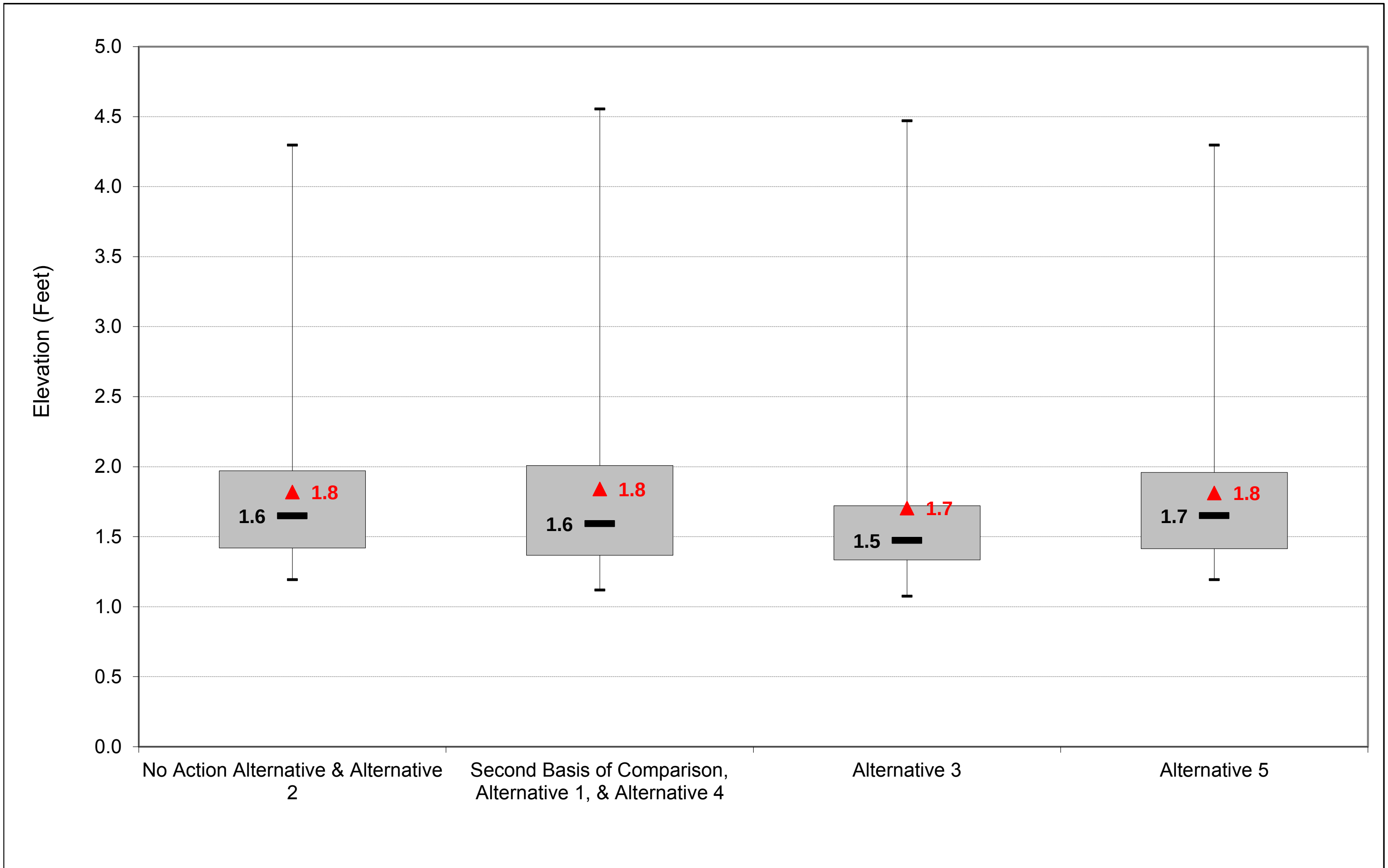
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-9. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, June



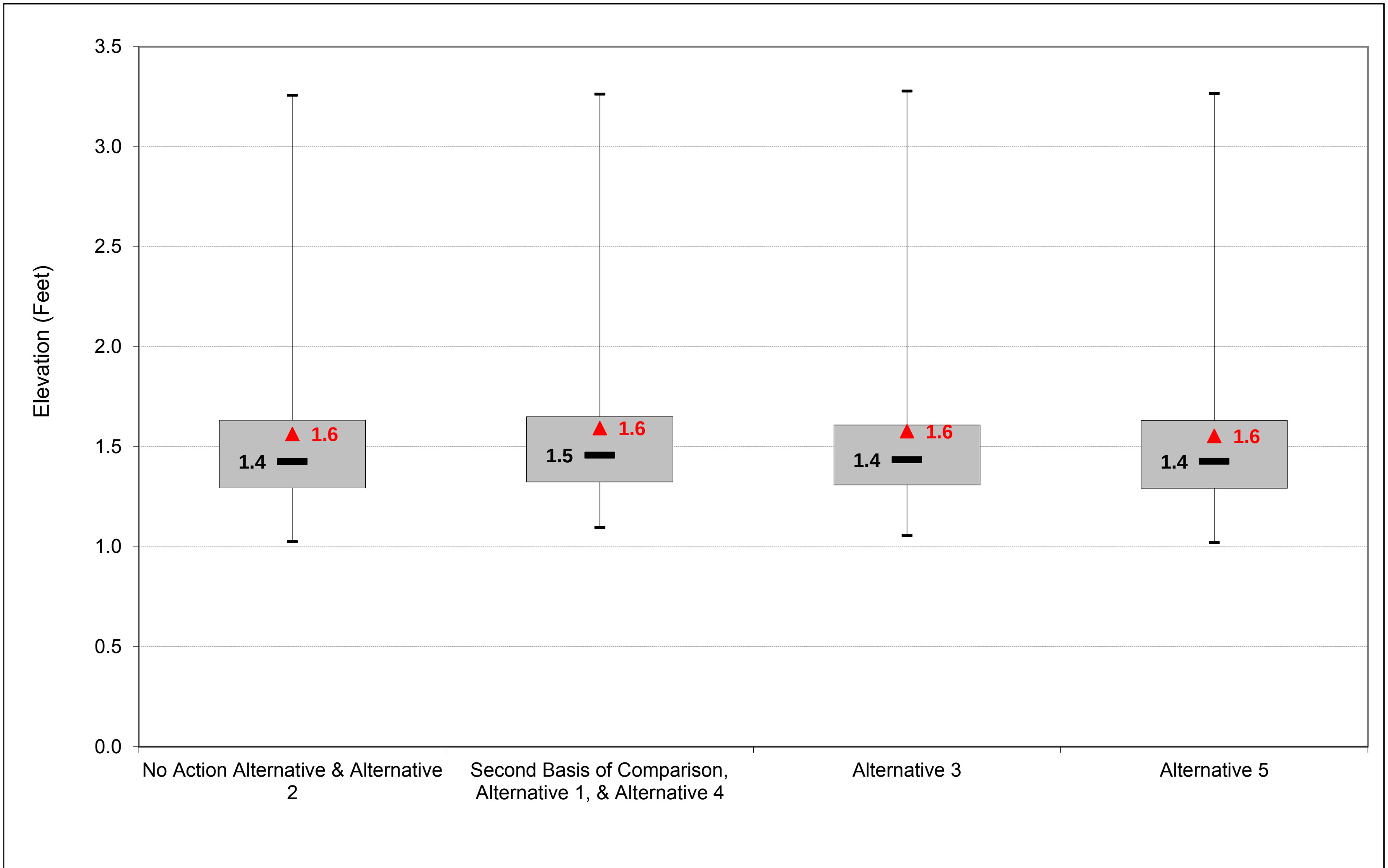
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-10. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, July



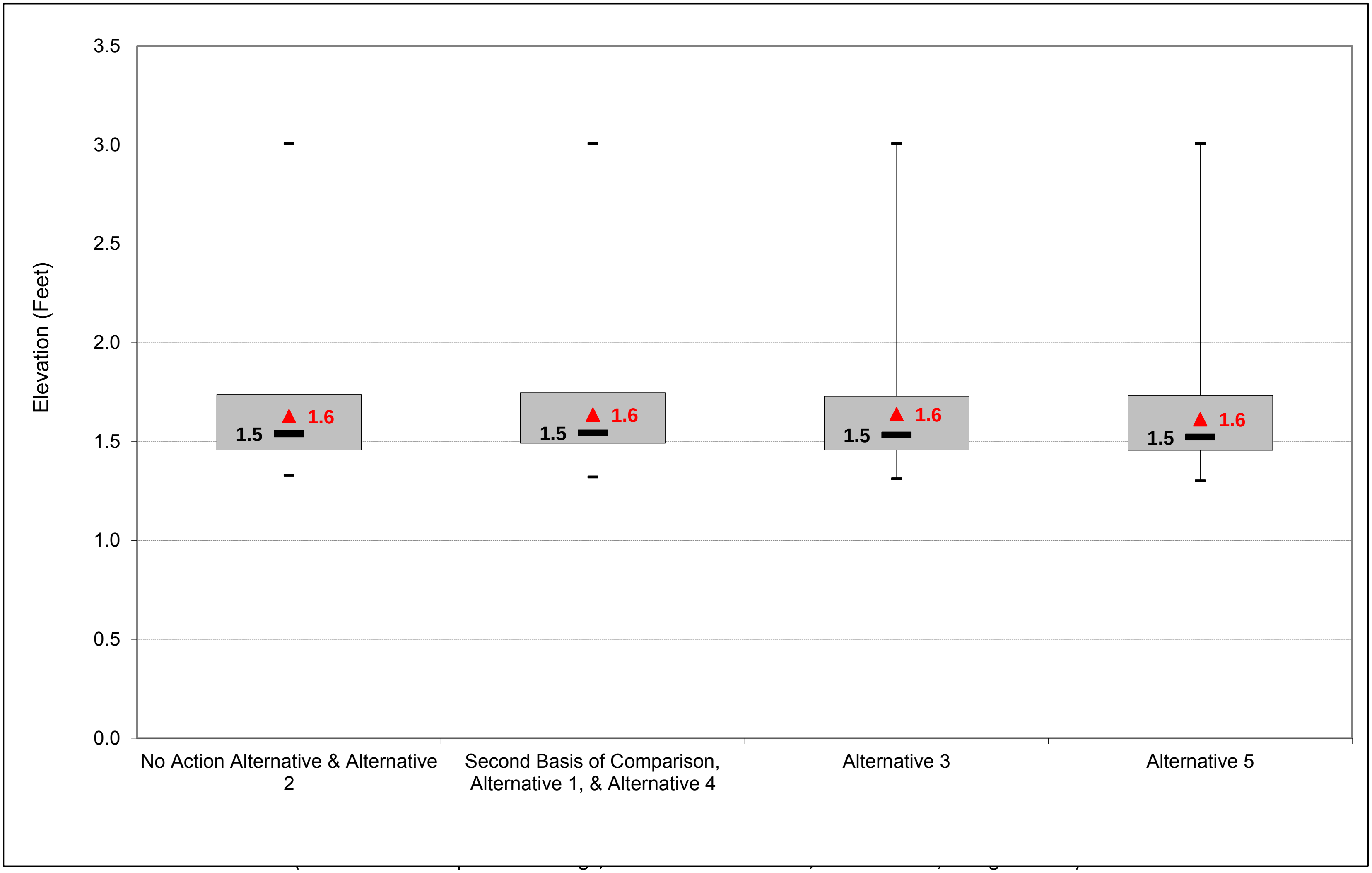
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-11. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-41-2-12. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-2-1. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.8	1.7	0.6	1.1	1.8	1.9	1.8	1.6	2.8	2.3	1.9	1.8
20%	1.7	1.6	0.1	0.7	1.2	1.0	1.2	1.0	2.0	1.7	1.8	1.8
30%	1.7	1.6	0.0	0.3	0.8	0.6	0.8	0.7	1.9	1.6	1.7	1.7
40%	1.7	1.5	-0.1	0.1	0.6	0.3	0.5	0.5	1.7	1.5	1.6	1.7
50%	1.6	1.5	-0.2	0.0	0.3	0.2	0.4	0.3	1.6	1.4	1.5	1.6
60%	1.6	1.5	-0.2	-0.1	0.1	0.1	0.2	0.3	1.5	1.4	1.5	1.6
70%	1.5	1.5	-0.3	-0.1	0.1	-0.1	0.0	0.2	1.5	1.3	1.5	1.6
80%	1.5	1.4	-0.4	-0.2	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.5
90%	1.5	1.4	-0.5	-0.2	-0.2	-0.2	-0.2	0.0	1.3	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.6	1.6	0.0	0.5	0.8	0.6	0.6	0.7	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.7	1.7	0.5	1.4	1.8	1.7	1.6	1.4	2.3	2.0	1.8	1.8
Above Normal (16%)	1.6	1.5	0.0	0.4	0.9	0.5	0.7	0.6	1.9	1.5	1.5	1.6
Below Normal (13%)	1.7	1.6	-0.2	0.0	0.3	0.0	0.3	0.3	1.6	1.4	1.5	1.6
Dry (24%)	1.6	1.5	-0.3	-0.1	0.1	0.1	0.1	0.3	1.5	1.3	1.6	1.6
Critical (15%)	1.6	1.5	-0.2	-0.2	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.6

Alternative 1

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.6	1.6	0.5	1.2	2.0	2.2	1.6	1.4	3.1	2.3	1.9	1.8
20%	1.6	1.6	0.0	0.6	1.3	1.1	0.5	0.5	2.2	1.7	1.8	1.7
30%	1.5	1.5	0.0	0.1	0.7	0.6	0.1	0.2	1.9	1.6	1.7	1.7
40%	1.5	1.5	-0.2	-0.1	0.3	0.3	0.0	0.1	1.8	1.5	1.6	1.6
50%	1.5	1.5	-0.3	-0.2	0.2	0.1	-0.1	0.0	1.6	1.5	1.5	1.6
60%	1.5	1.5	-0.3	-0.2	0.0	0.0	-0.2	-0.1	1.5	1.4	1.5	1.6
70%	1.4	1.4	-0.4	-0.3	-0.1	-0.1	-0.3	-0.1	1.4	1.3	1.5	1.5
80%	1.4	1.4	-0.4	-0.3	-0.2	-0.2	-0.3	-0.1	1.3	1.3	1.5	1.5
90%	1.4	1.4	-0.5	-0.4	-0.3	-0.3	-0.4	-0.2	1.2	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.5	1.6	0.0	0.3	0.7	0.6	0.3	0.4	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.6	1.7	0.4	1.2	1.7	1.7	1.2	1.1	2.5	2.0	1.8	1.8
Above Normal (16%)	1.5	1.5	-0.1	0.2	0.8	0.5	0.0	0.1	1.9	1.6	1.6	1.6
Below Normal (13%)	1.5	1.5	-0.2	-0.2	0.2	-0.1	-0.2	0.0	1.5	1.4	1.6	1.6
Dry (24%)	1.5	1.5	-0.3	-0.3	-0.1	0.0	-0.2	0.0	1.5	1.4	1.6	1.6
Critical (15%)	1.5	1.5	-0.2	-0.2	-0.1	-0.2	-0.3	0.0	1.4	1.4	1.5	1.6

Alternative 1 minus No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.2	0.0	-0.1	0.1	0.2	0.2	-0.2	-0.2	0.3	0.0	0.0	0.0
20%	-0.2	0.0	-0.1	-0.2	0.0	0.1	-0.7	-0.5	0.1	0.1	0.0	0.0
30%	-0.1	0.0	0.0	-0.2	0.0	0.0	-0.7	-0.5	0.0	0.0	0.0	0.0
40%	-0.1	0.0	-0.1	-0.2	-0.2	0.0	-0.6	-0.4	0.0	0.0	0.0	0.0
50%	-0.2	0.0	-0.1	-0.2	-0.1	-0.1	-0.5	-0.3	-0.1	0.0	0.0	0.0
60%	-0.1	0.0	-0.1	-0.2	-0.2	-0.1	-0.5	-0.3	0.0	0.0	0.0	0.0
70%	-0.1	0.0	0.0	-0.2	-0.2	-0.1	-0.3	-0.3	-0.1	0.0	0.0	0.0
80%	-0.1	0.0	0.0	-0.1	-0.2	-0.1	-0.2	-0.3	-0.1	0.0	0.0	0.0
90%	-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.2	-0.2	0.0	0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	-0.1	0.0	0.0	-0.2	-0.1	-0.1	-0.4	-0.3	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	-0.4	-0.4	0.2	0.0	0.0	0.0
Above Normal (16%)	-0.1	0.0	0.0	-0.2	-0.1	-0.1	-0.6	-0.5	0.0	0.0	0.0	0.0
Below Normal (13%)	-0.2	-0.1	0.0	-0.2	-0.1	-0.1	-0.5	-0.3	-0.1	0.0	0.0	0.0
Dry (24%)	-0.1	0.0	0.0	-0.1	-0.2	-0.1	-0.3	-0.2	0.0	0.1	0.0	0.0
Critical (15%)	-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.2	-0.1	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-2-2. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	1.8	1.7	0.6	1.1	1.8	1.9	1.8	1.6	2.8	2.3	1.9	1.8
20%	1.7	1.6	0.1	0.7	1.2	1.0	1.2	1.0	2.0	1.7	1.8	1.8
30%	1.7	1.6	0.0	0.3	0.8	0.6	0.8	0.7	1.9	1.6	1.7	1.7
40%	1.7	1.5	-0.1	0.1	0.6	0.3	0.5	0.5	1.7	1.5	1.6	1.7
50%	1.6	1.5	-0.2	0.0	0.3	0.2	0.4	0.3	1.6	1.4	1.5	1.6
60%	1.6	1.5	-0.2	-0.1	0.1	0.1	0.2	0.3	1.5	1.4	1.5	1.6
70%	1.5	1.5	-0.3	-0.1	0.1	-0.1	0.0	0.2	1.5	1.3	1.5	1.6
80%	1.5	1.4	-0.4	-0.2	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.5
90%	1.5	1.4	-0.5	-0.2	-0.2	-0.2	-0.2	0.0	1.3	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.6	1.6	0.0	0.5	0.8	0.6	0.6	0.7	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.7	1.7	0.5	1.4	1.8	1.7	1.6	1.4	2.3	2.0	1.8	1.8
Above Normal (16%)	1.6	1.5	0.0	0.4	0.9	0.5	0.7	0.6	1.9	1.5	1.5	1.6
Below Normal (13%)	1.7	1.6	-0.2	0.0	0.3	0.0	0.3	0.3	1.6	1.4	1.5	1.6
Dry (24%)	1.6	1.5	-0.3	-0.1	0.1	0.1	0.1	0.3	1.5	1.3	1.6	1.6
Critical (15%)	1.6	1.5	-0.2	-0.2	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.6

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	1.6	1.6	0.6	1.4	2.5	2.2	1.7	1.4	2.8	2.3	2.0	1.9
20%	1.6	1.6	0.1	0.7	1.3	1.0	0.9	0.7	1.9	1.7	1.8	1.8
30%	1.6	1.5	0.0	0.3	0.8	0.5	0.4	0.4	1.7	1.5	1.7	1.7
40%	1.5	1.5	-0.1	0.1	0.6	0.3	0.3	0.2	1.6	1.5	1.6	1.6
50%	1.5	1.5	-0.2	0.0	0.2	0.2	0.1	0.2	1.5	1.4	1.5	1.6
60%	1.5	1.5	-0.3	-0.1	0.1	0.0	0.0	0.1	1.4	1.4	1.5	1.6
70%	1.4	1.4	-0.3	-0.1	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.6
80%	1.4	1.4	-0.4	-0.2	-0.1	-0.2	-0.2	0.0	1.3	1.3	1.5	1.5
90%	1.4	1.4	-0.4	-0.2	-0.2	-0.2	-0.3	0.0	1.2	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.5	1.6	0.0	0.5	0.8	0.6	0.5	0.5	1.7	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.6	1.7	0.5	1.4	1.8	1.7	1.4	1.2	2.2	2.0	1.9	1.9
Above Normal (16%)	1.5	1.5	0.0	0.4	0.9	0.5	0.4	0.4	1.7	1.5	1.5	1.6
Below Normal (13%)	1.5	1.5	-0.2	0.0	0.4	0.0	0.1	0.2	1.5	1.4	1.5	1.6
Dry (24%)	1.5	1.5	-0.3	-0.1	0.1	0.1	0.0	0.2	1.4	1.3	1.6	1.6
Critical (15%)	1.5	1.5	-0.2	-0.2	0.0	-0.1	-0.2	0.1	1.3	1.4	1.5	1.6

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.2	0.0	0.0	0.2	0.6	0.3	-0.1	-0.3	0.0	0.0	0.2	0.1
20%	-0.1	0.0	0.0	-0.1	0.0	0.0	-0.3	-0.3	-0.2	0.0	0.0	0.0
30%	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.4	-0.3	-0.2	0.0	0.0	0.0
40%	-0.1	0.0	0.0	0.0	0.0	0.0	-0.3	-0.2	-0.2	0.0	0.0	0.0
50%	-0.1	0.0	0.0	0.0	-0.1	0.0	-0.2	-0.2	-0.2	0.0	0.0	0.0
60%	-0.1	0.0	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	0.0	0.0	0.0
70%	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0
80%	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0
90%	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	-0.1	0.0	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.1	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	-0.1	-0.1	0.0	0.0	0.1	0.0	-0.2	-0.3	-0.1	0.0	0.0	0.0
Above Normal (16%)	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.3	-0.3	-0.2	0.0	0.0	0.0
Below Normal (13%)	-0.2	-0.1	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.1	0.0	0.0	0.0
Dry (24%)	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0
Critical (15%)	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-2-3. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	1.8	1.7	0.6	1.1	1.8	1.9	1.8	1.6	2.8	2.3	1.9	1.8
20%	1.7	1.6	0.1	0.7	1.2	1.0	1.2	1.0	2.0	1.7	1.8	1.8
30%	1.7	1.6	0.0	0.3	0.8	0.6	0.8	0.7	1.9	1.6	1.7	1.7
40%	1.7	1.5	-0.1	0.1	0.6	0.3	0.5	0.5	1.7	1.5	1.6	1.7
50%	1.6	1.5	-0.2	0.0	0.3	0.2	0.4	0.3	1.6	1.4	1.5	1.6
60%	1.6	1.5	-0.2	-0.1	0.1	0.1	0.2	0.3	1.5	1.4	1.5	1.6
70%	1.5	1.5	-0.3	-0.1	0.1	-0.1	0.0	0.2	1.5	1.3	1.5	1.6
80%	1.5	1.4	-0.4	-0.2	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.5
90%	1.5	1.4	-0.5	-0.2	-0.2	-0.2	-0.2	0.0	1.3	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.6	1.6	0.0	0.5	0.8	0.6	0.6	0.7	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.7	1.7	0.5	1.4	1.8	1.7	1.6	1.4	2.3	2.0	1.8	1.8
Above Normal (16%)	1.6	1.5	0.0	0.4	0.9	0.5	0.7	0.6	1.9	1.5	1.5	1.6
Below Normal (13%)	1.7	1.6	-0.2	0.0	0.3	0.0	0.3	0.3	1.6	1.4	1.5	1.6
Dry (24%)	1.6	1.5	-0.3	-0.1	0.1	0.1	0.1	0.3	1.5	1.3	1.6	1.6
Critical (15%)	1.6	1.5	-0.2	-0.2	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.6

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	1.8	1.7	0.6	1.1	1.8	1.9	1.8	1.6	2.8	2.3	1.8	1.8
20%	1.7	1.6	0.1	0.7	1.3	1.0	1.2	1.0	2.0	1.7	1.8	1.8
30%	1.7	1.6	0.0	0.3	0.8	0.6	0.7	0.7	1.9	1.6	1.7	1.7
40%	1.7	1.5	-0.1	0.1	0.6	0.3	0.5	0.5	1.7	1.5	1.6	1.7
50%	1.6	1.5	-0.2	0.0	0.3	0.2	0.4	0.4	1.7	1.4	1.5	1.6
60%	1.6	1.5	-0.2	-0.1	0.1	0.1	0.3	0.4	1.5	1.4	1.5	1.6
70%	1.6	1.5	-0.3	-0.1	0.1	-0.1	0.1	0.3	1.5	1.3	1.5	1.6
80%	1.5	1.4	-0.4	-0.2	0.0	-0.1	0.0	0.2	1.4	1.3	1.4	1.5
90%	1.5	1.4	-0.5	-0.2	-0.2	-0.2	-0.1	0.1	1.3	1.1	1.4	1.5
Long Term												
Full Simulation Period[b]	1.6	1.6	0.0	0.5	0.8	0.6	0.7	0.7	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.7	1.7	0.5	1.4	1.8	1.7	1.6	1.5	2.3	2.0	1.8	1.8
Above Normal (16%)	1.6	1.5	0.0	0.4	0.9	0.5	0.7	0.7	1.9	1.5	1.5	1.6
Below Normal (13%)	1.7	1.6	-0.2	0.0	0.3	0.0	0.3	0.4	1.6	1.4	1.5	1.6
Dry (24%)	1.6	1.5	-0.3	-0.1	0.1	0.1	0.2	0.4	1.5	1.3	1.5	1.6
Critical (15%)	1.6	1.5	-0.2	-0.2	0.0	-0.1	0.0	0.2	1.4	1.3	1.5	1.6

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-2-4. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	1.6	1.6	0.5	1.2	2.0	2.2	1.6	1.4	3.1	2.3	1.9	1.8
20%	1.6	1.6	0.0	0.6	1.3	1.1	0.5	0.5	2.2	1.7	1.8	1.7
30%	1.5	1.5	0.0	0.1	0.7	0.6	0.1	0.2	1.9	1.6	1.7	1.7
40%	1.5	1.5	-0.2	-0.1	0.3	0.3	0.0	0.1	1.8	1.5	1.6	1.6
50%	1.5	1.5	-0.3	-0.2	0.2	0.1	-0.1	0.0	1.6	1.5	1.5	1.6
60%	1.5	1.5	-0.3	-0.2	0.0	0.0	-0.2	-0.1	1.5	1.4	1.5	1.6
70%	1.4	1.4	-0.4	-0.3	-0.1	-0.1	-0.3	-0.1	1.4	1.3	1.5	1.5
80%	1.4	1.4	-0.4	-0.3	-0.2	-0.2	-0.3	-0.1	1.3	1.3	1.5	1.5
90%	1.4	1.4	-0.5	-0.4	-0.3	-0.3	-0.4	-0.2	1.2	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.5	1.6	0.0	0.3	0.7	0.6	0.3	0.4	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.6	1.7	0.4	1.2	1.7	1.7	1.2	1.1	2.5	2.0	1.8	1.8
Above Normal (16%)	1.5	1.5	-0.1	0.2	0.8	0.5	0.0	0.1	1.9	1.6	1.6	1.6
Below Normal (13%)	1.5	1.5	-0.2	-0.2	0.2	-0.1	-0.2	0.0	1.5	1.4	1.6	1.6
Dry (24%)	1.5	1.5	-0.3	-0.3	-0.1	0.0	-0.2	0.0	1.5	1.4	1.6	1.6
Critical (15%)	1.5	1.5	-0.2	-0.2	-0.1	-0.2	-0.3	0.0	1.4	1.4	1.5	1.6

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	1.8	1.7	0.6	1.1	1.8	1.9	1.8	1.6	2.8	2.3	1.9	1.8
20%	1.7	1.6	0.1	0.7	1.2	1.0	1.2	1.0	2.0	1.7	1.8	1.8
30%	1.7	1.6	0.0	0.3	0.8	0.6	0.8	0.7	1.9	1.6	1.7	1.7
40%	1.7	1.5	-0.1	0.1	0.6	0.3	0.5	0.5	1.7	1.5	1.6	1.7
50%	1.6	1.5	-0.2	0.0	0.3	0.2	0.4	0.3	1.6	1.4	1.5	1.6
60%	1.6	1.5	-0.2	-0.1	0.1	0.1	0.2	0.3	1.5	1.4	1.5	1.6
70%	1.5	1.5	-0.3	-0.1	0.1	-0.1	0.0	0.2	1.5	1.3	1.5	1.6
80%	1.5	1.4	-0.4	-0.2	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.5
90%	1.5	1.4	-0.5	-0.2	-0.2	-0.2	-0.2	0.0	1.3	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.6	1.6	0.0	0.5	0.8	0.6	0.6	0.7	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.7	1.7	0.5	1.4	1.8	1.7	1.6	1.4	2.3	2.0	1.8	1.8
Above Normal (16%)	1.6	1.5	0.0	0.4	0.9	0.5	0.7	0.6	1.9	1.5	1.5	1.6
Below Normal (13%)	1.7	1.6	-0.2	0.0	0.3	0.0	0.3	0.3	1.6	1.4	1.5	1.6
Dry (24%)	1.6	1.5	-0.3	-0.1	0.1	0.1	0.1	0.3	1.5	1.3	1.6	1.6
Critical (15%)	1.6	1.5	-0.2	-0.2	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.6

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.2	0.0	0.1	-0.1	-0.2	-0.2	0.2	0.2	-0.3	0.0	0.0	0.0
20%	0.2	0.0	0.1	0.2	0.0	-0.1	0.7	0.5	-0.1	-0.1	0.0	0.0
30%	0.1	0.0	0.0	0.2	0.0	0.0	0.7	0.5	0.0	0.0	0.0	0.0
40%	0.1	0.0	0.1	0.2	0.2	0.0	0.6	0.4	0.0	0.0	0.0	0.0
50%	0.2	0.0	0.1	0.2	0.1	0.1	0.5	0.3	0.1	0.0	0.0	0.0
60%	0.1	0.0	0.1	0.2	0.2	0.1	0.5	0.3	0.0	0.0	0.0	0.0
70%	0.1	0.0	0.0	0.2	0.2	0.1	0.3	0.3	0.1	0.0	0.0	0.0
80%	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.3	0.1	0.0	0.0	0.0
90%	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.0	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.1	0.0	0.0	0.2	0.1	0.1	0.4	0.3	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.2	0.1	0.1	0.1	0.1	0.0	0.4	0.4	-0.2	0.0	0.0	0.0
Above Normal (16%)	0.1	0.0	0.0	0.2	0.1	0.1	0.6	0.5	0.0	0.0	0.0	0.0
Below Normal (13%)	0.2	0.1	0.0	0.2	0.1	0.1	0.5	0.3	0.1	0.0	0.0	0.0
Dry (24%)	0.1	0.0	0.0	0.1	0.2	0.1	0.3	0.2	0.0	-0.1	0.0	0.0
Critical (15%)	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-2-5. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.6	1.6	0.5	1.2	2.0	2.2	1.6	1.4	3.1	2.3	1.9	1.8
20%	1.6	1.6	0.0	0.6	1.3	1.1	0.5	0.5	2.2	1.7	1.8	1.7
30%	1.5	1.5	0.0	0.1	0.7	0.6	0.1	0.2	1.9	1.6	1.7	1.7
40%	1.5	1.5	-0.2	-0.1	0.3	0.3	0.0	0.1	1.8	1.5	1.6	1.6
50%	1.5	1.5	-0.3	-0.2	0.2	0.1	-0.1	0.0	1.6	1.5	1.5	1.6
60%	1.5	1.5	-0.3	-0.2	0.0	0.0	-0.2	-0.1	1.5	1.4	1.5	1.6
70%	1.4	1.4	-0.4	-0.3	-0.1	-0.1	-0.3	-0.1	1.4	1.3	1.5	1.5
80%	1.4	1.4	-0.4	-0.3	-0.2	-0.2	-0.3	-0.1	1.3	1.3	1.5	1.5
90%	1.4	1.4	-0.5	-0.4	-0.3	-0.3	-0.4	-0.2	1.2	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.5	1.6	0.0	0.3	0.7	0.6	0.3	0.4	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.6	1.7	0.4	1.2	1.7	1.7	1.2	1.1	2.5	2.0	1.8	1.8
Above Normal (16%)	1.5	1.5	-0.1	0.2	0.8	0.5	0.0	0.1	1.9	1.6	1.6	1.6
Below Normal (13%)	1.5	1.5	-0.2	-0.2	0.2	-0.1	-0.2	0.0	1.5	1.4	1.6	1.6
Dry (24%)	1.5	1.5	-0.3	-0.3	-0.1	0.0	-0.2	0.0	1.5	1.4	1.6	1.6
Critical (15%)	1.5	1.5	-0.2	-0.2	-0.1	-0.2	-0.3	0.0	1.4	1.4	1.5	1.6

Alternative 3

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.6	1.6	0.6	1.4	2.5	2.2	1.7	1.4	2.8	2.3	2.0	1.9
20%	1.6	1.6	0.1	0.7	1.3	1.0	0.9	0.7	1.9	1.7	1.8	1.8
30%	1.6	1.5	0.0	0.3	0.8	0.5	0.4	0.4	1.7	1.5	1.7	1.7
40%	1.5	1.5	-0.1	0.1	0.6	0.3	0.3	0.2	1.6	1.5	1.6	1.6
50%	1.5	1.5	-0.2	0.0	0.2	0.2	0.1	0.2	1.5	1.4	1.5	1.6
60%	1.5	1.5	-0.3	-0.1	0.1	0.0	0.0	0.1	1.4	1.4	1.5	1.6
70%	1.4	1.4	-0.3	-0.1	0.0	-0.1	-0.1	0.1	1.4	1.3	1.5	1.6
80%	1.4	1.4	-0.4	-0.2	-0.1	-0.2	-0.2	0.0	1.3	1.3	1.5	1.5
90%	1.4	1.4	-0.4	-0.2	-0.2	-0.2	-0.3	0.0	1.2	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.5	1.6	0.0	0.5	0.8	0.6	0.5	0.5	1.7	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.6	1.7	0.5	1.4	1.8	1.7	1.4	1.2	2.2	2.0	1.9	1.9
Above Normal (16%)	1.5	1.5	0.0	0.4	0.9	0.5	0.4	0.4	1.7	1.5	1.5	1.6
Below Normal (13%)	1.5	1.5	-0.2	0.0	0.4	0.0	0.1	0.2	1.5	1.4	1.5	1.6
Dry (24%)	1.5	1.5	-0.3	-0.1	0.1	0.1	0.0	0.2	1.4	1.3	1.6	1.6
Critical (15%)	1.5	1.5	-0.2	-0.2	0.0	-0.1	-0.2	0.1	1.3	1.4	1.5	1.6

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.1	0.1	0.5	0.0	0.1	-0.1	-0.3	0.0	0.1	0.1
20%	0.0	0.0	0.1	0.1	0.0	-0.2	0.4	0.2	-0.3	-0.1	0.0	0.0
30%	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2	-0.2	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.2	0.3	0.0	0.3	0.1	-0.2	0.0	0.0	0.0
50%	0.0	0.0	0.1	0.2	0.1	0.1	0.3	0.2	-0.1	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	-0.1	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.1	0.2	0.1	0.0	0.2	0.1	-0.1	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.1	-0.3	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.1	0.2	0.1	0.0	0.3	0.2	-0.1	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.2	0.1	0.0	0.3	0.2	0.0	0.0	-0.1	0.0
Dry (24%)	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-41-2-6. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.6	1.6	0.5	1.2	2.0	2.2	1.6	1.4	3.1	2.3	1.9	1.8
20%	1.6	1.6	0.0	0.6	1.3	1.1	0.5	0.5	2.2	1.7	1.8	1.7
30%	1.5	1.5	0.0	0.1	0.7	0.6	0.1	0.2	1.9	1.6	1.7	1.7
40%	1.5	1.5	-0.2	-0.1	0.3	0.3	0.0	0.1	1.8	1.5	1.6	1.6
50%	1.5	1.5	-0.3	-0.2	0.2	0.1	-0.1	0.0	1.6	1.5	1.5	1.6
60%	1.5	1.5	-0.3	-0.2	0.0	0.0	-0.2	-0.1	1.5	1.4	1.5	1.6
70%	1.4	1.4	-0.4	-0.3	-0.1	-0.1	-0.3	-0.1	1.4	1.3	1.5	1.5
80%	1.4	1.4	-0.4	-0.3	-0.2	-0.2	-0.3	-0.1	1.3	1.3	1.5	1.5
90%	1.4	1.4	-0.5	-0.4	-0.3	-0.3	-0.4	-0.2	1.2	1.2	1.4	1.5
Long Term												
Full Simulation Period[b]	1.5	1.6	0.0	0.3	0.7	0.6	0.3	0.4	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.6	1.7	0.4	1.2	1.7	1.7	1.2	1.1	2.5	2.0	1.8	1.8
Above Normal (16%)	1.5	1.5	-0.1	0.2	0.8	0.5	0.0	0.1	1.9	1.6	1.6	1.6
Below Normal (13%)	1.5	1.5	-0.2	-0.2	0.2	-0.1	-0.2	0.0	1.5	1.4	1.6	1.6
Dry (24%)	1.5	1.5	-0.3	-0.3	-0.1	0.0	-0.2	0.0	1.5	1.4	1.6	1.6
Critical (15%)	1.5	1.5	-0.2	-0.2	-0.1	-0.2	-0.3	0.0	1.4	1.4	1.5	1.6

Alternative 5

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.8	1.7	0.6	1.1	1.8	1.9	1.8	1.6	2.8	2.3	1.8	1.8
20%	1.7	1.6	0.1	0.7	1.3	1.0	1.2	1.0	2.0	1.7	1.8	1.8
30%	1.7	1.6	0.0	0.3	0.8	0.6	0.7	0.7	1.9	1.6	1.7	1.7
40%	1.7	1.5	-0.1	0.1	0.6	0.3	0.5	0.5	1.7	1.5	1.6	1.7
50%	1.6	1.5	-0.2	0.0	0.3	0.2	0.4	0.4	1.7	1.4	1.5	1.6
60%	1.6	1.5	-0.2	-0.1	0.1	0.1	0.3	0.4	1.5	1.4	1.5	1.6
70%	1.6	1.5	-0.3	-0.1	0.1	-0.1	0.1	0.3	1.5	1.3	1.5	1.6
80%	1.5	1.4	-0.4	-0.2	0.0	-0.1	0.0	0.2	1.4	1.3	1.4	1.5
90%	1.5	1.4	-0.5	-0.2	-0.2	-0.2	-0.1	0.1	1.3	1.1	1.4	1.5
Long Term												
Full Simulation Period[b]	1.6	1.6	0.0	0.5	0.8	0.6	0.7	0.7	1.8	1.6	1.6	1.7
Water Year Types[c]												
Wet (32%)	1.7	1.7	0.5	1.4	1.8	1.7	1.6	1.5	2.3	2.0	1.8	1.8
Above Normal (16%)	1.6	1.5	0.0	0.4	0.9	0.5	0.7	0.7	1.9	1.5	1.5	1.6
Below Normal (13%)	1.7	1.6	-0.2	0.0	0.3	0.0	0.3	0.4	1.6	1.4	1.5	1.6
Dry (24%)	1.6	1.5	-0.3	-0.1	0.1	0.1	0.2	0.4	1.5	1.3	1.5	1.6
Critical (15%)	1.6	1.5	-0.2	-0.2	0.0	-0.1	0.0	0.2	1.4	1.3	1.5	1.6

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.2	0.0	0.1	-0.1	-0.2	-0.2	0.2	0.2	-0.3	0.0	-0.1	0.0
20%	0.2	0.1	0.1	0.2	0.0	-0.1	0.7	0.5	-0.1	-0.1	0.0	0.0
30%	0.1	0.0	0.0	0.2	0.0	0.0	0.6	0.5	0.0	0.0	0.0	0.0
40%	0.1	0.0	0.1	0.2	0.2	0.0	0.6	0.4	0.0	0.0	0.0	0.0
50%	0.2	0.0	0.1	0.2	0.1	0.1	0.6	0.4	0.1	0.0	0.0	0.0
60%	0.1	0.0	0.1	0.2	0.2	0.1	0.5	0.4	0.0	0.0	0.0	0.0
70%	0.1	0.0	0.0	0.2	0.2	0.1	0.4	0.4	0.1	0.0	0.0	0.0
80%	0.1	0.0	0.0	0.1	0.2	0.1	0.3	0.4	0.1	-0.1	0.0	0.0
90%	0.1	0.0	0.0	0.1	0.1	0.1	0.3	0.3	0.0	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.1	0.0	0.0	0.2	0.1	0.1	0.4	0.4	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.2	0.0	0.1	0.1	0.1	0.0	0.4	0.4	-0.2	0.0	0.0	0.0
Above Normal (16%)	0.1	0.0	0.0	0.2	0.1	0.0	0.6	0.5	0.0	0.0	0.0	0.0
Below Normal (13%)	0.2	0.1	0.0	0.2	0.1	0.1	0.5	0.4	0.1	0.0	0.0	0.0
Dry (24%)	0.1	0.0	0.0	0.1	0.2	0.1	0.4	0.3	0.0	-0.1	0.0	0.0
Critical (15%)	0.1	0.0	0.0	0.1	0.1	0.1	0.3	0.2	0.0	-0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

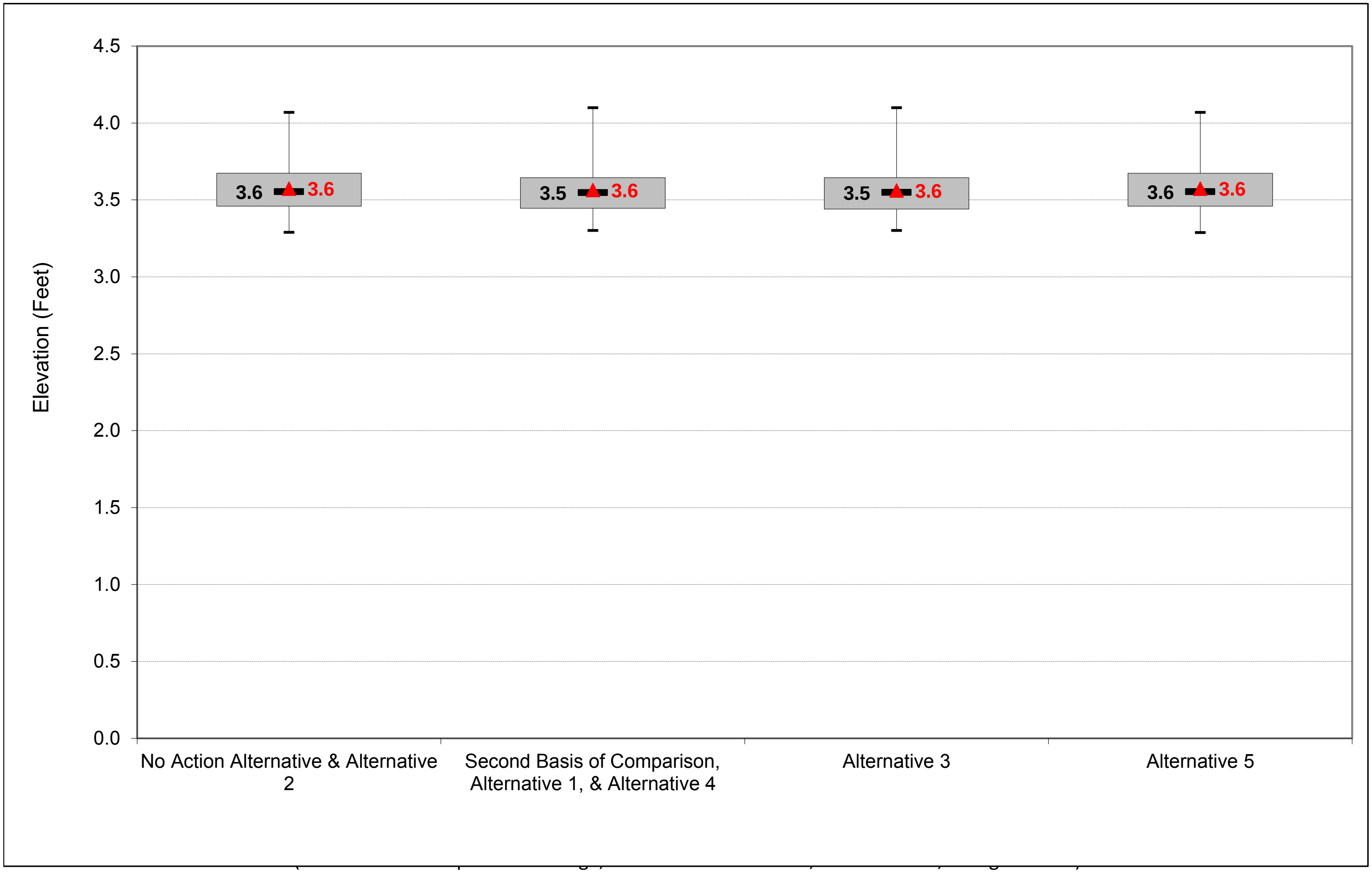
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

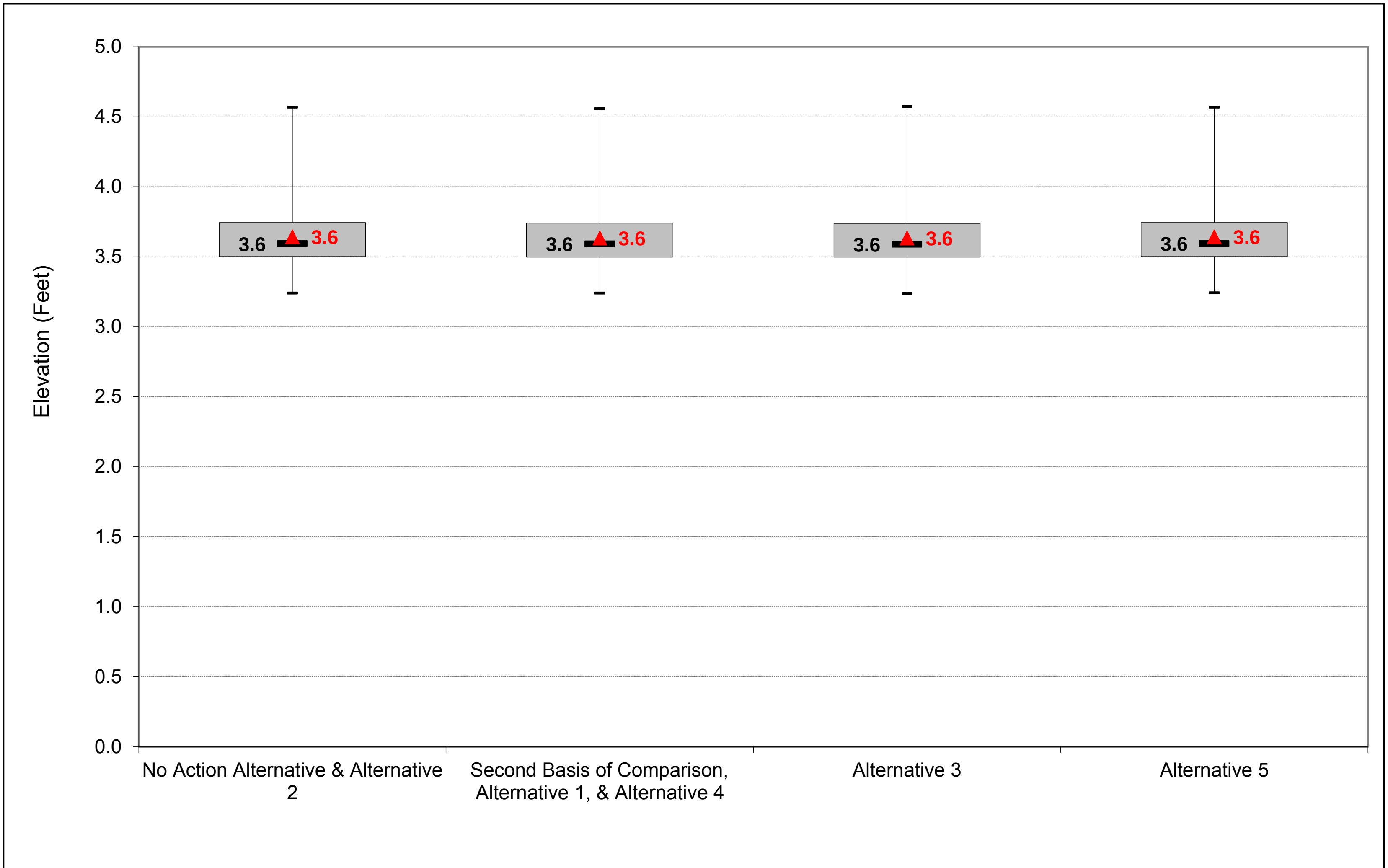
C.42. Mokelumne River at Terminous Water Surface Elevation

Figure C-42-1-1. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, October



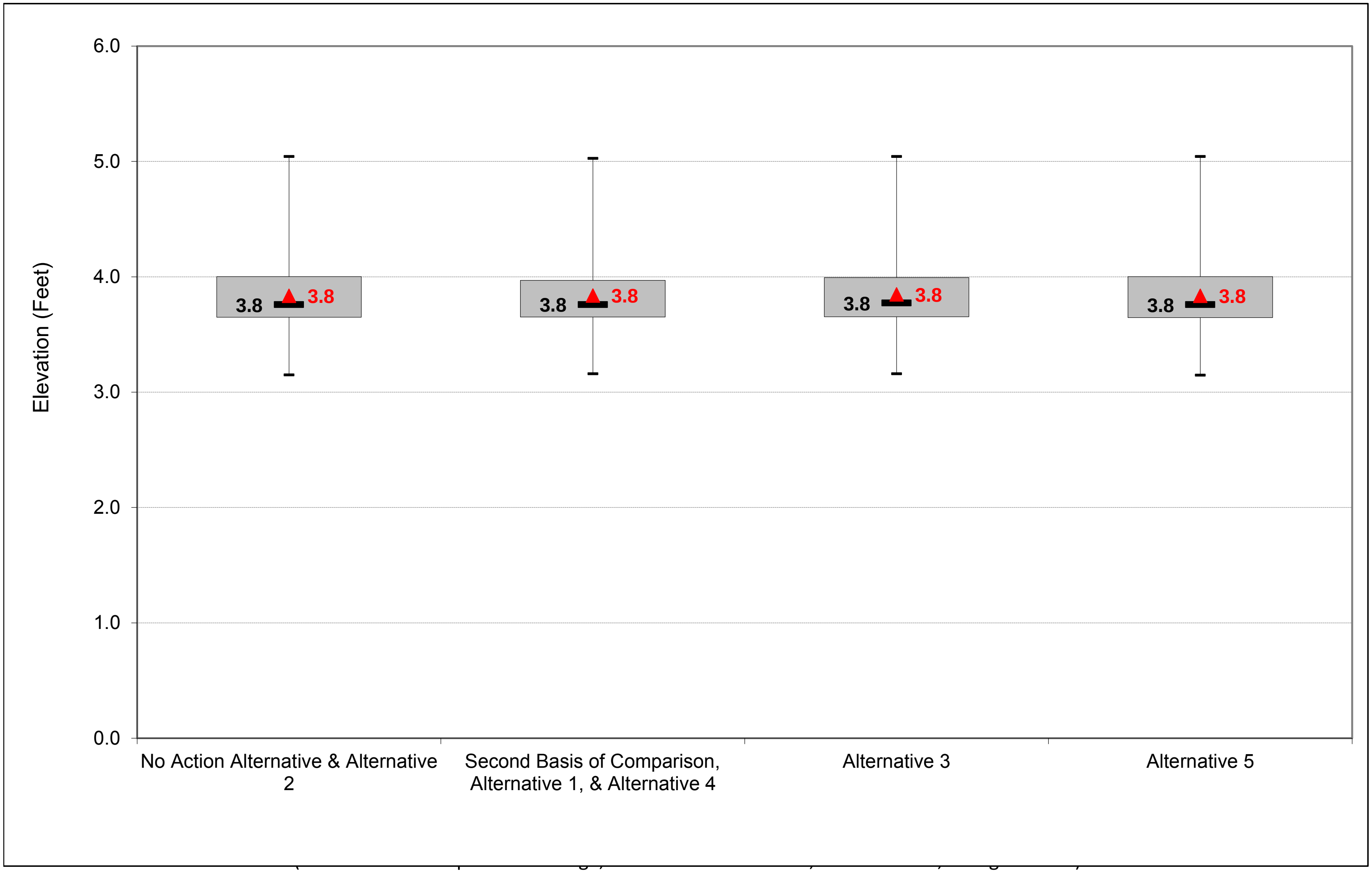
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-2. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, November



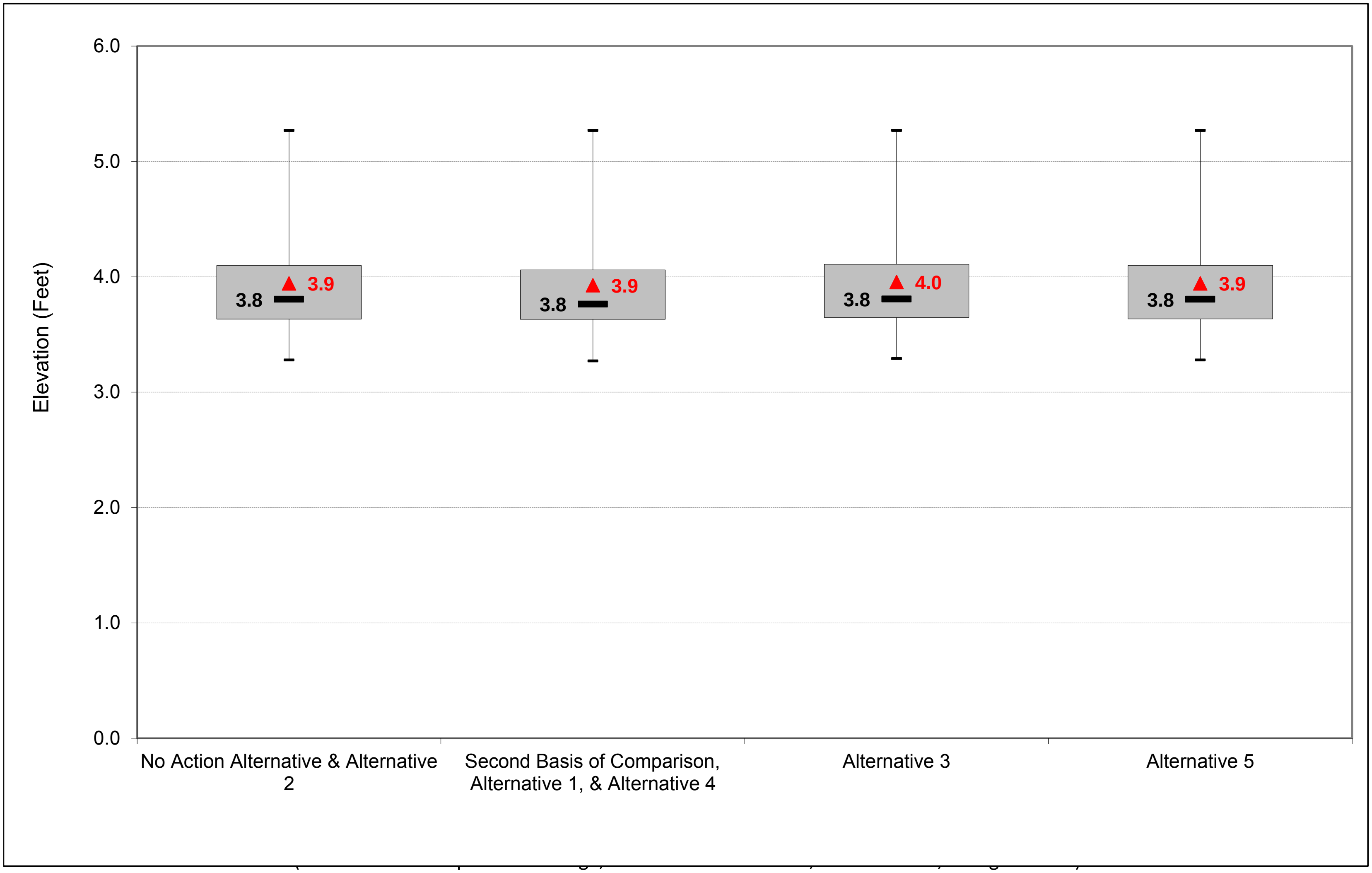
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-3. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, December



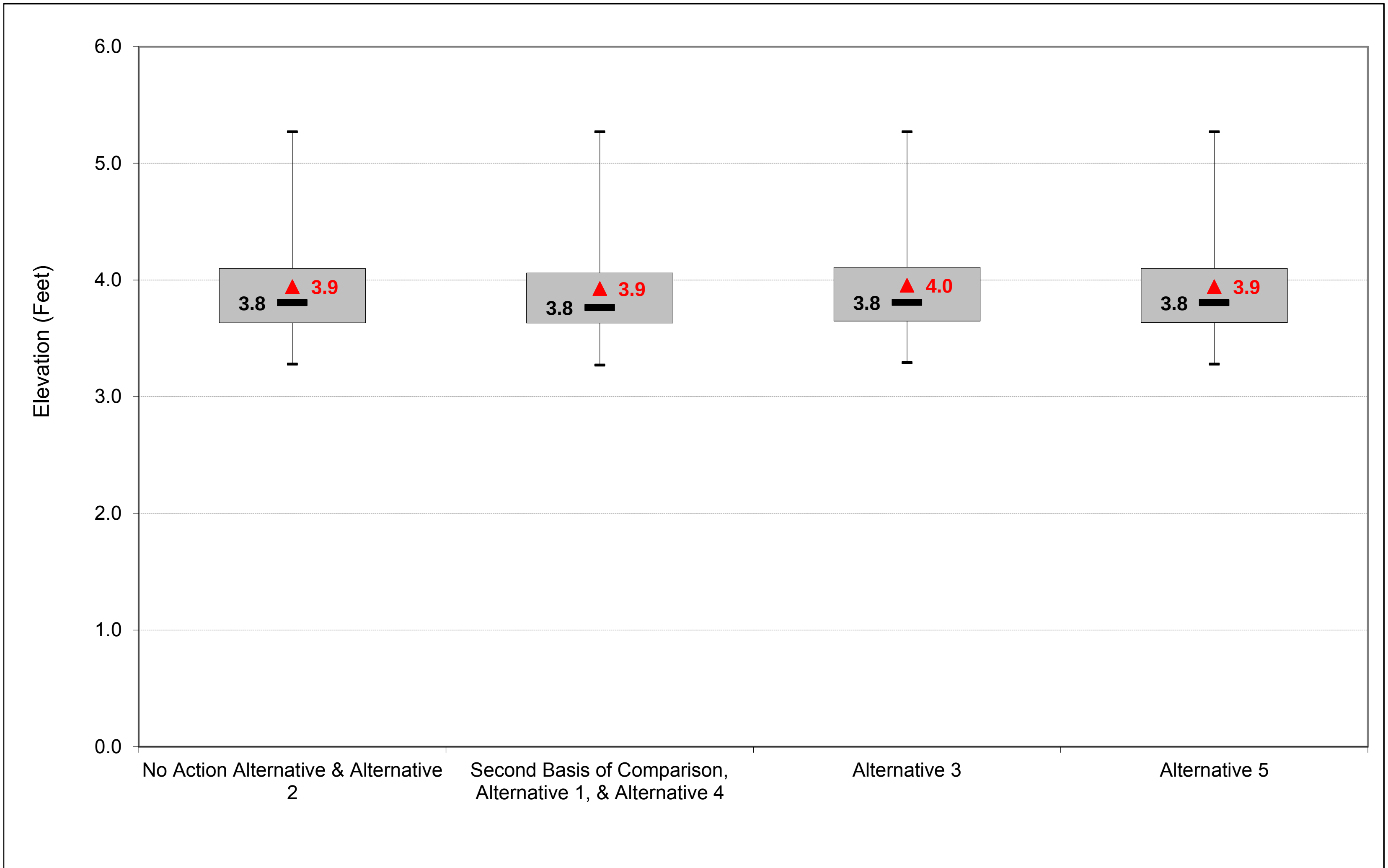
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-4. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, January



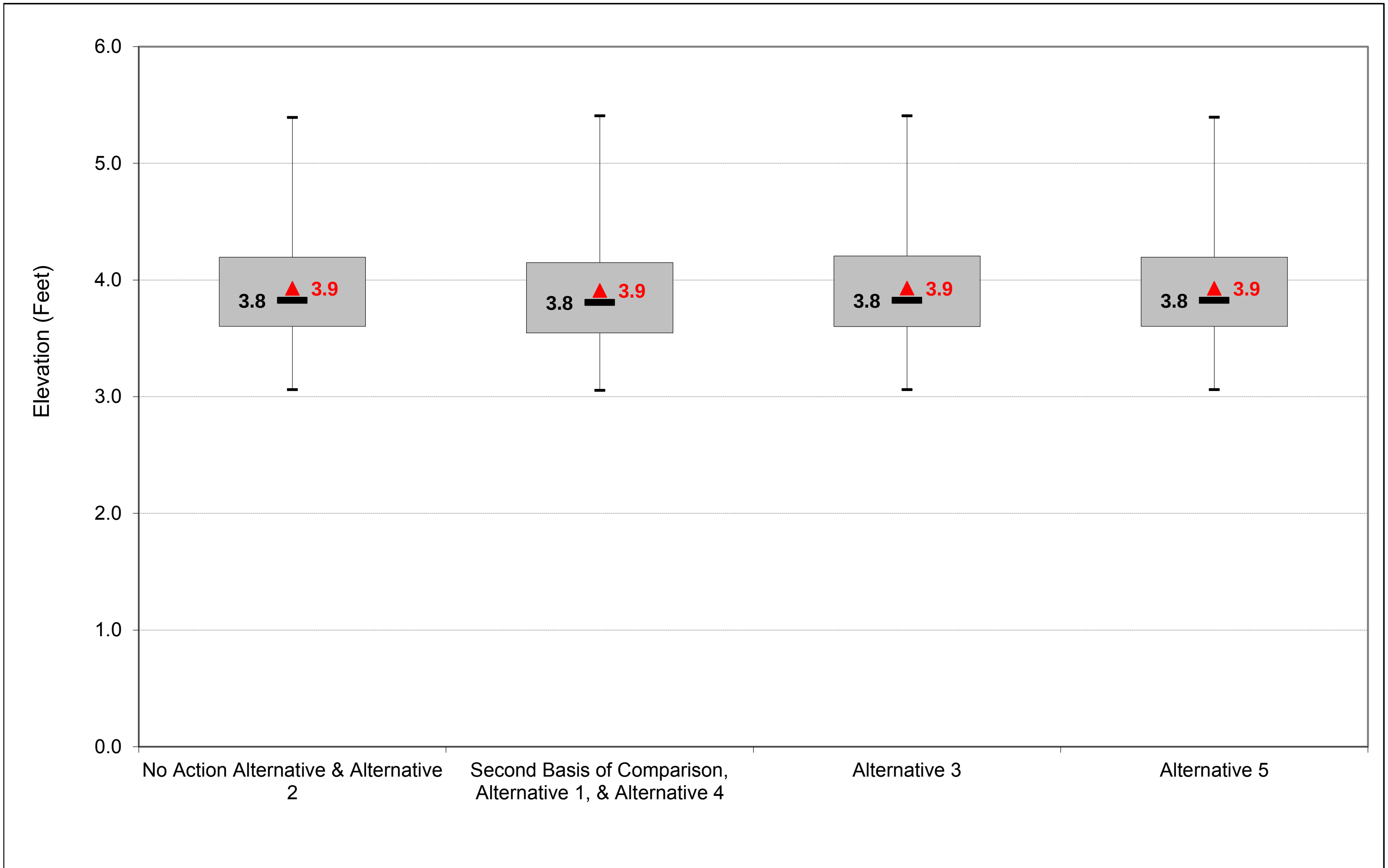
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-5. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, February



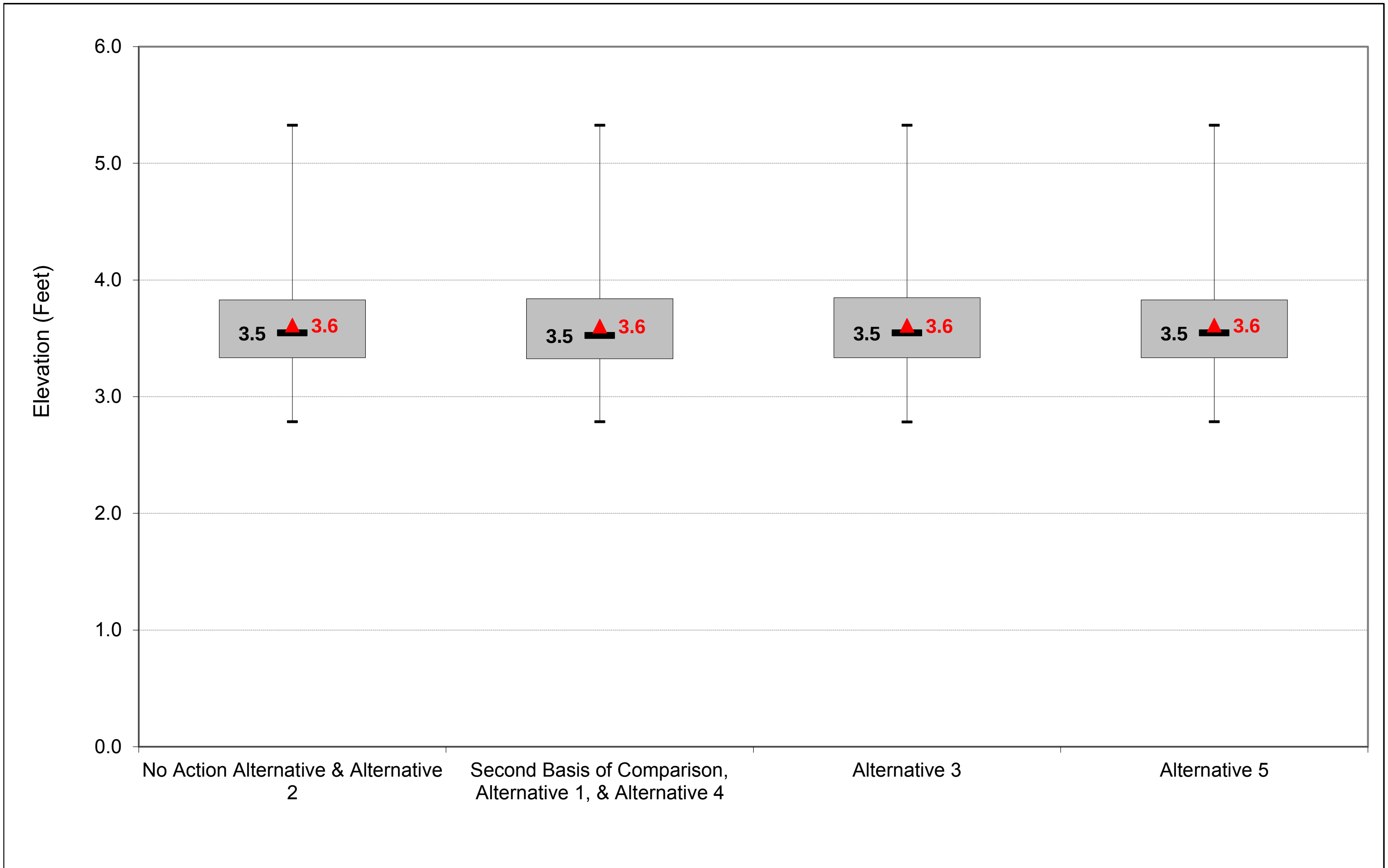
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-6. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, March



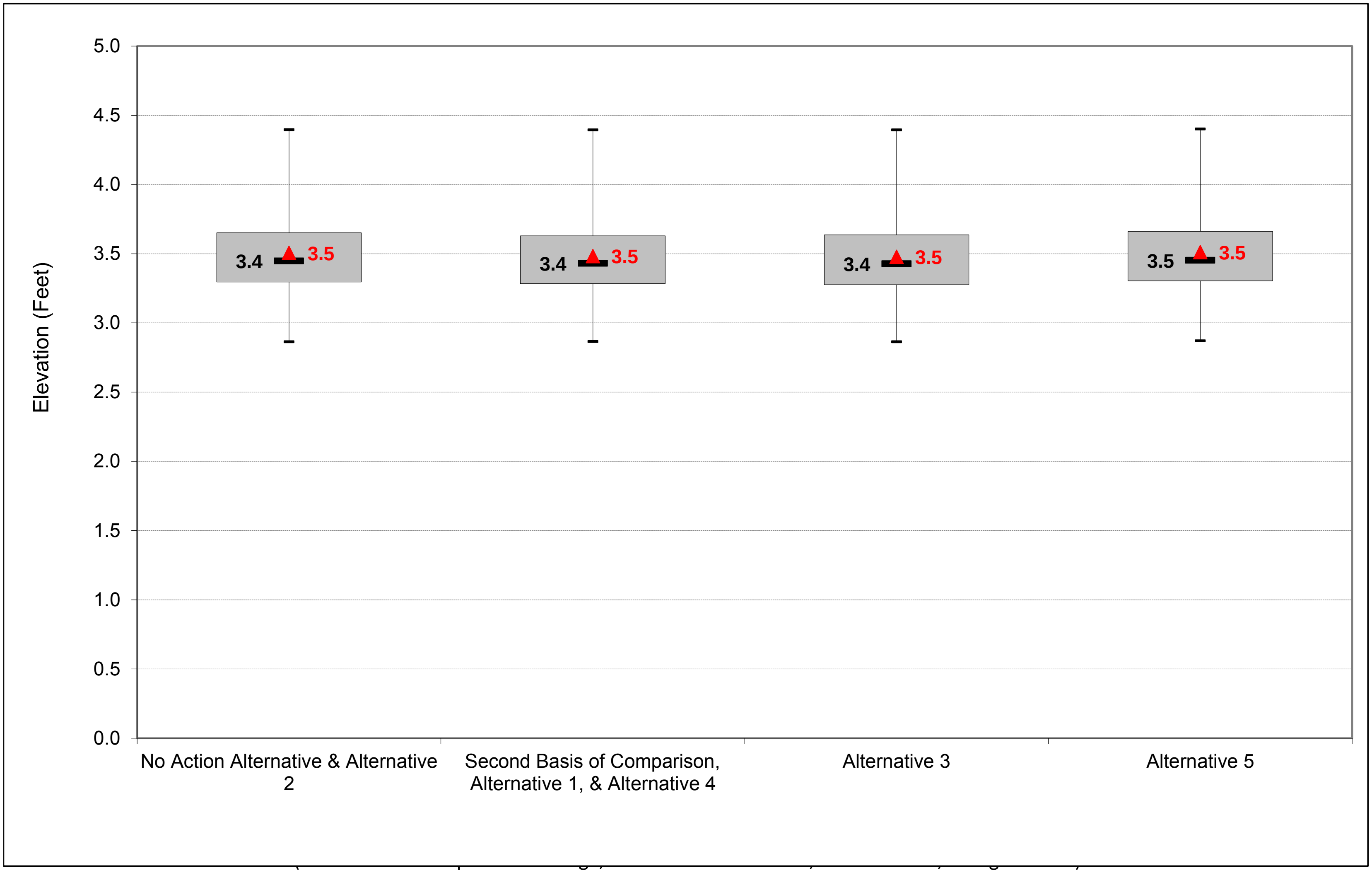
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-7. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, April



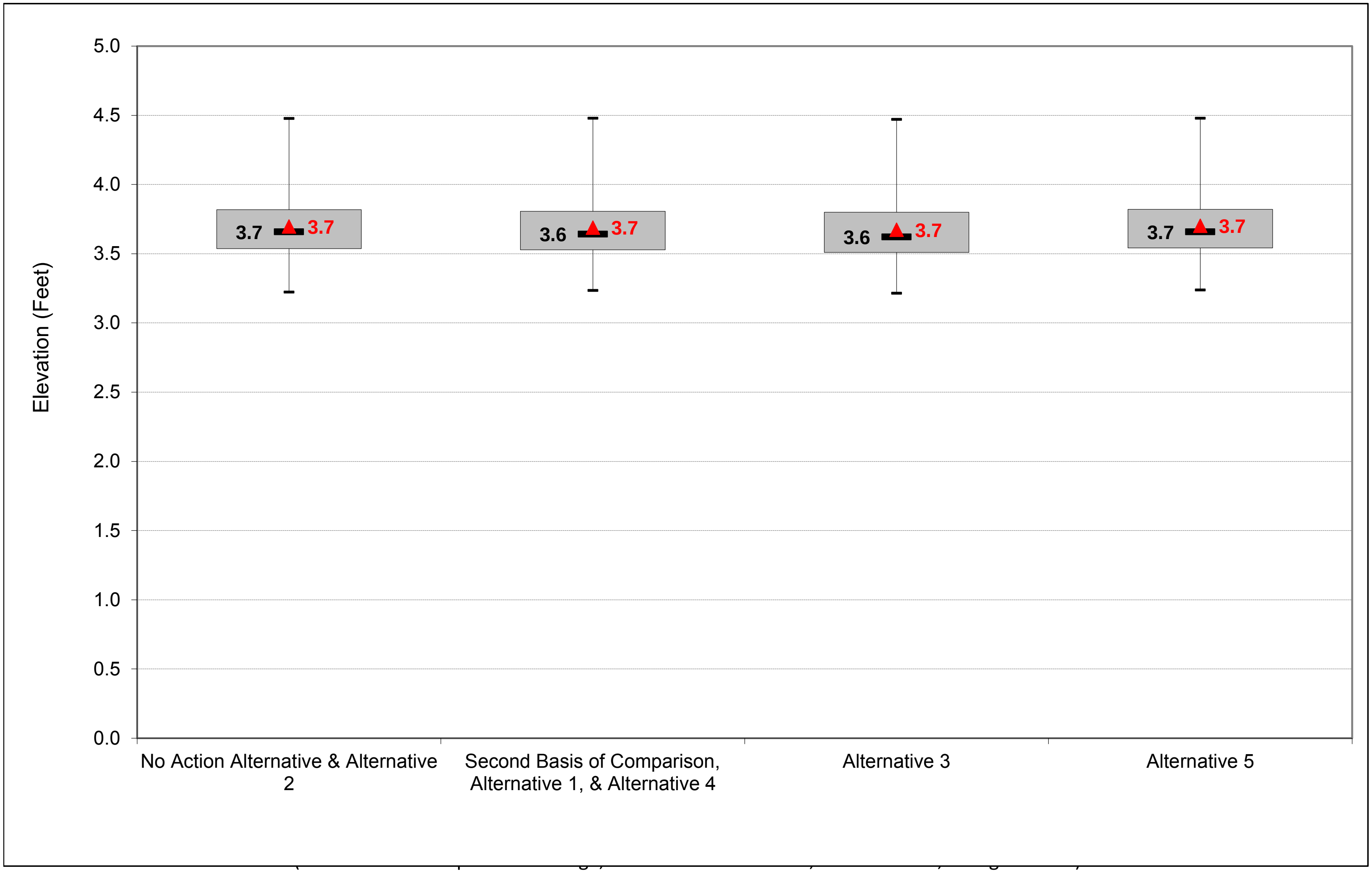
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-8. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, May



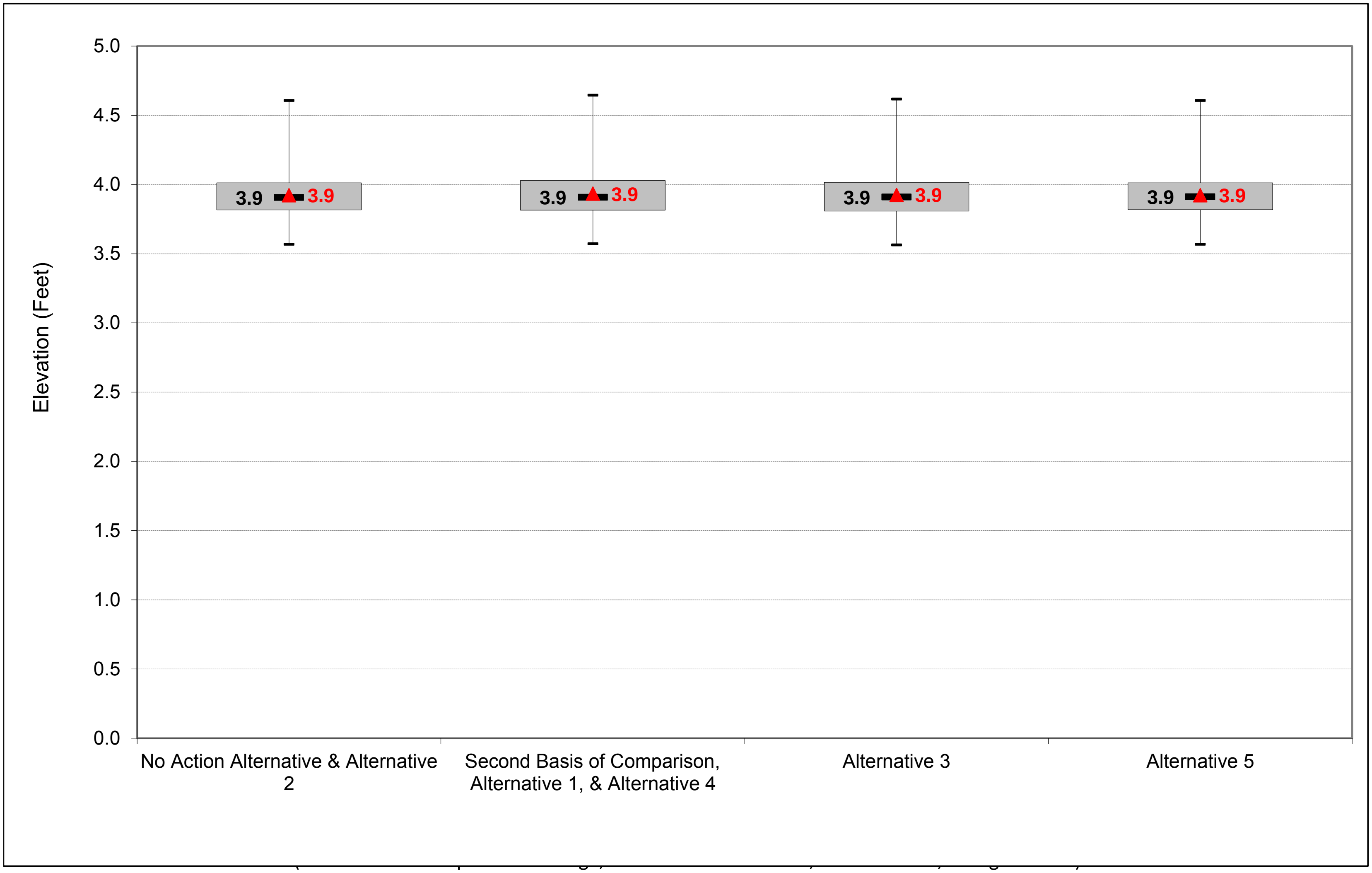
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-9. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, June



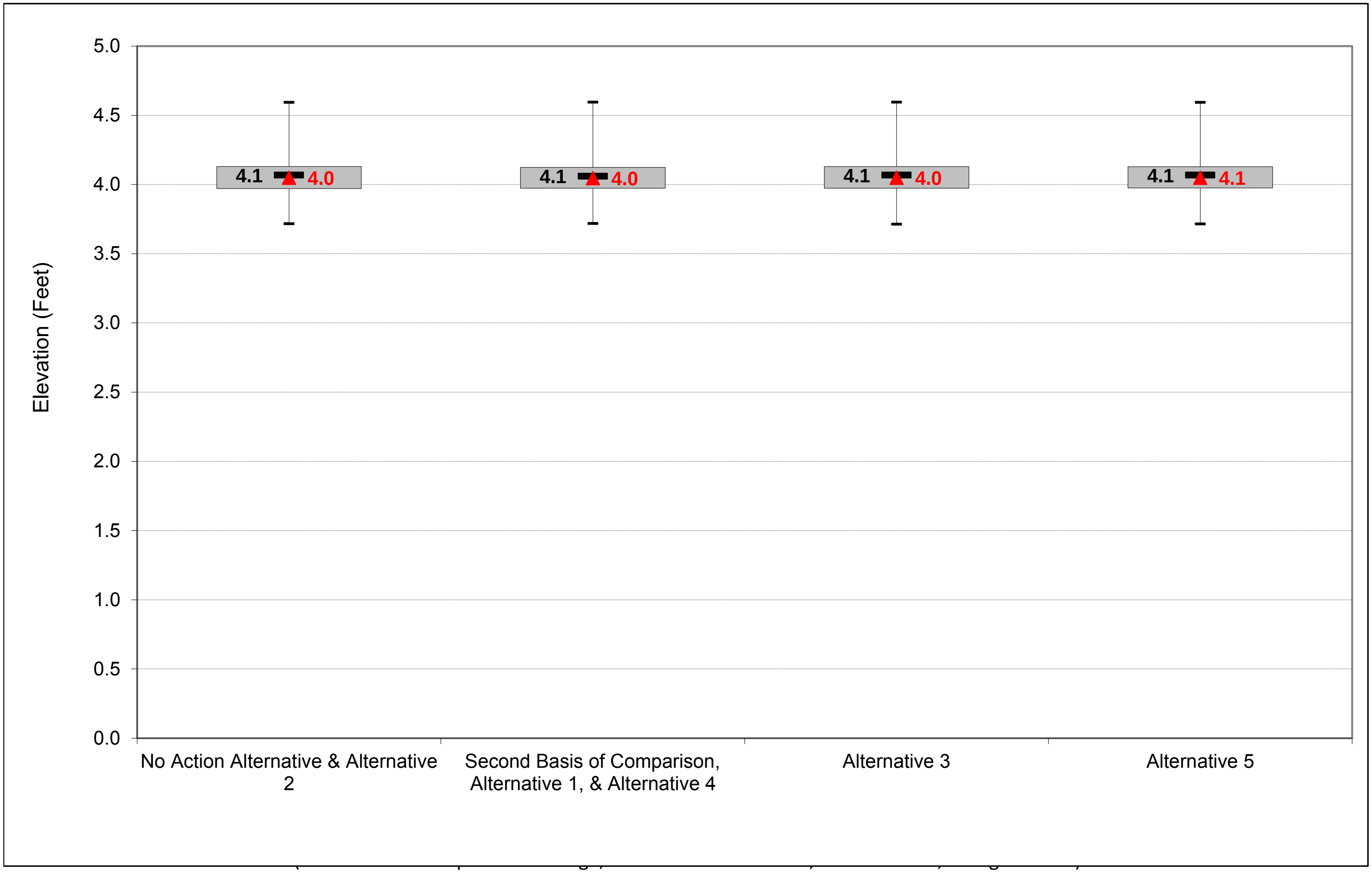
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-10. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, July



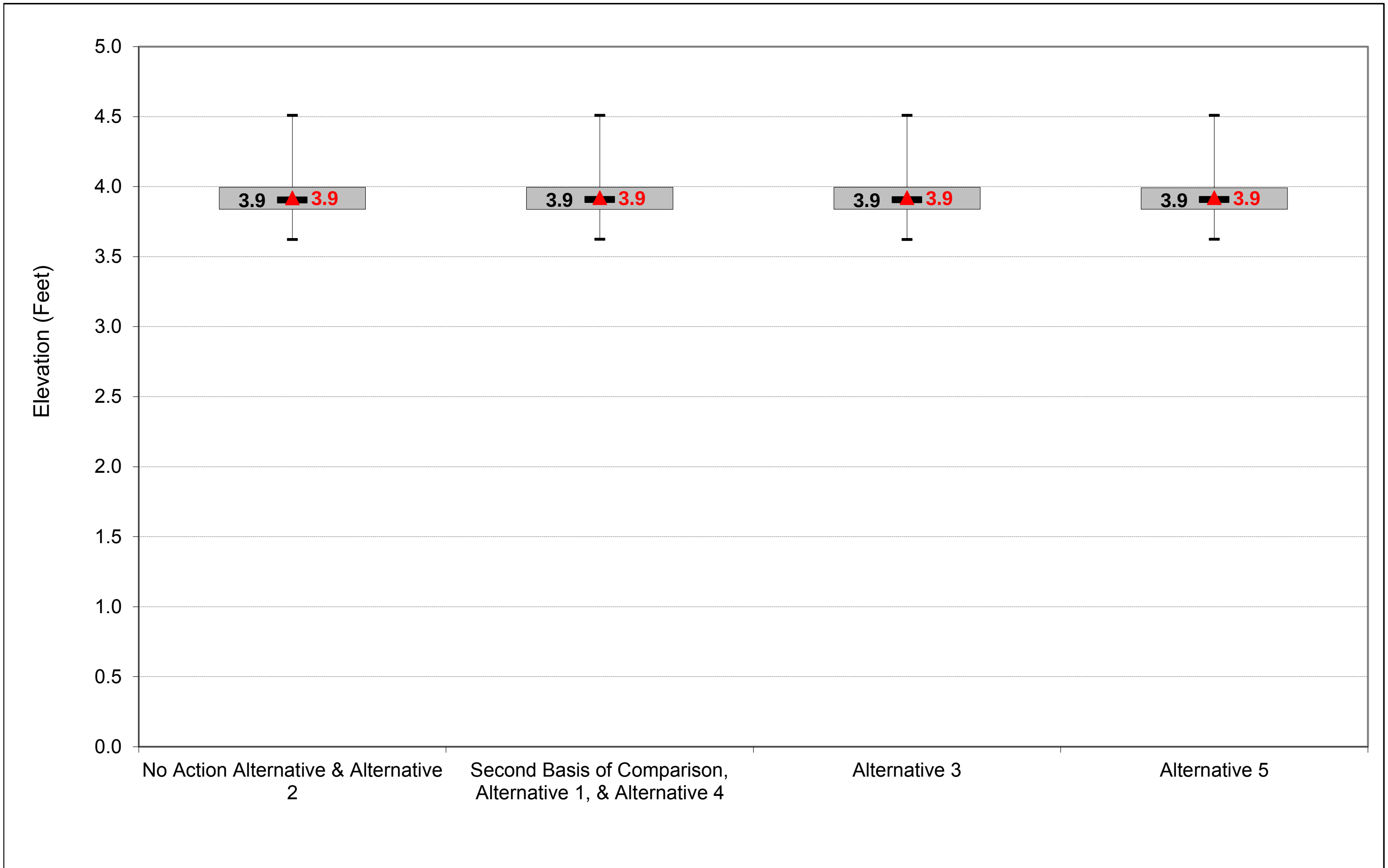
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-11. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-1-12. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-1-1. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.7	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.1	4.2	4.1	4.0
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.0	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.6	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
60%	3.5	3.6	3.7	3.8	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.6	3.8	4.0	3.8	3.7
80%	3.4	3.5	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.9	4.0	4.1	3.9	3.9
Above Normal (16%)	3.6	3.6	3.8	4.0	4.2	3.7	3.5	3.7	3.9	4.1	3.9	3.8
Below Normal (13%)	3.6	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.4	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.8	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.2	4.2	4.1	3.9
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.1	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.6	3.9	4.1	3.9	3.8
60%	3.5	3.5	3.7	3.7	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.5	3.8	4.0	3.8	3.7
80%	3.4	3.4	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.8	4.0	4.1	3.9	3.8
Above Normal (16%)	3.6	3.6	3.8	4.0	4.1	3.7	3.5	3.7	3.9	4.0	3.9	3.7
Below Normal (13%)	3.5	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.3	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**
20%	**0.0**	**0.0**	0.0	**-0.1**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**
30%	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	**0.0**
40%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**
50%	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**
60%	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**
70%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**
80%	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	0.0	**0.0**
90%	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	**0.0**
Long Term												
Full Simulation Period[b]	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**
Water Year Types[c]												
Wet (32%)	**0.0**	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**
Above Normal (16%)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**
Below Normal (13%)	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**
Dry (24%)	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	0.0	0.0
Critical (15%)	**0.0**	**0.0**	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-1-2. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.7	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.1	4.2	4.1	4.0
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.0	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.6	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
60%	3.5	3.6	3.7	3.8	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.6	3.8	4.0	3.8	3.7
80%	3.4	3.5	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.9	4.0	4.1	3.9	3.9
Above Normal (16%)	3.6	3.6	3.8	4.0	4.2	3.7	3.5	3.7	3.9	4.1	3.9	3.8
Below Normal (13%)	3.6	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.4	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 3

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.8	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.1	4.2	4.1	3.9
20%	3.7	3.8	4.2	4.3	4.3	3.9	3.7	3.9	4.0	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.6	3.9	4.1	3.9	3.8
60%	3.5	3.5	3.7	3.8	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.5	3.8	4.0	3.8	3.7
80%	3.4	3.4	3.6	3.6	3.5	3.3	3.2	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	4.0	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.8	4.0	4.1	3.9	3.8
Above Normal (16%)	3.6	3.6	3.8	4.1	4.2	3.7	3.5	3.7	3.9	4.0	3.9	3.7
Below Normal (13%)	3.5	3.6	3.8	3.8	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.4	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 3 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-1-3. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.7	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.1	4.2	4.1	4.0
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.0	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.6	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
60%	3.5	3.6	3.7	3.8	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.6	3.8	4.0	3.8	3.7
80%	3.4	3.5	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.9	4.0	4.1	3.9	3.9
Above Normal (16%)	3.6	3.6	3.8	4.0	4.2	3.7	3.5	3.7	3.9	4.1	3.9	3.8
Below Normal (13%)	3.6	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.4	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 5

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.7	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.1	4.2	4.1	4.0
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.0	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.6	3.6	3.8	3.8	3.8	3.5	3.5	3.7	3.9	4.1	3.9	3.8
60%	3.5	3.6	3.7	3.8	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.6	3.8	4.0	3.8	3.7
80%	3.4	3.5	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.9	4.0	4.1	3.9	3.9
Above Normal (16%)	3.6	3.7	3.8	4.0	4.2	3.7	3.5	3.7	3.9	4.1	3.9	3.8
Below Normal (13%)	3.6	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.4	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.4	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 5 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**
20%	0.0	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**	0.0	**0.0**	0.0
30%	**0.0**	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0
40%	**0.0**	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	**0.0**	0.0
50%	**0.0**	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	**0.0**	0.0	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**
70%	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	0.0	**0.0**	0.0	**0.0**	**0.0**
80%	**0.0**	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	0.0	0.0
90%	0.0	0.0	0.0	**0.0**	0.0	**0.0**	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	**0.0**	0.0
Above Normal (16%)	**0.0**	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	**0.0**	0.0	**0.0**
Below Normal (13%)	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	0.0	0.0
Dry (24%)	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	**0.0**	0.0	0.0
Critical (15%)	**0.0**	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-1-4. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.8	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.2	4.2	4.1	3.9
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.1	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.6	3.9	4.1	3.9	3.8
60%	3.5	3.5	3.7	3.7	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.5	3.8	4.0	3.8	3.7
80%	3.4	3.4	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.8	4.0	4.1	3.9	3.8
Above Normal (16%)	3.6	3.6	3.8	4.0	4.1	3.7	3.5	3.7	3.9	4.0	3.9	3.7
Below Normal (13%)	3.5	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.3	3.4	3.6	3.9	4.0	3.9	3.7

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.7	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.1	4.2	4.1	4.0
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.0	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.6	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
60%	3.5	3.6	3.7	3.8	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.6	3.8	4.0	3.8	3.7
80%	3.4	3.5	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.9	4.0	4.1	3.9	3.9
Above Normal (16%)	3.6	3.6	3.8	4.0	4.2	3.7	3.5	3.7	3.9	4.1	3.9	3.8
Below Normal (13%)	3.6	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.4	3.4	3.6	3.9	4.0	3.9	3.7

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-1-5. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.8	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.2	4.2	4.1	3.9
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.1	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.6	3.9	4.1	3.9	3.8
60%	3.5	3.5	3.7	3.7	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.5	3.8	4.0	3.8	3.7
80%	3.4	3.4	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.8	4.0	4.1	3.9	3.8
Above Normal (16%)	3.6	3.6	3.8	4.0	4.1	3.7	3.5	3.7	3.9	4.0	3.9	3.7
Below Normal (13%)	3.5	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.3	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 3

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.8	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.1	4.2	4.1	3.9
20%	3.7	3.8	4.2	4.3	4.3	3.9	3.7	3.9	4.0	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.6	3.9	4.1	3.9	3.8
60%	3.5	3.5	3.7	3.8	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.5	3.8	4.0	3.8	3.7
80%	3.4	3.4	3.6	3.6	3.5	3.3	3.2	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	4.0	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.8	4.0	4.1	3.9	3.8
Above Normal (16%)	3.6	3.6	3.8	4.1	4.2	3.7	3.5	3.7	3.9	4.0	3.9	3.7
Below Normal (13%)	3.5	3.6	3.8	3.8	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.4	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-1-6. Mokelumne River at Terminous, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.8	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.2	4.2	4.1	3.9
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.1	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.0	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.6	3.9	4.1	3.9	3.8
60%	3.5	3.5	3.7	3.7	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.5	3.8	4.0	3.8	3.7
80%	3.4	3.4	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.0	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.8	4.0	4.1	3.9	3.8
Above Normal (16%)	3.6	3.6	3.8	4.0	4.1	3.7	3.5	3.7	3.9	4.0	3.9	3.7
Below Normal (13%)	3.5	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.3	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.3	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.7	3.9	4.3	4.6	4.6	4.2	3.9	4.0	4.1	4.2	4.1	4.0
20%	3.7	3.8	4.1	4.3	4.3	3.9	3.7	3.9	4.0	4.1	4.0	3.9
30%	3.6	3.7	3.9	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.9
40%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
50%	3.6	3.6	3.8	3.8	3.8	3.5	3.5	3.7	3.9	4.1	3.9	3.8
60%	3.5	3.6	3.7	3.8	3.7	3.4	3.4	3.6	3.9	4.0	3.9	3.7
70%	3.5	3.5	3.7	3.7	3.6	3.4	3.3	3.6	3.8	4.0	3.8	3.7
80%	3.4	3.5	3.6	3.6	3.5	3.3	3.3	3.5	3.8	3.9	3.8	3.6
90%	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.4	3.7	3.9	3.8	3.6
Long Term												
Full Simulation Period[b]	3.6	3.6	3.8	3.9	3.9	3.6	3.5	3.7	3.9	4.1	3.9	3.8
Water Year Types[c]												
Wet (32%)	3.6	3.7	4.1	4.3	4.2	3.9	3.7	3.9	4.0	4.1	3.9	3.9
Above Normal (16%)	3.6	3.7	3.8	4.0	4.2	3.7	3.5	3.7	3.9	4.1	3.9	3.8
Below Normal (13%)	3.6	3.6	3.8	3.7	3.8	3.3	3.4	3.6	3.9	4.0	3.9	3.8
Dry (24%)	3.5	3.5	3.6	3.7	3.6	3.5	3.4	3.6	3.9	4.0	3.9	3.7
Critical (15%)	3.6	3.6	3.7	3.7	3.6	3.4	3.4	3.6	3.9	4.0	3.9	3.7

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

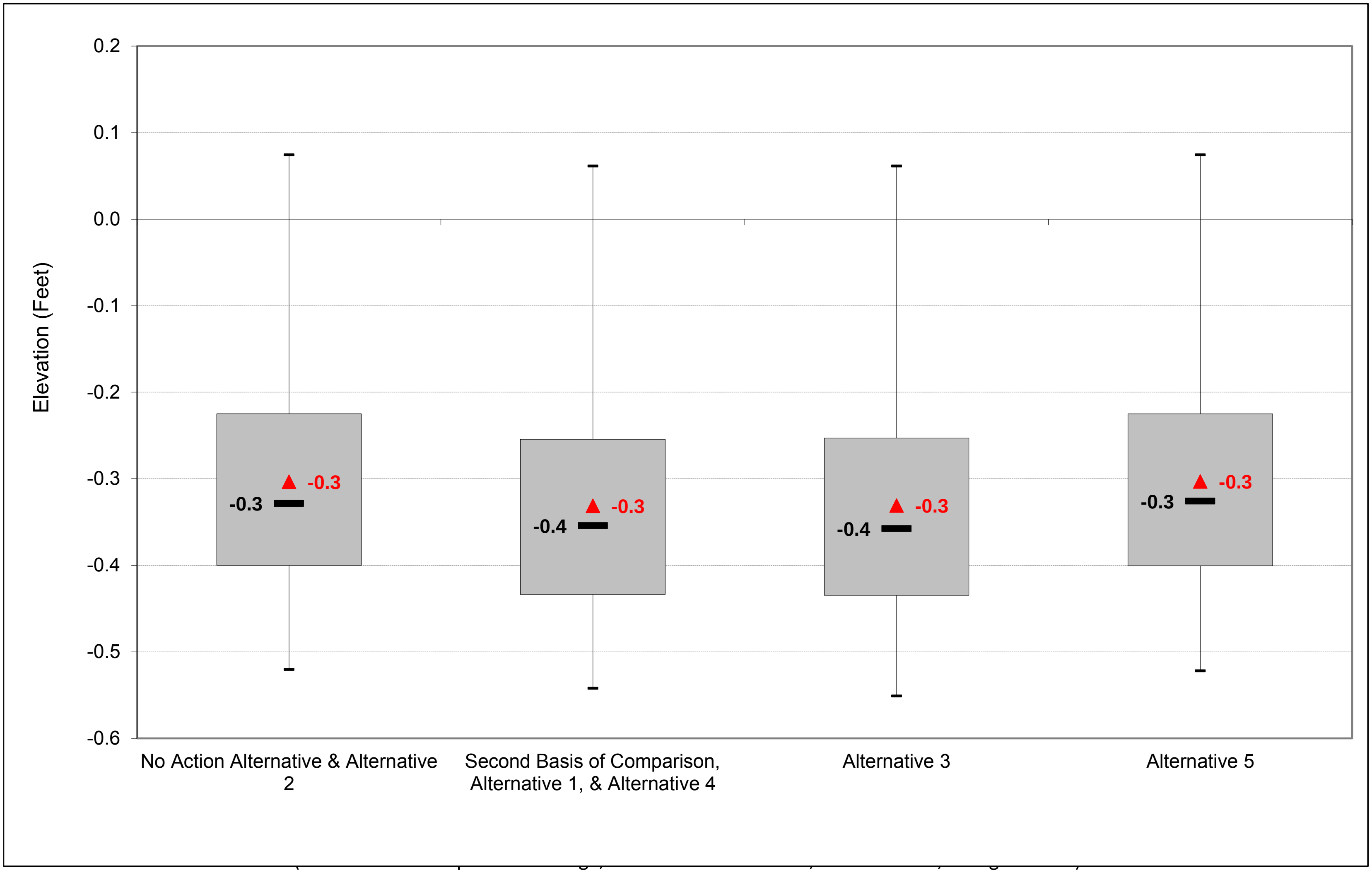
a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

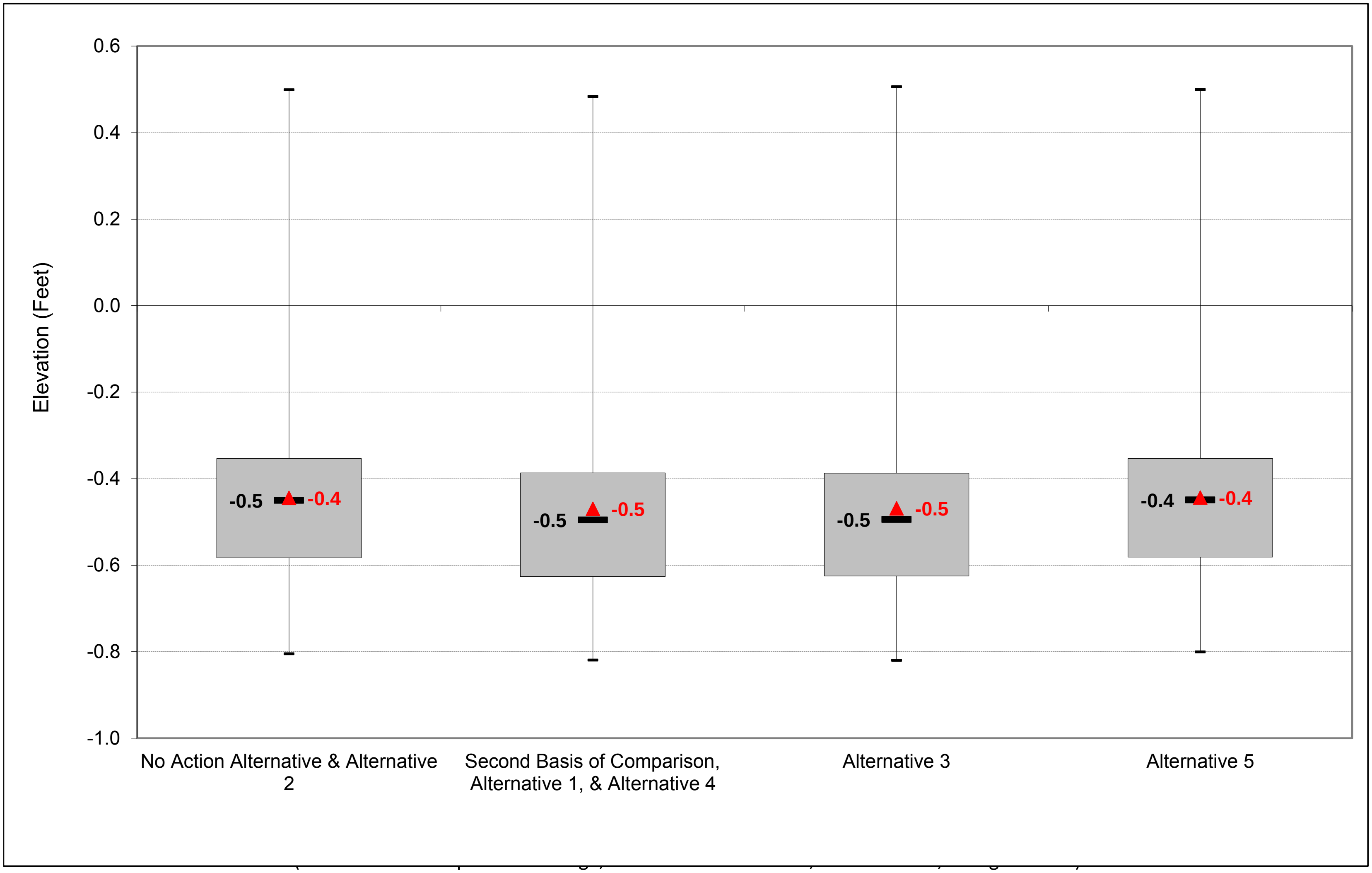
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-1. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, October



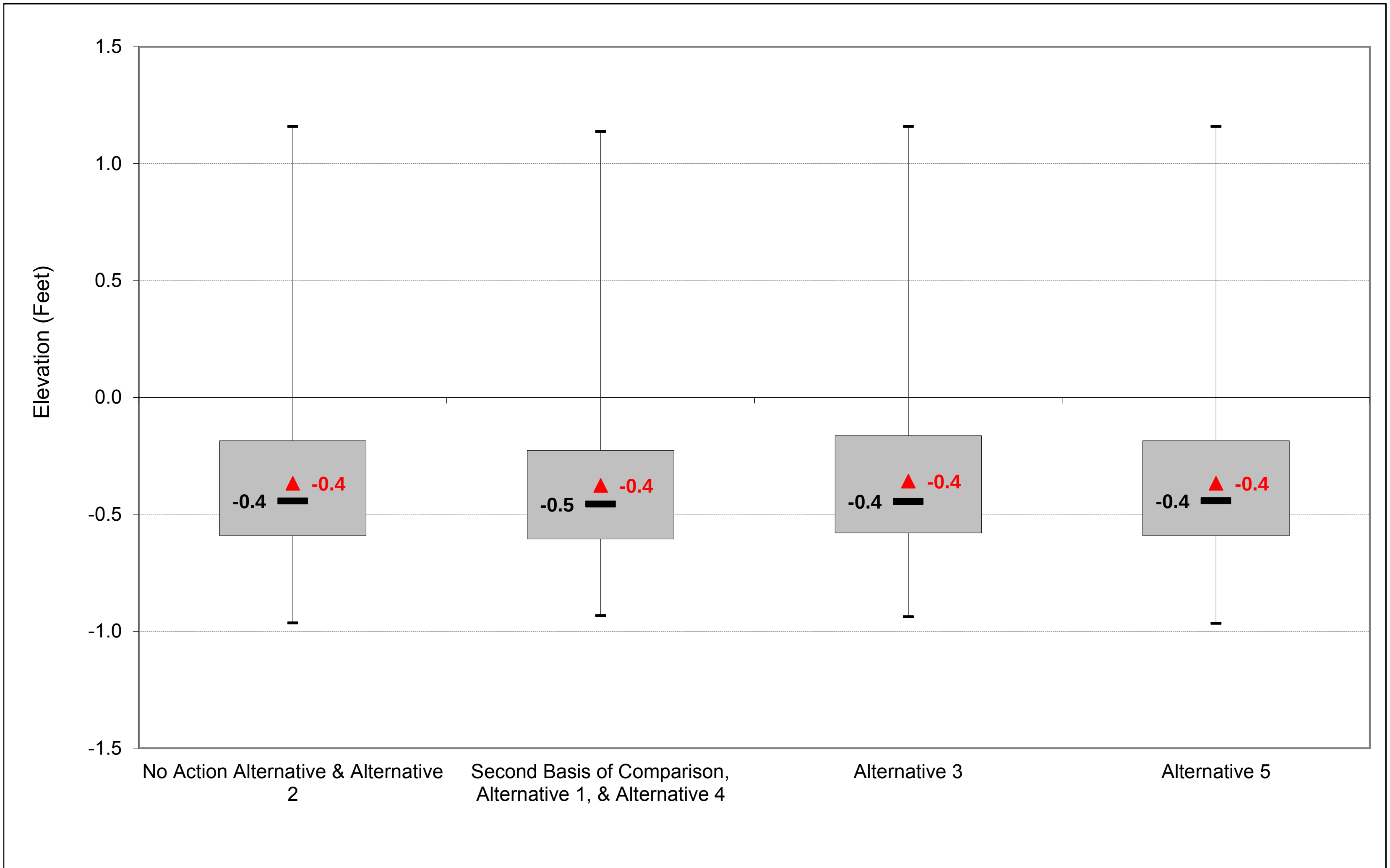
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-2. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, November



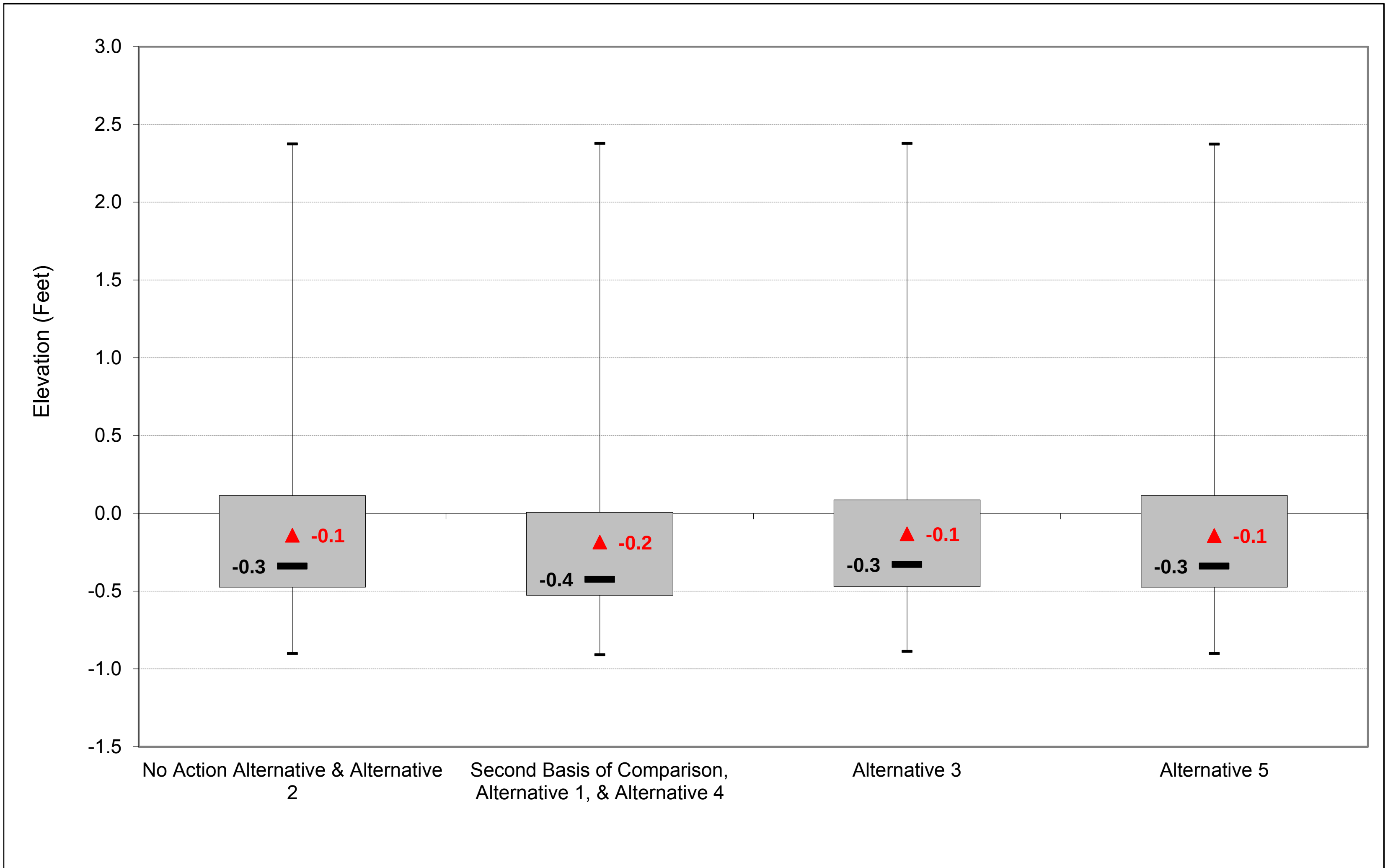
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-3. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, December



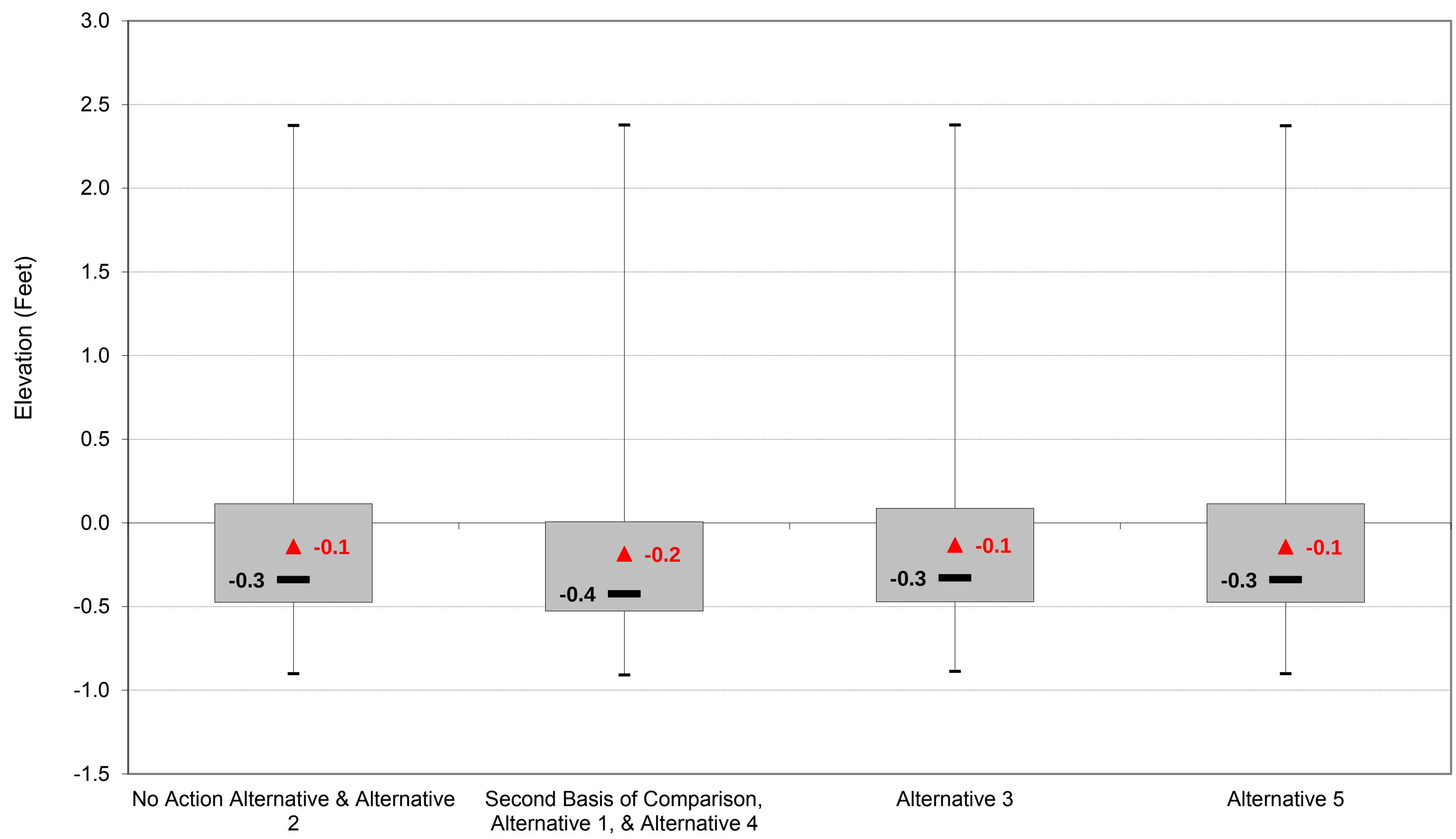
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-4. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, January



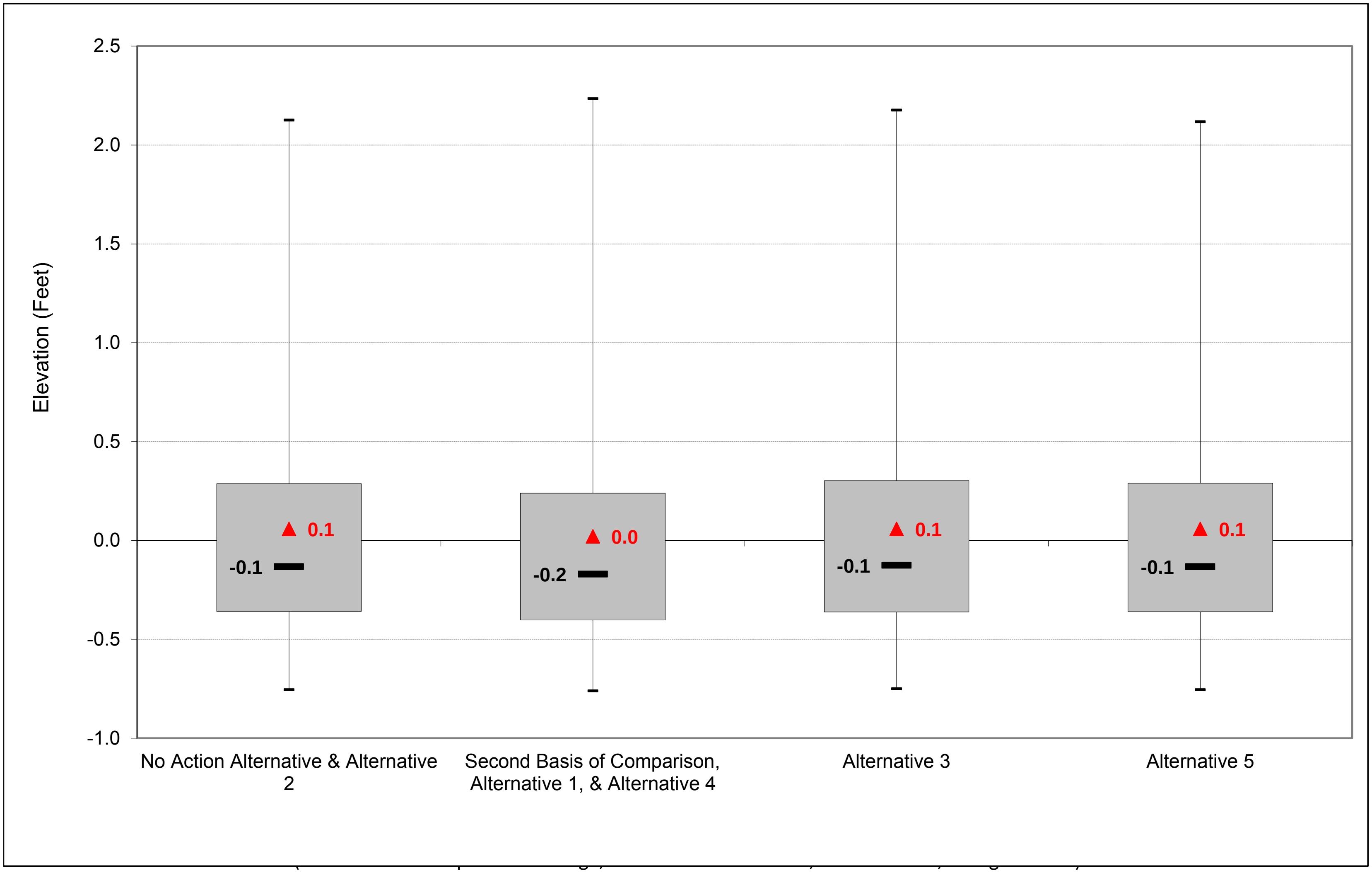
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-5. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, February



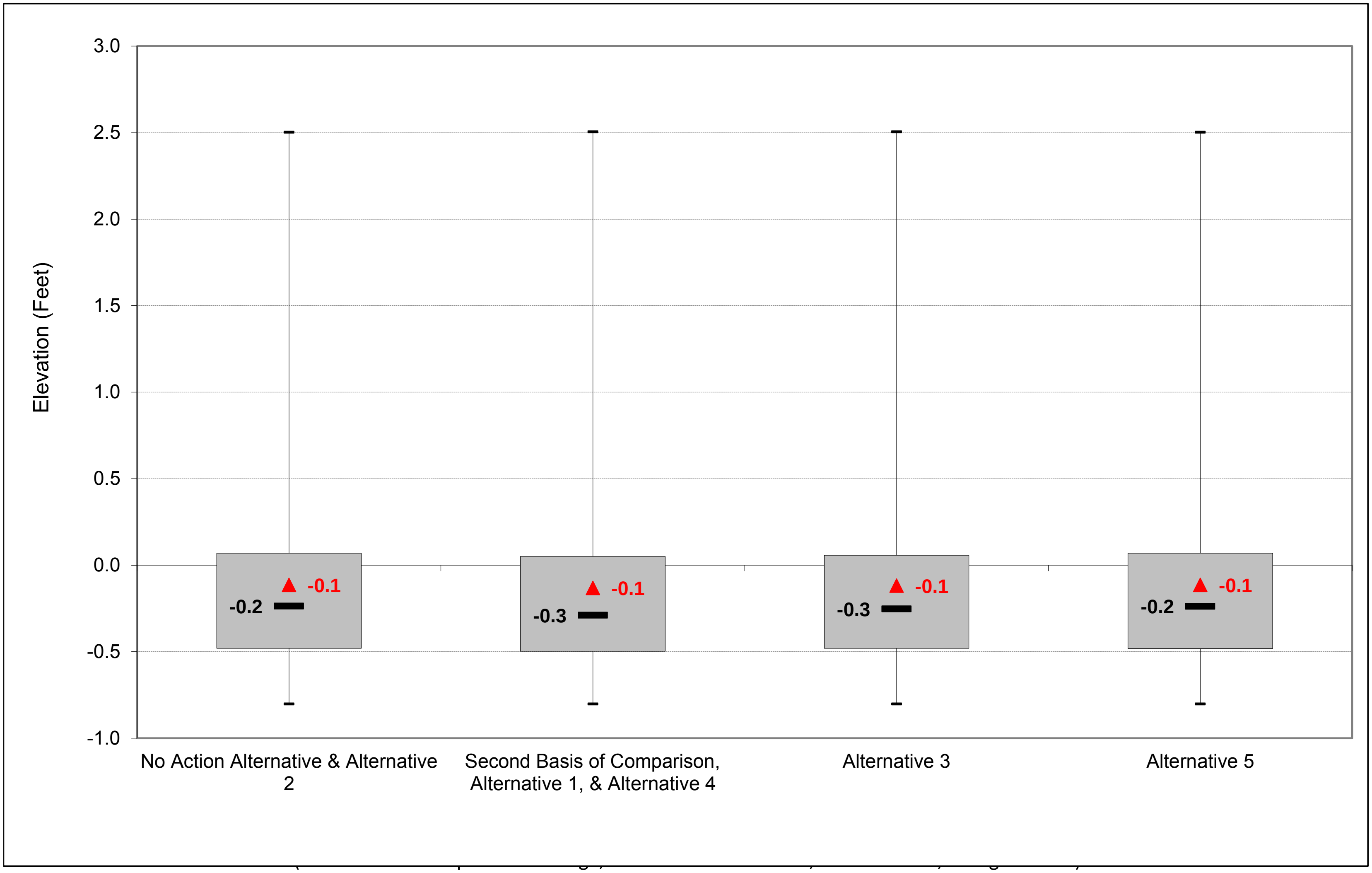
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-6. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, March



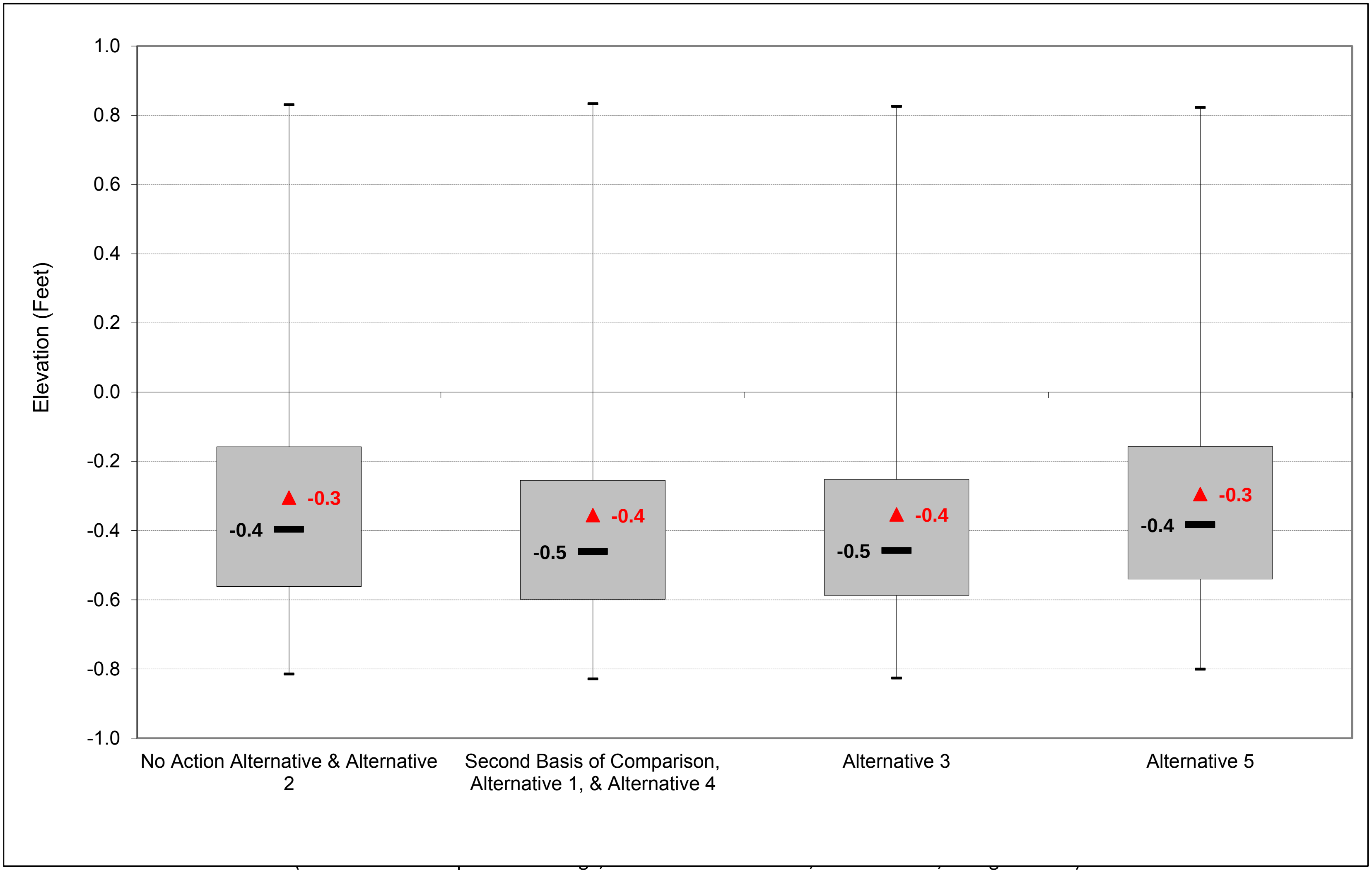
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-7. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, April



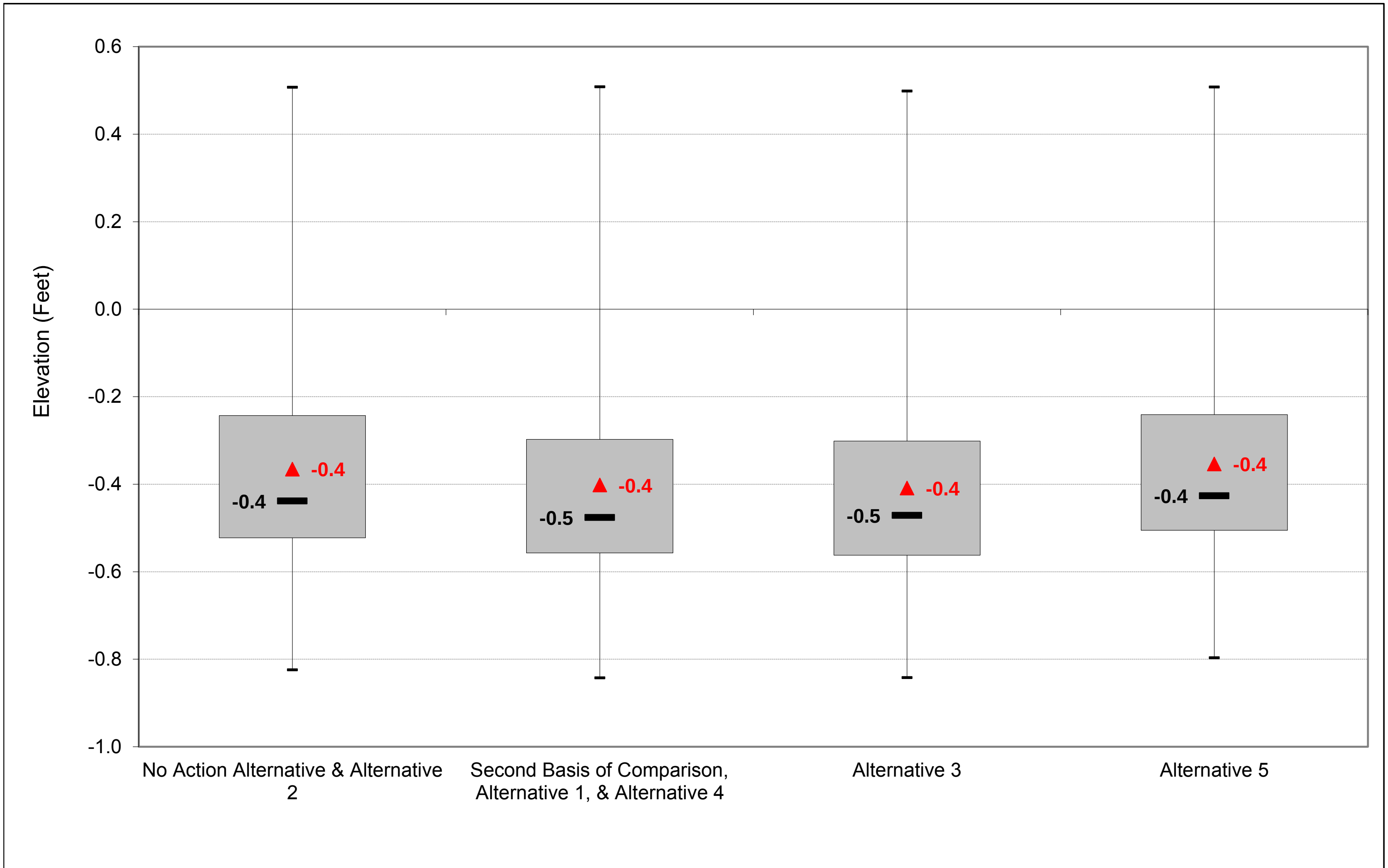
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-8. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, May



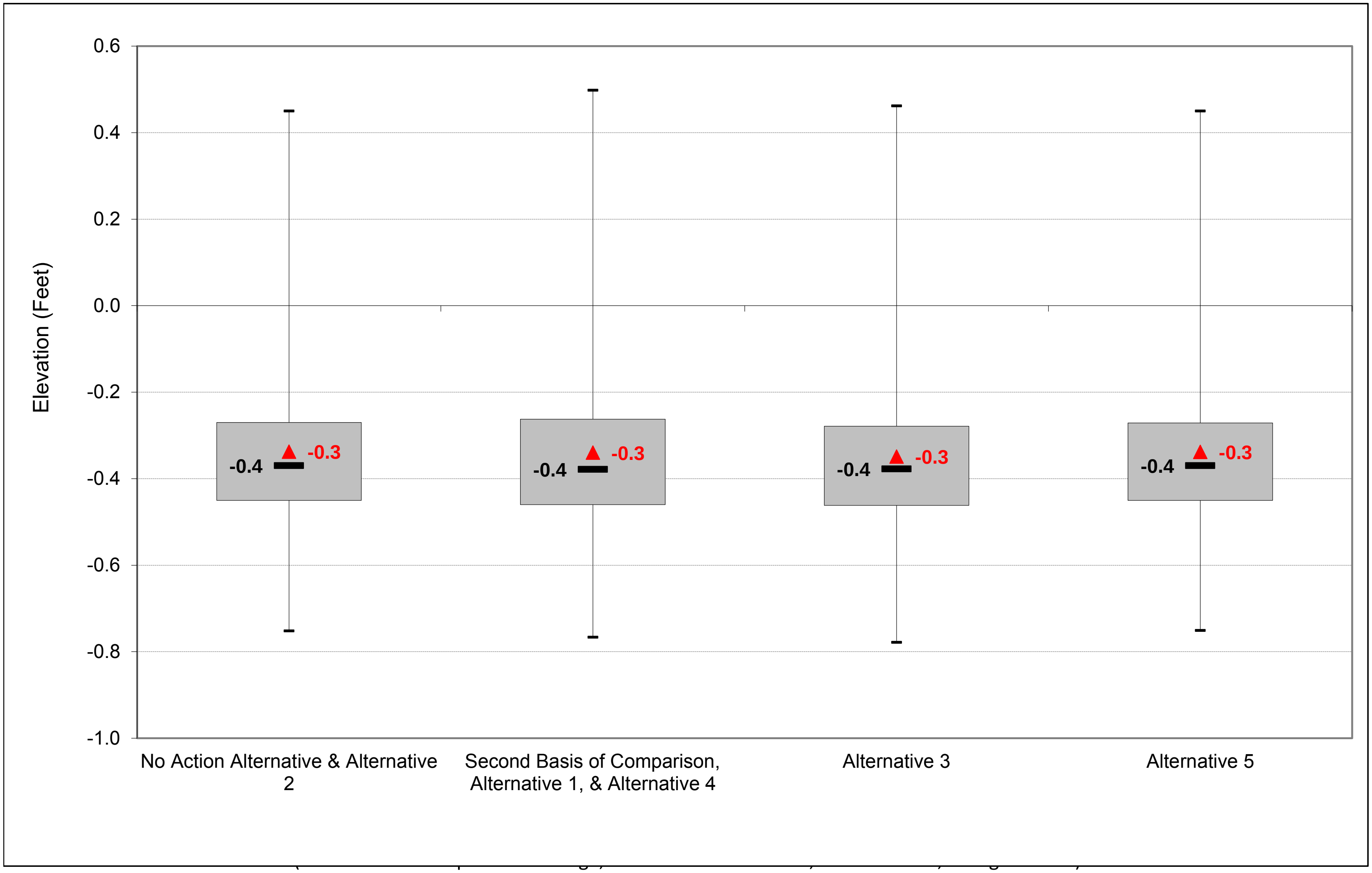
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-9. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, June



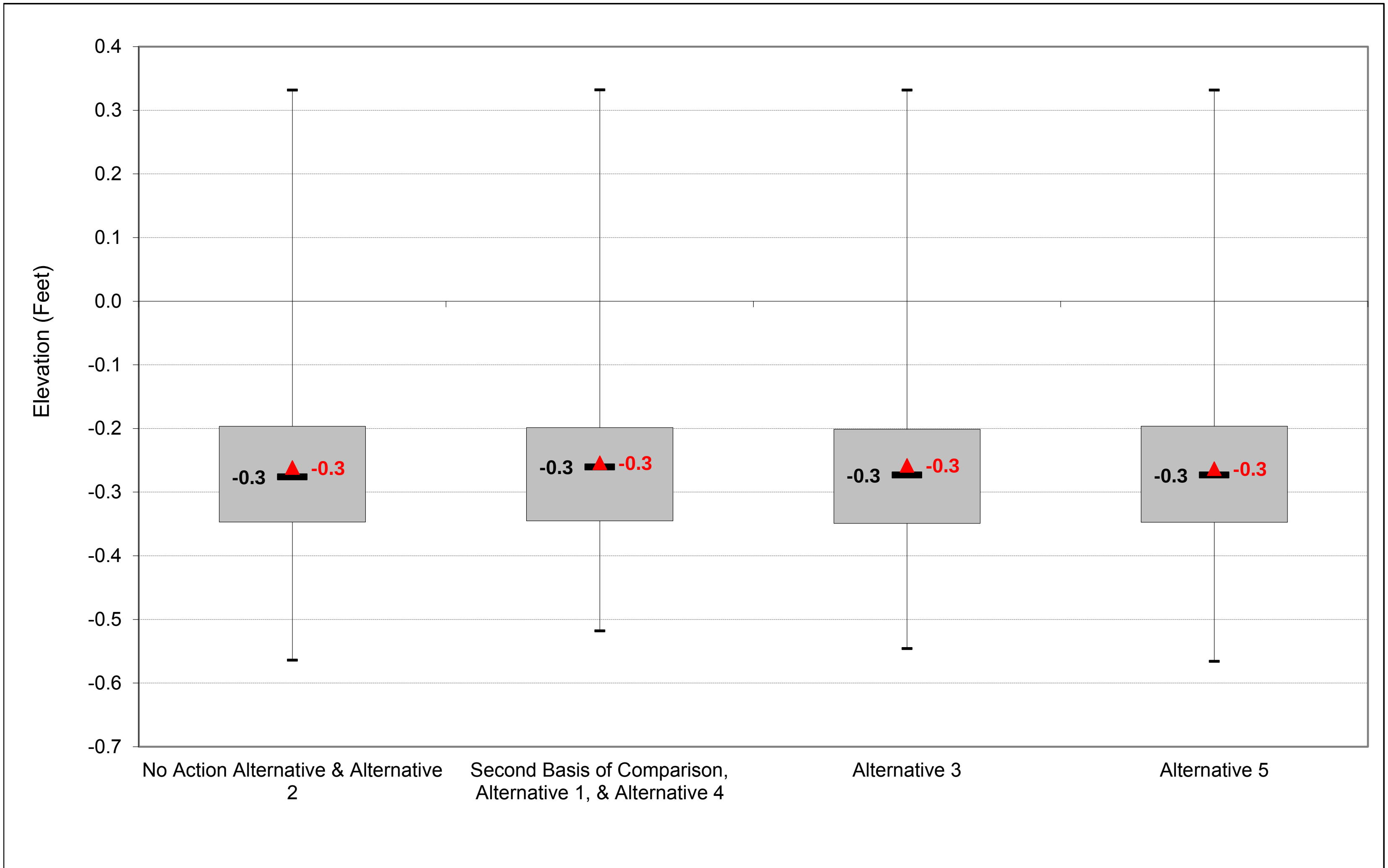
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-10. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, July



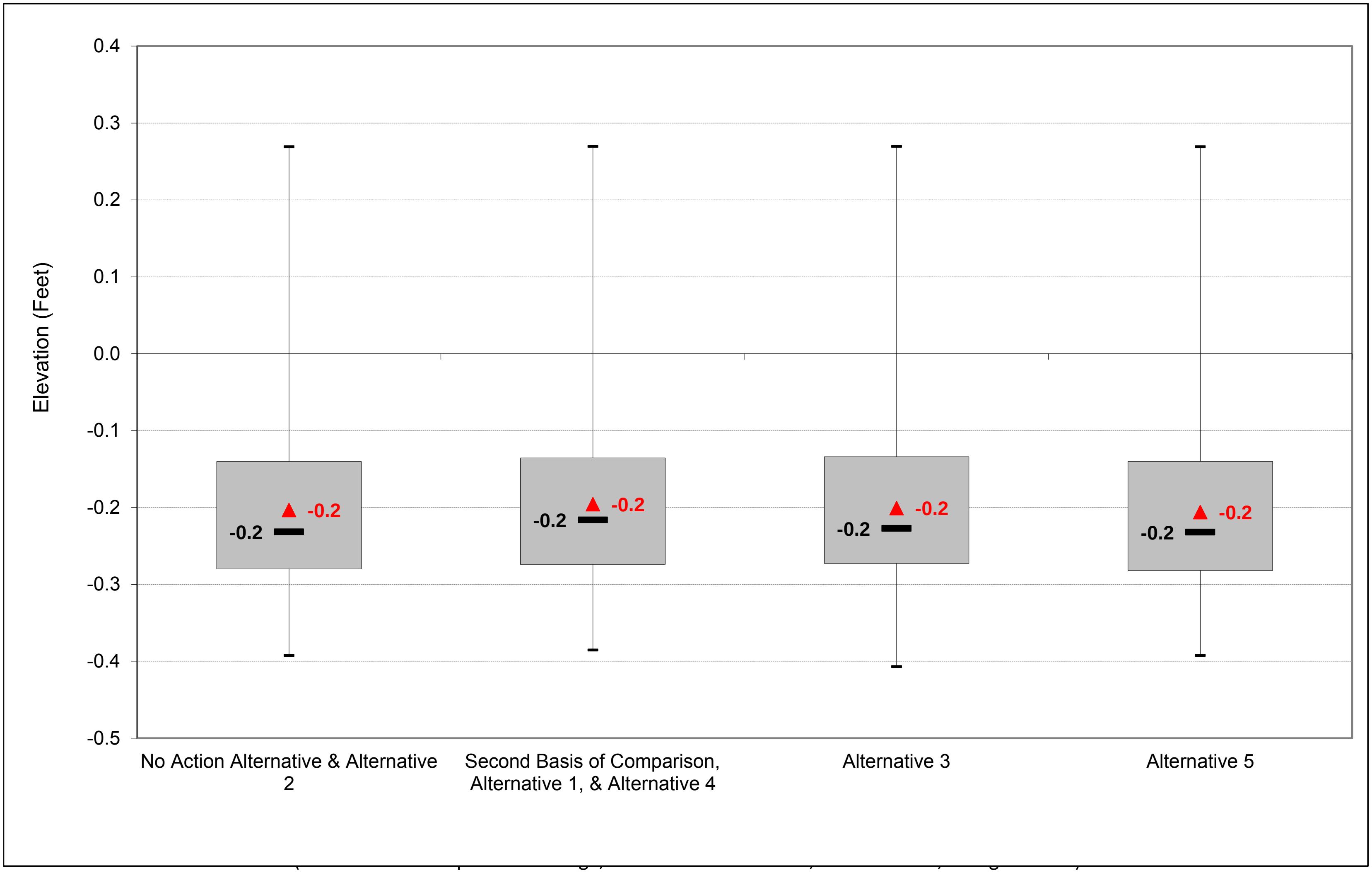
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-11. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-42-2-12. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-2-1. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.2	0.5	0.9	0.5	0.2	0.0	-0.1	-0.1	-0.1	0.0
20%	-0.2	-0.3	-0.1	0.3	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	0.0
30%	-0.2	-0.4	-0.3	-0.1	0.2	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
50%	-0.3	-0.5	-0.4	-0.3	-0.1	-0.2	-0.4	-0.4	-0.4	-0.3	-0.2	-0.1
60%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
70%	-0.4	-0.5	-0.6	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.5	-0.6	-0.5	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.6	-0.7	-0.6	-0.5	-0.6	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.4	-0.4	-0.1	0.1	-0.1	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	0.0	-0.2	-0.2	-0.2	-0.2	0.0
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.3	-0.1	-0.3	-0.3	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.3	-0.5	-0.5	-0.4	-0.2	-0.4	-0.4	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.3	-0.5	-0.6	-0.5	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.3	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

Alternative 1

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.1	0.5	0.9	0.6	0.1	0.0	-0.1	-0.1	0.0	0.0
20%	-0.2	-0.4	-0.1	0.2	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	-0.1
30%	-0.3	-0.4	-0.3	-0.2	0.2	-0.1	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1
50%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
60%	-0.4	-0.5	-0.5	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
70%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.4	-0.6	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.5	-0.6	-0.7	-0.6	-0.4	-0.5	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.7	-0.7	-0.6	-0.6	-0.6	-0.7	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.5	-0.4	-0.2	0.0	-0.1	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.2	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.4	-0.5	-0.5	-0.4	-0.2	-0.5	-0.5	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.4	-0.6	-0.6	-0.5	-0.4	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.4	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

Alternative 1 minus No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	-0.1	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	-0.1
Below Normal (13%)	0.0	0.0	0.0	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-2-2. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.2	0.5	0.9	0.5	0.2	0.0	-0.1	-0.1	-0.1	0.0
20%	-0.2	-0.3	-0.1	0.3	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	0.0
30%	-0.2	-0.4	-0.3	-0.1	0.2	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
50%	-0.3	-0.5	-0.4	-0.3	-0.1	-0.2	-0.4	-0.4	-0.4	-0.3	-0.2	-0.1
60%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
70%	-0.4	-0.5	-0.6	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.5	-0.6	-0.5	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.6	-0.7	-0.6	-0.5	-0.6	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.4	-0.4	-0.1	0.1	-0.1	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	0.0	-0.2	-0.2	-0.2	-0.2	0.0
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.3	-0.1	-0.3	-0.3	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.3	-0.5	-0.5	-0.4	-0.2	-0.4	-0.4	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.3	-0.5	-0.6	-0.5	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.3	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.1	0.5	0.9	0.5	0.1	0.0	-0.1	-0.1	-0.1	0.0
20%	-0.2	-0.4	-0.1	0.3	0.4	0.1	0.0	-0.3	-0.3	-0.2	-0.1	-0.1
30%	-0.3	-0.4	-0.3	-0.1	0.2	-0.1	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1
40%	-0.3	-0.4	-0.4	-0.2	0.1	-0.2	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1
50%	-0.4	-0.5	-0.4	-0.3	-0.1	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
60%	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
70%	-0.4	-0.6	-0.5	-0.4	-0.3	-0.4	-0.6	-0.6	-0.4	-0.3	-0.3	-0.2
80%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.5	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.7	-0.7	-0.6	-0.5	-0.6	-0.7	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.5	-0.4	-0.1	0.1	-0.1	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
Above Normal (16%)	-0.3	-0.4	-0.4	0.0	0.3	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.4	-0.5	-0.4	-0.4	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.4	-0.6	-0.6	-0.4	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.3	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	-0.1
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-2-3. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.2	0.5	0.9	0.5	0.2	0.0	-0.1	-0.1	-0.1	0.0
20%	-0.2	-0.3	-0.1	0.3	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	0.0
30%	-0.2	-0.4	-0.3	-0.1	0.2	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
50%	-0.3	-0.5	-0.4	-0.3	-0.1	-0.2	-0.4	-0.4	-0.4	-0.3	-0.2	-0.1
60%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
70%	-0.4	-0.5	-0.6	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.5	-0.6	-0.5	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.6	-0.7	-0.6	-0.5	-0.6	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.4	-0.4	-0.1	0.1	-0.1	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	0.0	-0.2	-0.2	-0.2	-0.2	0.0
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.3	-0.1	-0.3	-0.3	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.3	-0.5	-0.5	-0.4	-0.2	-0.4	-0.4	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.3	-0.5	-0.6	-0.5	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.3	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.2	0.5	0.9	0.5	0.2	0.0	-0.1	-0.1	-0.1	0.0
20%	-0.2	-0.3	-0.1	0.3	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	0.0
30%	-0.2	-0.4	-0.3	-0.1	0.2	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
50%	-0.3	-0.4	-0.4	-0.3	-0.1	-0.2	-0.4	-0.4	-0.4	-0.3	-0.2	-0.1
60%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
70%	-0.4	-0.5	-0.6	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.5	-0.6	-0.5	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.6	-0.7	-0.6	-0.5	-0.6	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.4	-0.4	-0.1	0.1	-0.1	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	0.0	-0.2	-0.2	-0.2	-0.2	0.0
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.3	-0.1	-0.3	-0.3	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.3	-0.5	-0.5	-0.4	-0.2	-0.4	-0.4	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.3	-0.5	-0.6	-0.5	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.3	-0.5	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-2-4. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.1	0.5	0.9	0.6	0.1	0.0	-0.1	-0.1	0.0	0.0
20%	-0.2	-0.4	-0.1	0.2	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	-0.1
30%	-0.3	-0.4	-0.3	-0.2	0.2	-0.1	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1
50%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
60%	-0.4	-0.5	-0.5	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
70%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.4	-0.6	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.5	-0.6	-0.7	-0.6	-0.4	-0.5	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.7	-0.7	-0.6	-0.6	-0.6	-0.7	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.5	-0.4	-0.2	0.0	-0.1	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.2	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.4	-0.5	-0.5	-0.4	-0.2	-0.5	-0.5	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.4	-0.6	-0.6	-0.5	-0.4	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.4	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.2	0.5	0.9	0.5	0.2	0.0	-0.1	-0.1	-0.1	0.0
20%	-0.2	-0.3	-0.1	0.3	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	0.0
30%	-0.2	-0.4	-0.3	-0.1	0.2	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
50%	-0.3	-0.5	-0.4	-0.3	-0.1	-0.2	-0.4	-0.4	-0.4	-0.3	-0.2	-0.1
60%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
70%	-0.4	-0.5	-0.6	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.5	-0.6	-0.5	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.6	-0.7	-0.6	-0.5	-0.6	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.4	-0.4	-0.1	0.1	-0.1	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	0.0	-0.2	-0.2	-0.2	-0.2	0.0
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.3	-0.1	-0.3	-0.3	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.3	-0.5	-0.5	-0.4	-0.2	-0.4	-0.4	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.3	-0.5	-0.6	-0.5	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.3	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	**0.0**	0.0
20%	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.1	0.0	**0.0**	**0.0**	0.0
30%	0.0	0.0	0.0	0.1	0.0	**0.0**	0.1	0.0	0.0	**0.0**	**0.0**	0.0
40%	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	**0.0**	**0.0**	0.0
50%	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	**0.0**	**0.0**	0.0
60%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0
70%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0
80%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	**0.0**	**0.0**	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	**0.0**	**0.0**	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	**0.0**	0.1	0.1	**0.0**	**0.0**	**0.0**	0.0
Above Normal (16%)	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	**0.0**	0.1
Below Normal (13%)	0.0	0.0	**0.0**	0.1	0.0	0.0	0.1	0.0	0.0	0.0	**0.0**	**0.0**
Dry (24%)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-2-5. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.1	0.5	0.9	0.6	0.1	0.0	-0.1	-0.1	0.0	0.0
20%	-0.2	-0.4	-0.1	0.2	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	-0.1
30%	-0.3	-0.4	-0.3	-0.2	0.2	-0.1	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1
50%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
60%	-0.4	-0.5	-0.5	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
70%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.4	-0.6	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.5	-0.6	-0.7	-0.6	-0.4	-0.5	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.7	-0.7	-0.6	-0.6	-0.6	-0.7	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.5	-0.4	-0.2	0.0	-0.1	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.2	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.4	-0.5	-0.5	-0.4	-0.2	-0.5	-0.5	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.4	-0.6	-0.6	-0.5	-0.4	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.4	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.1	0.5	0.9	0.5	0.1	0.0	-0.1	-0.1	-0.1	0.0
20%	-0.2	-0.4	-0.1	0.3	0.4	0.1	0.0	-0.3	-0.3	-0.2	-0.1	-0.1
30%	-0.3	-0.4	-0.3	-0.1	0.2	-0.1	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1
40%	-0.3	-0.4	-0.4	-0.2	0.1	-0.2	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1
50%	-0.4	-0.5	-0.4	-0.3	-0.1	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
60%	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
70%	-0.4	-0.6	-0.5	-0.4	-0.3	-0.4	-0.6	-0.6	-0.4	-0.3	-0.3	-0.2
80%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.5	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.7	-0.7	-0.6	-0.5	-0.6	-0.7	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.5	-0.4	-0.1	0.1	-0.1	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
Above Normal (16%)	-0.3	-0.4	-0.4	0.0	0.3	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.4	-0.5	-0.4	-0.4	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.4	-0.6	-0.6	-0.4	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.3	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.1	**0.0**	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	**0.0**
20%	0.0	**0.0**	0.0	0.0	0.1	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	**0.0**
30%	0.0	**0.0**	0.0	0.1	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0
40%	0.0	**0.0**	0.0	0.1	0.1	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0
50%	**0.0**	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0
60%	**0.0**	**0.0**	0.0	0.0	0.1	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	**0.0**
70%	0.0	**0.0**	0.0	0.0	0.1	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0
80%	0.0	0.0	0.0	0.1	0.1	0.0	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
90%	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.1	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	0.0
Above Normal (16%)	**0.0**	**0.0**	0.0	0.1	0.0	0.0	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0
Below Normal (13%)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**
Dry (24%)	**0.0**	0.0	0.0	0.1	0.1	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-42-2-6. Mokelumne River at Terminous, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.1	0.5	0.9	0.6	0.1	0.0	-0.1	-0.1	0.0	0.0
20%	-0.2	-0.4	-0.1	0.2	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	-0.1
30%	-0.3	-0.4	-0.3	-0.2	0.2	-0.1	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1
50%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
60%	-0.4	-0.5	-0.5	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
70%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.4	-0.6	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.5	-0.6	-0.7	-0.6	-0.4	-0.5	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.7	-0.7	-0.6	-0.6	-0.6	-0.7	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.5	-0.4	-0.2	0.0	-0.1	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.2	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.4	-0.5	-0.5	-0.4	-0.2	-0.5	-0.5	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.4	-0.6	-0.6	-0.5	-0.4	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.4	-0.5	-0.5	-0.6	-0.4	-0.3	-0.2	-0.2

Alternative 5

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	-0.3	0.2	0.5	0.9	0.5	0.2	0.0	-0.1	-0.1	-0.1	0.0
20%	-0.2	-0.3	-0.1	0.3	0.4	0.1	0.0	-0.2	-0.2	-0.2	-0.1	0.0
30%	-0.2	-0.4	-0.3	-0.1	0.2	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2	-0.1
40%	-0.3	-0.4	-0.4	-0.3	0.1	-0.2	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
50%	-0.3	-0.4	-0.4	-0.3	-0.1	-0.2	-0.4	-0.4	-0.4	-0.3	-0.2	-0.1
60%	-0.4	-0.5	-0.5	-0.4	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
70%	-0.4	-0.5	-0.6	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3	-0.2
80%	-0.4	-0.6	-0.6	-0.5	-0.4	-0.5	-0.6	-0.5	-0.5	-0.4	-0.3	-0.3
90%	-0.5	-0.6	-0.7	-0.6	-0.5	-0.6	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
Long Term												
Full Simulation Period[b]	-0.3	-0.4	-0.4	-0.1	0.1	-0.1	-0.3	-0.4	-0.3	-0.3	-0.2	-0.1
Water Year Types[c]												
Wet (32%)	-0.3	-0.4	-0.1	0.3	0.5	0.3	0.0	-0.2	-0.2	-0.2	-0.2	0.0
Above Normal (16%)	-0.3	-0.4	-0.4	-0.1	0.3	-0.1	-0.3	-0.3	-0.4	-0.3	-0.2	-0.2
Below Normal (13%)	-0.3	-0.5	-0.5	-0.4	-0.2	-0.4	-0.4	-0.5	-0.4	-0.3	-0.2	-0.1
Dry (24%)	-0.3	-0.5	-0.6	-0.5	-0.3	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2
Critical (15%)	-0.3	-0.5	-0.5	-0.5	-0.3	-0.5	-0.5	-0.5	-0.4	-0.3	-0.2	-0.2

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	**0.0**	0.0
20%	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.1	**0.0**	**0.0**	**0.0**	0.0
30%	0.0	0.0	0.0	0.1	0.1	**0.0**	0.1	0.0	0.0	**0.0**	**0.0**	0.0
40%	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	**0.0**	**0.0**	0.0
50%	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	**0.0**	**0.0**	0.0
60%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0
70%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0
80%	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	**0.0**	**0.0**	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	**0.0**	**0.0**	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	**0.0**	**0.0**	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	**0.0**	0.1	0.1	**0.0**	**0.0**	**0.0**	0.0
Above Normal (16%)	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	**0.0**	0.1
Below Normal (13%)	0.0	0.0	**0.0**	0.1	0.0	0.0	0.1	0.1	0.0	0.0	**0.0**	**0.0**
Dry (24%)	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	**0.0**	**0.0**	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

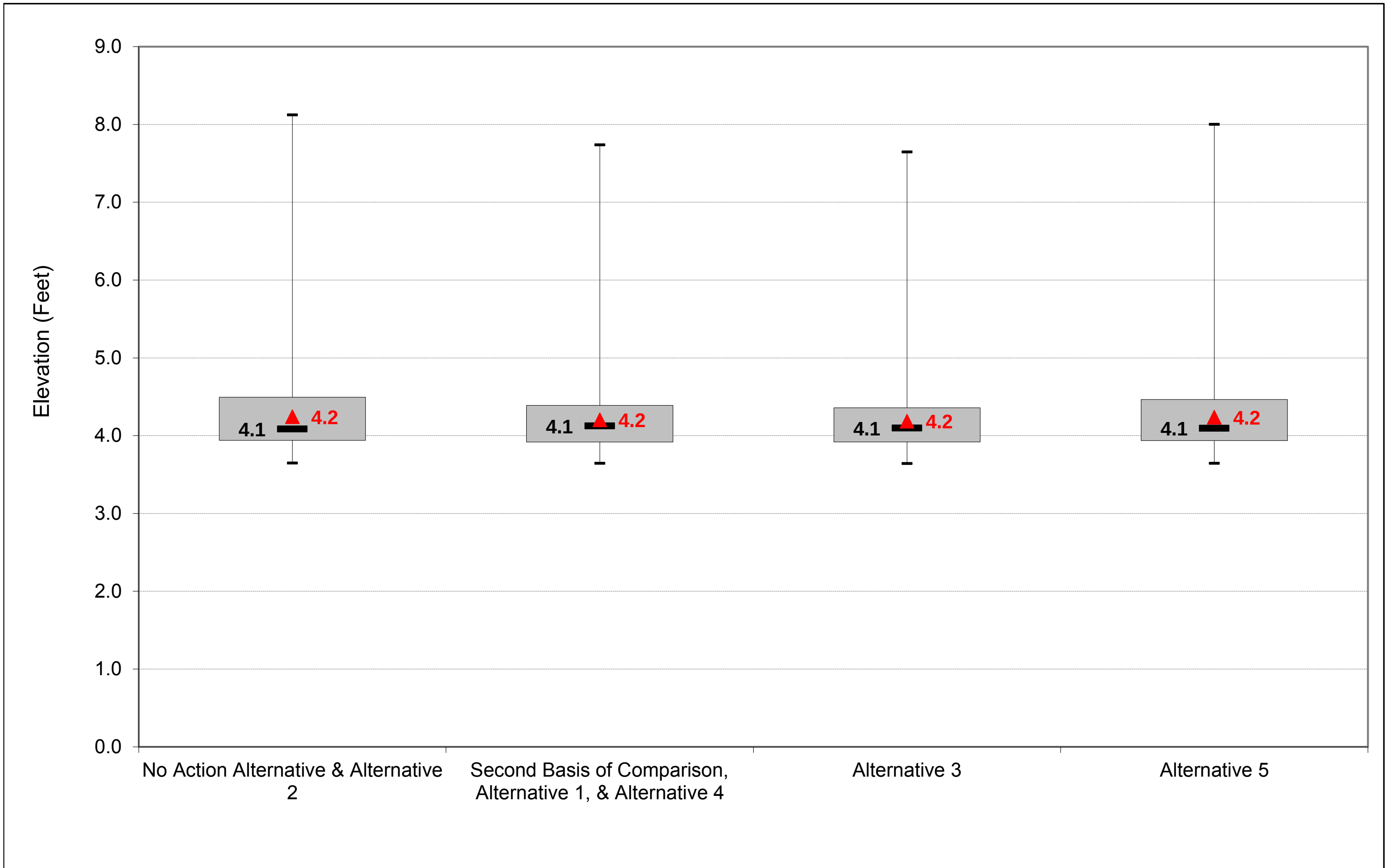
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

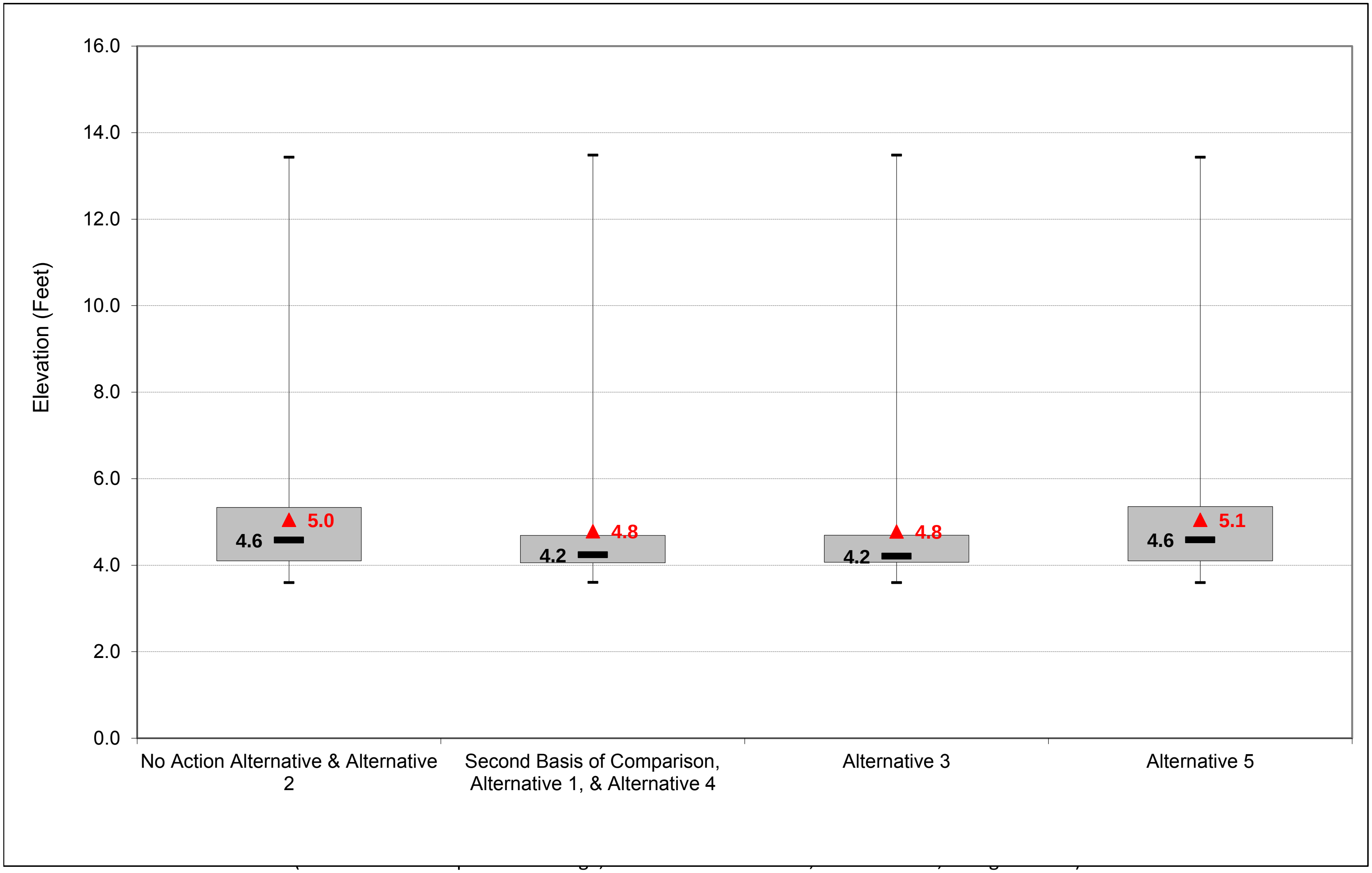
C.43. Sacramento River at Freeport Water Surface Elevation

Figure C-43-1-1. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, October



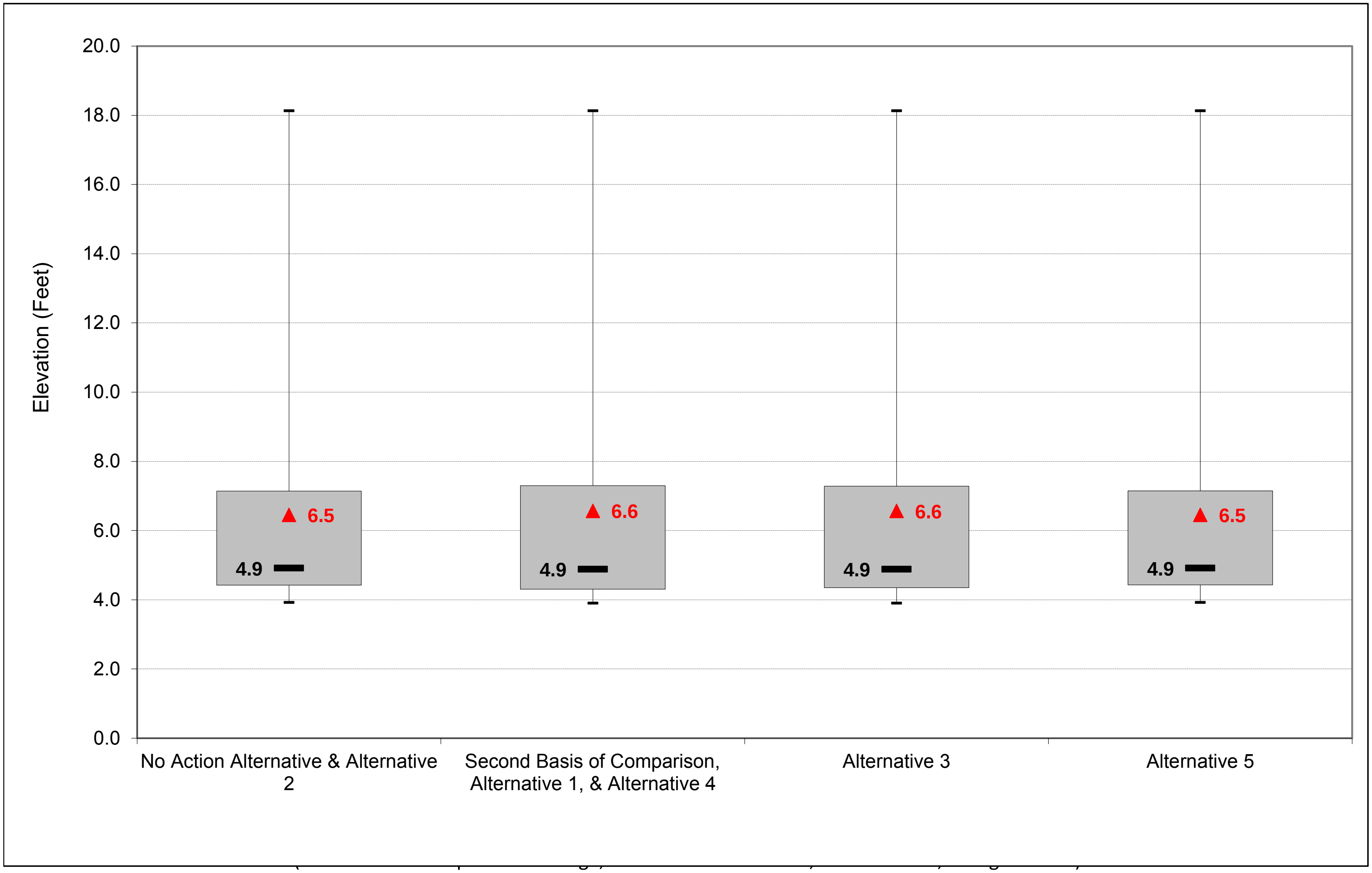
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-2. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, November



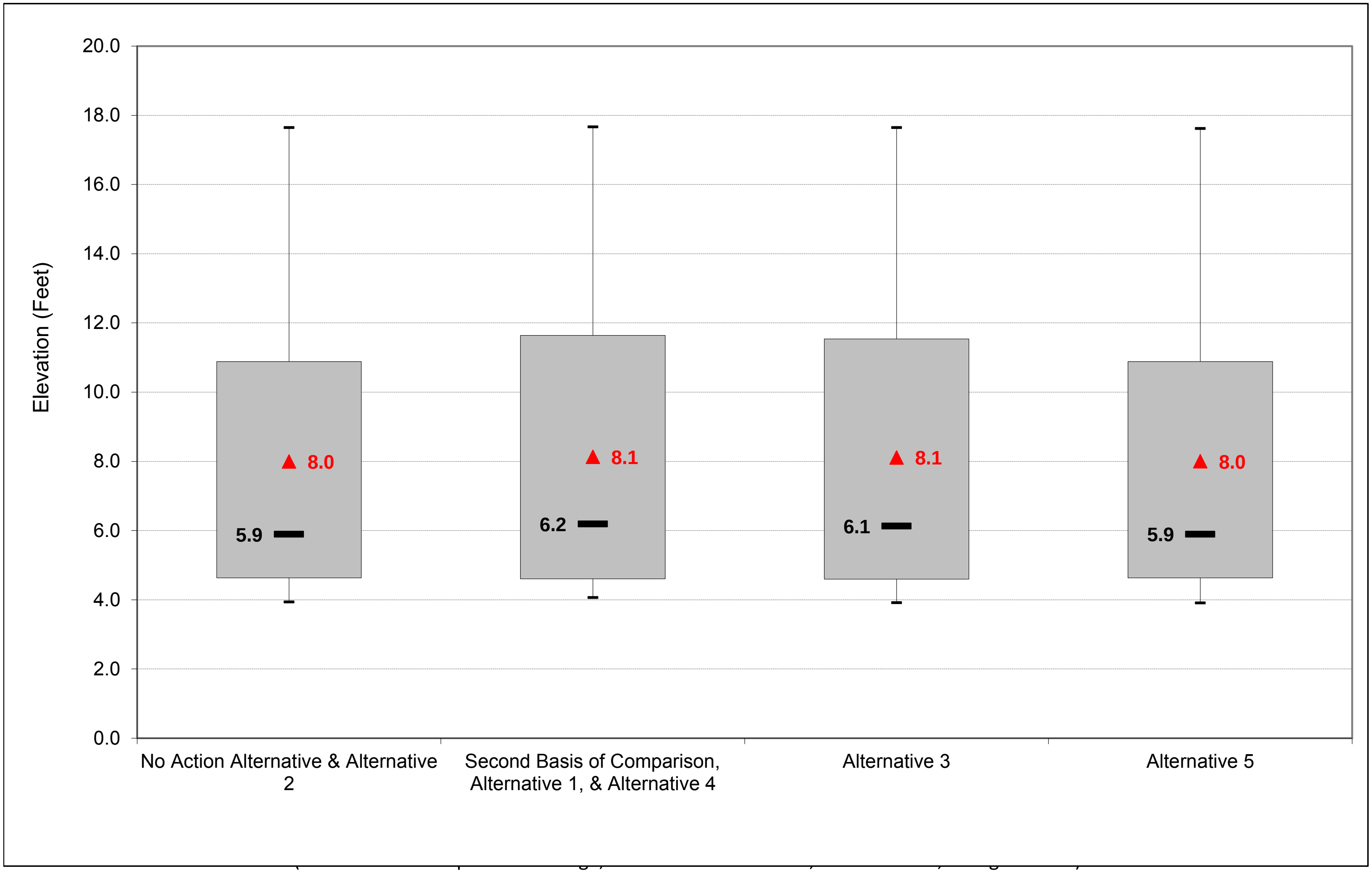
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-3. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, December



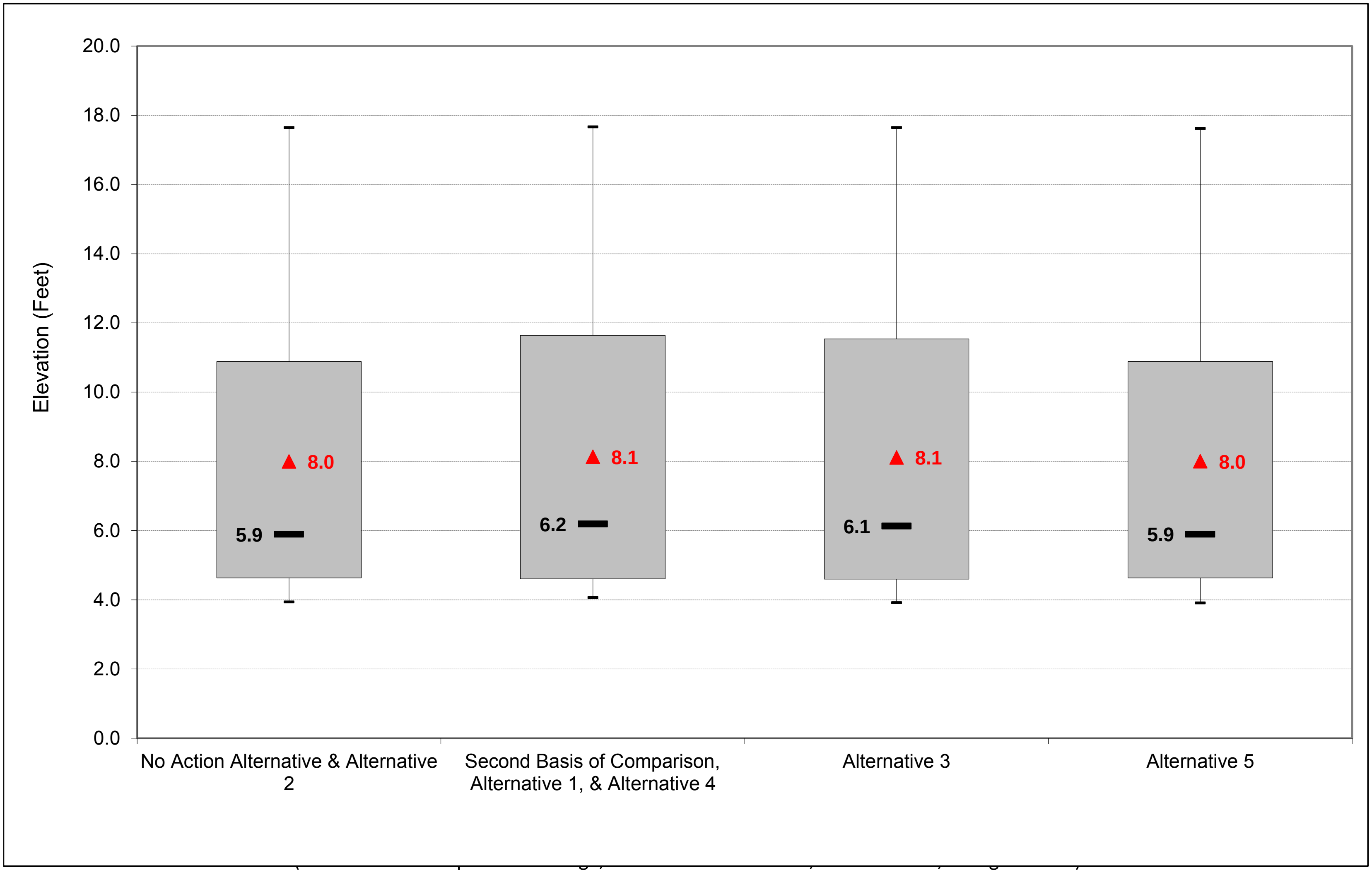
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-4. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, January



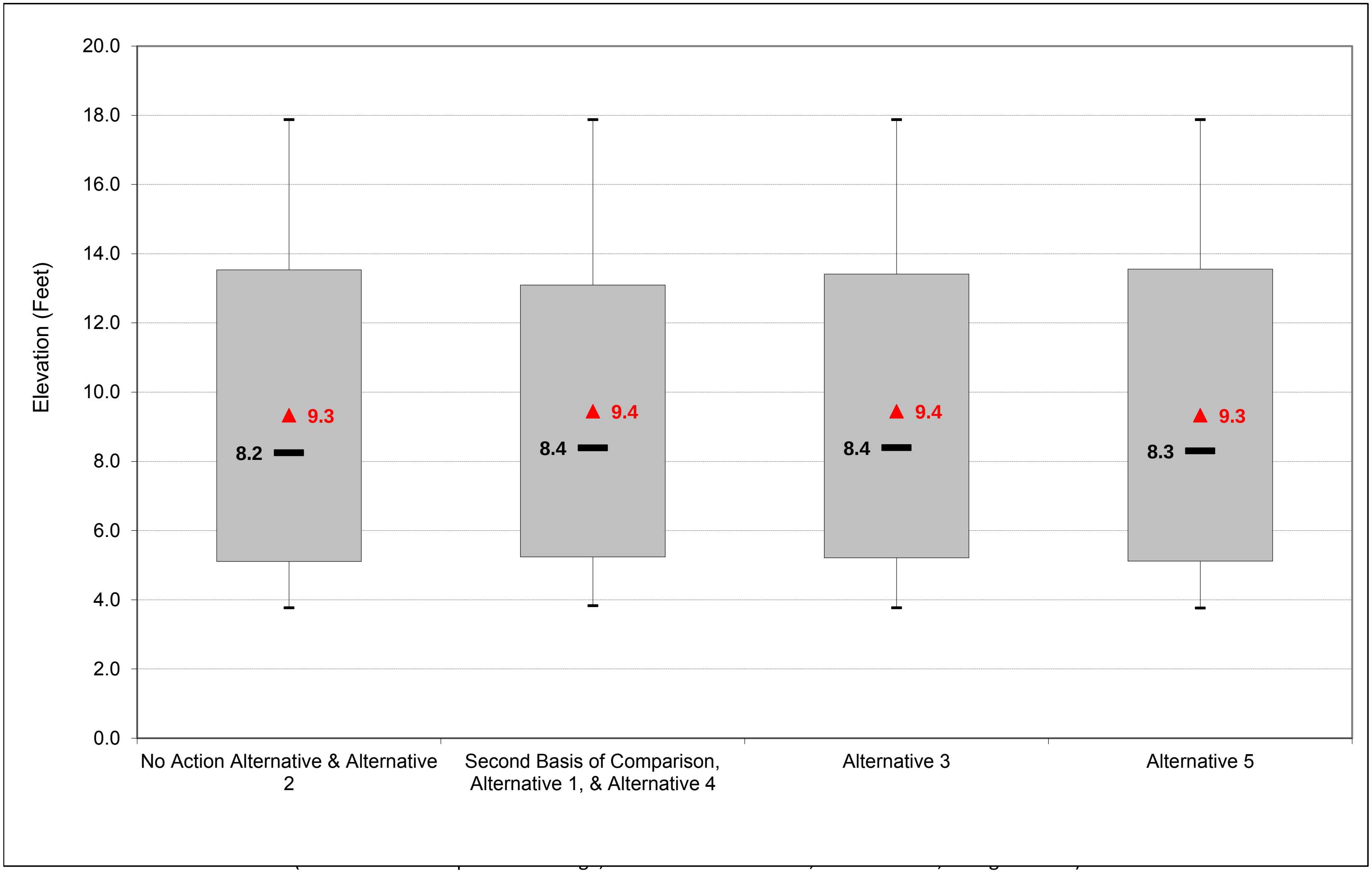
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-5. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, February



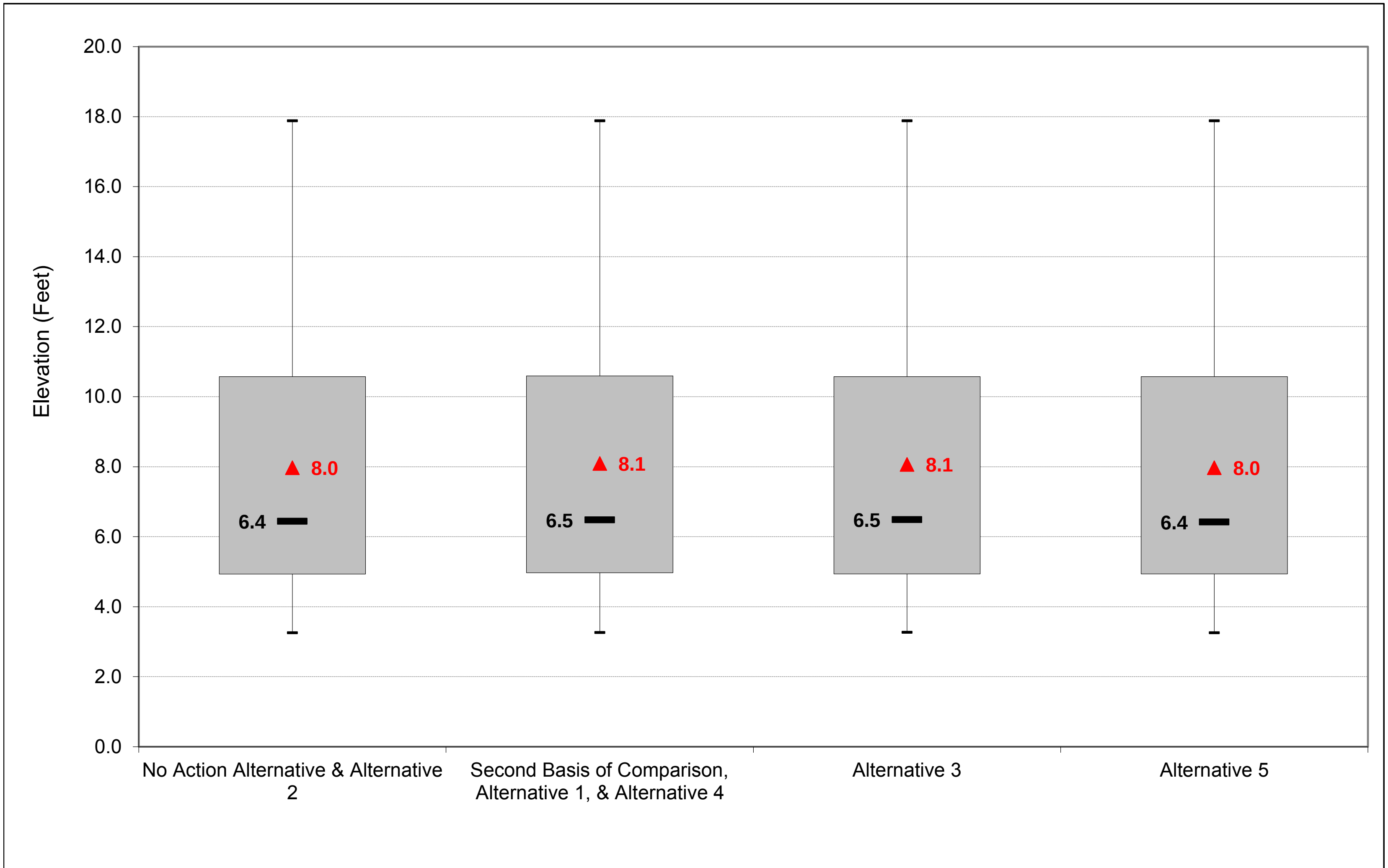
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-6. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, March



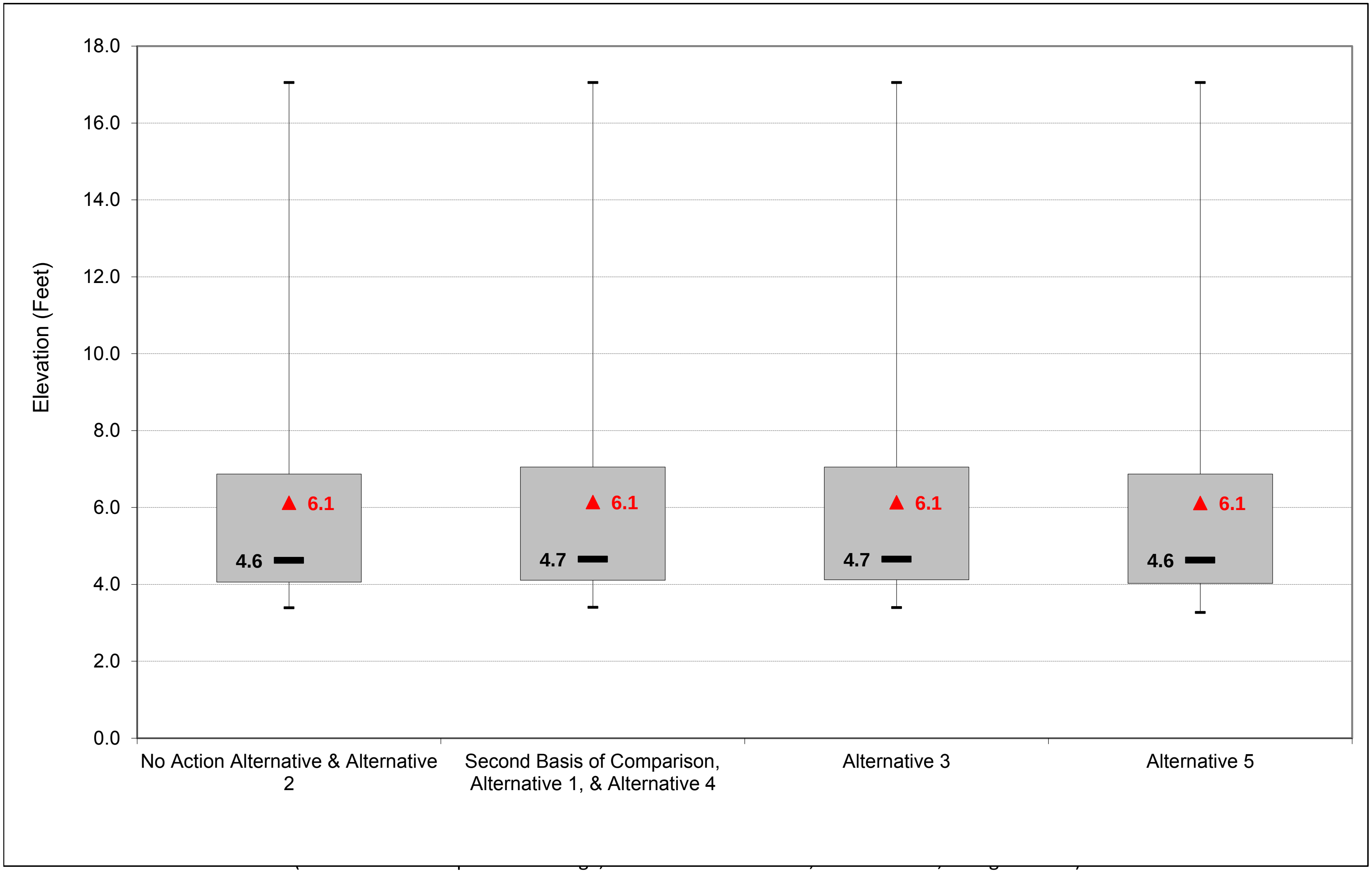
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-7. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, April



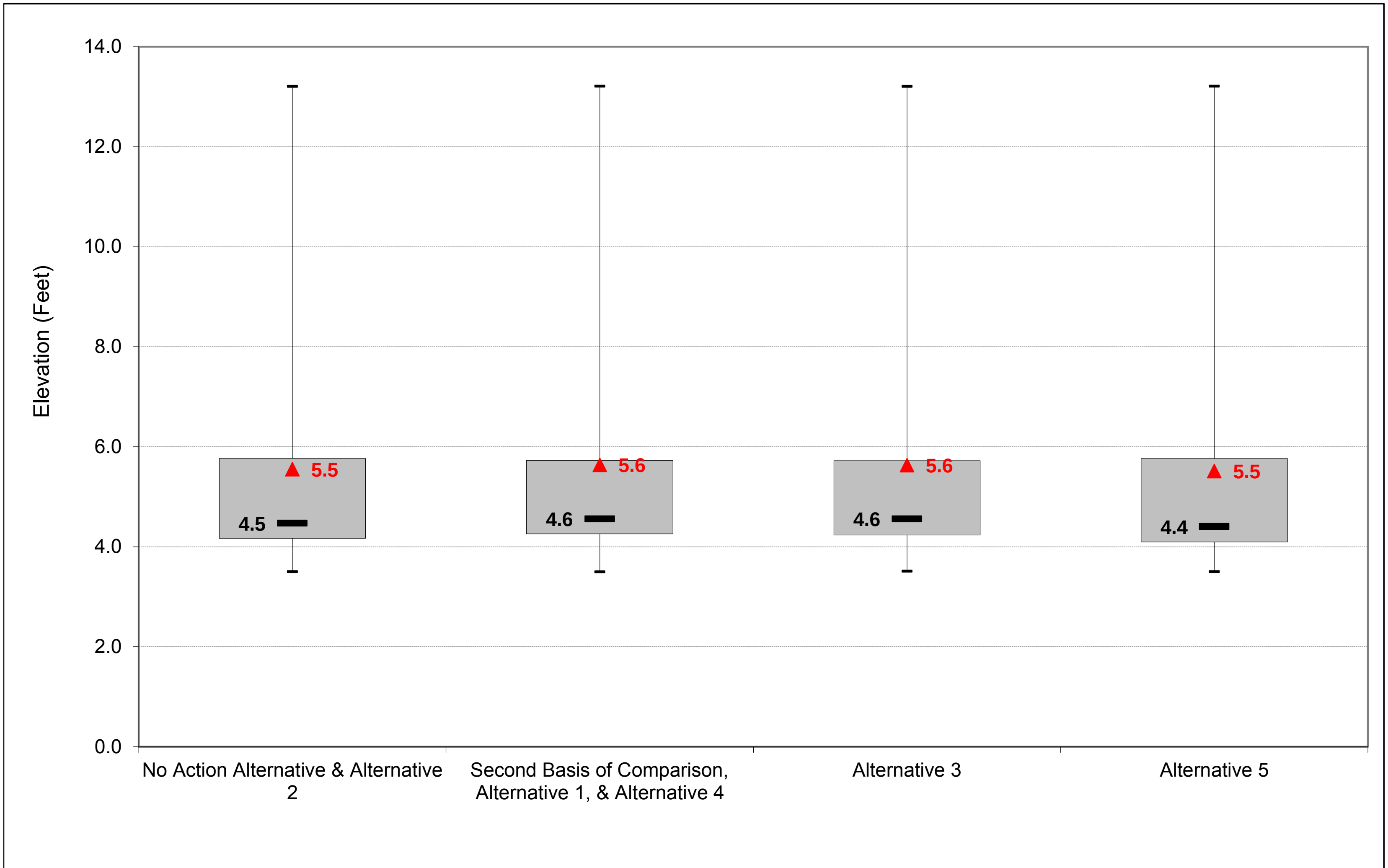
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-8. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, May



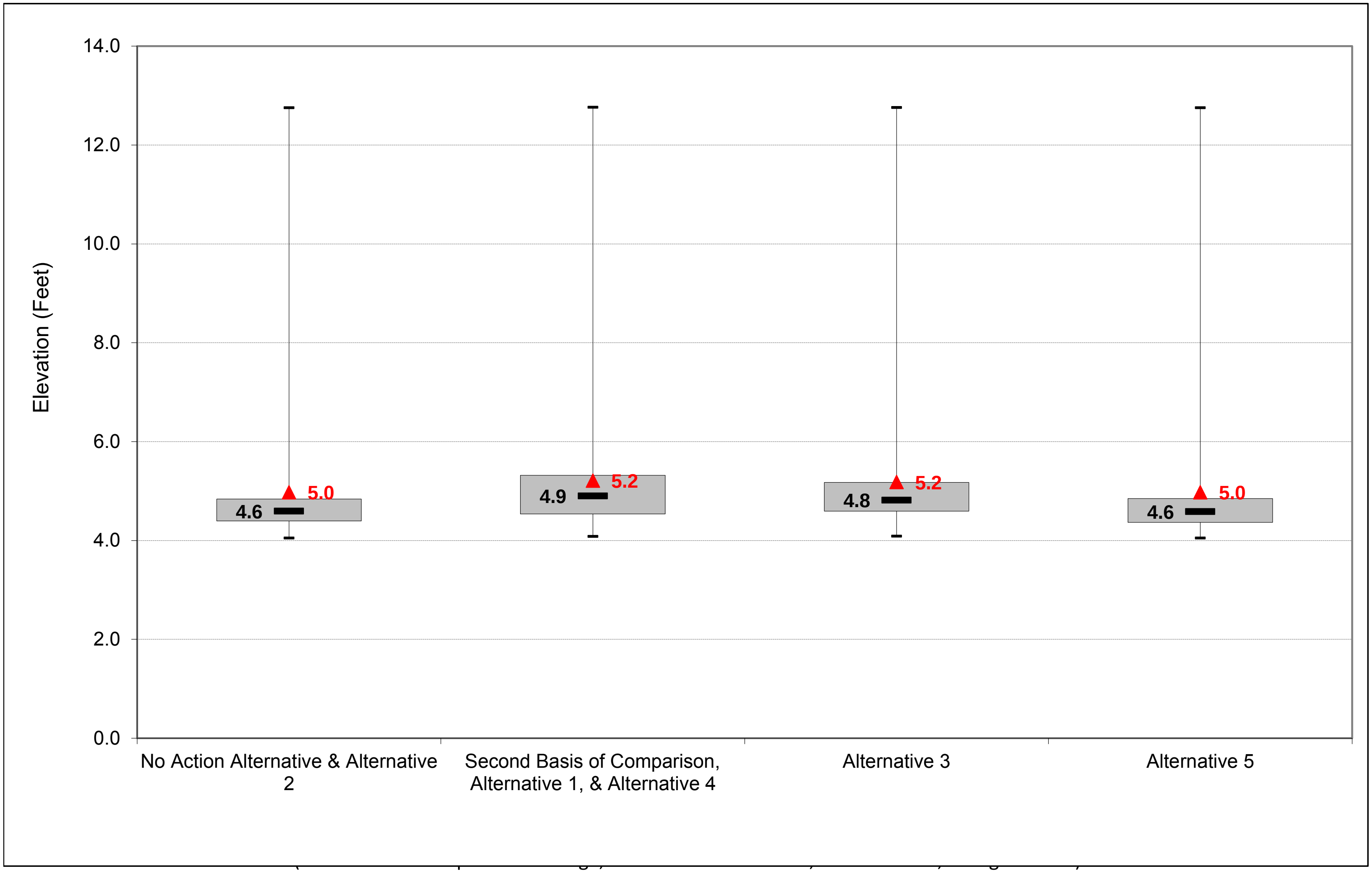
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-9. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, June



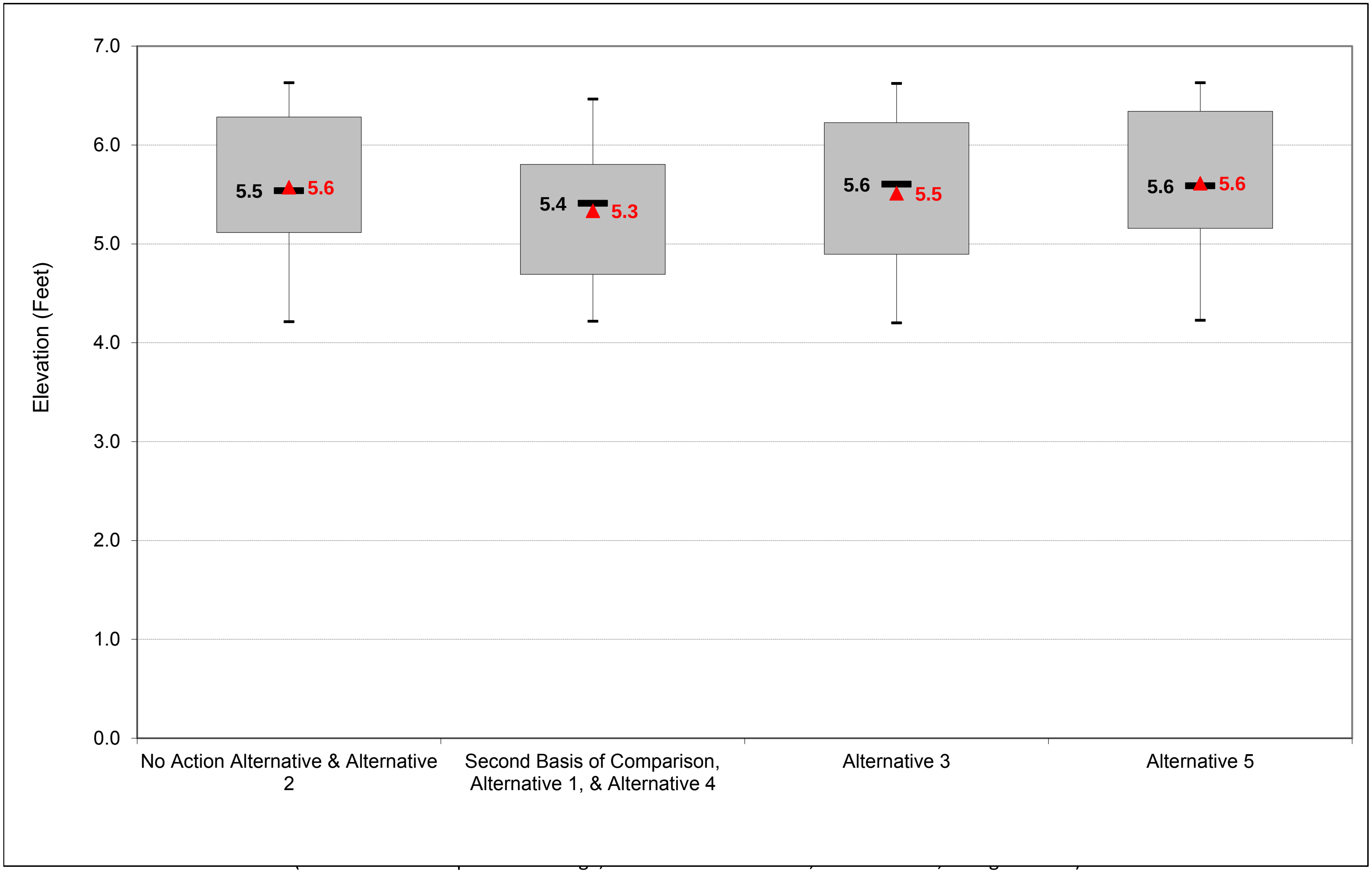
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-10. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, July



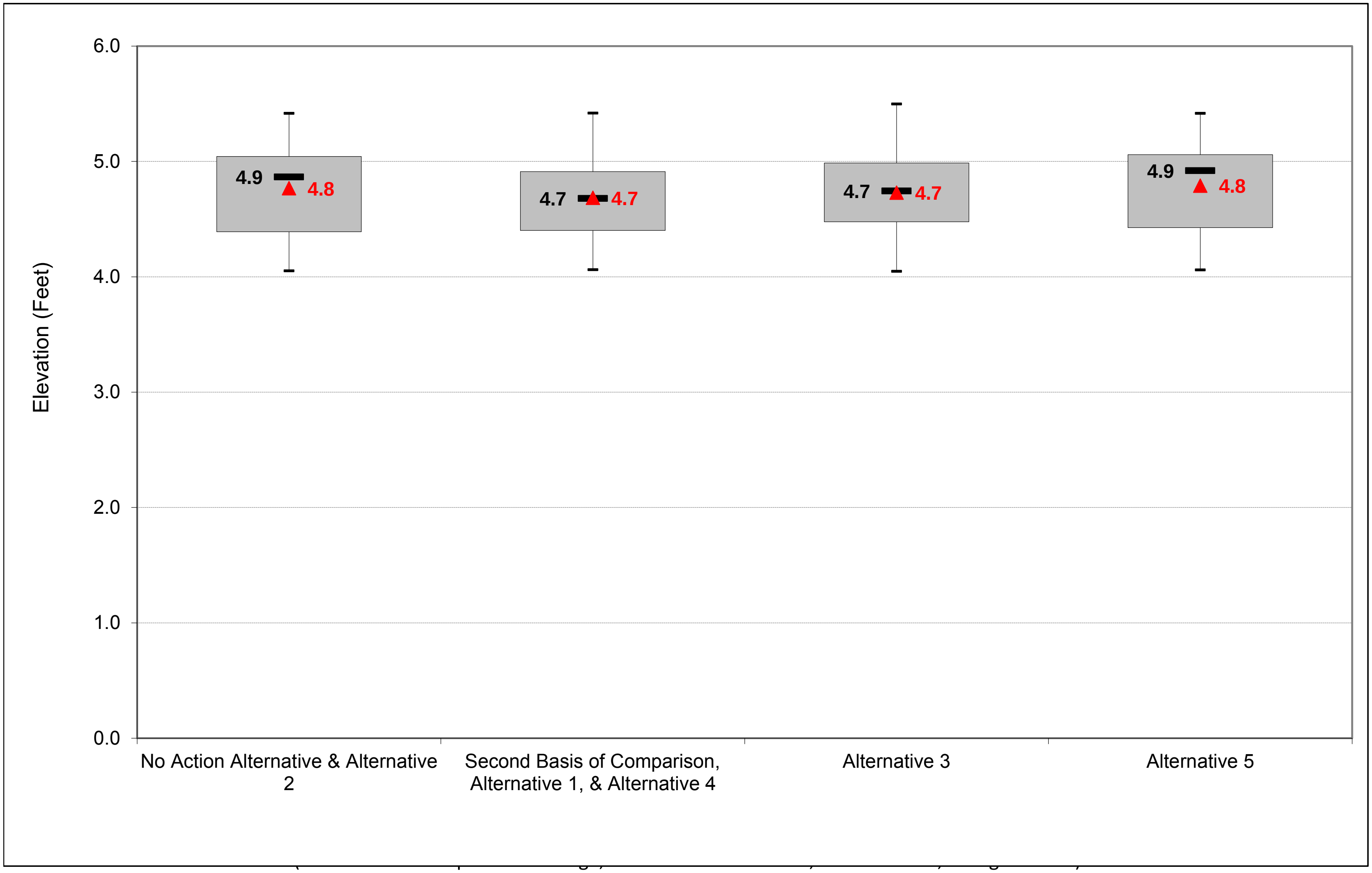
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-11. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-1-12. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-1-1. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4.6	6.2	12.0	14.9	16.2	14.5	11.3	9.6	5.7	6.5	5.2	7.5
20%	4.5	5.5	8.3	12.7	14.5	12.2	8.3	6.7	5.0	6.4	5.1	7.3
30%	4.4	5.2	5.9	9.6	12.0	9.2	6.0	5.0	4.7	6.1	5.0	6.2
40%	4.3	4.9	5.2	6.7	10.5	7.5	5.4	4.6	4.7	5.8	4.9	5.7
50%	4.1	4.6	4.9	5.9	8.2	6.4	4.6	4.5	4.6	5.5	4.9	4.7
60%	4.0	4.4	4.8	5.3	6.4	5.6	4.3	4.3	4.5	5.3	4.7	4.4
70%	4.0	4.1	4.6	4.8	5.4	5.2	4.1	4.2	4.5	5.1	4.5	4.3
80%	3.9	4.0	4.3	4.5	4.8	4.4	4.0	4.1	4.3	4.9	4.4	4.2
90%	3.7	3.9	4.2	4.3	4.5	4.0	3.8	4.0	4.2	4.6	4.2	4.0
Long Term												
Full Simulation Period[b]	4.2	5.0	6.5	8.0	9.3	8.0	6.1	5.5	5.0	5.6	4.8	5.4
Water Year Types[c]												
Wet (32%)	4.5	5.9	9.2	11.8	13.3	11.5	8.8	7.8	5.9	5.8	5.0	7.3
Above Normal (16%)	4.1	5.4	6.8	9.6	11.3	10.0	6.5	5.2	4.7	6.2	5.1	5.7
Below Normal (13%)	4.3	4.9	5.0	5.5	7.8	5.2	4.5	4.5	4.6	6.0	5.0	4.5
Dry (24%)	4.1	4.4	4.7	5.3	6.4	5.8	4.6	4.3	4.6	5.2	4.4	4.2
Critical (15%)	4.0	4.1	4.5	4.8	4.9	4.3	4.0	4.0	4.3	4.6	4.3	4.1

Alternative 1

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4.6	6.1	13.0	15.2	16.2	14.8	11.3	9.6	5.9	6.2	5.1	4.9
20%	4.4	4.7	8.8	13.4	14.6	12.3	8.3	7.2	5.4	5.9	5.0	4.7
30%	4.3	4.6	6.1	10.2	12.4	10.3	6.0	5.2	5.2	5.7	4.9	4.6
40%	4.2	4.4	5.3	7.1	11.1	7.6	5.4	4.7	5.0	5.6	4.8	4.6
50%	4.1	4.2	4.9	6.2	8.4	6.5	4.7	4.6	4.9	5.4	4.7	4.5
60%	4.1	4.2	4.7	5.3	6.5	5.6	4.3	4.5	4.7	5.2	4.6	4.3
70%	4.0	4.1	4.5	4.8	5.6	5.2	4.2	4.3	4.6	4.8	4.4	4.2
80%	3.9	4.0	4.3	4.5	4.8	4.5	4.0	4.2	4.5	4.6	4.4	4.1
90%	3.8	3.8	4.2	4.3	4.5	4.0	3.8	4.0	4.3	4.5	4.3	4.0
Long Term												
Full Simulation Period[b]	4.2	4.8	6.6	8.1	9.4	8.1	6.1	5.6	5.2	5.3	4.7	4.5
Water Year Types[c]												
Wet (32%)	4.4	5.5	9.6	12.1	13.4	11.6	8.8	7.8	6.0	5.6	4.9	4.8
Above Normal (16%)	4.1	5.0	6.7	9.8	11.5	10.4	6.5	5.4	5.1	5.9	5.0	4.6
Below Normal (13%)	4.3	4.6	5.0	5.6	8.2	5.4	4.5	4.7	5.2	5.8	4.8	4.5
Dry (24%)	4.0	4.2	4.6	5.2	6.4	5.9	4.6	4.4	4.8	4.9	4.4	4.3
Critical (15%)	4.0	4.0	4.5	4.8	4.9	4.3	4.0	4.0	4.4	4.5	4.3	4.1

Alternative 1 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	-0.1	1.1	0.3	0.0	0.3	0.0	0.0	0.2	-0.3	-0.1	-2.6
20%	-0.1	-0.8	0.5	0.8	0.1	0.1	0.0	0.5	0.4	-0.5	-0.1	-2.6
30%	-0.1	-0.7	0.1	0.6	0.4	1.0	0.0	0.1	0.5	-0.4	-0.1	-1.6
40%	-0.1	-0.5	0.1	0.4	0.6	0.2	0.0	0.1	0.4	-0.2	-0.1	-1.1
50%	0.0	-0.3	0.0	0.3	0.1	0.0	0.0	0.1	0.3	-0.1	-0.2	-0.2
60%	0.0	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.2	0.2	-0.1	-0.1	-0.1
70%	0.0	-0.1	-0.1	0.0	0.2	0.0	0.0	0.1	0.1	-0.4	-0.1	-0.1
80%	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.1	0.1	-0.3	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	-0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.2	-0.2	-0.1	-1.0
Water Year Types[c]												
Wet (32%)	-0.1	-0.3	0.5	0.2	0.1	0.1	0.0	0.0	0.1	-0.2	-0.1	-2.5
Above Normal (16%)	0.0	-0.3	-0.1	0.2	0.2	0.4	0.0	0.2	0.4	-0.2	-0.1	-1.1
Below Normal (13%)	-0.1	-0.3	0.0	0.1	0.3	0.2	0.0	0.3	0.6	-0.3	-0.2	0.0
Dry (24%)	0.0	-0.3	0.0	0.0	0.1	0.0	0.0	0.1	0.2	-0.3	0.0	0.0
Critical (15%)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-1-2. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	4.6	6.2	12.0	14.9	16.2	14.5	11.3	9.6	5.7	6.5	5.2	7.5
20%	4.5	5.5	8.3	12.7	14.5	12.2	8.3	6.7	5.0	6.4	5.1	7.3
30%	4.4	5.2	5.9	9.6	12.0	9.2	6.0	5.0	4.7	6.1	5.0	6.2
40%	4.3	4.9	5.2	6.7	10.5	7.5	5.4	4.6	4.7	5.8	4.9	5.7
50%	4.1	4.6	4.9	5.9	8.2	6.4	4.6	4.5	4.6	5.5	4.9	4.7
60%	4.0	4.4	4.8	5.3	6.4	5.6	4.3	4.3	4.5	5.3	4.7	4.4
70%	4.0	4.1	4.6	4.8	5.4	5.2	4.1	4.2	4.5	5.1	4.5	4.3
80%	3.9	4.0	4.3	4.5	4.8	4.4	4.0	4.1	4.3	4.9	4.4	4.2
90%	3.7	3.9	4.2	4.3	4.5	4.0	3.8	4.0	4.2	4.6	4.2	4.0
Long Term												
Full Simulation Period[b]	4.2	5.0	6.5	8.0	9.3	8.0	6.1	5.5	5.0	5.6	4.8	5.4
Water Year Types[c]												
Wet (32%)	4.5	5.9	9.2	11.8	13.3	11.5	8.8	7.8	5.9	5.8	5.0	7.3
Above Normal (16%)	4.1	5.4	6.8	9.6	11.3	10.0	6.5	5.2	4.7	6.2	5.1	5.7
Below Normal (13%)	4.3	4.9	5.0	5.5	7.8	5.2	4.5	4.5	4.6	6.0	5.0	4.5
Dry (24%)	4.1	4.4	4.7	5.3	6.4	5.8	4.6	4.3	4.6	5.2	4.4	4.2
Critical (15%)	4.0	4.1	4.5	4.8	4.9	4.3	4.0	4.0	4.3	4.6	4.3	4.1

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	4.5	6.1	13.0	15.1	16.2	14.8	11.3	9.6	5.7	6.4	5.1	4.8
20%	4.4	4.8	8.9	13.3	14.6	12.3	8.3	6.9	5.3	6.3	5.0	4.7
30%	4.3	4.5	6.1	10.2	12.4	9.7	6.0	5.2	5.1	6.1	4.9	4.6
40%	4.2	4.3	5.3	7.0	11.0	7.6	5.4	4.7	5.0	5.8	4.9	4.6
50%	4.1	4.2	4.9	6.1	8.4	6.5	4.7	4.6	4.8	5.6	4.7	4.5
60%	4.0	4.2	4.7	5.3	6.5	5.7	4.3	4.4	4.8	5.3	4.6	4.4
70%	3.9	4.1	4.5	4.8	5.7	5.2	4.2	4.3	4.7	5.0	4.5	4.2
80%	3.9	4.0	4.3	4.5	4.8	4.5	4.0	4.2	4.5	4.7	4.4	4.2
90%	3.7	3.8	4.2	4.3	4.6	4.0	3.8	4.0	4.3	4.5	4.3	4.1
Long Term												
Full Simulation Period[b]	4.2	4.8	6.6	8.1	9.4	8.1	6.1	5.6	5.2	5.5	4.7	4.5
Water Year Types[c]												
Wet (32%)	4.4	5.5	9.6	12.1	13.4	11.5	8.8	7.9	6.1	5.7	4.9	4.8
Above Normal (16%)	4.1	5.1	6.7	9.7	11.5	10.3	6.5	5.4	5.0	6.1	5.0	4.6
Below Normal (13%)	4.2	4.6	5.0	5.7	8.2	5.4	4.5	4.6	4.9	6.1	5.0	4.6
Dry (24%)	4.0	4.2	4.6	5.2	6.4	5.8	4.6	4.4	4.8	5.1	4.4	4.2
Critical (15%)	4.0	4.0	4.5	4.8	5.0	4.3	4.0	4.0	4.4	4.5	4.3	4.1

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.1	0.0	1.0	0.2	0.0	0.3	0.0	0.0	0.0	-0.1	-0.1	-2.7
20%	-0.1	-0.7	0.7	0.7	0.1	0.1	0.0	0.2	0.3	-0.1	0.0	-2.6
30%	-0.1	-0.7	0.2	0.6	0.4	0.5	0.0	0.2	0.4	0.0	-0.1	-1.6
40%	-0.1	-0.6	0.1	0.4	0.5	0.2	0.0	0.1	0.3	0.0	-0.1	-1.1
50%	0.0	-0.4	0.0	0.2	0.1	0.0	0.0	0.1	0.2	0.1	-0.1	-0.2
60%	0.0	-0.2	-0.1	0.0	0.0	0.1	0.0	0.1	0.3	0.0	-0.1	-0.1
70%	0.0	-0.1	-0.1	0.0	0.2	0.0	0.0	0.1	0.2	-0.1	0.0	0.0
80%	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.1	0.2	-0.2	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	-0.1	-0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.2	-0.1	0.0	-1.0
Water Year Types[c]												
Wet (32%)	-0.1	-0.3	0.5	0.3	0.1	0.1	0.0	0.0	0.2	-0.1	-0.1	-2.5
Above Normal (16%)	-0.1	-0.3	-0.1	0.1	0.2	0.3	0.0	0.2	0.3	-0.1	-0.1	-1.1
Below Normal (13%)	-0.1	-0.3	0.0	0.2	0.3	0.2	0.0	0.2	0.3	0.1	0.1	0.1
Dry (24%)	0.0	-0.3	0.0	0.0	0.1	0.0	0.0	0.1	0.2	-0.1	0.0	0.0
Critical (15%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-1-3. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	4.6	6.2	12.0	14.9	16.2	14.5	11.3	9.6	5.7	6.5	5.2	7.5
20%	4.5	5.5	8.3	12.7	14.5	12.2	8.3	6.7	5.0	6.4	5.1	7.3
30%	4.4	5.2	5.9	9.6	12.0	9.2	6.0	5.0	4.7	6.1	5.0	6.2
40%	4.3	4.9	5.2	6.7	10.5	7.5	5.4	4.6	4.7	5.8	4.9	5.7
50%	4.1	4.6	4.9	5.9	8.2	6.4	4.6	4.5	4.6	5.5	4.9	4.7
60%	4.0	4.4	4.8	5.3	6.4	5.6	4.3	4.3	4.5	5.3	4.7	4.4
70%	4.0	4.1	4.6	4.8	5.4	5.2	4.1	4.2	4.5	5.1	4.5	4.3
80%	3.9	4.0	4.3	4.5	4.8	4.4	4.0	4.1	4.3	4.9	4.4	4.2
90%	3.7	3.9	4.2	4.3	4.5	4.0	3.8	4.0	4.2	4.6	4.2	4.0
Long Term												
Full Simulation Period[b]	4.2	5.0	6.5	8.0	9.3	8.0	6.1	5.5	5.0	5.6	4.8	5.4
Water Year Types[c]												
Wet (32%)	4.5	5.9	9.2	11.8	13.3	11.5	8.8	7.8	5.9	5.8	5.0	7.3
Above Normal (16%)	4.1	5.4	6.8	9.6	11.3	10.0	6.5	5.2	4.7	6.2	5.1	5.7
Below Normal (13%)	4.3	4.9	5.0	5.5	7.8	5.2	4.5	4.5	4.6	6.0	5.0	4.5
Dry (24%)	4.1	4.4	4.7	5.3	6.4	5.8	4.6	4.3	4.6	5.2	4.4	4.2
Critical (15%)	4.0	4.1	4.5	4.8	4.9	4.3	4.0	4.0	4.3	4.6	4.3	4.1

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	4.6	6.2	12.0	14.9	16.2	14.5	11.3	9.6	5.7	6.5	5.2	7.5
20%	4.5	5.5	8.3	12.6	14.5	12.2	8.3	6.7	5.0	6.4	5.1	7.3
30%	4.4	5.3	5.9	9.6	12.0	9.2	6.0	5.0	4.8	6.2	5.0	6.2
40%	4.3	4.9	5.2	6.6	10.5	7.5	5.4	4.5	4.7	5.8	5.0	5.7
50%	4.1	4.6	4.9	5.9	8.3	6.4	4.6	4.4	4.6	5.6	4.9	4.7
60%	4.0	4.3	4.8	5.3	6.4	5.6	4.3	4.3	4.5	5.4	4.8	4.5
70%	4.0	4.2	4.6	4.8	5.4	5.2	4.1	4.2	4.5	5.2	4.5	4.3
80%	3.9	4.0	4.3	4.5	4.8	4.4	3.9	4.1	4.3	5.1	4.4	4.2
90%	3.7	3.9	4.2	4.3	4.5	4.0	3.8	3.9	4.2	4.6	4.3	4.0
Long Term												
Full Simulation Period[b]	4.2	5.1	6.5	8.0	9.3	8.0	6.1	5.5	5.0	5.6	4.8	5.4
Water Year Types[c]												
Wet (32%)	4.5	5.9	9.2	11.9	13.3	11.5	8.8	7.8	5.9	5.9	5.0	7.2
Above Normal (16%)	4.1	5.4	6.8	9.6	11.3	10.0	6.5	5.2	4.7	6.2	5.1	5.7
Below Normal (13%)	4.3	4.9	5.0	5.5	7.8	5.2	4.5	4.4	4.6	6.1	5.0	4.5
Dry (24%)	4.1	4.4	4.7	5.3	6.4	5.8	4.6	4.2	4.6	5.3	4.5	4.2
Critical (15%)	4.0	4.1	4.5	4.8	4.9	4.3	3.9	4.0	4.3	4.6	4.3	4.1

Alternative 5 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	0.1	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.1	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-1-4. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	4.6	6.1	13.0	15.2	16.2	14.8	11.3	9.6	5.9	6.2	5.1	4.9
20%	4.4	4.7	8.8	13.4	14.6	12.3	8.3	7.2	5.4	5.9	5.0	4.7
30%	4.3	4.6	6.1	10.2	12.4	10.3	6.0	5.2	5.2	5.7	4.9	4.6
40%	4.2	4.4	5.3	7.1	11.1	7.6	5.4	4.7	5.0	5.6	4.8	4.6
50%	4.1	4.2	4.9	6.2	8.4	6.5	4.7	4.6	4.9	5.4	4.7	4.5
60%	4.1	4.2	4.7	5.3	6.5	5.6	4.3	4.5	4.7	5.2	4.6	4.3
70%	4.0	4.1	4.5	4.8	5.6	5.2	4.2	4.3	4.6	4.8	4.4	4.2
80%	3.9	4.0	4.3	4.5	4.8	4.5	4.0	4.2	4.5	4.6	4.4	4.1
90%	3.8	3.8	4.2	4.3	4.5	4.0	3.8	4.0	4.3	4.5	4.3	4.0
Long Term												
Full Simulation Period[b]	4.2	4.8	6.6	8.1	9.4	8.1	6.1	5.6	5.2	5.3	4.7	4.5
Water Year Types[c]												
Wet (32%)	4.4	5.5	9.6	12.1	13.4	11.6	8.8	7.8	6.0	5.6	4.9	4.8
Above Normal (16%)	4.1	5.0	6.7	9.8	11.5	10.4	6.5	5.4	5.1	5.9	5.0	4.6
Below Normal (13%)	4.3	4.6	5.0	5.6	8.2	5.4	4.5	4.7	5.2	5.8	4.8	4.5
Dry (24%)	4.0	4.2	4.6	5.2	6.4	5.9	4.6	4.4	4.8	4.9	4.4	4.3
Critical (15%)	4.0	4.0	4.5	4.8	4.9	4.3	4.0	4.0	4.4	4.5	4.3	4.1

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	4.6	6.2	12.0	14.9	16.2	14.5	11.3	9.6	5.7	6.5	5.2	7.5
20%	4.5	5.5	8.3	12.7	14.5	12.2	8.3	6.7	5.0	6.4	5.1	7.3
30%	4.4	5.2	5.9	9.6	12.0	9.2	6.0	5.0	4.7	6.1	5.0	6.2
40%	4.3	4.9	5.2	6.7	10.5	7.5	5.4	4.6	4.7	5.8	4.9	5.7
50%	4.1	4.6	4.9	5.9	8.2	6.4	4.6	4.5	4.6	5.5	4.9	4.7
60%	4.0	4.4	4.8	5.3	6.4	5.6	4.3	4.3	4.5	5.3	4.7	4.4
70%	4.0	4.1	4.6	4.8	5.4	5.2	4.1	4.2	4.5	5.1	4.5	4.3
80%	3.9	4.0	4.3	4.5	4.8	4.4	4.0	4.1	4.3	4.9	4.4	4.2
90%	3.7	3.9	4.2	4.3	4.5	4.0	3.8	4.0	4.2	4.6	4.2	4.0
Long Term												
Full Simulation Period[b]	4.2	5.0	6.5	8.0	9.3	8.0	6.1	5.5	5.0	5.6	4.8	5.4
Water Year Types[c]												
Wet (32%)	4.5	5.9	9.2	11.8	13.3	11.5	8.8	7.8	5.9	5.8	5.0	7.3
Above Normal (16%)	4.1	5.4	6.8	9.6	11.3	10.0	6.5	5.2	4.7	6.2	5.1	5.7
Below Normal (13%)	4.3	4.9	5.0	5.5	7.8	5.2	4.5	4.5	4.6	6.0	5.0	4.5
Dry (24%)	4.1	4.4	4.7	5.3	6.4	5.8	4.6	4.3	4.6	5.2	4.4	4.2
Critical (15%)	4.0	4.1	4.5	4.8	4.9	4.3	4.0	4.0	4.3	4.6	4.3	4.1

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.1	-1.1	-0.3	0.0	-0.3	0.0	0.0	-0.2	0.3	0.1	2.6
20%	0.1	0.8	-0.5	-0.8	-0.1	-0.1	0.0	-0.5	-0.4	0.5	0.1	2.6
30%	0.1	0.7	-0.1	-0.6	-0.4	-1.0	0.0	-0.1	-0.5	0.4	0.1	1.6
40%	0.1	0.5	-0.1	-0.4	-0.6	-0.2	0.0	-0.1	-0.4	0.2	0.1	1.1
50%	0.0	0.3	0.0	-0.3	-0.1	0.0	0.0	-0.1	-0.3	0.1	0.2	0.2
60%	0.0	0.2	0.1	0.1	0.0	0.0	0.0	-0.2	-0.2	0.1	0.1	0.1
70%	0.0	0.1	0.1	0.0	-0.2	0.0	0.0	-0.1	-0.1	0.4	0.1	0.1
80%	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	0.3	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.3	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.2	0.2	0.1	1.0
Water Year Types[c]												
Wet (32%)	0.1	0.3	-0.5	-0.2	-0.1	-0.1	0.0	0.0	-0.1	0.2	0.1	2.5
Above Normal (16%)	0.0	0.3	0.1	-0.2	-0.2	-0.4	0.0	-0.2	-0.4	0.2	0.1	1.1
Below Normal (13%)	0.1	0.3	0.0	-0.1	-0.3	-0.2	0.0	-0.3	-0.6	0.3	0.2	0.0
Dry (24%)	0.0	0.3	0.0	0.0	-0.1	0.0	0.0	-0.1	-0.2	0.3	0.0	0.0
Critical (15%)	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-1-5. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4.6	6.1	13.0	15.2	16.2	14.8	11.3	9.6	5.9	6.2	5.1	4.9
20%	4.4	4.7	8.8	13.4	14.6	12.3	8.3	7.2	5.4	5.9	5.0	4.7
30%	4.3	4.6	6.1	10.2	12.4	10.3	6.0	5.2	5.2	5.7	4.9	4.6
40%	4.2	4.4	5.3	7.1	11.1	7.6	5.4	4.7	5.0	5.6	4.8	4.6
50%	4.1	4.2	4.9	6.2	8.4	6.5	4.7	4.6	4.9	5.4	4.7	4.5
60%	4.1	4.2	4.7	5.3	6.5	5.6	4.3	4.5	4.7	5.2	4.6	4.3
70%	4.0	4.1	4.5	4.8	5.6	5.2	4.2	4.3	4.6	4.8	4.4	4.2
80%	3.9	4.0	4.3	4.5	4.8	4.5	4.0	4.2	4.5	4.6	4.4	4.1
90%	3.8	3.8	4.2	4.3	4.5	4.0	3.8	4.0	4.3	4.5	4.3	4.0
Long Term												
Full Simulation Period[b]	4.2	4.8	6.6	8.1	9.4	8.1	6.1	5.6	5.2	5.3	4.7	4.5
Water Year Types[c]												
Wet (32%)	4.4	5.5	9.6	12.1	13.4	11.6	8.8	7.8	6.0	5.6	4.9	4.8
Above Normal (16%)	4.1	5.0	6.7	9.8	11.5	10.4	6.5	5.4	5.1	5.9	5.0	4.6
Below Normal (13%)	4.3	4.6	5.0	5.6	8.2	5.4	4.5	4.7	5.2	5.8	4.8	4.5
Dry (24%)	4.0	4.2	4.6	5.2	6.4	5.9	4.6	4.4	4.8	4.9	4.4	4.3
Critical (15%)	4.0	4.0	4.5	4.8	4.9	4.3	4.0	4.0	4.4	4.5	4.3	4.1

Alternative 3

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4.5	6.1	13.0	15.1	16.2	14.8	11.3	9.6	5.7	6.4	5.1	4.8
20%	4.4	4.8	8.9	13.3	14.6	12.3	8.3	6.9	5.3	6.3	5.0	4.7
30%	4.3	4.5	6.1	10.2	12.4	9.7	6.0	5.2	5.1	6.1	4.9	4.6
40%	4.2	4.3	5.3	7.0	11.0	7.6	5.4	4.7	5.0	5.8	4.9	4.6
50%	4.1	4.2	4.9	6.1	8.4	6.5	4.7	4.6	4.8	5.6	4.7	4.5
60%	4.0	4.2	4.7	5.3	6.5	5.7	4.3	4.4	4.8	5.3	4.6	4.4
70%	3.9	4.1	4.5	4.8	5.7	5.2	4.2	4.3	4.7	5.0	4.5	4.2
80%	3.9	4.0	4.3	4.5	4.8	4.5	4.0	4.2	4.5	4.7	4.4	4.2
90%	3.7	3.8	4.2	4.3	4.6	4.0	3.8	4.0	4.3	4.5	4.3	4.1
Long Term												
Full Simulation Period[b]	4.2	4.8	6.6	8.1	9.4	8.1	6.1	5.6	5.2	5.5	4.7	4.5
Water Year Types[c]												
Wet (32%)	4.4	5.5	9.6	12.1	13.4	11.5	8.8	7.9	6.1	5.7	4.9	4.8
Above Normal (16%)	4.1	5.1	6.7	9.7	11.5	10.3	6.5	5.4	5.0	6.1	5.0	4.6
Below Normal (13%)	4.2	4.6	5.0	5.7	8.2	5.4	4.5	4.6	4.9	6.1	5.0	4.6
Dry (24%)	4.0	4.2	4.6	5.2	6.4	5.8	4.6	4.4	4.8	5.1	4.4	4.2
Critical (15%)	4.0	4.0	4.5	4.8	5.0	4.3	4.0	4.0	4.4	4.5	4.3	4.1

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.1	0.0	-0.1	0.0	0.0	0.0	0.0	-0.2	0.2	0.0	0.0
20%	0.0	0.1	0.2	-0.1	0.0	0.0	0.0	-0.3	-0.1	0.4	0.1	0.0
30%	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	-0.1	0.4	0.1	0.0
40%	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	-0.1	0.2	0.1	0.0
50%	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	-0.1	0.2	0.1	0.0
60%	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
70%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	-0.1	0.0	-0.1	0.0	0.0	-0.1	0.2	0.0	0.0
Below Normal (13%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.4	0.4	0.3	0.1
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-1-6. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	4.6	6.1	13.0	15.2	16.2	14.8	11.3	9.6	5.9	6.2	5.1	4.9
20%	4.4	4.7	8.8	13.4	14.6	12.3	8.3	7.2	5.4	5.9	5.0	4.7
30%	4.3	4.6	6.1	10.2	12.4	10.3	6.0	5.2	5.2	5.7	4.9	4.6
40%	4.2	4.4	5.3	7.1	11.1	7.6	5.4	4.7	5.0	5.6	4.8	4.6
50%	4.1	4.2	4.9	6.2	8.4	6.5	4.7	4.6	4.9	5.4	4.7	4.5
60%	4.1	4.2	4.7	5.3	6.5	5.6	4.3	4.5	4.7	5.2	4.6	4.3
70%	4.0	4.1	4.5	4.8	5.6	5.2	4.2	4.3	4.6	4.8	4.4	4.2
80%	3.9	4.0	4.3	4.5	4.8	4.5	4.0	4.2	4.5	4.6	4.4	4.1
90%	3.8	3.8	4.2	4.3	4.5	4.0	3.8	4.0	4.3	4.5	4.3	4.0
Long Term												
Full Simulation Period[b]	4.2	4.8	6.6	8.1	9.4	8.1	6.1	5.6	5.2	5.3	4.7	4.5
Water Year Types[c]												
Wet (32%)	4.4	5.5	9.6	12.1	13.4	11.6	8.8	7.8	6.0	5.6	4.9	4.8
Above Normal (16%)	4.1	5.0	6.7	9.8	11.5	10.4	6.5	5.4	5.1	5.9	5.0	4.6
Below Normal (13%)	4.3	4.6	5.0	5.6	8.2	5.4	4.5	4.7	5.2	5.8	4.8	4.5
Dry (24%)	4.0	4.2	4.6	5.2	6.4	5.9	4.6	4.4	4.8	4.9	4.4	4.3
Critical (15%)	4.0	4.0	4.5	4.8	4.9	4.3	4.0	4.0	4.4	4.5	4.3	4.1

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	4.6	6.2	12.0	14.9	16.2	14.5	11.3	9.6	5.7	6.5	5.2	7.5
20%	4.5	5.5	8.3	12.6	14.5	12.2	8.3	6.7	5.0	6.4	5.1	7.3
30%	4.4	5.3	5.9	9.6	12.0	9.2	6.0	5.0	4.8	6.2	5.0	6.2
40%	4.3	4.9	5.2	6.6	10.5	7.5	5.4	4.5	4.7	5.8	5.0	5.7
50%	4.1	4.6	4.9	5.9	8.3	6.4	4.6	4.4	4.6	5.6	4.9	4.7
60%	4.0	4.3	4.8	5.3	6.4	5.6	4.3	4.3	4.5	5.4	4.8	4.5
70%	4.0	4.2	4.6	4.8	5.4	5.2	4.1	4.2	4.5	5.2	4.5	4.3
80%	3.9	4.0	4.3	4.5	4.8	4.4	3.9	4.1	4.3	5.1	4.4	4.2
90%	3.7	3.9	4.2	4.3	4.5	4.0	3.8	3.9	4.2	4.6	4.3	4.0
Long Term												
Full Simulation Period[b]	4.2	5.1	6.5	8.0	9.3	8.0	6.1	5.5	5.0	5.6	4.8	5.4
Water Year Types[c]												
Wet (32%)	4.5	5.9	9.2	11.9	13.3	11.5	8.8	7.8	5.9	5.9	5.0	7.2
Above Normal (16%)	4.1	5.4	6.8	9.6	11.3	10.0	6.5	5.2	4.7	6.2	5.1	5.7
Below Normal (13%)	4.3	4.9	5.0	5.5	7.8	5.2	4.5	4.4	4.6	6.1	5.0	4.5
Dry (24%)	4.1	4.4	4.7	5.3	6.4	5.8	4.6	4.2	4.6	5.3	4.5	4.2
Critical (15%)	4.0	4.1	4.5	4.8	4.9	4.3	3.9	4.0	4.3	4.6	4.3	4.1

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.1	**-1.1**	**-0.3**	**0.0**	**-0.3**	**0.0**	0.0	**-0.2**	0.3	0.1	2.6
20%	0.1	0.8	**-0.5**	**-0.8**	**-0.1**	**-0.1**	0.0	**-0.5**	**-0.5**	0.5	0.1	2.6
30%	0.1	0.7	**-0.1**	**-0.6**	**-0.4**	**-1.0**	0.0	**-0.1**	**-0.5**	0.5	0.1	1.6
40%	0.1	0.5	**-0.1**	**-0.4**	**-0.6**	**-0.2**	0.0	**-0.1**	**-0.4**	0.2	0.2	1.1
50%	**0.0**	0.3	0.0	**-0.3**	**-0.1**	**-0.1**	**0.0**	**-0.2**	**-0.3**	0.2	0.2	0.2
60%	**0.0**	0.2	0.1	0.0	**0.0**	**-0.1**	**0.0**	**-0.2**	**-0.2**	0.2	0.2	0.1
70%	0.0	0.1	0.1	0.0	**-0.2**	**0.0**	**0.0**	**-0.1**	**-0.1**	0.4	0.1	0.1
80%	**0.0**	0.0	0.1	0.0	**0.0**	**0.0**	**0.0**	**-0.1**	**-0.2**	0.4	0.0	0.0
90%	**0.0**	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**-0.1**	**-0.1**	0.1	0.0	**0.0**
Long Term												
Full Simulation Period[b]	0.0	0.3	**-0.1**	**-0.1**	**-0.1**	**-0.1**	**0.0**	**-0.1**	**-0.2**	0.3	0.1	1.0
Water Year Types[c]												
Wet (32%)	0.1	0.3	**-0.5**	**-0.2**	**-0.1**	**-0.1**	0.0	**0.0**	**-0.1**	0.3	0.1	2.5
Above Normal (16%)	0.0	0.3	0.1	**-0.2**	**-0.2**	**-0.4**	**0.0**	**-0.2**	**-0.4**	0.2	0.1	1.1
Below Normal (13%)	0.0	0.3	0.0	**-0.1**	**-0.3**	**-0.2**	**0.0**	**-0.3**	**-0.7**	0.3	0.2	0.0
Dry (24%)	0.0	0.3	0.0	0.0	**-0.1**	**0.0**	**0.0**	**-0.2**	**-0.2**	0.4	0.0	**0.0**
Critical (15%)	**-0.1**	0.0	0.0	**0.0**	0.0	**0.0**	**-0.1**	**0.0**	**-0.1**	0.1	0.0	**0.0**

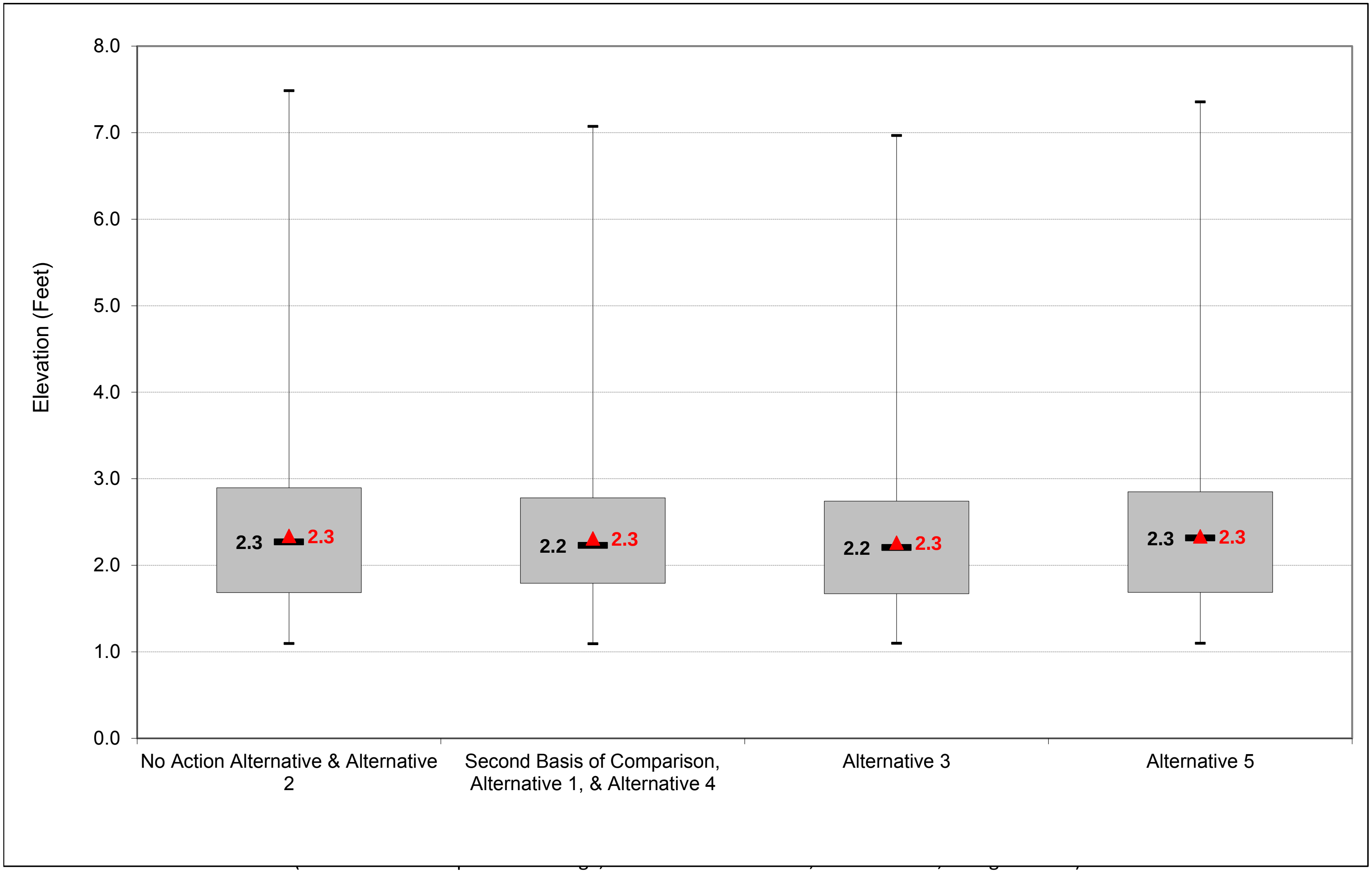
a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

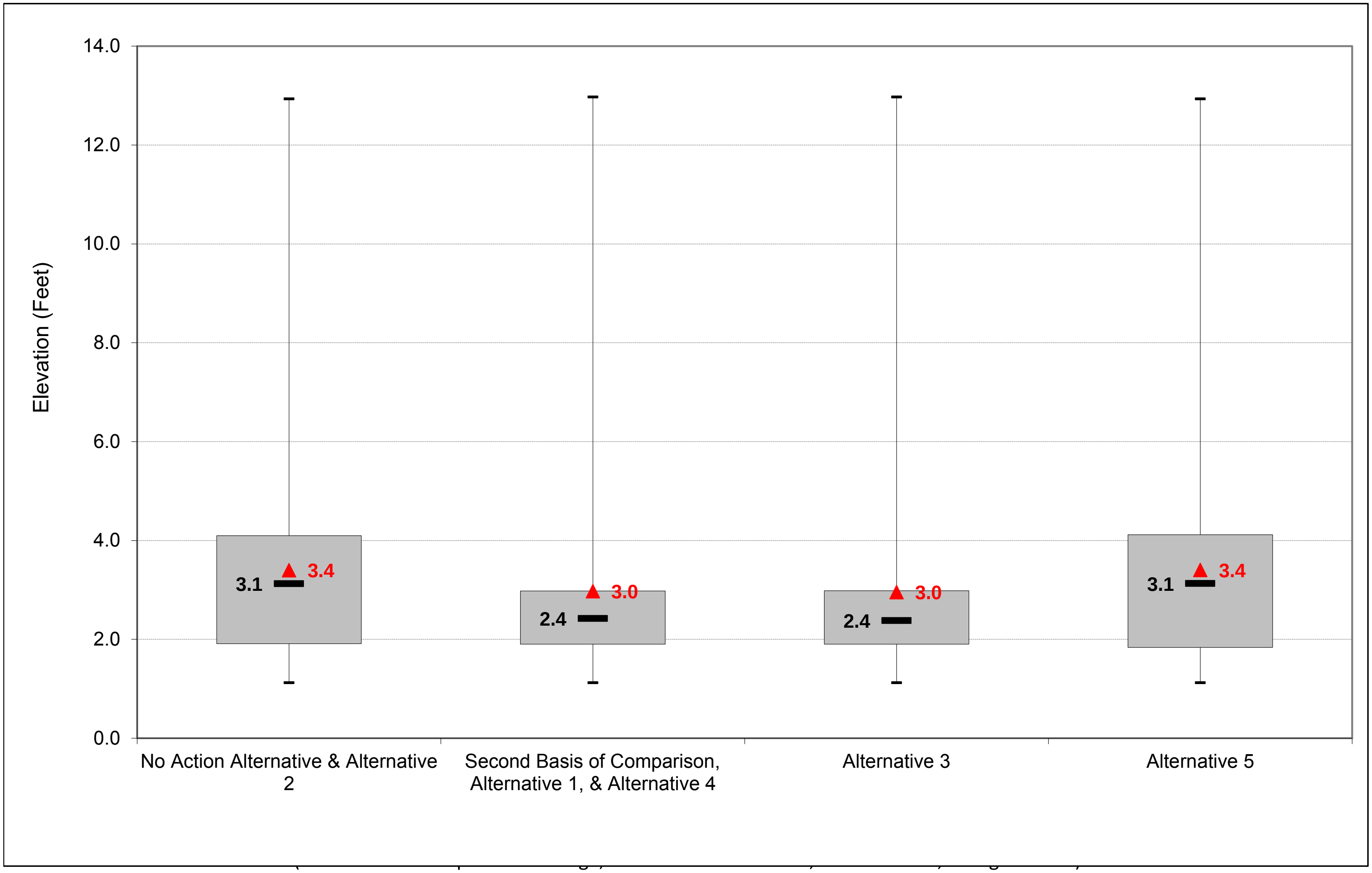
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-1. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, October



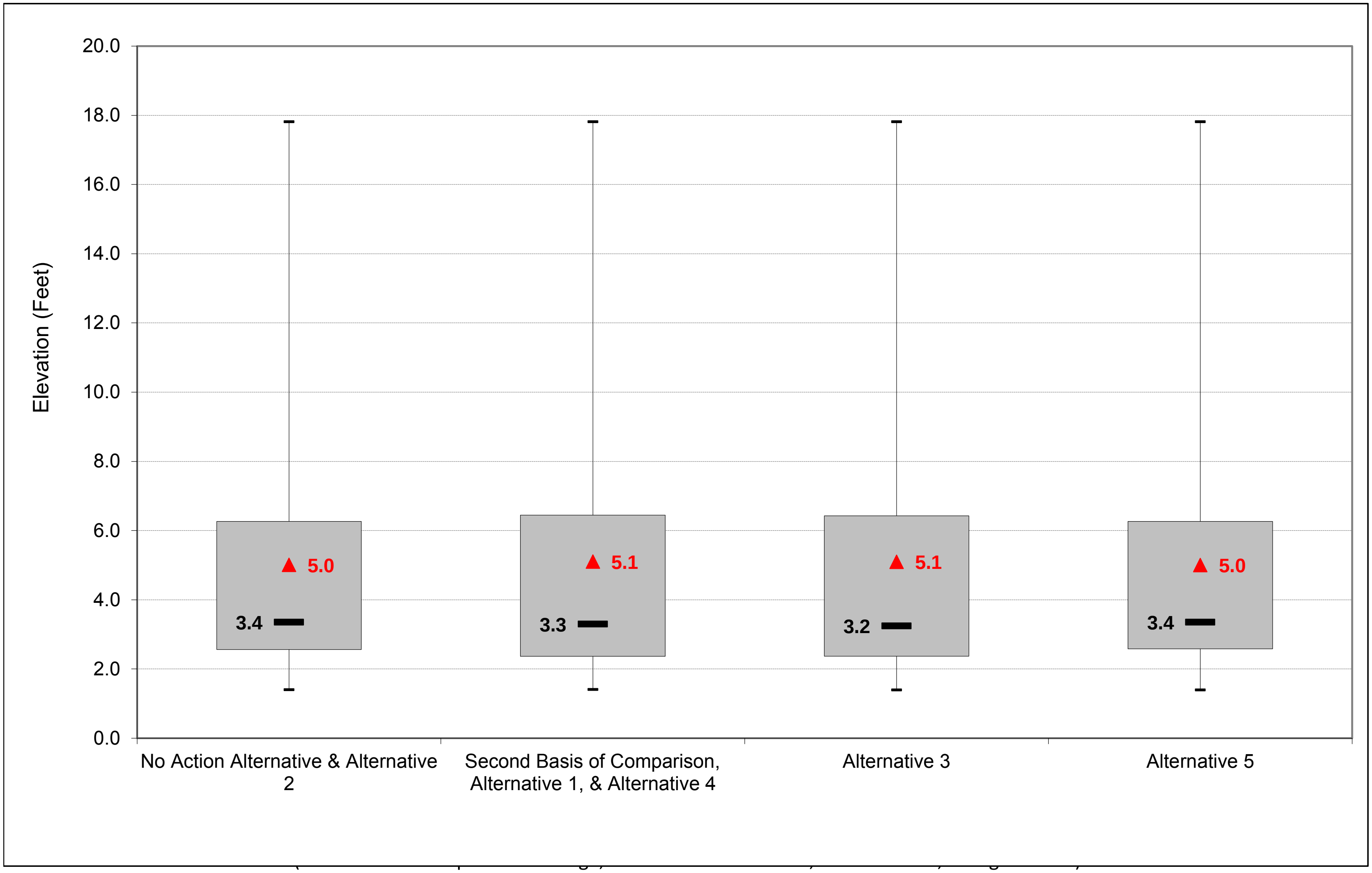
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-2. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, November



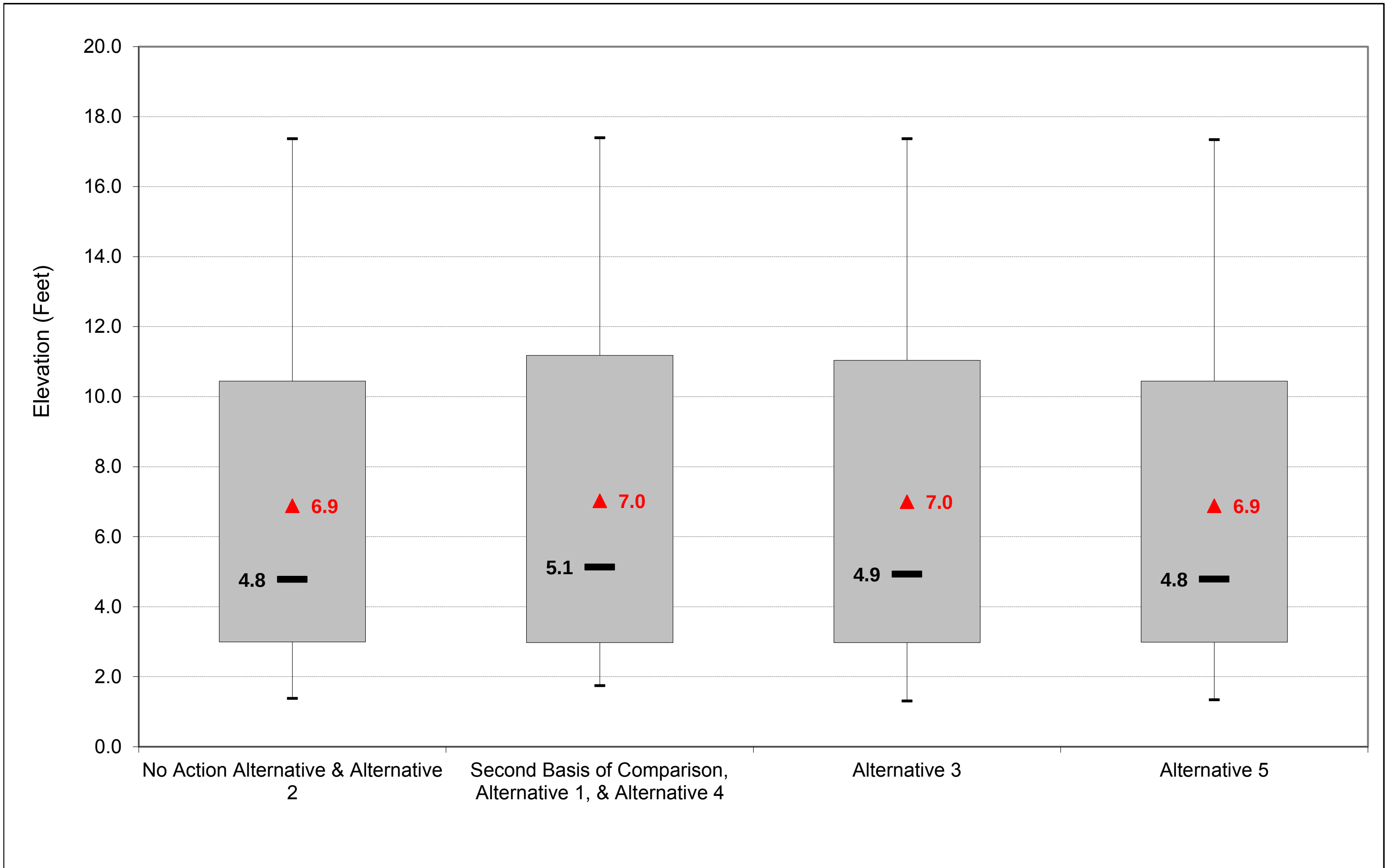
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-3. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, December



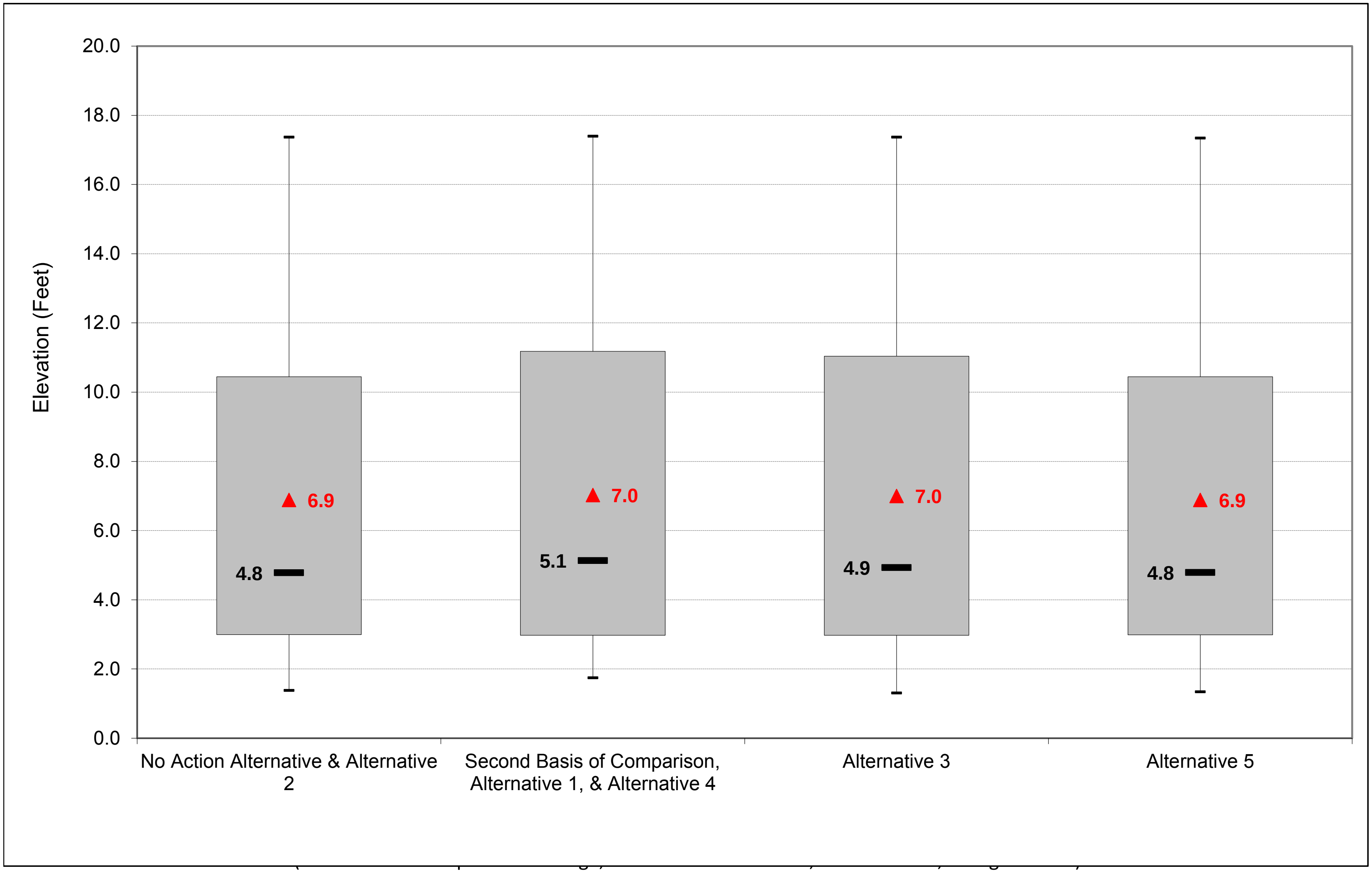
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-4. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, January



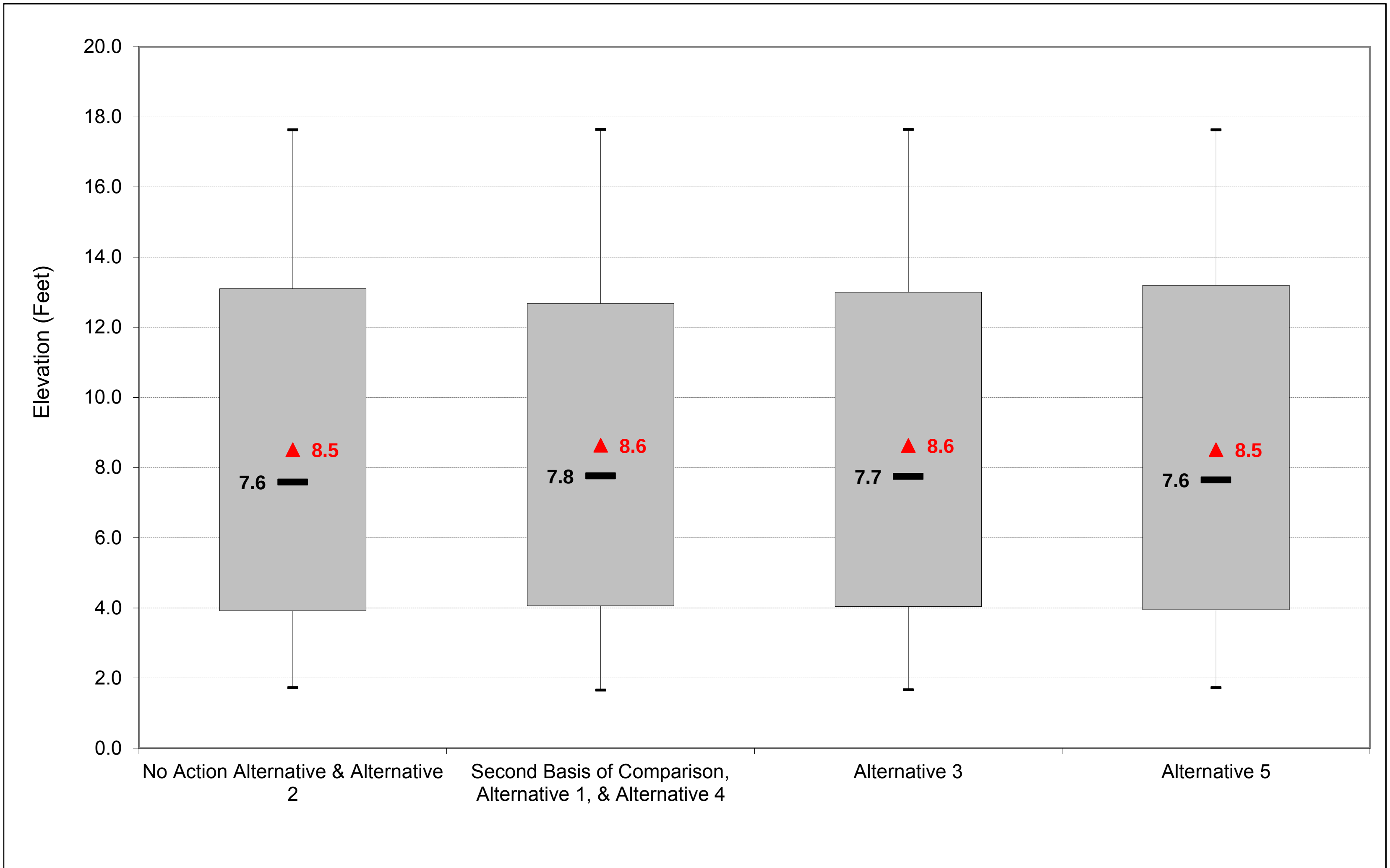
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-5. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, February



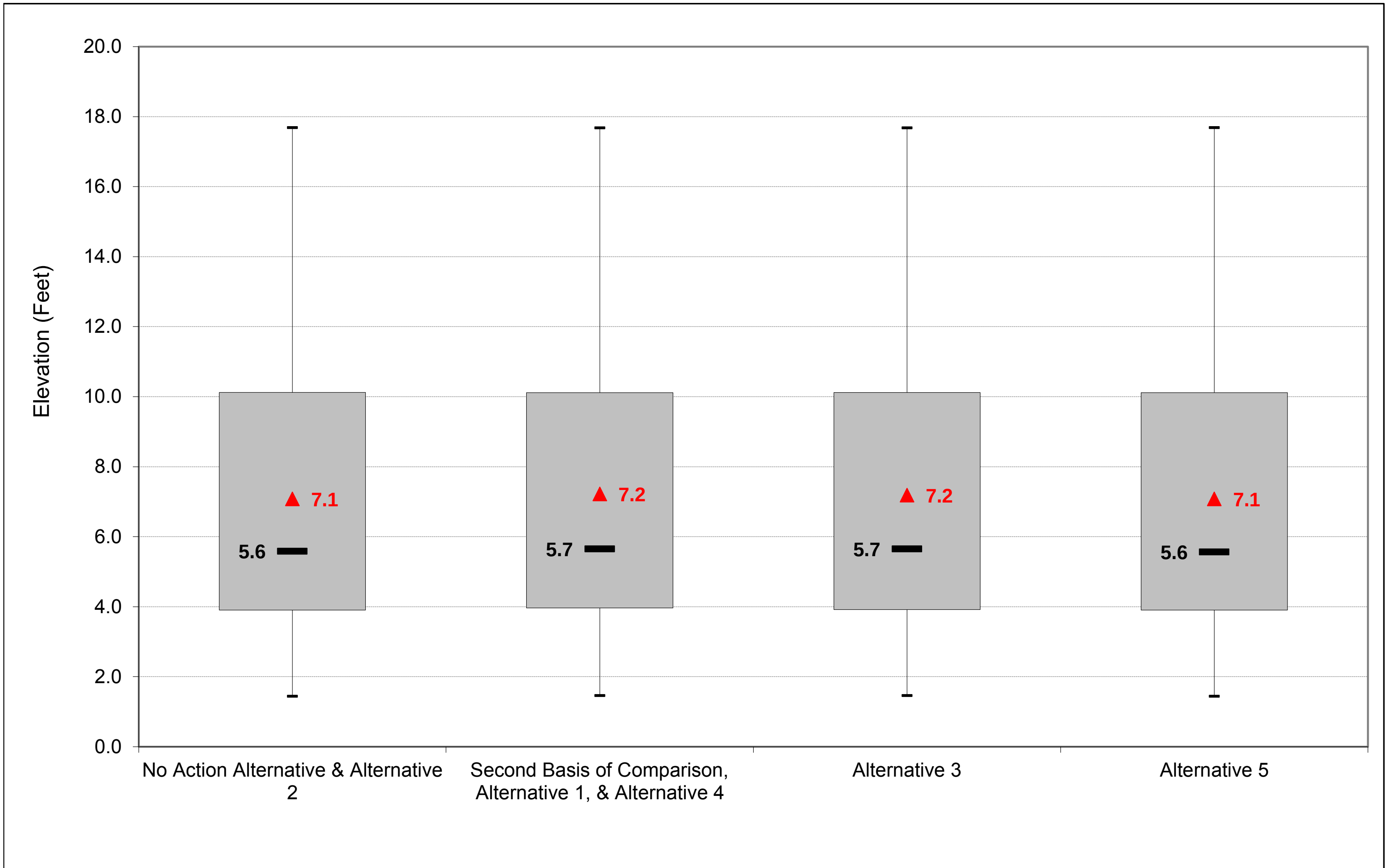
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-6. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, March



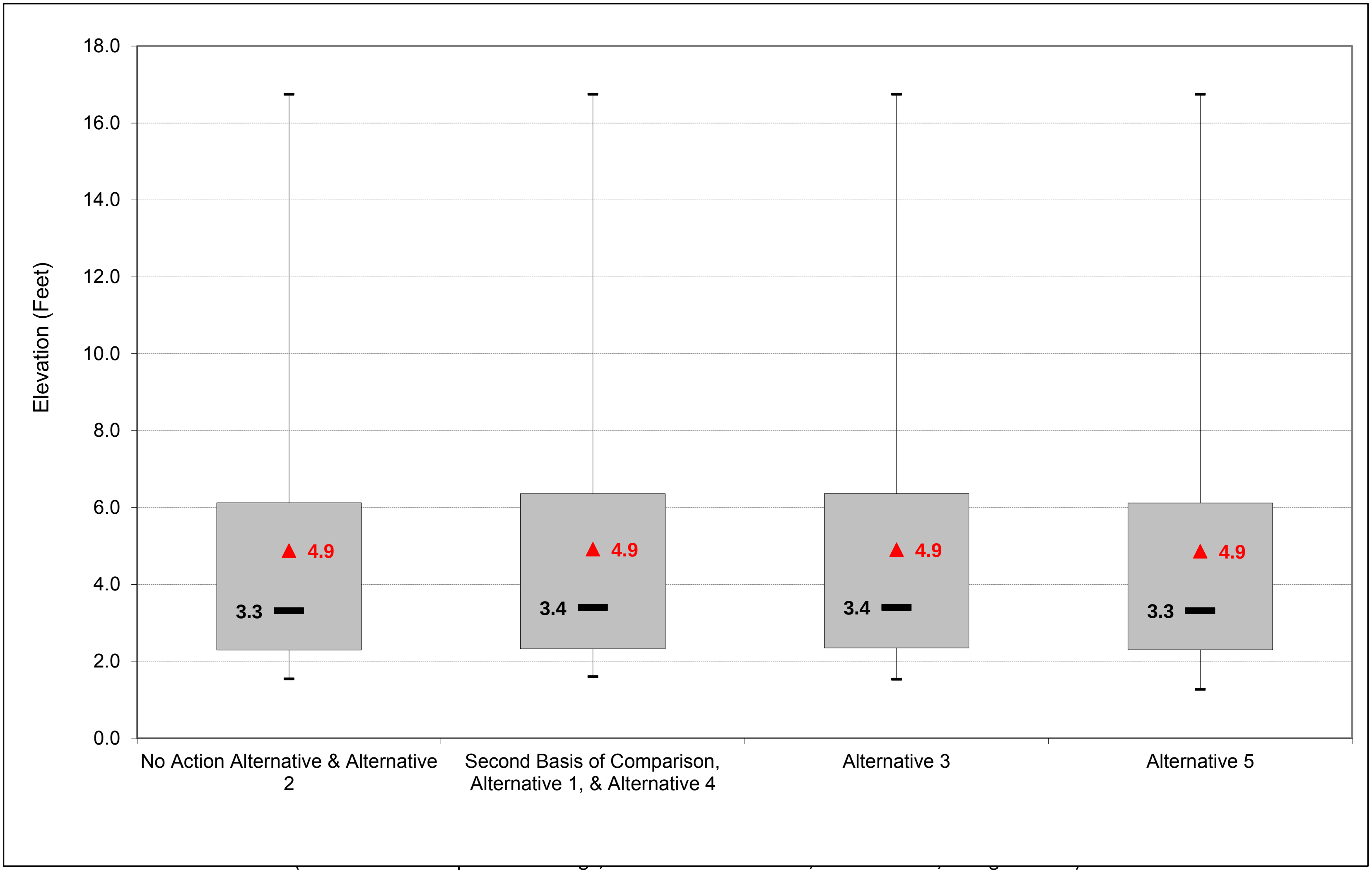
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-7. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, April



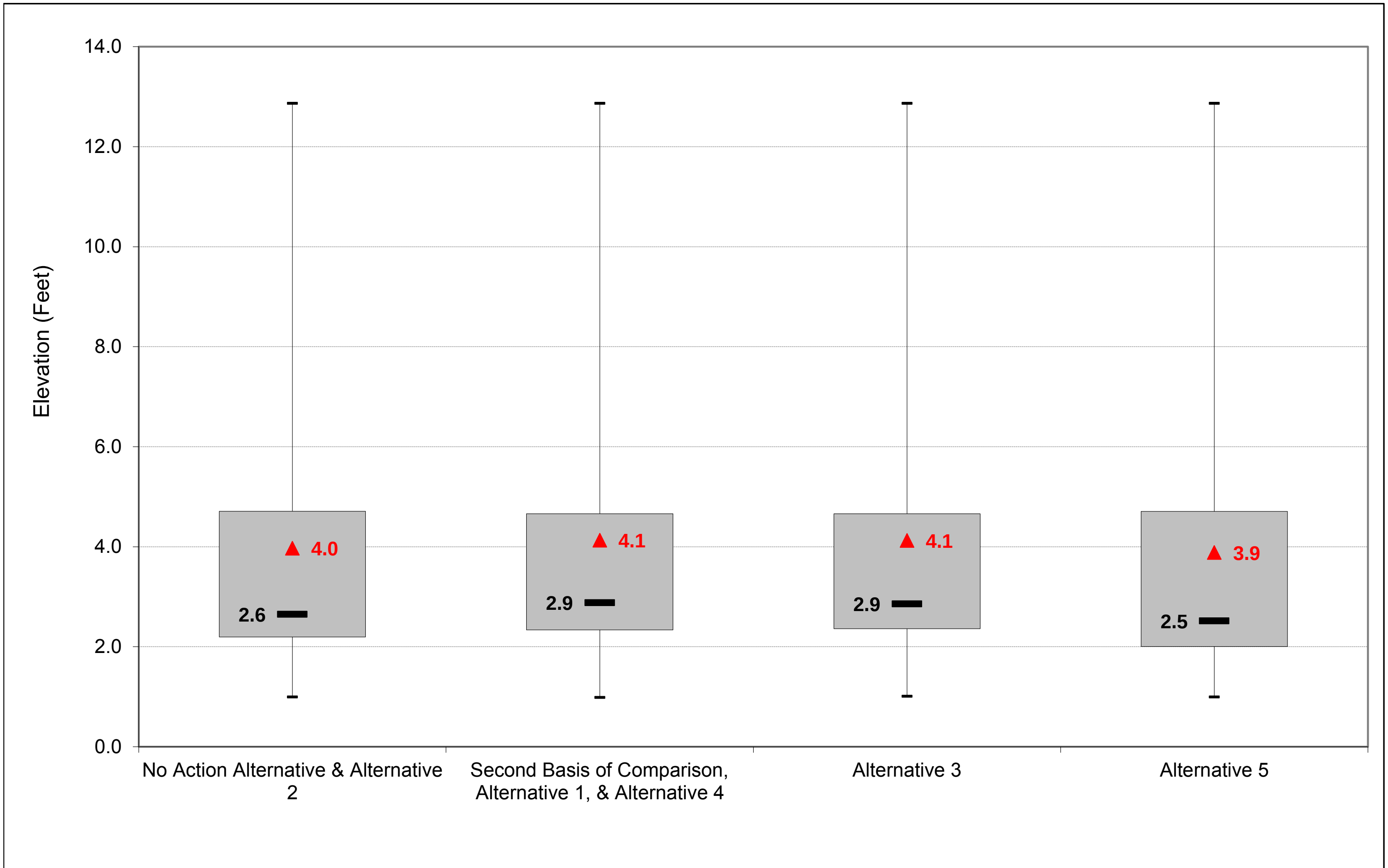
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-8. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, May



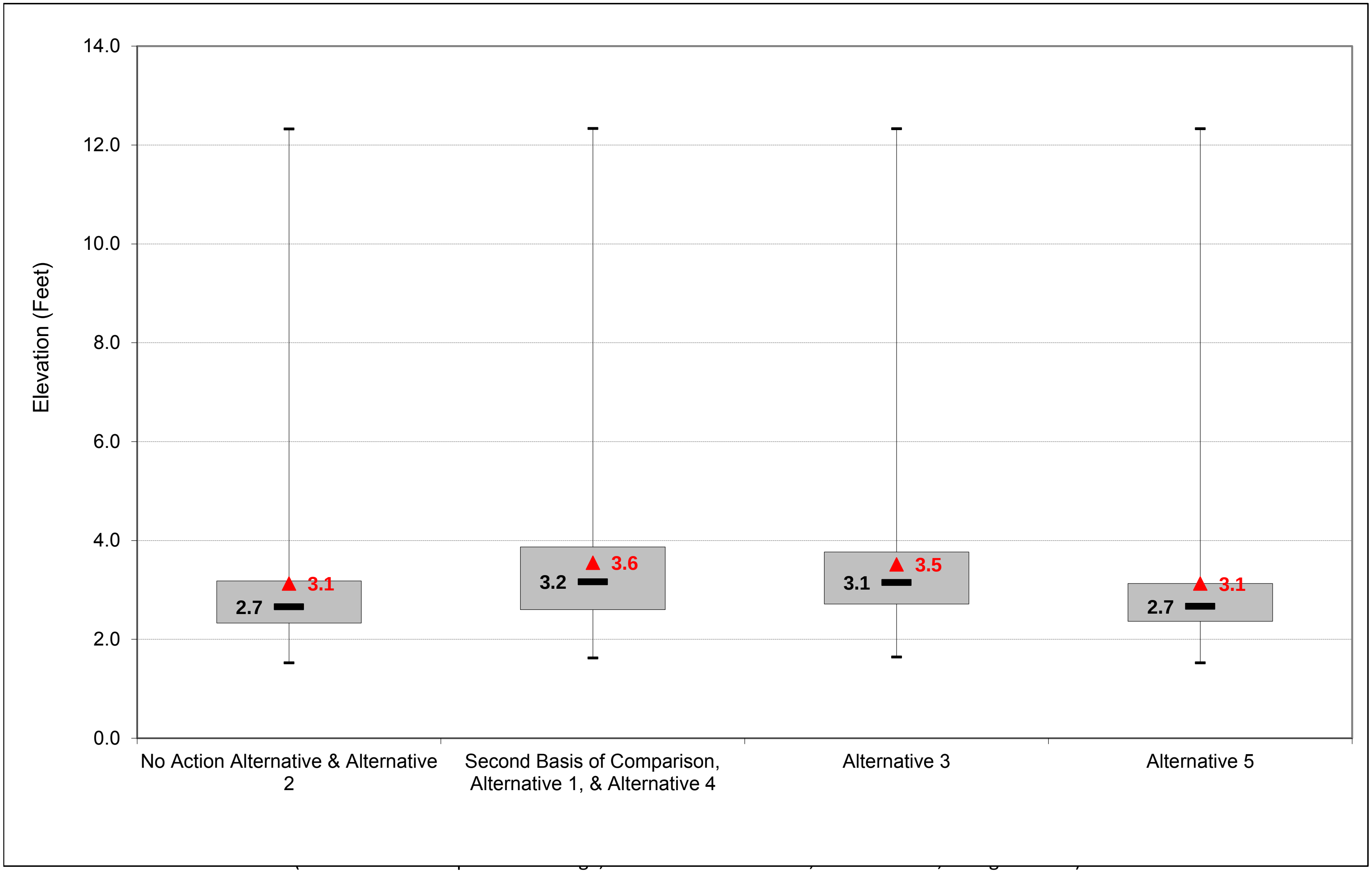
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-9. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, June



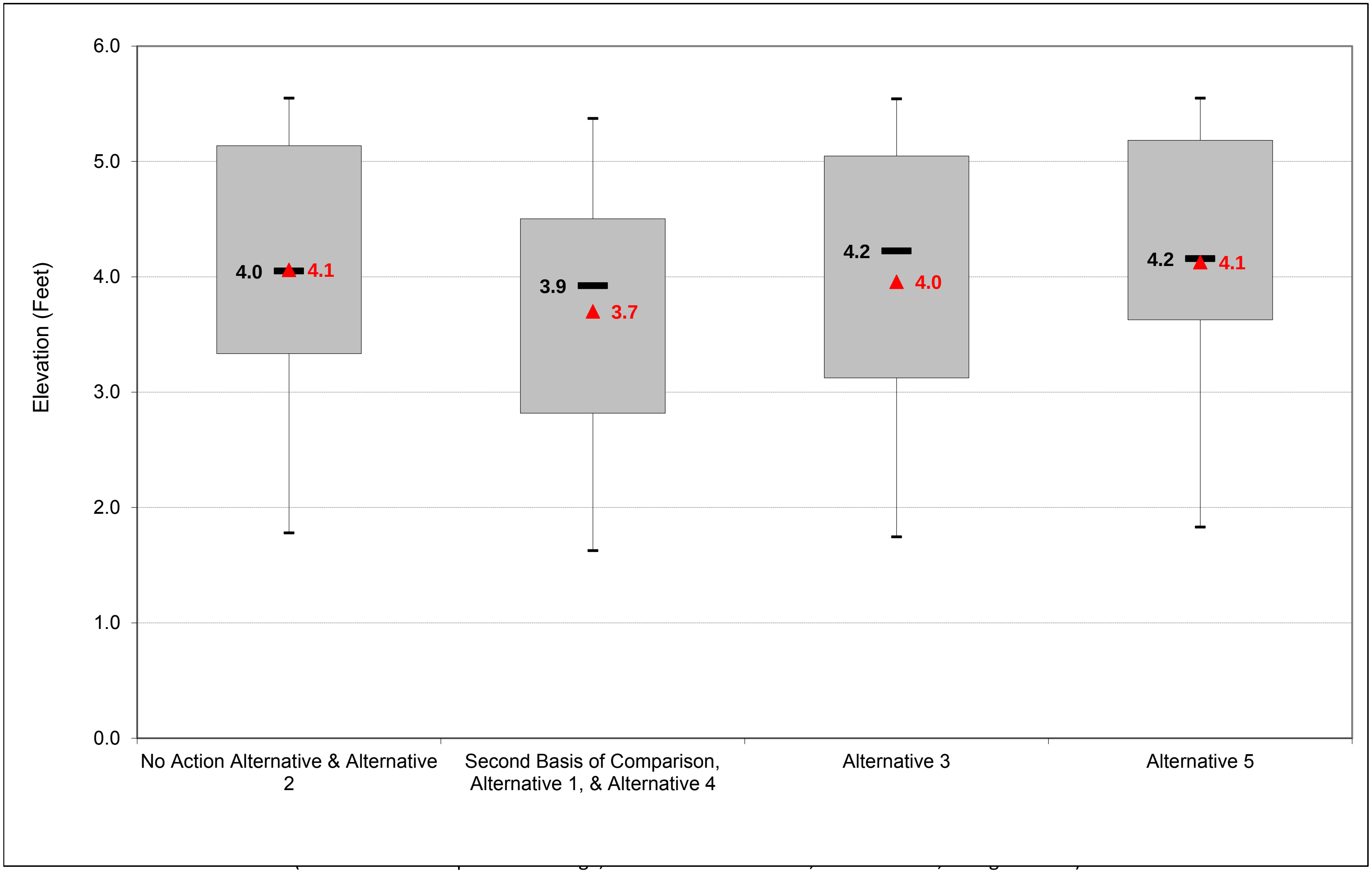
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-10. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, July



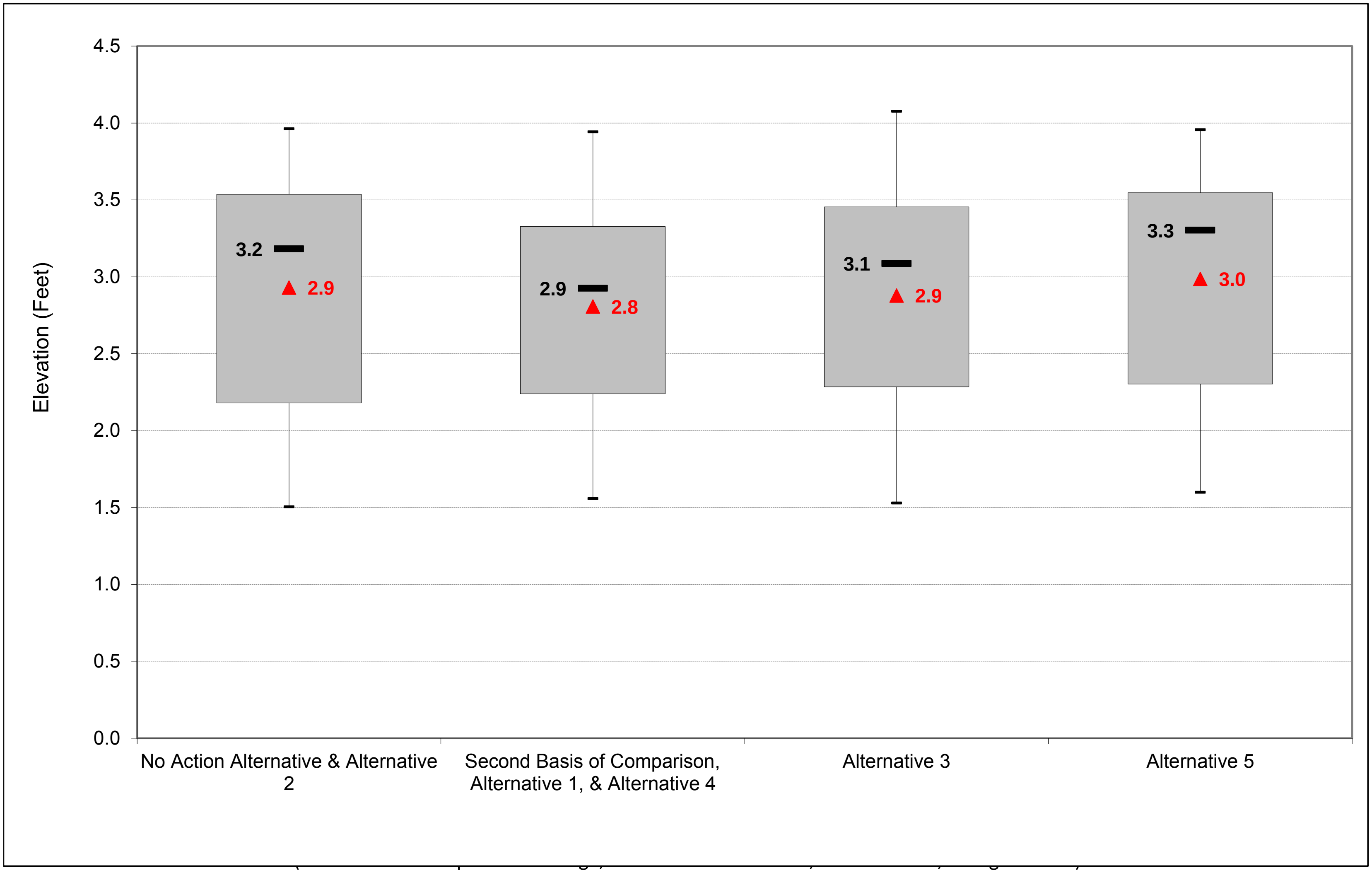
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-11. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-43-2-12. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-2-1. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.2	5.1	11.4	14.5	15.8	14.2	10.9	9.0	4.3	5.4	3.7	6.8
20%	3.0	4.1	7.6	12.3	14.1	11.9	7.7	5.9	3.4	5.2	3.6	6.7
30%	2.8	4.0	4.8	9.0	11.5	8.7	5.2	3.6	2.9	4.9	3.5	5.0
40%	2.5	3.6	4.0	5.7	10.0	6.8	4.4	2.9	2.7	4.5	3.4	4.7
50%	2.3	3.1	3.4	4.8	7.6	5.6	3.3	2.6	2.7	4.0	3.2	3.1
60%	1.9	2.7	3.1	4.0	5.6	4.6	2.7	2.4	2.6	3.8	2.9	2.7
70%	1.8	2.0	2.8	3.2	4.3	4.1	2.3	2.3	2.5	3.6	2.4	2.2
80%	1.6	1.8	2.2	2.9	3.5	3.1	2.2	2.1	2.2	3.1	2.0	1.9
90%	1.4	1.4	1.9	2.4	3.0	2.3	1.9	1.8	1.9	2.4	1.9	1.7
Long Term												
Full Simulation Period[b]	2.3	3.4	5.0	6.9	8.5	7.1	4.9	4.0	3.1	4.1	2.9	3.9
Water Year Types[c]												
Wet (32%)	2.8	4.5	8.3	11.2	12.9	11.0	8.0	6.9	4.4	4.4	3.4	6.5
Above Normal (16%)	2.1	3.8	5.5	8.9	10.7	9.4	5.4	3.7	2.8	5.0	3.6	4.6
Below Normal (13%)	2.5	3.4	3.4	4.1	6.9	4.1	3.0	2.7	2.6	4.8	3.3	2.6
Dry (24%)	2.1	2.6	2.9	3.8	5.3	4.8	3.2	2.5	2.6	3.6	2.3	2.2
Critical (15%)	1.7	1.7	2.4	3.1	3.5	2.7	2.1	1.7	1.9	2.3	1.9	1.7

Alternative 1

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.0	5.0	12.6	14.8	15.9	14.4	10.9	9.0	4.6	5.0	3.6	3.2
20%	2.8	3.2	8.0	13.0	14.2	12.0	7.6	6.4	4.0	4.6	3.4	3.1
30%	2.6	2.9	4.9	9.7	12.0	9.8	5.2	3.8	3.8	4.4	3.3	3.1
40%	2.3	2.7	3.9	6.1	10.7	7.0	4.4	3.2	3.5	4.1	3.1	3.0
50%	2.2	2.4	3.3	5.1	7.8	5.7	3.4	2.9	3.2	3.9	2.9	2.9
60%	2.0	2.2	3.0	3.9	5.6	4.7	2.7	2.7	3.0	3.6	2.6	2.6
70%	1.8	2.0	2.5	3.2	4.4	4.2	2.4	2.5	2.6	3.1	2.3	2.1
80%	1.7	1.7	2.1	2.8	3.6	3.2	2.3	2.2	2.5	2.7	2.1	2.0
90%	1.5	1.4	1.9	2.4	3.1	2.4	2.0	1.8	2.3	2.2	1.9	1.7
Long Term												
Full Simulation Period[b]	2.3	3.0	5.1	7.0	8.6	7.2	4.9	4.1	3.6	3.7	2.8	2.6
Water Year Types[c]												
Wet (32%)	2.7	4.0	8.8	11.5	13.0	11.1	8.0	6.9	4.6	4.1	3.2	3.2
Above Normal (16%)	2.1	3.3	5.3	9.1	10.9	9.9	5.5	4.0	3.4	4.7	3.4	3.0
Below Normal (13%)	2.5	3.0	3.3	4.3	7.2	4.3	3.1	3.1	3.7	4.4	3.0	2.6
Dry (24%)	2.1	2.2	2.8	3.8	5.4	4.8	3.2	2.6	3.0	3.1	2.3	2.2
Critical (15%)	1.8	1.7	2.4	3.1	3.4	2.7	2.1	1.7	2.2	2.1	1.9	1.7

Alternative 1 minus No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	-0.2	1.1	0.3	0.0	0.2	0.0	0.0	0.2	-0.4	-0.1	-3.6
20%	-0.1	-1.0	0.5	0.7	0.1	0.1	0.0	0.5	0.6	-0.6	-0.1	-3.5
30%	-0.2	-1.2	0.1	0.7	0.5	1.1	0.0	0.2	0.9	-0.5	-0.2	-1.9
40%	-0.2	-0.9	0.0	0.4	0.6	0.2	0.0	0.3	0.7	-0.4	-0.3	-1.7
50%	0.0	-0.7	-0.1	0.4	0.2	0.1	0.1	0.2	0.5	-0.1	-0.3	-0.2
60%	0.1	-0.5	-0.1	0.0	0.0	0.1	0.0	0.3	0.5	-0.2	-0.4	0.0
70%	0.1	0.0	-0.4	0.0	0.1	0.1	0.0	0.2	0.2	-0.6	0.0	0.0
80%	0.1	0.0	-0.1	0.0	0.1	0.1	0.1	0.1	0.3	-0.5	0.1	0.0
90%	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	-0.2	0.1	0.0
Long Term												
Full Simulation Period[b]	0.0	-0.4	0.1	0.1	0.1	0.1	0.0	0.2	0.4	-0.4	-0.1	-1.3
Water Year Types[c]												
Wet (32%)	-0.1	-0.5	0.5	0.3	0.1	0.1	0.0	0.0	0.2	-0.3	-0.2	-3.3
Above Normal (16%)	0.0	-0.5	-0.2	0.3	0.3	0.4	0.1	0.3	0.6	-0.3	-0.2	-1.6
Below Normal (13%)	0.0	-0.4	-0.1	0.2	0.4	0.2	0.1	0.5	1.1	-0.4	-0.3	0.0
Dry (24%)	0.0	-0.4	0.0	0.0	0.1	0.0	0.0	0.2	0.4	-0.5	0.0	0.0
Critical (15%)	0.1	0.0	0.0	0.0	-0.1	0.1	0.1	0.0	0.2	-0.3	0.1	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-2-2. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.2	5.1	11.4	14.5	15.8	14.2	10.9	9.0	4.3	5.4	3.7	6.8
20%	3.0	4.1	7.6	12.3	14.1	11.9	7.7	5.9	3.4	5.2	3.6	6.7
30%	2.8	4.0	4.8	9.0	11.5	8.7	5.2	3.6	2.9	4.9	3.5	5.0
40%	2.5	3.6	4.0	5.7	10.0	6.8	4.4	2.9	2.7	4.5	3.4	4.7
50%	2.3	3.1	3.4	4.8	7.6	5.6	3.3	2.6	2.7	4.0	3.2	3.1
60%	1.9	2.7	3.1	4.0	5.6	4.6	2.7	2.4	2.6	3.8	2.9	2.7
70%	1.8	2.0	2.8	3.2	4.3	4.1	2.3	2.3	2.5	3.6	2.4	2.2
80%	1.6	1.8	2.2	2.9	3.5	3.1	2.2	2.1	2.2	3.1	2.0	1.9
90%	1.4	1.4	1.9	2.4	3.0	2.3	1.9	1.8	1.9	2.4	1.9	1.7
Long Term												
Full Simulation Period[b]	2.3	3.4	5.0	6.9	8.5	7.1	4.9	4.0	3.1	4.1	2.9	3.9
Water Year Types[c]												
Wet (32%)	2.8	4.5	8.3	11.2	12.9	11.0	8.0	6.9	4.4	4.4	3.4	6.5
Above Normal (16%)	2.1	3.8	5.5	8.9	10.7	9.4	5.4	3.7	2.8	5.0	3.6	4.6
Below Normal (13%)	2.5	3.4	3.4	4.1	6.9	4.1	3.0	2.7	2.6	4.8	3.3	2.6
Dry (24%)	2.1	2.6	2.9	3.8	5.3	4.8	3.2	2.5	2.6	3.6	2.3	2.2
Critical (15%)	1.7	1.7	2.4	3.1	3.5	2.7	2.1	1.7	1.9	2.3	1.9	1.7

Alternative 3

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.1	5.0	12.6	14.7	15.9	14.5	10.9	9.0	4.3	5.3	3.7	3.3
20%	2.8	3.2	8.2	12.9	14.2	12.0	7.6	6.1	3.9	5.1	3.5	3.2
30%	2.6	2.9	5.0	9.7	12.0	9.3	5.2	3.8	3.5	5.0	3.3	3.0
40%	2.4	2.7	4.0	6.1	10.6	7.0	4.4	3.2	3.3	4.5	3.2	2.9
50%	2.2	2.4	3.2	4.9	7.7	5.7	3.4	2.9	3.1	4.2	3.1	2.8
60%	1.9	2.2	3.0	3.9	5.6	4.7	2.7	2.6	3.0	3.8	2.9	2.7
70%	1.8	2.0	2.7	3.1	4.6	4.2	2.4	2.4	2.8	3.2	2.4	2.2
80%	1.6	1.7	2.2	2.8	3.5	3.2	2.3	2.3	2.6	2.8	2.1	1.9
90%	1.4	1.4	1.8	2.3	3.1	2.3	2.0	1.8	2.3	2.2	1.8	1.6
Long Term												
Full Simulation Period[b]	2.3	3.0	5.1	7.0	8.6	7.2	4.9	4.1	3.5	4.0	2.9	2.6
Water Year Types[c]												
Wet (32%)	2.7	4.0	8.8	11.5	13.0	11.0	8.0	6.9	4.7	4.3	3.2	3.2
Above Normal (16%)	2.1	3.4	5.3	9.0	10.9	9.8	5.5	4.0	3.3	4.9	3.5	3.0
Below Normal (13%)	2.4	2.9	3.4	4.3	7.2	4.3	3.1	3.0	3.2	4.9	3.4	2.8
Dry (24%)	2.1	2.2	2.8	3.7	5.4	4.8	3.2	2.6	3.1	3.5	2.3	2.2
Critical (15%)	1.8	1.6	2.3	3.0	3.5	2.7	2.1	1.7	2.2	2.1	1.9	1.7

Alternative 3 minus No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	-0.1	1.1	0.2	0.0	0.3	0.0	0.0	-0.1	-0.1	0.0	-3.5
20%	-0.1	-1.0	0.6	0.6	0.1	0.1	0.0	0.2	0.5	-0.1	-0.1	-3.5
30%	-0.2	-1.1	0.2	0.7	0.5	0.6	0.0	0.2	0.6	0.1	-0.1	-1.9
40%	-0.2	-0.9	0.0	0.4	0.5	0.2	0.0	0.3	0.6	0.0	-0.1	-1.7
50%	-0.1	-0.7	-0.1	0.1	0.2	0.1	0.1	0.2	0.5	0.2	-0.1	-0.2
60%	0.0	-0.5	-0.2	0.0	0.1	0.1	0.0	0.2	0.5	0.0	-0.1	0.0
70%	0.0	0.0	-0.1	-0.1	0.3	0.1	0.1	0.2	0.3	-0.4	0.1	0.0
80%	0.0	0.0	-0.1	-0.1	0.0	0.1	0.1	0.1	0.4	-0.4	0.1	0.0
90%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	-0.2	0.0	-0.1
Long Term												
Full Simulation Period[b]	-0.1	-0.4	0.1	0.1	0.1	0.1	0.0	0.2	0.4	-0.1	-0.1	-1.3
Water Year Types[c]												
Wet (32%)	-0.2	-0.5	0.5	0.3	0.1	0.1	0.0	0.1	0.3	-0.1	-0.2	-3.4
Above Normal (16%)	-0.1	-0.5	-0.2	0.1	0.2	0.3	0.0	0.3	0.5	-0.1	-0.1	-1.6
Below Normal (13%)	-0.1	-0.5	-0.1	0.2	0.4	0.2	0.1	0.3	0.5	0.1	0.1	0.2
Dry (24%)	0.0	-0.5	-0.1	0.0	0.1	0.0	0.0	0.2	0.4	-0.1	0.0	0.0
Critical (15%)	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.2	-0.2	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-2-3. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.2	5.1	11.4	14.5	15.8	14.2	10.9	9.0	4.3	5.4	3.7	6.8
20%	3.0	4.1	7.6	12.3	14.1	11.9	7.7	5.9	3.4	5.2	3.6	6.7
30%	2.8	4.0	4.8	9.0	11.5	8.7	5.2	3.6	2.9	4.9	3.5	5.0
40%	2.5	3.6	4.0	5.7	10.0	6.8	4.4	2.9	2.7	4.5	3.4	4.7
50%	2.3	3.1	3.4	4.8	7.6	5.6	3.3	2.6	2.7	4.0	3.2	3.1
60%	1.9	2.7	3.1	4.0	5.6	4.6	2.7	2.4	2.6	3.8	2.9	2.7
70%	1.8	2.0	2.8	3.2	4.3	4.1	2.3	2.3	2.5	3.6	2.4	2.2
80%	1.6	1.8	2.2	2.9	3.5	3.1	2.2	2.1	2.2	3.1	2.0	1.9
90%	1.4	1.4	1.9	2.4	3.0	2.3	1.9	1.8	1.9	2.4	1.9	1.7
Long Term												
Full Simulation Period[b]	2.3	3.4	5.0	6.9	8.5	7.1	4.9	4.0	3.1	4.1	2.9	3.9
Water Year Types[c]												
Wet (32%)	2.8	4.5	8.3	11.2	12.9	11.0	8.0	6.9	4.4	4.4	3.4	6.5
Above Normal (16%)	2.1	3.8	5.5	8.9	10.7	9.4	5.4	3.7	2.8	5.0	3.6	4.6
Below Normal (13%)	2.5	3.4	3.4	4.1	6.9	4.1	3.0	2.7	2.6	4.8	3.3	2.6
Dry (24%)	2.1	2.6	2.9	3.8	5.3	4.8	3.2	2.5	2.6	3.6	2.3	2.2
Critical (15%)	1.7	1.7	2.4	3.1	3.5	2.7	2.1	1.7	1.9	2.3	1.9	1.7

Alternative 5

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.2	5.1	11.4	14.5	15.8	14.2	10.9	9.0	4.4	5.4	3.7	6.8
20%	2.9	4.2	7.6	12.3	14.1	11.9	7.7	5.9	3.3	5.2	3.6	6.6
30%	2.8	4.1	4.8	9.0	11.5	8.7	5.2	3.6	2.9	5.0	3.5	5.0
40%	2.5	3.6	3.9	5.7	10.0	6.8	4.4	2.7	2.7	4.6	3.4	4.6
50%	2.3	3.1	3.4	4.8	7.6	5.6	3.3	2.5	2.7	4.2	3.3	3.2
60%	1.9	2.7	3.1	4.0	5.6	4.6	2.6	2.3	2.6	3.9	3.1	2.8
70%	1.7	2.0	2.8	3.2	4.3	4.1	2.4	2.1	2.5	3.7	2.4	2.2
80%	1.6	1.8	2.2	2.9	3.5	3.1	2.1	1.9	2.1	3.4	2.1	1.9
90%	1.4	1.4	1.8	2.4	3.0	2.3	1.9	1.6	1.9	2.5	2.0	1.7
Long Term												
Full Simulation Period[b]	2.3	3.4	5.0	6.9	8.5	7.1	4.9	3.9	3.1	4.1	3.0	3.9
Water Year Types[c]												
Wet (32%)	2.8	4.6	8.3	11.2	12.9	11.0	8.0	6.9	4.4	4.5	3.5	6.5
Above Normal (16%)	2.2	3.8	5.5	8.9	10.7	9.4	5.4	3.7	2.8	5.0	3.6	4.6
Below Normal (13%)	2.5	3.4	3.4	4.1	6.9	4.1	3.0	2.6	2.6	4.8	3.4	2.7
Dry (24%)	2.1	2.6	2.9	3.8	5.3	4.8	3.2	2.3	2.6	3.7	2.4	2.2
Critical (15%)	1.7	1.7	2.4	3.1	3.5	2.7	2.0	1.6	2.0	2.4	2.0	1.7

Alternative 5 minus No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.1	0.0	0.1	0.1	0.1
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.2	0.1
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.1	0.1	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.1	0.2	0.1	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2	0.0	0.1	0.1	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.1	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.1
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.1	0.1	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.1	0.1	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-2-4. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.0	5.0	12.6	14.8	15.9	14.4	10.9	9.0	4.6	5.0	3.6	3.2
20%	2.8	3.2	8.0	13.0	14.2	12.0	7.6	6.4	4.0	4.6	3.4	3.1
30%	2.6	2.9	4.9	9.7	12.0	9.8	5.2	3.8	3.8	4.4	3.3	3.1
40%	2.3	2.7	3.9	6.1	10.7	7.0	4.4	3.2	3.5	4.1	3.1	3.0
50%	2.2	2.4	3.3	5.1	7.8	5.7	3.4	2.9	3.2	3.9	2.9	2.9
60%	2.0	2.2	3.0	3.9	5.6	4.7	2.7	2.7	3.0	3.6	2.6	2.6
70%	1.8	2.0	2.5	3.2	4.4	4.2	2.4	2.5	2.6	3.1	2.3	2.1
80%	1.7	1.7	2.1	2.8	3.6	3.2	2.3	2.2	2.5	2.7	2.1	2.0
90%	1.5	1.4	1.9	2.4	3.1	2.4	2.0	1.8	2.3	2.2	1.9	1.7
Long Term												
Full Simulation Period[b]	2.3	3.0	5.1	7.0	8.6	7.2	4.9	4.1	3.6	3.7	2.8	2.6
Water Year Types[c]												
Wet (32%)	2.7	4.0	8.8	11.5	13.0	11.1	8.0	6.9	4.6	4.1	3.2	3.2
Above Normal (16%)	2.1	3.3	5.3	9.1	10.9	9.9	5.5	4.0	3.4	4.7	3.4	3.0
Below Normal (13%)	2.5	3.0	3.3	4.3	7.2	4.3	3.1	3.1	3.7	4.4	3.0	2.6
Dry (24%)	2.1	2.2	2.8	3.8	5.4	4.8	3.2	2.6	3.0	3.1	2.3	2.2
Critical (15%)	1.8	1.7	2.4	3.1	3.4	2.7	2.1	1.7	2.2	2.1	1.9	1.7

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.2	5.1	11.4	14.5	15.8	14.2	10.9	9.0	4.3	5.4	3.7	6.8
20%	3.0	4.1	7.6	12.3	14.1	11.9	7.7	5.9	3.4	5.2	3.6	6.7
30%	2.8	4.0	4.8	9.0	11.5	8.7	5.2	3.6	2.9	4.9	3.5	5.0
40%	2.5	3.6	4.0	5.7	10.0	6.8	4.4	2.9	2.7	4.5	3.4	4.7
50%	2.3	3.1	3.4	4.8	7.6	5.6	3.3	2.6	2.7	4.0	3.2	3.1
60%	1.9	2.7	3.1	4.0	5.6	4.6	2.7	2.4	2.6	3.8	2.9	2.7
70%	1.8	2.0	2.8	3.2	4.3	4.1	2.3	2.3	2.5	3.6	2.4	2.2
80%	1.6	1.8	2.2	2.9	3.5	3.1	2.2	2.1	2.2	3.1	2.0	1.9
90%	1.4	1.4	1.9	2.4	3.0	2.3	1.9	1.8	1.9	2.4	1.9	1.7
Long Term												
Full Simulation Period[b]	2.3	3.4	5.0	6.9	8.5	7.1	4.9	4.0	3.1	4.1	2.9	3.9
Water Year Types[c]												
Wet (32%)	2.8	4.5	8.3	11.2	12.9	11.0	8.0	6.9	4.4	4.4	3.4	6.5
Above Normal (16%)	2.1	3.8	5.5	8.9	10.7	9.4	5.4	3.7	2.8	5.0	3.6	4.6
Below Normal (13%)	2.5	3.4	3.4	4.1	6.9	4.1	3.0	2.7	2.6	4.8	3.3	2.6
Dry (24%)	2.1	2.6	2.9	3.8	5.3	4.8	3.2	2.5	2.6	3.6	2.3	2.2
Critical (15%)	1.7	1.7	2.4	3.1	3.5	2.7	2.1	1.7	1.9	2.3	1.9	1.7

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.1	0.2	-1.1	-0.3	0.0	-0.2	0.0	0.0	-0.2	0.4	0.1	3.6
20%	0.1	1.0	-0.5	-0.7	-0.1	-0.1	0.0	-0.5	-0.6	0.6	0.1	3.5
30%	0.2	1.2	-0.1	-0.7	-0.5	-1.1	0.0	-0.2	-0.9	0.5	0.2	1.9
40%	0.2	0.9	0.0	-0.4	-0.6	-0.2	0.0	-0.3	-0.7	0.4	0.3	1.7
50%	0.0	0.7	0.1	-0.4	-0.2	-0.1	-0.1	-0.2	-0.5	0.1	0.3	0.2
60%	-0.1	0.5	0.1	0.0	0.0	-0.1	0.0	-0.3	-0.5	0.2	0.4	0.0
70%	-0.1	0.0	0.4	0.0	-0.1	-0.1	0.0	-0.2	-0.2	0.6	0.0	0.0
80%	-0.1	0.0	0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.3	0.5	-0.1	0.0
90%	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	-0.4	0.2	-0.1	0.0
Long Term												
Full Simulation Period[b]	0.0	0.4	-0.1	-0.1	-0.1	-0.1	0.0	-0.2	-0.4	0.4	0.1	1.3
Water Year Types[c]												
Wet (32%)	0.1	0.5	-0.5	-0.3	-0.1	-0.1	0.0	0.0	-0.2	0.3	0.2	3.3
Above Normal (16%)	0.0	0.5	0.2	-0.3	-0.3	-0.4	-0.1	-0.3	-0.6	0.3	0.2	1.6
Below Normal (13%)	0.0	0.4	0.1	-0.2	-0.4	-0.2	-0.1	-0.5	-1.1	0.4	0.3	0.0
Dry (24%)	0.0	0.4	0.0	0.0	-0.1	0.0	0.0	-0.2	-0.4	0.5	0.0	0.0
Critical (15%)	-0.1	0.0	0.0	0.0	0.1	-0.1	-0.1	0.0	-0.2	0.3	-0.1	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-2-5. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.0	5.0	12.6	14.8	15.9	14.4	10.9	9.0	4.6	5.0	3.6	3.2
20%	2.8	3.2	8.0	13.0	14.2	12.0	7.6	6.4	4.0	4.6	3.4	3.1
30%	2.6	2.9	4.9	9.7	12.0	9.8	5.2	3.8	3.8	4.4	3.3	3.1
40%	2.3	2.7	3.9	6.1	10.7	7.0	4.4	3.2	3.5	4.1	3.1	3.0
50%	2.2	2.4	3.3	5.1	7.8	5.7	3.4	2.9	3.2	3.9	2.9	2.9
60%	2.0	2.2	3.0	3.9	5.6	4.7	2.7	2.7	3.0	3.6	2.6	2.6
70%	1.8	2.0	2.5	3.2	4.4	4.2	2.4	2.5	2.6	3.1	2.3	2.1
80%	1.7	1.7	2.1	2.8	3.6	3.2	2.3	2.2	2.5	2.7	2.1	2.0
90%	1.5	1.4	1.9	2.4	3.1	2.4	2.0	1.8	2.3	2.2	1.9	1.7
Long Term												
Full Simulation Period[b]	2.3	3.0	5.1	7.0	8.6	7.2	4.9	4.1	3.6	3.7	2.8	2.6
Water Year Types[c]												
Wet (32%)	2.7	4.0	8.8	11.5	13.0	11.1	8.0	6.9	4.6	4.1	3.2	3.2
Above Normal (16%)	2.1	3.3	5.3	9.1	10.9	9.9	5.5	4.0	3.4	4.7	3.4	3.0
Below Normal (13%)	2.5	3.0	3.3	4.3	7.2	4.3	3.1	3.1	3.7	4.4	3.0	2.6
Dry (24%)	2.1	2.2	2.8	3.8	5.4	4.8	3.2	2.6	3.0	3.1	2.3	2.2
Critical (15%)	1.8	1.7	2.4	3.1	3.4	2.7	2.1	1.7	2.2	2.1	1.9	1.7

Alternative 3

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.1	5.0	12.6	14.7	15.9	14.5	10.9	9.0	4.3	5.3	3.7	3.3
20%	2.8	3.2	8.2	12.9	14.2	12.0	7.6	6.1	3.9	5.1	3.5	3.2
30%	2.6	2.9	5.0	9.7	12.0	9.3	5.2	3.8	3.5	5.0	3.3	3.0
40%	2.4	2.7	4.0	6.1	10.6	7.0	4.4	3.2	3.3	4.5	3.2	2.9
50%	2.2	2.4	3.2	4.9	7.7	5.7	3.4	2.9	3.1	4.2	3.1	2.8
60%	1.9	2.2	3.0	3.9	5.6	4.7	2.7	2.6	3.0	3.8	2.9	2.7
70%	1.8	2.0	2.7	3.1	4.6	4.2	2.4	2.4	2.8	3.2	2.4	2.2
80%	1.6	1.7	2.2	2.8	3.5	3.2	2.3	2.3	2.6	2.8	2.1	1.9
90%	1.4	1.4	1.8	2.3	3.1	2.3	2.0	1.8	2.3	2.2	1.8	1.6
Long Term												
Full Simulation Period[b]	2.3	3.0	5.1	7.0	8.6	7.2	4.9	4.1	3.5	4.0	2.9	2.6
Water Year Types[c]												
Wet (32%)	2.7	4.0	8.8	11.5	13.0	11.0	8.0	6.9	4.7	4.3	3.2	3.2
Above Normal (16%)	2.1	3.4	5.3	9.0	10.9	9.8	5.5	4.0	3.3	4.9	3.5	3.0
Below Normal (13%)	2.4	2.9	3.4	4.3	7.2	4.3	3.1	3.0	3.2	4.9	3.4	2.8
Dry (24%)	2.1	2.2	2.8	3.7	5.4	4.8	3.2	2.6	3.1	3.5	2.3	2.2
Critical (15%)	1.8	1.6	2.3	3.0	3.5	2.7	2.1	1.7	2.2	2.1	1.9	1.7

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.1	0.0	-0.1	0.0	0.1	0.0	0.0	-0.3	0.3	0.1	0.1
20%	0.0	0.0	0.2	-0.1	0.0	0.0	0.0	-0.3	-0.1	0.5	0.1	0.0
30%	0.0	0.0	0.1	0.0	0.0	-0.5	0.0	0.0	-0.3	0.6	0.1	0.0
40%	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	-0.1	0.4	0.1	0.0
50%	0.0	0.0	-0.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0
60%	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.2	0.3	0.1
70%	-0.1	-0.1	0.2	-0.1	0.1	0.0	0.0	-0.1	0.2	0.2	0.1	0.0
80%	-0.1	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
90%	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
Above Normal (16%)	0.0	0.1	0.1	-0.1	0.0	-0.1	0.0	0.0	-0.1	0.2	0.1	0.0
Below Normal (13%)	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.6	0.5	0.5	0.2
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0
Critical (15%)	-0.1	-0.1	-0.1	-0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-43-2-6. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.0	5.0	12.6	14.8	15.9	14.4	10.9	9.0	4.6	5.0	3.6	3.2
20%	2.8	3.2	8.0	13.0	14.2	12.0	7.6	6.4	4.0	4.6	3.4	3.1
30%	2.6	2.9	4.9	9.7	12.0	9.8	5.2	3.8	3.8	4.4	3.3	3.1
40%	2.3	2.7	3.9	6.1	10.7	7.0	4.4	3.2	3.5	4.1	3.1	3.0
50%	2.2	2.4	3.3	5.1	7.8	5.7	3.4	2.9	3.2	3.9	2.9	2.9
60%	2.0	2.2	3.0	3.9	5.6	4.7	2.7	2.7	3.0	3.6	2.6	2.6
70%	1.8	2.0	2.5	3.2	4.4	4.2	2.4	2.5	2.6	3.1	2.3	2.1
80%	1.7	1.7	2.1	2.8	3.6	3.2	2.3	2.2	2.5	2.7	2.1	2.0
90%	1.5	1.4	1.9	2.4	3.1	2.4	2.0	1.8	2.3	2.2	1.9	1.7
Long Term												
Full Simulation Period[b]	2.3	3.0	5.1	7.0	8.6	7.2	4.9	4.1	3.6	3.7	2.8	2.6
Water Year Types[c]												
Wet (32%)	2.7	4.0	8.8	11.5	13.0	11.1	8.0	6.9	4.6	4.1	3.2	3.2
Above Normal (16%)	2.1	3.3	5.3	9.1	10.9	9.9	5.5	4.0	3.4	4.7	3.4	3.0
Below Normal (13%)	2.5	3.0	3.3	4.3	7.2	4.3	3.1	3.1	3.7	4.4	3.0	2.6
Dry (24%)	2.1	2.2	2.8	3.8	5.4	4.8	3.2	2.6	3.0	3.1	2.3	2.2
Critical (15%)	1.8	1.7	2.4	3.1	3.4	2.7	2.1	1.7	2.2	2.1	1.9	1.7

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.2	5.1	11.4	14.5	15.8	14.2	10.9	9.0	4.4	5.4	3.7	6.8
20%	2.9	4.2	7.6	12.3	14.1	11.9	7.7	5.9	3.3	5.2	3.6	6.6
30%	2.8	4.1	4.8	9.0	11.5	8.7	5.2	3.6	2.9	5.0	3.5	5.0
40%	2.5	3.6	3.9	5.7	10.0	6.8	4.4	2.7	2.7	4.6	3.4	4.6
50%	2.3	3.1	3.4	4.8	7.6	5.6	3.3	2.5	2.7	4.2	3.3	3.2
60%	1.9	2.7	3.1	4.0	5.6	4.6	2.6	2.3	2.6	3.9	3.1	2.8
70%	1.7	2.0	2.8	3.2	4.3	4.1	2.4	2.1	2.5	3.7	2.4	2.2
80%	1.6	1.8	2.2	2.9	3.5	3.1	2.1	1.9	2.1	3.4	2.1	1.9
90%	1.4	1.4	1.8	2.4	3.0	2.3	1.9	1.6	1.9	2.5	2.0	1.7
Long Term												
Full Simulation Period[b]	2.3	3.4	5.0	6.9	8.5	7.1	4.9	3.9	3.1	4.1	3.0	3.9
Water Year Types[c]												
Wet (32%)	2.8	4.6	8.3	11.2	12.9	11.0	8.0	6.9	4.4	4.5	3.5	6.5
Above Normal (16%)	2.2	3.8	5.5	8.9	10.7	9.4	5.4	3.7	2.8	5.0	3.6	4.6
Below Normal (13%)	2.5	3.4	3.4	4.1	6.9	4.1	3.0	2.6	2.6	4.8	3.4	2.7
Dry (24%)	2.1	2.6	2.9	3.8	5.3	4.8	3.2	2.3	2.6	3.7	2.4	2.2
Critical (15%)	1.7	1.7	2.4	3.1	3.5	2.7	2.0	1.6	2.0	2.4	2.0	1.7

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.1	0.2	-1.1	-0.3	0.0	-0.2	0.0	0.0	-0.2	0.4	0.1	3.6
20%	0.1	1.0	-0.5	-0.7	-0.1	-0.1	0.0	-0.6	-0.6	0.6	0.1	3.5
30%	0.1	1.2	-0.1	-0.7	-0.4	-1.1	0.0	-0.2	-0.9	0.6	0.2	1.9
40%	0.2	0.9	0.0	-0.4	-0.6	-0.2	0.0	-0.4	-0.7	0.4	0.3	1.7
50%	0.1	0.7	0.1	-0.3	-0.1	-0.1	-0.1	-0.4	-0.5	0.2	0.4	0.3
60%	-0.1	0.5	0.1	0.0	0.0	-0.1	0.0	-0.4	-0.5	0.3	0.5	0.2
70%	-0.1	0.0	0.4	0.0	-0.1	-0.1	0.0	-0.4	-0.2	0.7	0.1	0.0
80%	-0.1	0.0	0.1	0.0	-0.1	-0.1	-0.2	-0.4	-0.4	0.7	0.0	0.0
90%	-0.1	0.0	-0.1	0.0	0.0	-0.1	-0.1	-0.2	-0.4	0.3	0.0	0.1
Long Term												
Full Simulation Period[b]	0.0	0.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.4	0.4	0.2	1.3
Water Year Types[c]												
Wet (32%)	0.1	0.6	-0.5	-0.2	-0.1	-0.1	0.0	0.0	-0.2	0.4	0.2	3.3
Above Normal (16%)	0.1	0.5	0.2	-0.3	-0.3	-0.4	-0.1	-0.3	-0.7	0.3	0.2	1.6
Below Normal (13%)	0.0	0.4	0.1	-0.2	-0.4	-0.2	-0.1	-0.6	-1.1	0.4	0.4	0.1
Dry (24%)	0.0	0.4	0.0	0.0	-0.1	0.0	0.0	-0.4	-0.4	0.6	0.1	0.0
Critical (15%)	-0.1	0.0	0.0	0.0	0.1	-0.1	-0.1	-0.1	-0.2	0.3	0.1	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

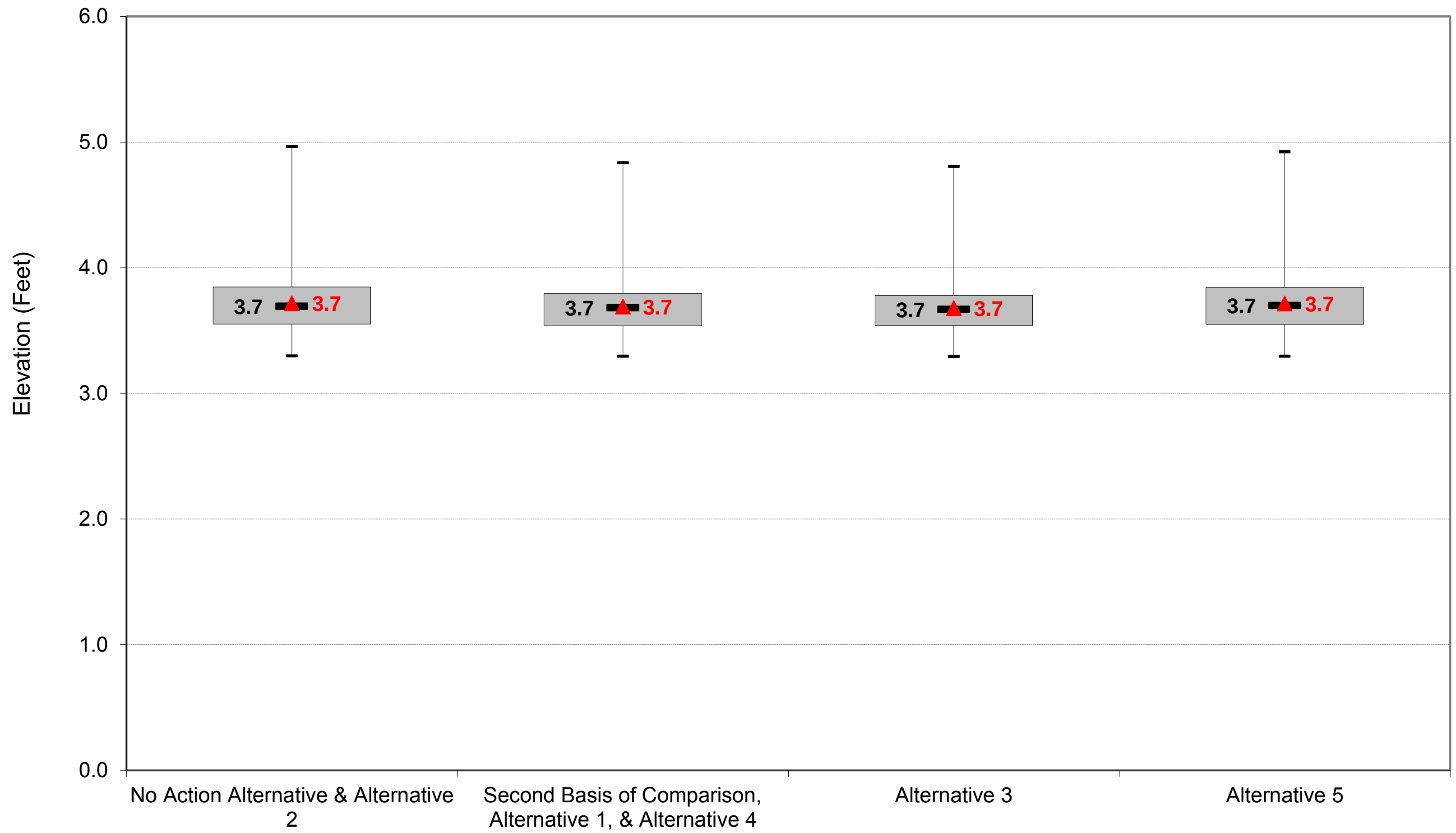
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

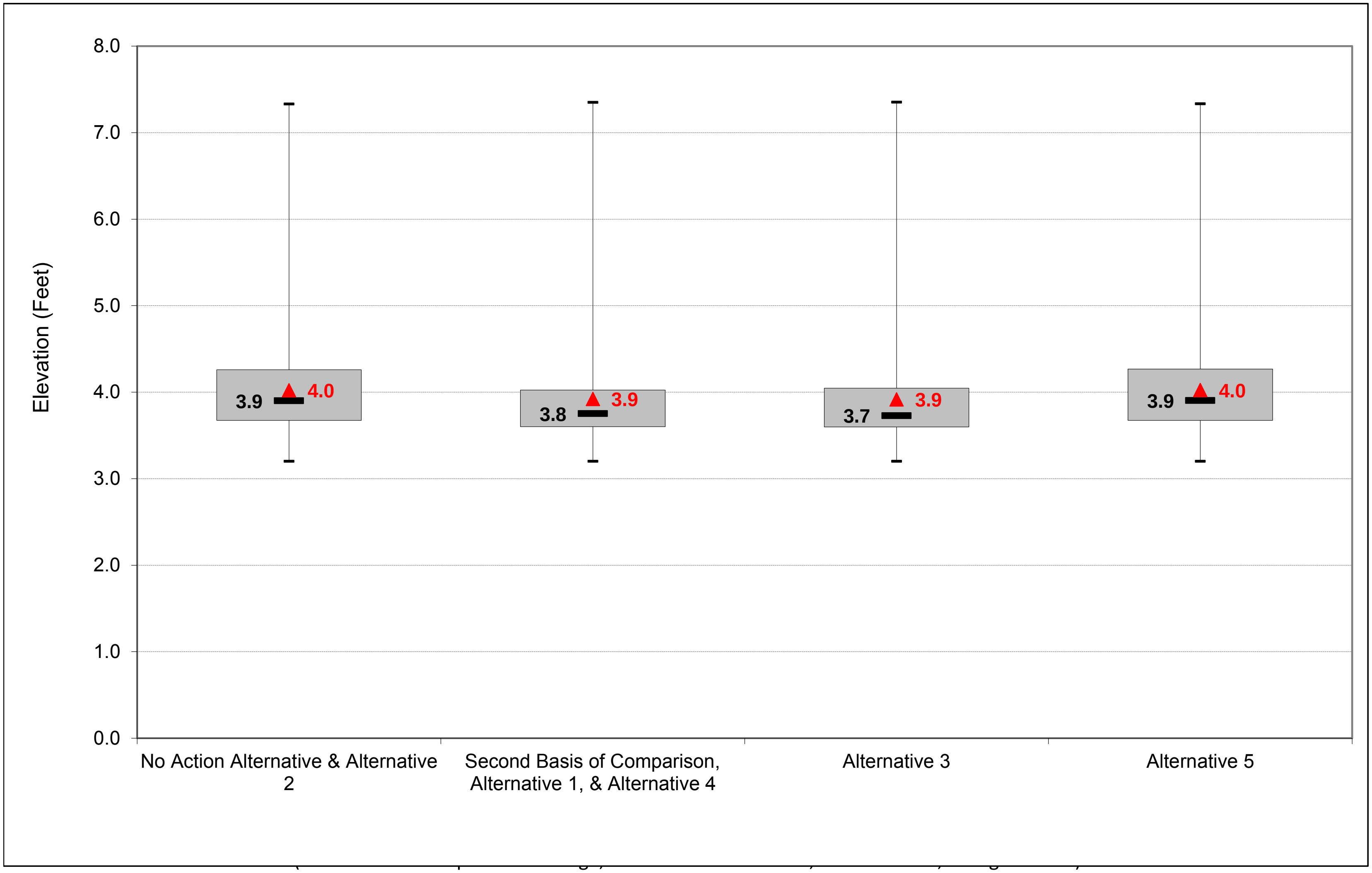
C.44. Sacramento River downstream of Delta Cross Channel Water Surface Elevation

Figure C-44-1-1. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, October



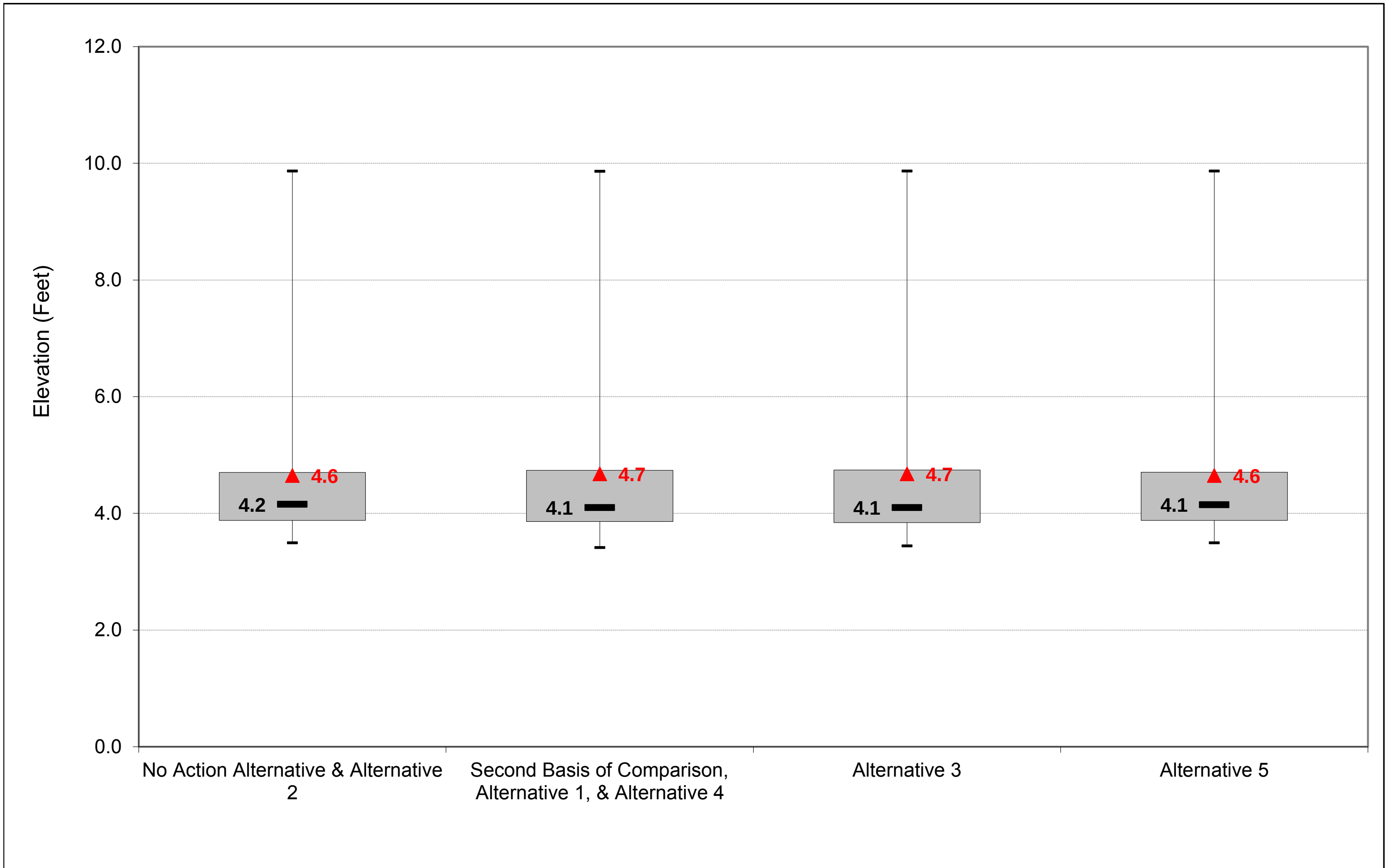
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-2. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, November



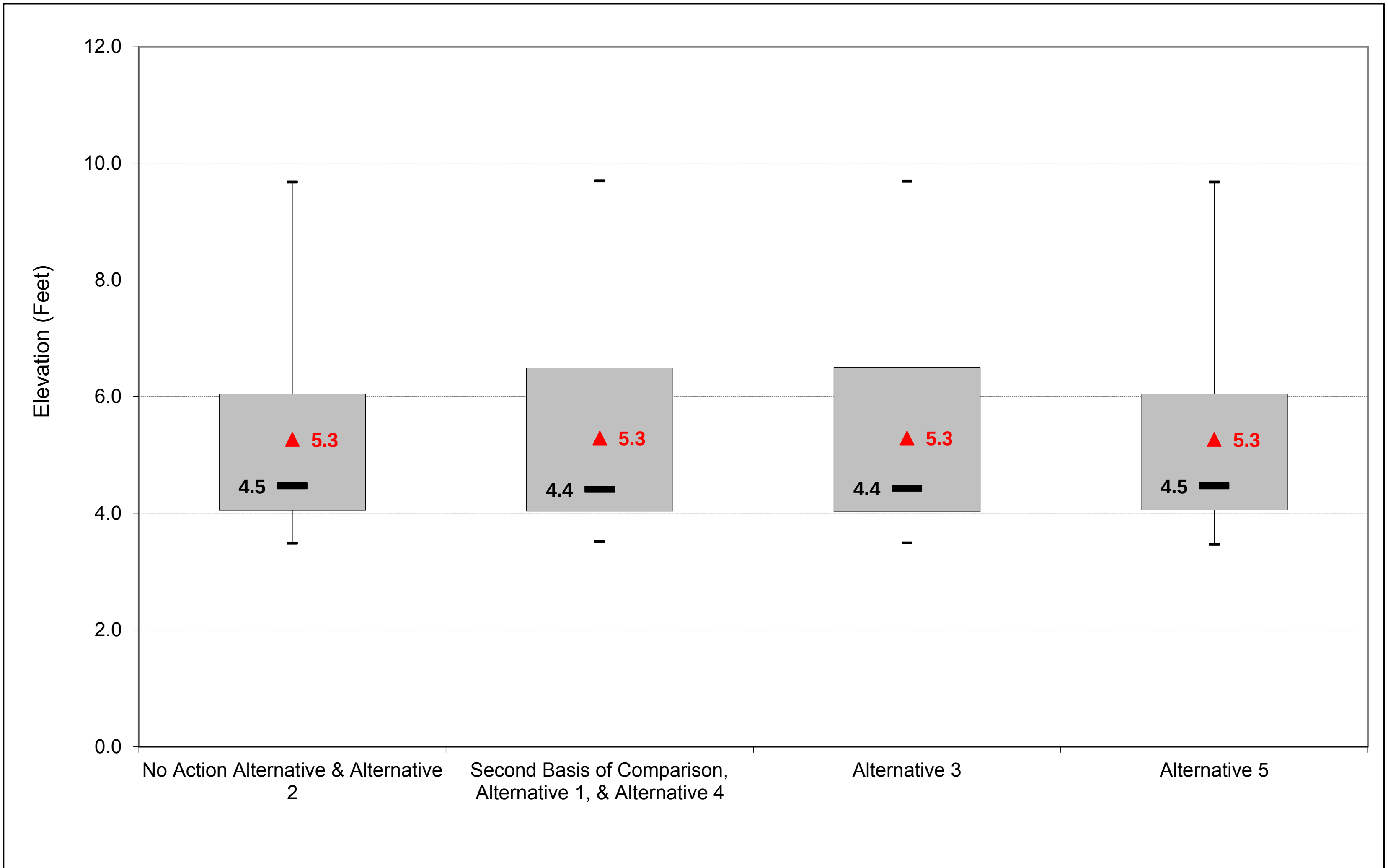
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-3. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, December



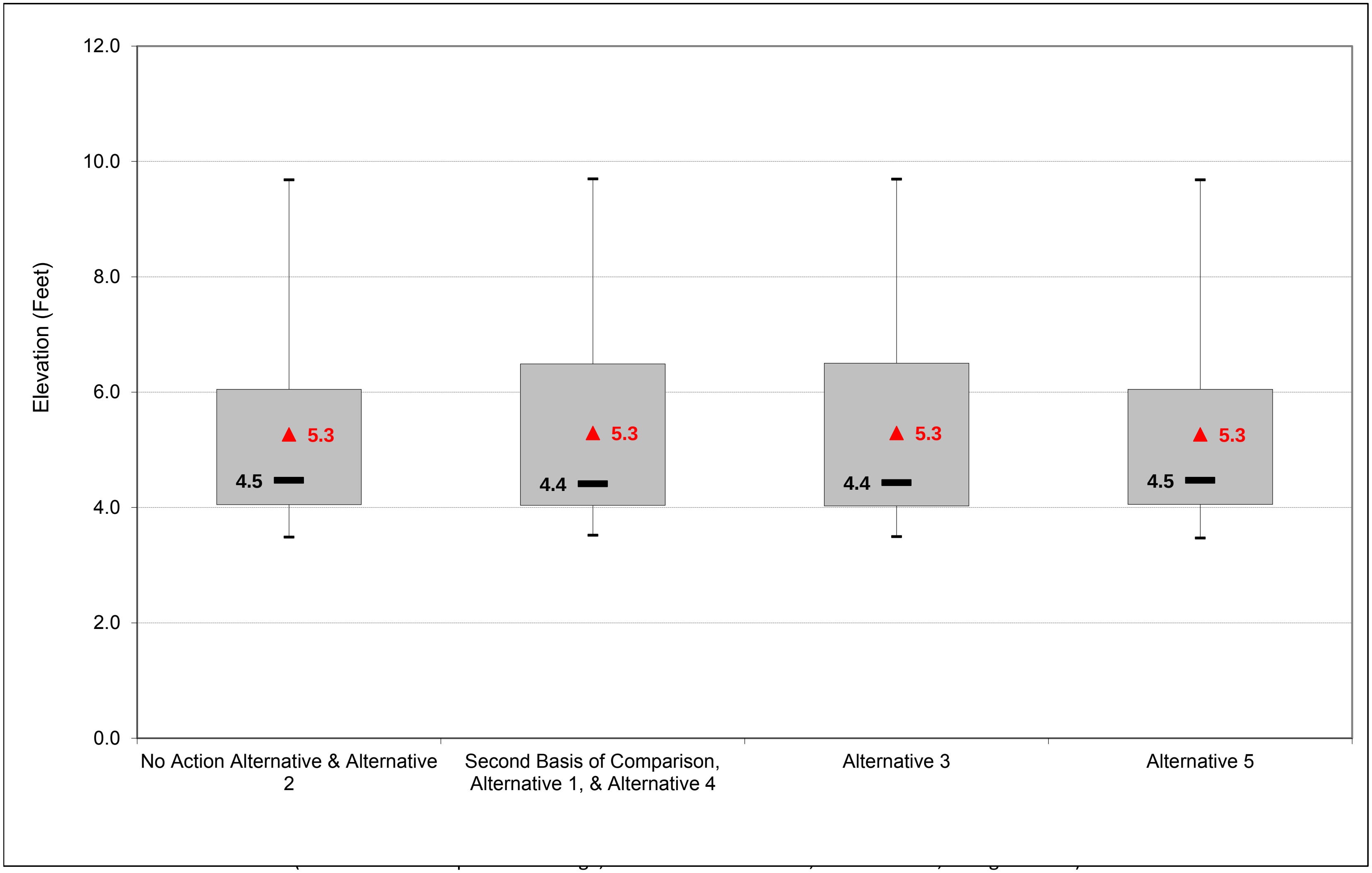
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-4. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, January



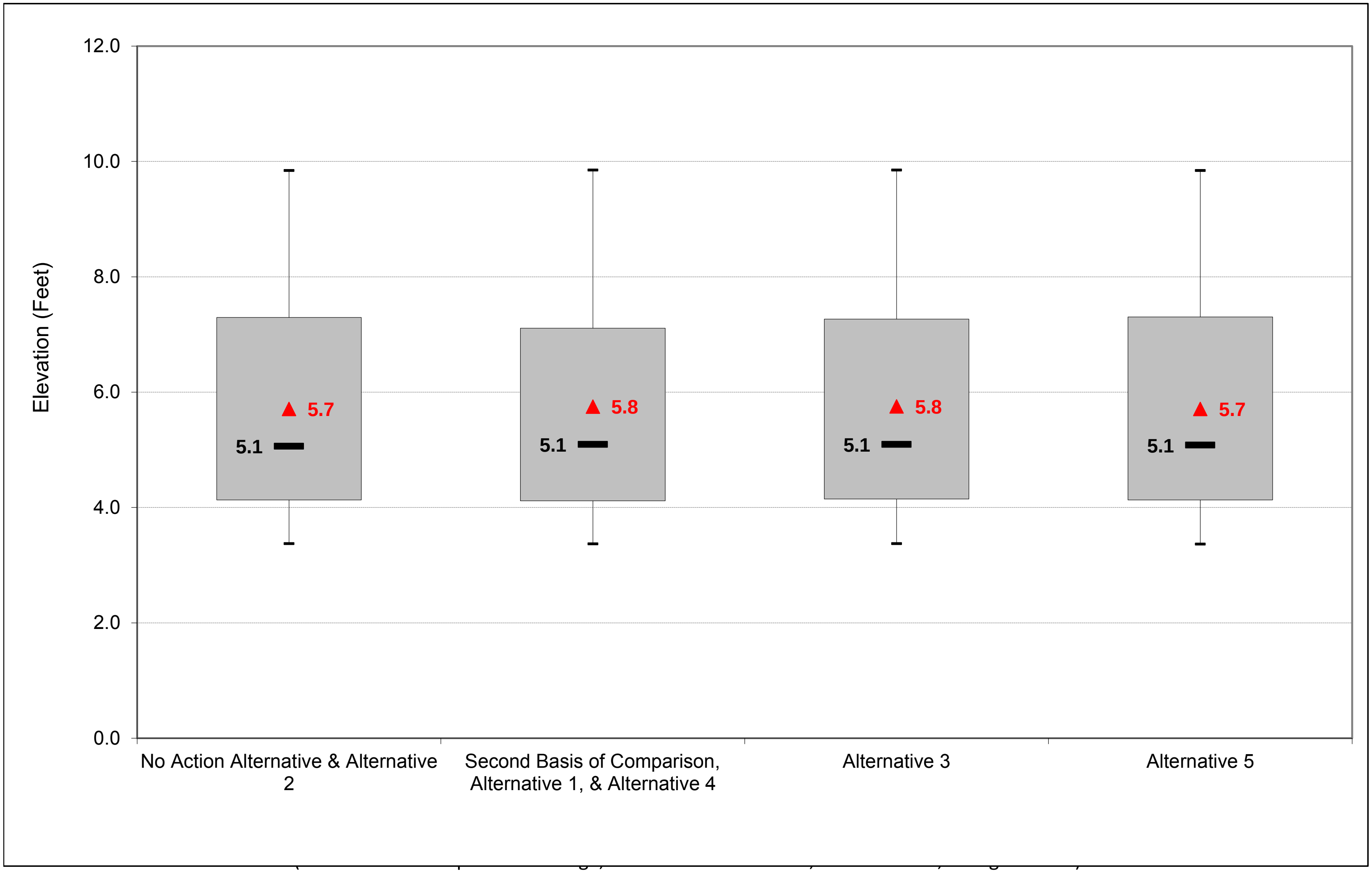
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-5. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, February



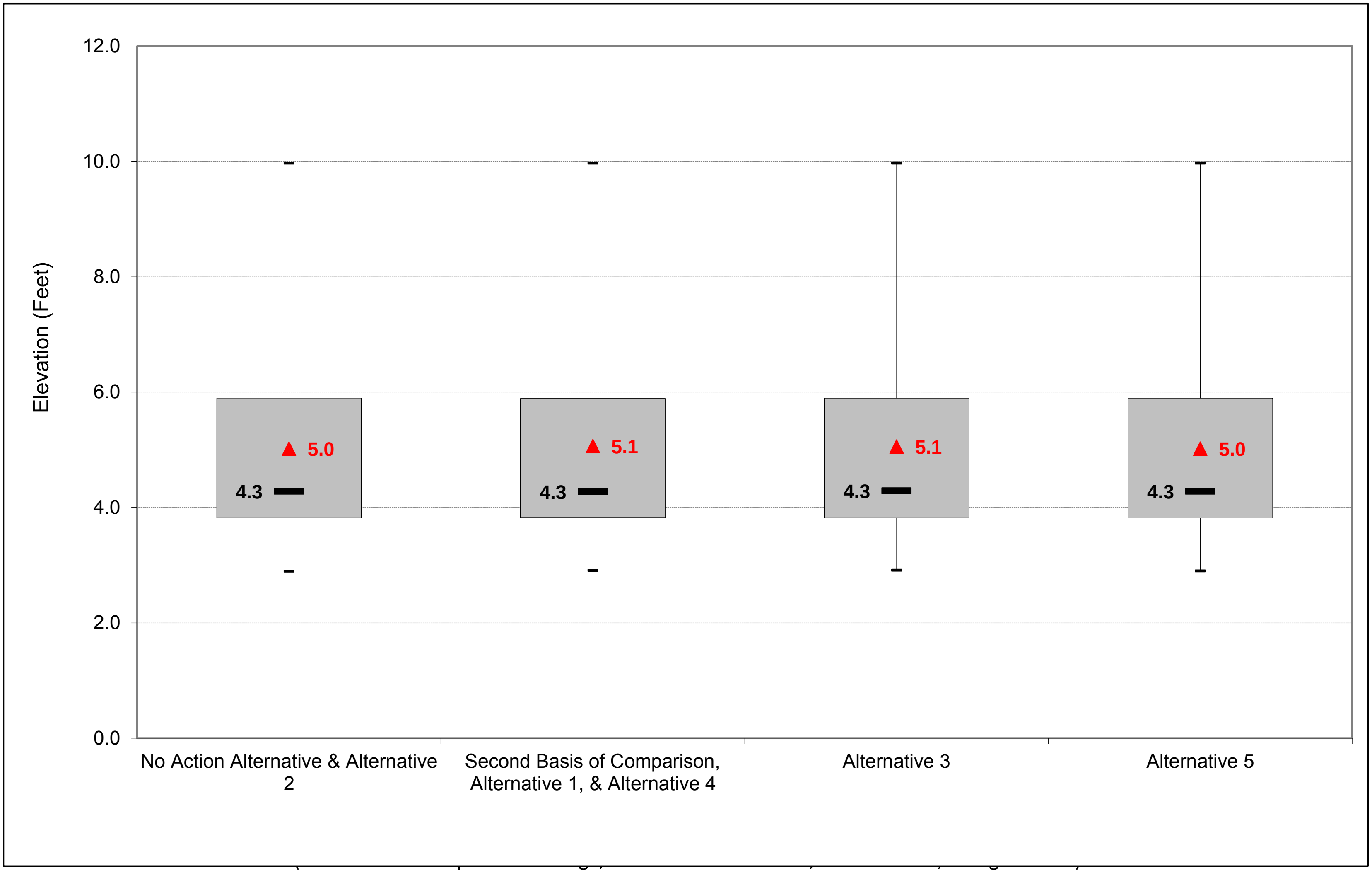
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-6. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, March



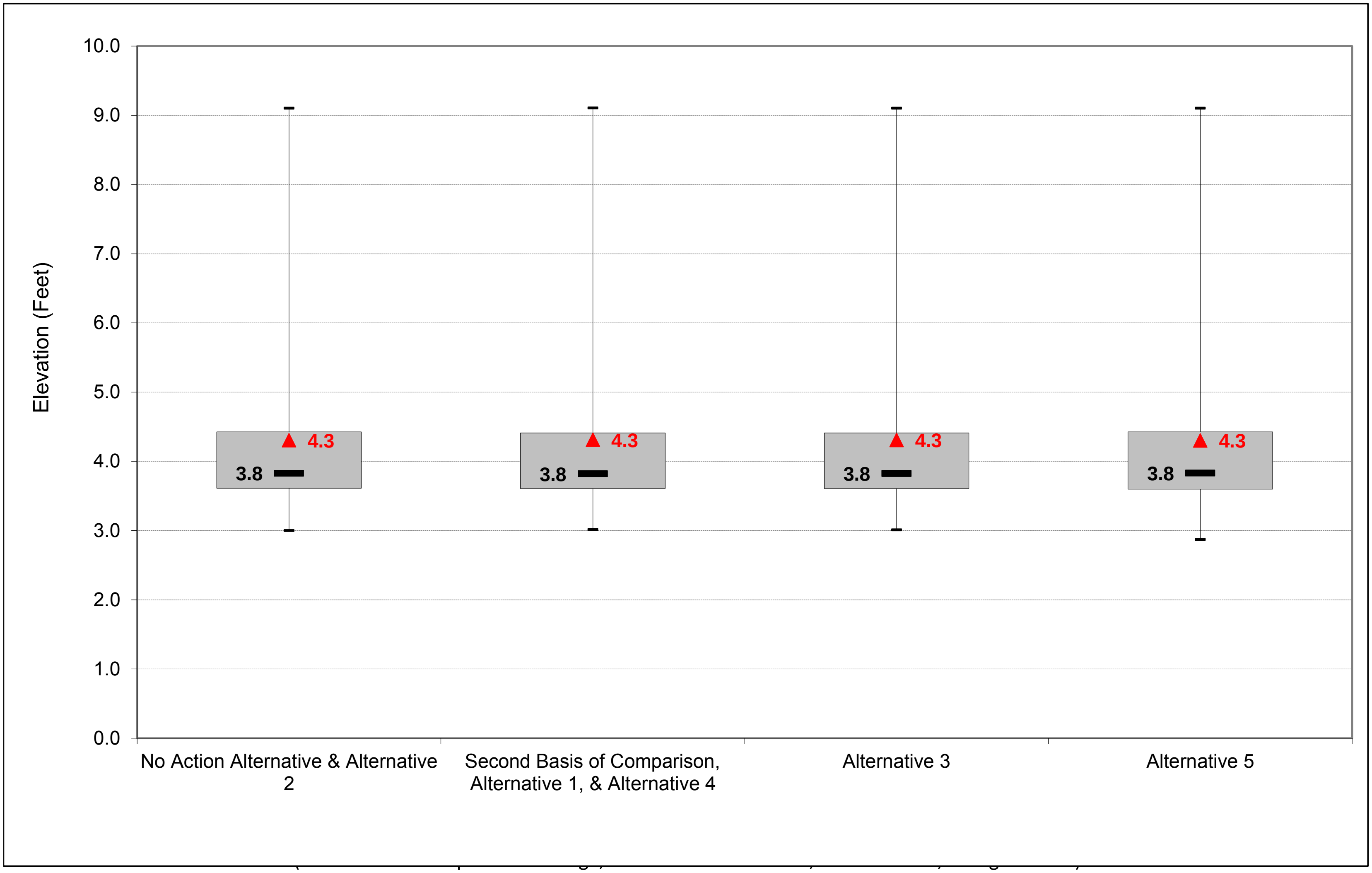
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-7. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, April



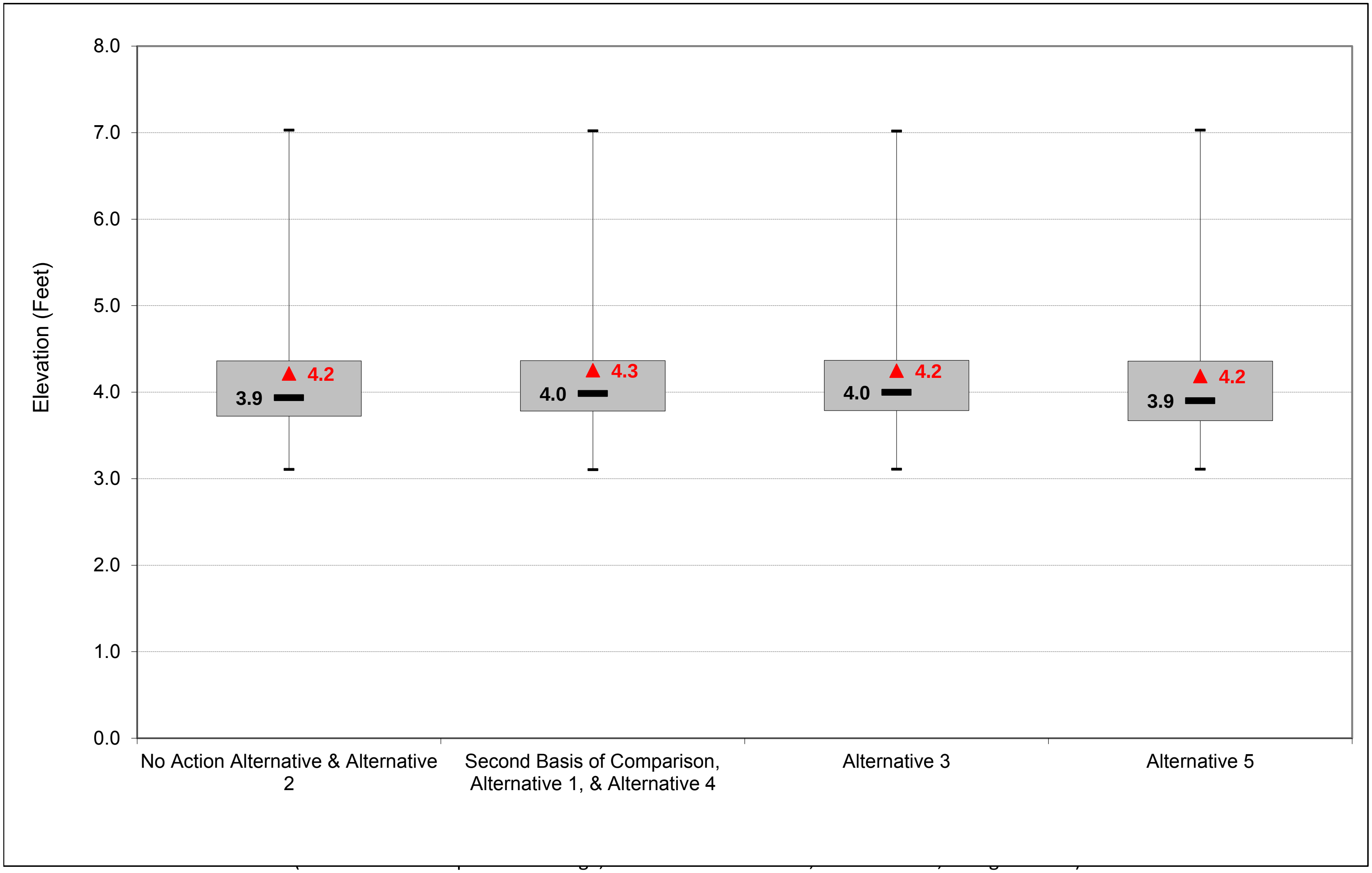
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-8. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, May



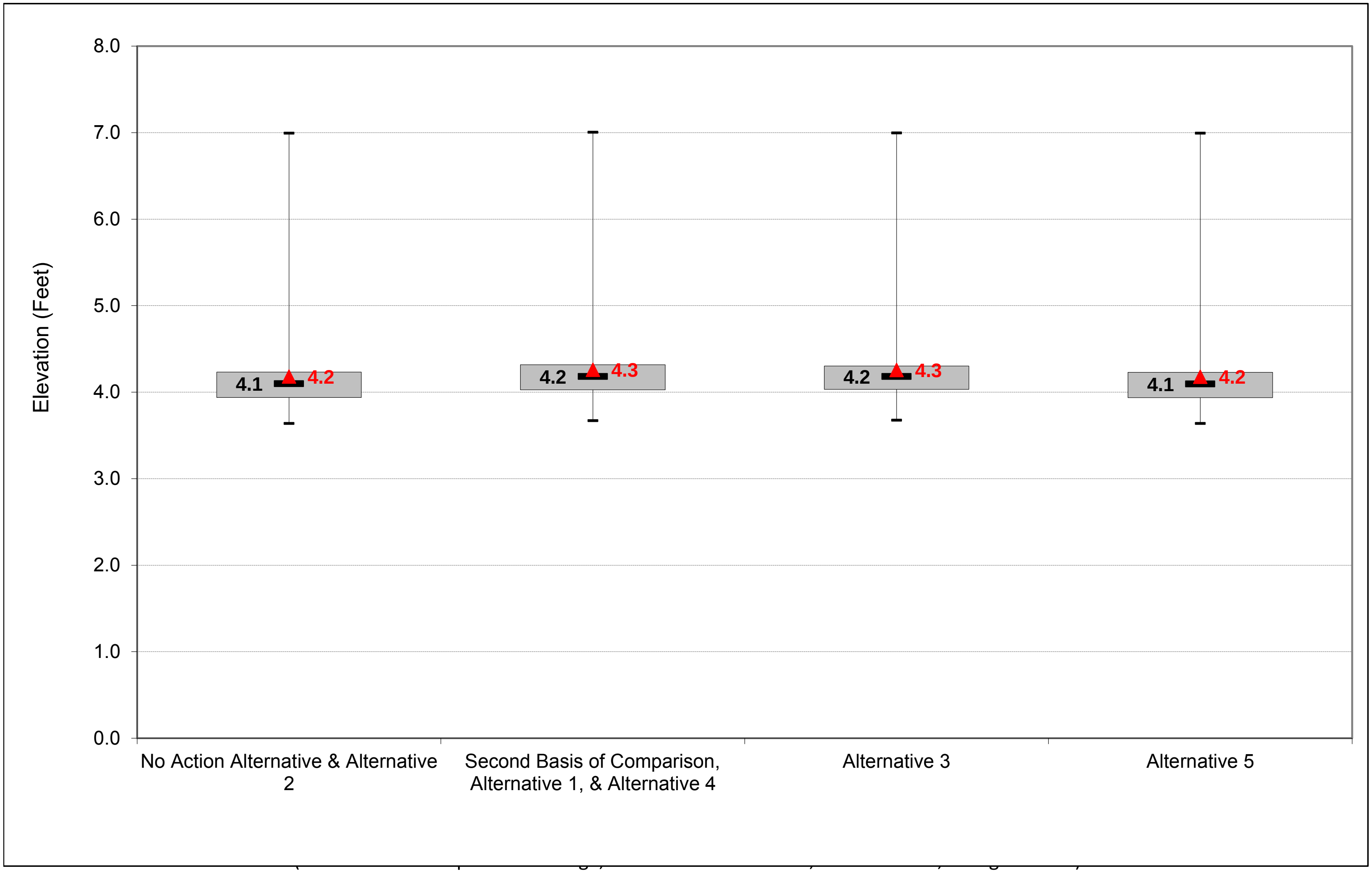
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-9. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, June



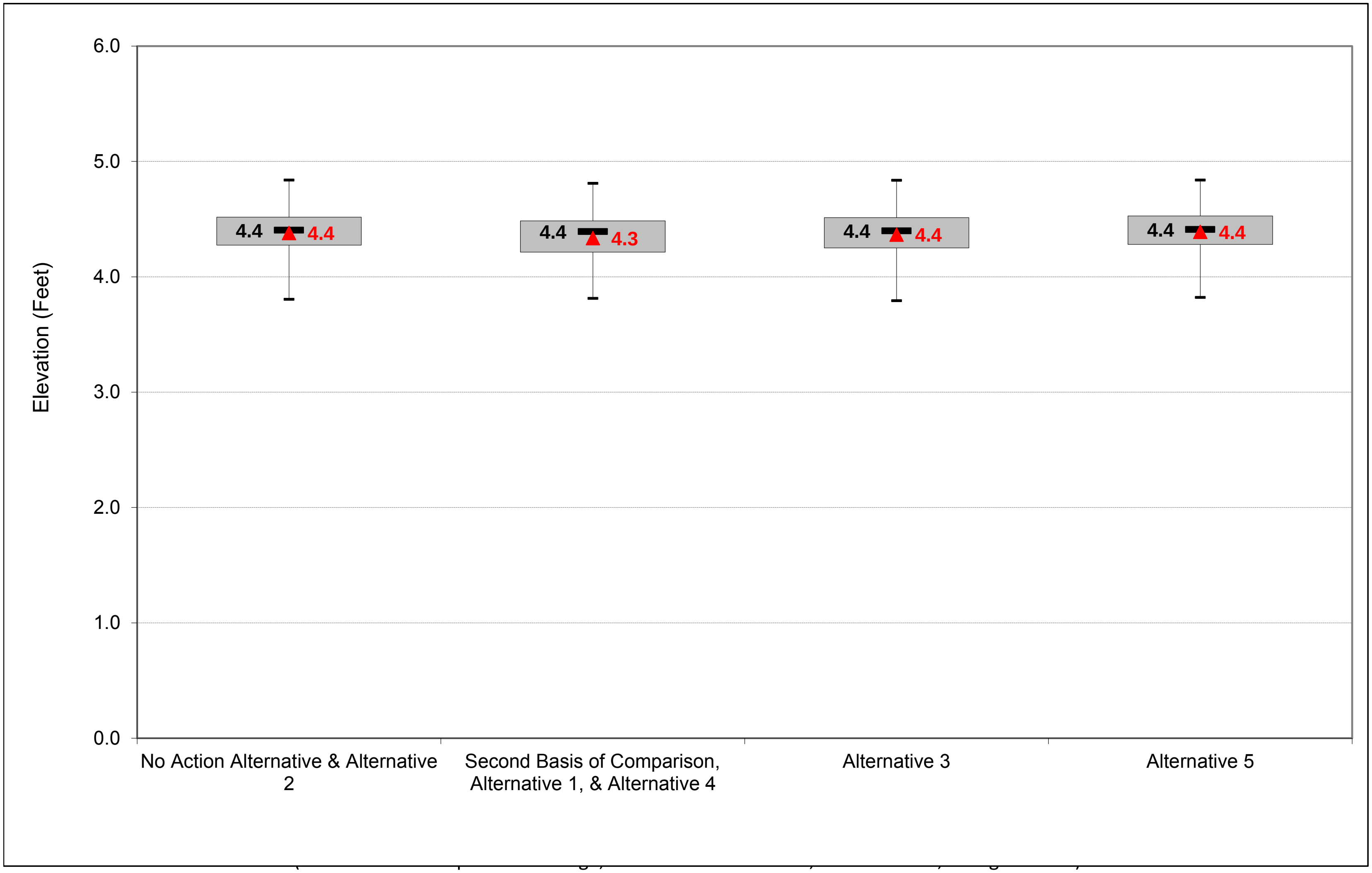
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-10. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, July



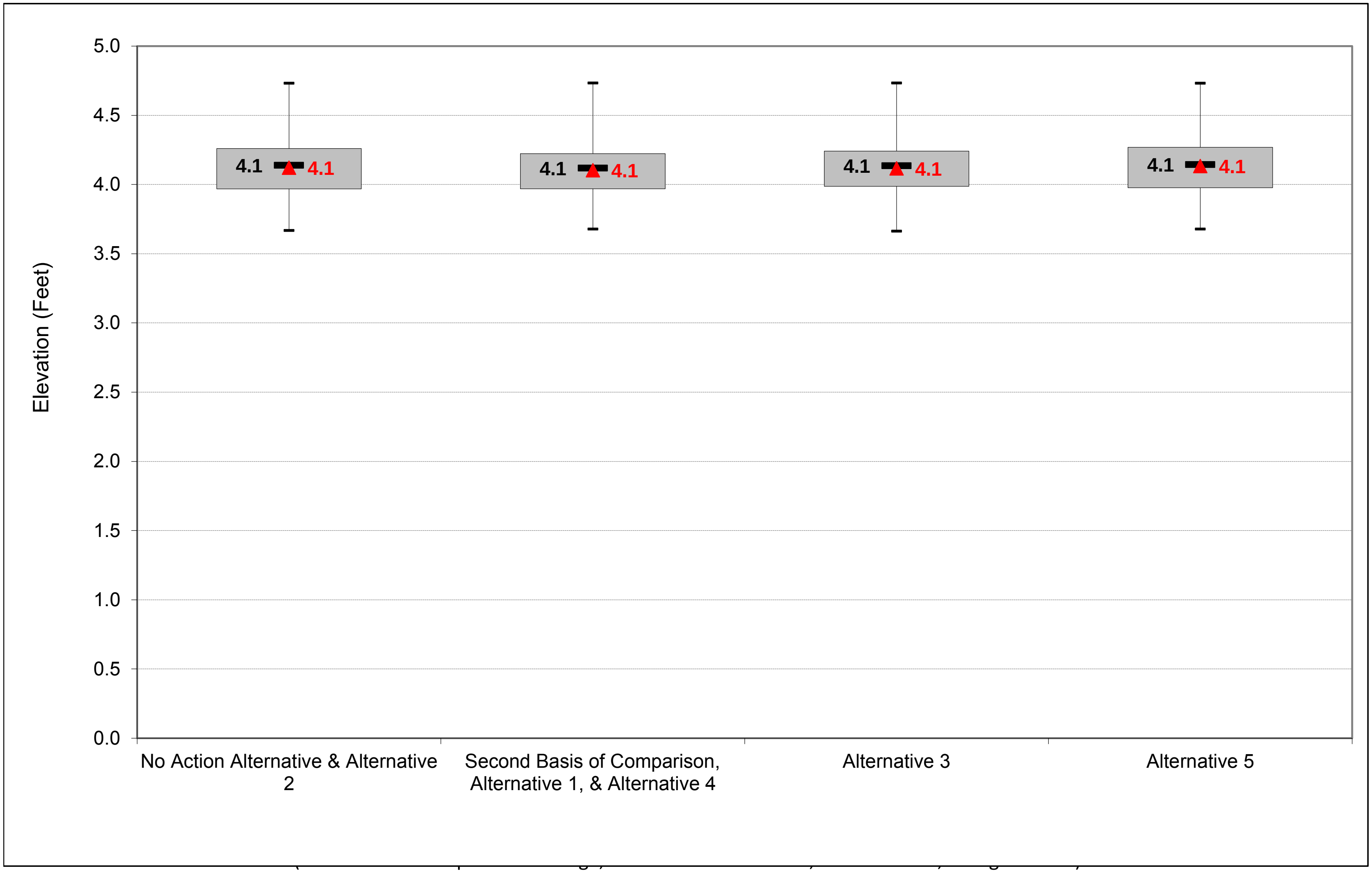
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-11. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-1-12. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-1-1. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4.0	4.5	6.6	8.1	8.7	7.9	6.3	5.4	4.5	4.6	4.3	4.8
20%	3.9	4.3	5.2	6.9	7.8	6.6	5.0	4.5	4.3	4.5	4.3	4.7
30%	3.8	4.2	4.5	5.6	6.6	5.2	4.2	4.2	4.2	4.5	4.3	4.4
40%	3.7	4.0	4.3	4.7	5.9	4.6	4.0	4.0	4.2	4.4	4.2	4.2
50%	3.7	3.9	4.2	4.5	5.1	4.3	3.8	3.9	4.1	4.4	4.1	4.1
60%	3.6	3.8	4.1	4.2	4.4	4.1	3.7	3.8	4.0	4.4	4.1	3.9
70%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.0	4.3	4.0	3.9
80%	3.5	3.6	3.8	4.0	4.1	3.7	3.5	3.7	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.9	3.6	3.4	3.6	3.8	4.1	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	4.0	4.6	5.3	5.7	5.0	4.3	4.2	4.2	4.4	4.1	4.2
Water Year Types[c]												
Wet (32%)	3.9	4.4	5.7	6.8	7.3	6.5	5.3	5.0	4.5	4.5	4.2	4.7
Above Normal (16%)	3.7	4.1	4.8	5.8	6.5	5.7	4.4	4.2	4.1	4.5	4.2	4.2
Below Normal (13%)	3.7	4.0	4.2	4.3	5.0	3.9	3.7	3.8	4.1	4.5	4.2	4.0
Dry (24%)	3.6	3.8	3.9	4.2	4.4	4.2	3.7	3.8	4.0	4.3	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.1	3.7	3.5	3.6	3.9	4.1	3.9	3.7

Alternative 1

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.4	7.1	8.2	8.8	7.9	6.3	5.4	4.6	4.5	4.3	4.2
20%	3.8	4.1	5.4	7.3	7.9	6.6	5.0	4.6	4.4	4.5	4.2	4.1
30%	3.8	3.9	4.5	5.7	6.7	5.7	4.2	4.2	4.3	4.5	4.2	4.1
40%	3.7	3.8	4.2	4.7	6.1	4.6	4.0	4.0	4.2	4.4	4.2	4.0
50%	3.7	3.8	4.1	4.4	5.1	4.3	3.8	4.0	4.2	4.4	4.1	3.9
60%	3.6	3.7	4.0	4.2	4.4	4.1	3.8	3.9	4.1	4.3	4.1	3.8
70%	3.6	3.6	3.9	4.1	4.3	3.9	3.7	3.8	4.1	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.9	4.0	3.8	3.5	3.7	4.0	4.2	4.0	3.8
90%	3.4	3.4	3.7	3.8	3.9	3.6	3.4	3.6	3.9	4.1	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	3.9	4.7	5.3	5.8	5.1	4.3	4.3	4.3	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.8	6.9	7.4	6.5	5.3	5.0	4.5	4.4	4.2	4.1
Above Normal (16%)	3.7	4.0	4.7	5.8	6.6	5.8	4.4	4.2	4.2	4.5	4.2	4.0
Below Normal (13%)	3.7	3.9	4.1	4.3	5.2	3.9	3.7	4.0	4.2	4.4	4.2	4.0
Dry (24%)	3.6	3.7	3.9	4.2	4.4	4.2	3.7	3.9	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.0	3.7	3.6	3.6	3.9	4.1	3.9	3.7

Alternative 1 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	-0.6
20%	-0.1	-0.1	0.2	0.4	0.0	0.0	0.0	0.0	0.1	0.0	-0.1	-0.6
30%	-0.1	-0.2	0.0	0.2	0.1	0.5	0.0	0.1	0.1	-0.1	-0.1	-0.3
40%	0.0	-0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	-0.2
50%	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.1
60%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	-0.1	0.0	-0.1
70%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	-0.1	0.0	-0.1
80%	0.0	0.0	0.0	-0.1	-0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.2
Water Year Types[c]												
Wet (32%)	-0.1	-0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6
Above Normal (16%)	0.0	-0.1	-0.1	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.0	-0.2
Below Normal (13%)	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0	-0.1	0.0
Dry (24%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-1-2. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4.0	4.5	6.6	8.1	8.7	7.9	6.3	5.4	4.5	4.6	4.3	4.8
20%	3.9	4.3	5.2	6.9	7.8	6.6	5.0	4.5	4.3	4.5	4.3	4.7
30%	3.8	4.2	4.5	5.6	6.6	5.2	4.2	4.2	4.2	4.5	4.3	4.4
40%	3.7	4.0	4.3	4.7	5.9	4.6	4.0	4.0	4.2	4.4	4.2	4.2
50%	3.7	3.9	4.2	4.5	5.1	4.3	3.8	3.9	4.1	4.4	4.1	4.1
60%	3.6	3.8	4.1	4.2	4.4	4.1	3.7	3.8	4.0	4.4	4.1	3.9
70%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.0	4.3	4.0	3.9
80%	3.5	3.6	3.8	4.0	4.1	3.7	3.5	3.7	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.9	3.6	3.4	3.6	3.8	4.1	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	4.0	4.6	5.3	5.7	5.0	4.3	4.2	4.2	4.4	4.1	4.2
Water Year Types[c]												
Wet (32%)	3.9	4.4	5.7	6.8	7.3	6.5	5.3	5.0	4.5	4.5	4.2	4.7
Above Normal (16%)	3.7	4.1	4.8	5.8	6.5	5.7	4.4	4.2	4.1	4.5	4.2	4.2
Below Normal (13%)	3.7	4.0	4.2	4.3	5.0	3.9	3.7	3.8	4.1	4.5	4.2	4.0
Dry (24%)	3.6	3.8	3.9	4.2	4.4	4.2	3.7	3.8	4.0	4.3	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.1	3.7	3.5	3.6	3.9	4.1	3.9	3.7

Alternative 3

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.4	7.1	8.2	8.8	7.9	6.3	5.4	4.5	4.6	4.3	4.2
20%	3.8	4.1	5.4	7.3	7.9	6.6	5.0	4.5	4.3	4.5	4.3	4.1
30%	3.8	3.9	4.5	5.7	6.7	5.4	4.2	4.2	4.3	4.5	4.2	4.0
40%	3.7	3.8	4.2	4.7	6.1	4.6	4.0	4.1	4.2	4.4	4.2	4.0
50%	3.7	3.7	4.1	4.4	5.1	4.3	3.8	4.0	4.2	4.4	4.1	3.9
60%	3.6	3.7	4.0	4.2	4.3	4.1	3.7	3.9	4.1	4.3	4.1	3.9
70%	3.6	3.6	3.9	4.1	4.3	3.9	3.7	3.8	4.0	4.3	4.0	3.8
80%	3.5	3.6	3.8	4.0	4.0	3.8	3.5	3.7	4.0	4.2	3.9	3.8
90%	3.4	3.4	3.7	3.8	3.9	3.6	3.4	3.6	3.9	4.1	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.9	4.7	5.3	5.8	5.1	4.3	4.2	4.3	4.4	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.8	6.9	7.4	6.5	5.3	5.0	4.6	4.5	4.2	4.1
Above Normal (16%)	3.6	4.0	4.7	5.8	6.6	5.8	4.4	4.2	4.2	4.5	4.2	4.0
Below Normal (13%)	3.7	3.9	4.1	4.3	5.2	3.9	3.7	3.9	4.2	4.5	4.2	4.0
Dry (24%)	3.6	3.7	3.9	4.2	4.4	4.2	3.7	3.9	4.1	4.3	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.1	3.7	3.6	3.6	3.9	4.1	3.9	3.7

Alternative 3 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.1	-0.1	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6
20%	-0.1	-0.1	0.3	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.6
30%	-0.1	-0.3	0.0	0.2	0.1	0.3	0.0	0.0	0.1	0.0	0.0	-0.4
40%	0.0	-0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	-0.2
50%	0.0	-0.2	-0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	-0.1
60%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	-0.1
70%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	-0.1
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.2
Water Year Types[c]												
Wet (32%)	-0.1	-0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.6
Above Normal (16%)	0.0	-0.1	-0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	-0.2
Below Normal (13%)	-0.1	-0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Dry (24%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-1-3. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4.0	4.5	6.6	8.1	8.7	7.9	6.3	5.4	4.5	4.6	4.3	4.8
20%	3.9	4.3	5.2	6.9	7.8	6.6	5.0	4.5	4.3	4.5	4.3	4.7
30%	3.8	4.2	4.5	5.6	6.6	5.2	4.2	4.2	4.2	4.5	4.3	4.4
40%	3.7	4.0	4.3	4.7	5.9	4.6	4.0	4.0	4.2	4.4	4.2	4.2
50%	3.7	3.9	4.2	4.5	5.1	4.3	3.8	3.9	4.1	4.4	4.1	4.1
60%	3.6	3.8	4.1	4.2	4.4	4.1	3.7	3.8	4.0	4.4	4.1	3.9
70%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.0	4.3	4.0	3.9
80%	3.5	3.6	3.8	4.0	4.1	3.7	3.5	3.7	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.9	3.6	3.4	3.6	3.8	4.1	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	4.0	4.6	5.3	5.7	5.0	4.3	4.2	4.2	4.4	4.1	4.2
Water Year Types[c]												
Wet (32%)	3.9	4.4	5.7	6.8	7.3	6.5	5.3	5.0	4.5	4.5	4.2	4.7
Above Normal (16%)	3.7	4.1	4.8	5.8	6.5	5.7	4.4	4.2	4.1	4.5	4.2	4.2
Below Normal (13%)	3.7	4.0	4.2	4.3	5.0	3.9	3.7	3.8	4.1	4.5	4.2	4.0
Dry (24%)	3.6	3.8	3.9	4.2	4.4	4.2	3.7	3.8	4.0	4.3	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.1	3.7	3.5	3.6	3.9	4.1	3.9	3.7

Alternative 5

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4.0	4.5	6.6	8.1	8.7	7.9	6.3	5.4	4.5	4.6	4.3	4.8
20%	3.9	4.3	5.2	6.9	7.8	6.6	5.0	4.5	4.3	4.5	4.3	4.7
30%	3.8	4.2	4.5	5.6	6.6	5.2	4.2	4.1	4.2	4.5	4.3	4.4
40%	3.7	4.0	4.3	4.7	5.9	4.6	4.0	4.0	4.1	4.4	4.2	4.2
50%	3.7	3.9	4.1	4.5	5.1	4.3	3.8	3.9	4.1	4.4	4.1	4.1
60%	3.7	3.8	4.1	4.2	4.4	4.1	3.7	3.8	4.1	4.4	4.1	4.0
70%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.7	3.9	4.3	4.1	3.9
80%	3.5	3.6	3.8	4.0	4.1	3.7	3.5	3.6	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.9	3.6	3.4	3.5	3.8	4.2	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	4.0	4.6	5.3	5.7	5.0	4.3	4.2	4.2	4.4	4.1	4.2
Water Year Types[c]												
Wet (32%)	3.9	4.4	5.7	6.8	7.3	6.5	5.3	5.0	4.5	4.5	4.2	4.7
Above Normal (16%)	3.7	4.1	4.8	5.8	6.5	5.7	4.4	4.2	4.1	4.5	4.2	4.2
Below Normal (13%)	3.7	4.0	4.2	4.3	5.0	3.9	3.7	3.8	4.1	4.5	4.2	4.0
Dry (24%)	3.6	3.8	3.9	4.2	4.4	4.2	3.7	3.8	4.0	4.3	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.1	3.7	3.5	3.5	3.9	4.1	3.9	3.7

Alternative 5 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-1-4. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.4	7.1	8.2	8.8	7.9	6.3	5.4	4.6	4.5	4.3	4.2
20%	3.8	4.1	5.4	7.3	7.9	6.6	5.0	4.6	4.4	4.5	4.2	4.1
30%	3.8	3.9	4.5	5.7	6.7	5.7	4.2	4.2	4.3	4.5	4.2	4.1
40%	3.7	3.8	4.2	4.7	6.1	4.6	4.0	4.0	4.2	4.4	4.2	4.0
50%	3.7	3.8	4.1	4.4	5.1	4.3	3.8	4.0	4.2	4.4	4.1	3.9
60%	3.6	3.7	4.0	4.2	4.4	4.1	3.8	3.9	4.1	4.3	4.1	3.8
70%	3.6	3.6	3.9	4.1	4.3	3.9	3.7	3.8	4.1	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.9	4.0	3.8	3.5	3.7	4.0	4.2	4.0	3.8
90%	3.4	3.4	3.7	3.8	3.9	3.6	3.4	3.6	3.9	4.1	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	3.9	4.7	5.3	5.8	5.1	4.3	4.3	4.3	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.8	6.9	7.4	6.5	5.3	5.0	4.5	4.4	4.2	4.1
Above Normal (16%)	3.7	4.0	4.7	5.8	6.6	5.8	4.4	4.2	4.2	4.5	4.2	4.0
Below Normal (13%)	3.7	3.9	4.1	4.3	5.2	3.9	3.7	4.0	4.2	4.4	4.2	4.0
Dry (24%)	3.6	3.7	3.9	4.2	4.4	4.2	3.7	3.9	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.0	3.7	3.6	3.6	3.9	4.1	3.9	3.7

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4.0	4.5	6.6	8.1	8.7	7.9	6.3	5.4	4.5	4.6	4.3	4.8
20%	3.9	4.3	5.2	6.9	7.8	6.6	5.0	4.5	4.3	4.5	4.3	4.7
30%	3.8	4.2	4.5	5.6	6.6	5.2	4.2	4.2	4.2	4.5	4.3	4.4
40%	3.7	4.0	4.3	4.7	5.9	4.6	4.0	4.0	4.2	4.4	4.2	4.2
50%	3.7	3.9	4.2	4.5	5.1	4.3	3.8	3.9	4.1	4.4	4.1	4.1
60%	3.6	3.8	4.1	4.2	4.4	4.1	3.7	3.8	4.0	4.4	4.1	3.9
70%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.8	4.0	4.3	4.0	3.9
80%	3.5	3.6	3.8	4.0	4.1	3.7	3.5	3.7	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.9	3.6	3.4	3.6	3.8	4.1	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	4.0	4.6	5.3	5.7	5.0	4.3	4.2	4.2	4.4	4.1	4.2
Water Year Types[c]												
Wet (32%)	3.9	4.4	5.7	6.8	7.3	6.5	5.3	5.0	4.5	4.5	4.2	4.7
Above Normal (16%)	3.7	4.1	4.8	5.8	6.5	5.7	4.4	4.2	4.1	4.5	4.2	4.2
Below Normal (13%)	3.7	4.0	4.2	4.3	5.0	3.9	3.7	3.8	4.1	4.5	4.2	4.0
Dry (24%)	3.6	3.8	3.9	4.2	4.4	4.2	3.7	3.8	4.0	4.3	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.1	3.7	3.5	3.6	3.9	4.1	3.9	3.7

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.1	0.0	-0.5	-0.1	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.6
20%	0.1	0.1	-0.2	-0.4	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.6
30%	0.1	0.2	0.0	-0.2	-0.1	-0.5	0.0	-0.1	-0.1	0.1	0.1	0.3
40%	0.0	0.2	0.0	0.0	-0.2	0.0	0.0	0.0	-0.1	0.0	0.0	0.2
50%	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.1
60%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.1
70%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.1
80%	0.0	0.0	0.0	0.1	0.1	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.2
Water Year Types[c]												
Wet (32%)	0.1	0.1	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Above Normal (16%)	0.0	0.1	0.1	0.0	-0.1	-0.2	0.0	-0.1	-0.1	0.0	0.0	0.2
Below Normal (13%)	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	-0.1	-0.2	0.0	0.1	0.0
Dry (24%)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-1-5. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

	Monthly Averaged Daily Maximum Elevation (Feet)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.4	7.1	8.2	8.8	7.9	6.3	5.4	4.6	4.5	4.3	4.2
20%	3.8	4.1	5.4	7.3	7.9	6.6	5.0	4.6	4.4	4.5	4.2	4.1
30%	3.8	3.9	4.5	5.7	6.7	5.7	4.2	4.2	4.3	4.5	4.2	4.1
40%	3.7	3.8	4.2	4.7	6.1	4.6	4.0	4.0	4.2	4.4	4.2	4.0
50%	3.7	3.8	4.1	4.4	5.1	4.3	3.8	4.0	4.2	4.4	4.1	3.9
60%	3.6	3.7	4.0	4.2	4.4	4.1	3.8	3.9	4.1	4.3	4.1	3.8
70%	3.6	3.6	3.9	4.1	4.3	3.9	3.7	3.8	4.1	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.9	4.0	3.8	3.5	3.7	4.0	4.2	4.0	3.8
90%	3.4	3.4	3.7	3.8	3.9	3.6	3.4	3.6	3.9	4.1	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	3.9	4.7	5.3	5.8	5.1	4.3	4.3	4.3	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.8	6.9	7.4	6.5	5.3	5.0	4.5	4.4	4.2	4.1
Above Normal (16%)	3.7	4.0	4.7	5.8	6.6	5.8	4.4	4.2	4.2	4.5	4.2	4.0
Below Normal (13%)	3.7	3.9	4.1	4.3	5.2	3.9	3.7	4.0	4.2	4.4	4.2	4.0
Dry (24%)	3.6	3.7	3.9	4.2	4.4	4.2	3.7	3.9	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.0	3.7	3.6	3.6	3.9	4.1	3.9	3.7

Alternative 3

	Monthly Averaged Daily Maximum Elevation (Feet)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.4	7.1	8.2	8.8	7.9	6.3	5.4	4.5	4.6	4.3	4.2
20%	3.8	4.1	5.4	7.3	7.9	6.6	5.0	4.5	4.3	4.5	4.3	4.1
30%	3.8	3.9	4.5	5.7	6.7	5.4	4.2	4.2	4.3	4.5	4.2	4.0
40%	3.7	3.8	4.2	4.7	6.1	4.6	4.0	4.1	4.2	4.4	4.2	4.0
50%	3.7	3.7	4.1	4.4	5.1	4.3	3.8	4.0	4.2	4.4	4.1	3.9
60%	3.6	3.7	4.0	4.2	4.3	4.1	3.7	3.9	4.1	4.3	4.1	3.9
70%	3.6	3.6	3.9	4.1	4.3	3.9	3.7	3.8	4.0	4.3	4.0	3.8
80%	3.5	3.6	3.8	4.0	4.0	3.8	3.5	3.7	4.0	4.2	3.9	3.8
90%	3.4	3.4	3.7	3.8	3.9	3.6	3.4	3.6	3.9	4.1	3.9	3.7
Long Term												
Full Simulation Period[b]	3.7	3.9	4.7	5.3	5.8	5.1	4.3	4.2	4.3	4.4	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.8	6.9	7.4	6.5	5.3	5.0	4.6	4.5	4.2	4.1
Above Normal (16%)	3.6	4.0	4.7	5.8	6.6	5.8	4.4	4.2	4.2	4.5	4.2	4.0
Below Normal (13%)	3.7	3.9	4.1	4.3	5.2	3.9	3.7	3.9	4.2	4.5	4.2	4.0
Dry (24%)	3.6	3.7	3.9	4.2	4.4	4.2	3.7	3.9	4.1	4.3	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.1	3.7	3.6	3.6	3.9	4.1	3.9	3.7

Alternative 3 minus Second Basis of Comparison

	Monthly Averaged Daily Maximum Elevation (Feet)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0
20%	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	-0.1	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-1-6. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.4	7.1	8.2	8.8	7.9	6.3	5.4	4.6	4.5	4.3	4.2
20%	3.8	4.1	5.4	7.3	7.9	6.6	5.0	4.6	4.4	4.5	4.2	4.1
30%	3.8	3.9	4.5	5.7	6.7	5.7	4.2	4.2	4.3	4.5	4.2	4.1
40%	3.7	3.8	4.2	4.7	6.1	4.6	4.0	4.0	4.2	4.4	4.2	4.0
50%	3.7	3.8	4.1	4.4	5.1	4.3	3.8	4.0	4.2	4.4	4.1	3.9
60%	3.6	3.7	4.0	4.2	4.4	4.1	3.8	3.9	4.1	4.3	4.1	3.8
70%	3.6	3.6	3.9	4.1	4.3	3.9	3.7	3.8	4.1	4.2	4.0	3.8
80%	3.5	3.6	3.8	3.9	4.0	3.8	3.5	3.7	4.0	4.2	4.0	3.8
90%	3.4	3.4	3.7	3.8	3.9	3.6	3.4	3.6	3.9	4.1	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	3.9	4.7	5.3	5.8	5.1	4.3	4.3	4.3	4.3	4.1	3.9
Water Year Types[c]												
Wet (32%)	3.8	4.2	5.8	6.9	7.4	6.5	5.3	5.0	4.5	4.4	4.2	4.1
Above Normal (16%)	3.7	4.0	4.7	5.8	6.6	5.8	4.4	4.2	4.2	4.5	4.2	4.0
Below Normal (13%)	3.7	3.9	4.1	4.3	5.2	3.9	3.7	4.0	4.2	4.4	4.2	4.0
Dry (24%)	3.6	3.7	3.9	4.2	4.4	4.2	3.7	3.9	4.1	4.2	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.0	3.7	3.6	3.6	3.9	4.1	3.9	3.7

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	4.0	4.5	6.6	8.1	8.7	7.9	6.3	5.4	4.5	4.6	4.3	4.8
20%	3.9	4.3	5.2	6.9	7.8	6.6	5.0	4.5	4.3	4.5	4.3	4.7
30%	3.8	4.2	4.5	5.6	6.6	5.2	4.2	4.1	4.2	4.5	4.3	4.4
40%	3.7	4.0	4.3	4.7	5.9	4.6	4.0	4.0	4.1	4.4	4.2	4.2
50%	3.7	3.9	4.1	4.5	5.1	4.3	3.8	3.9	4.1	4.4	4.1	4.1
60%	3.7	3.8	4.1	4.2	4.4	4.1	3.7	3.8	4.1	4.4	4.1	4.0
70%	3.6	3.7	3.9	4.1	4.2	3.9	3.6	3.7	3.9	4.3	4.1	3.9
80%	3.5	3.6	3.8	4.0	4.1	3.7	3.5	3.6	3.9	4.2	3.9	3.8
90%	3.4	3.5	3.7	3.8	3.9	3.6	3.4	3.5	3.8	4.2	3.9	3.6
Long Term												
Full Simulation Period[b]	3.7	4.0	4.6	5.3	5.7	5.0	4.3	4.2	4.2	4.4	4.1	4.2
Water Year Types[c]												
Wet (32%)	3.9	4.4	5.7	6.8	7.3	6.5	5.3	5.0	4.5	4.5	4.2	4.7
Above Normal (16%)	3.7	4.1	4.8	5.8	6.5	5.7	4.4	4.2	4.1	4.5	4.2	4.2
Below Normal (13%)	3.7	4.0	4.2	4.3	5.0	3.9	3.7	3.8	4.1	4.5	4.2	4.0
Dry (24%)	3.6	3.8	3.9	4.2	4.4	4.2	3.7	3.8	4.0	4.3	4.0	3.8
Critical (15%)	3.6	3.6	3.9	4.0	4.1	3.7	3.5	3.5	3.9	4.1	3.9	3.7

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.1	0.0	-0.5	-0.1	0.0	0.0	0.0	0.0	-0.1	0.1	0.1	0.6
20%	0.1	0.2	-0.2	-0.4	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.6
30%	0.1	0.2	0.0	-0.2	-0.1	-0.5	0.0	-0.1	-0.1	0.1	0.1	0.3
40%	0.0	0.2	0.0	0.0	-0.2	0.0	0.0	0.0	-0.1	0.0	0.0	0.2
50%	0.0	0.2	0.1	0.1	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	0.1
60%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.1
70%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.1	0.1
80%	0.0	0.0	0.0	0.1	0.1	0.0	-0.1	-0.1	-0.1	0.1	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.2
Water Year Types[c]												
Wet (32%)	0.1	0.1	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Above Normal (16%)	0.0	0.1	0.1	0.0	-0.1	-0.2	0.0	-0.1	-0.1	0.0	0.0	0.2
Below Normal (13%)	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	-0.2	-0.2	0.0	0.1	0.0
Dry (24%)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	0.1	0.0	0.0

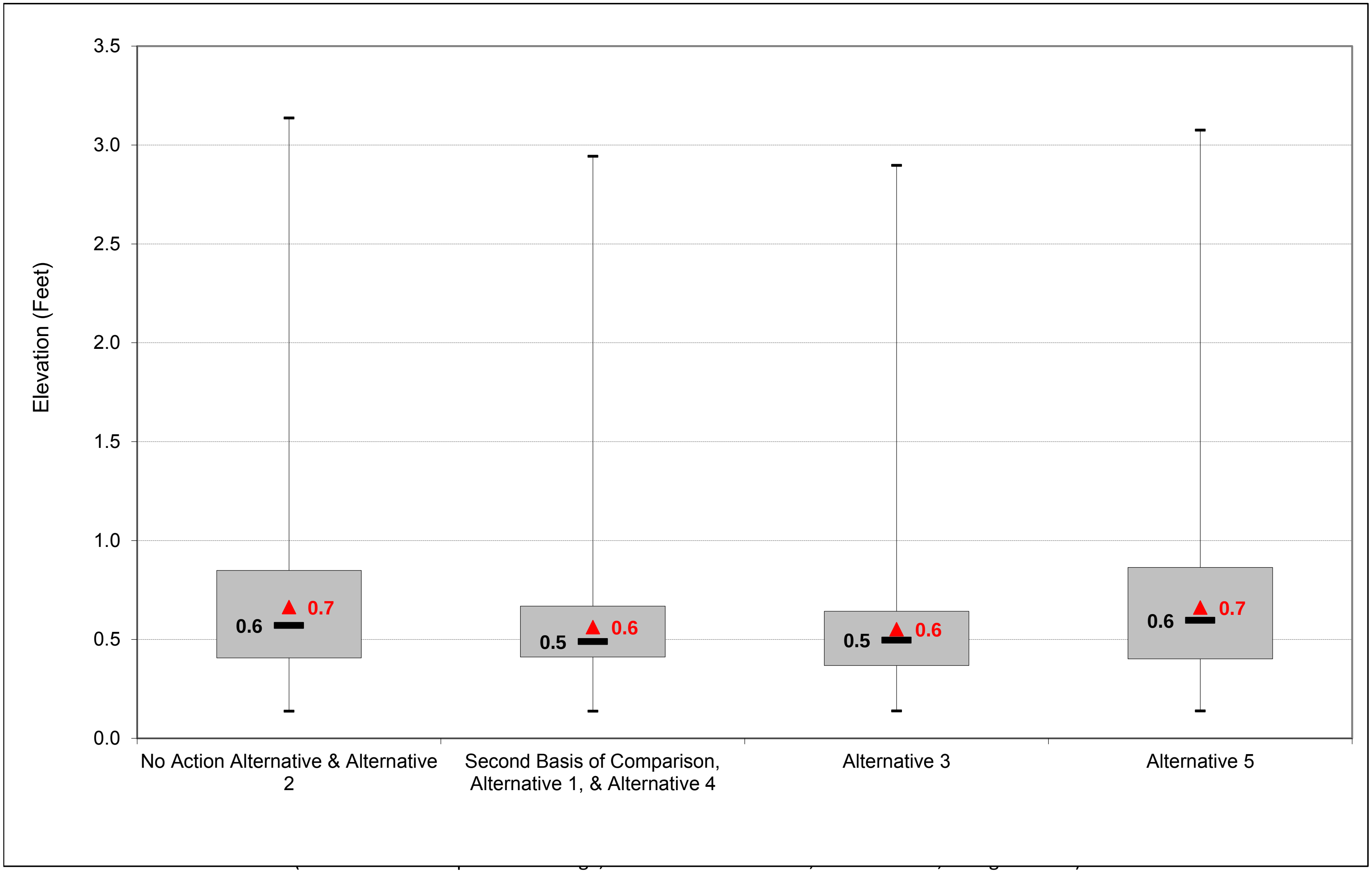
a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

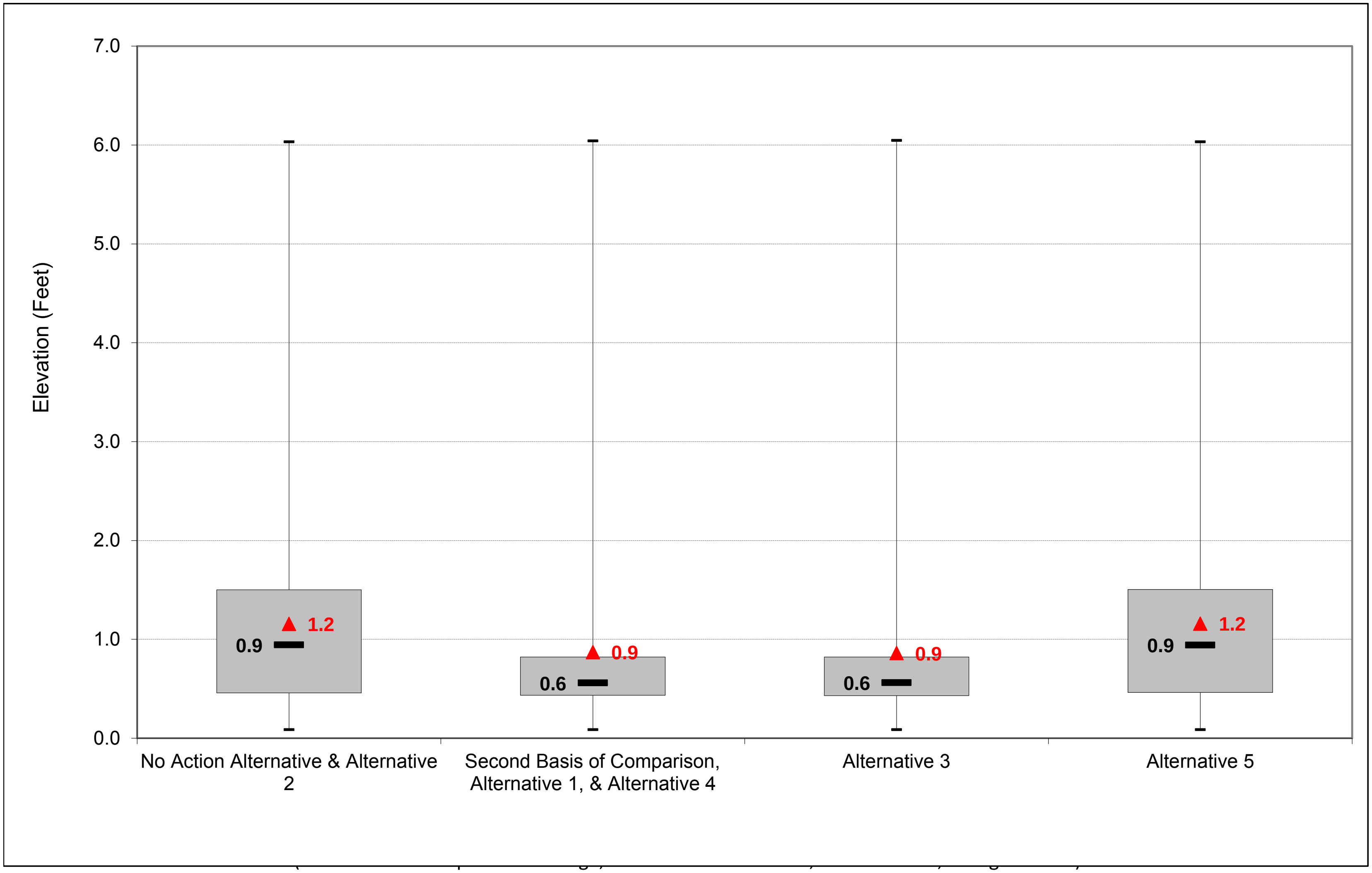
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-1. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, October



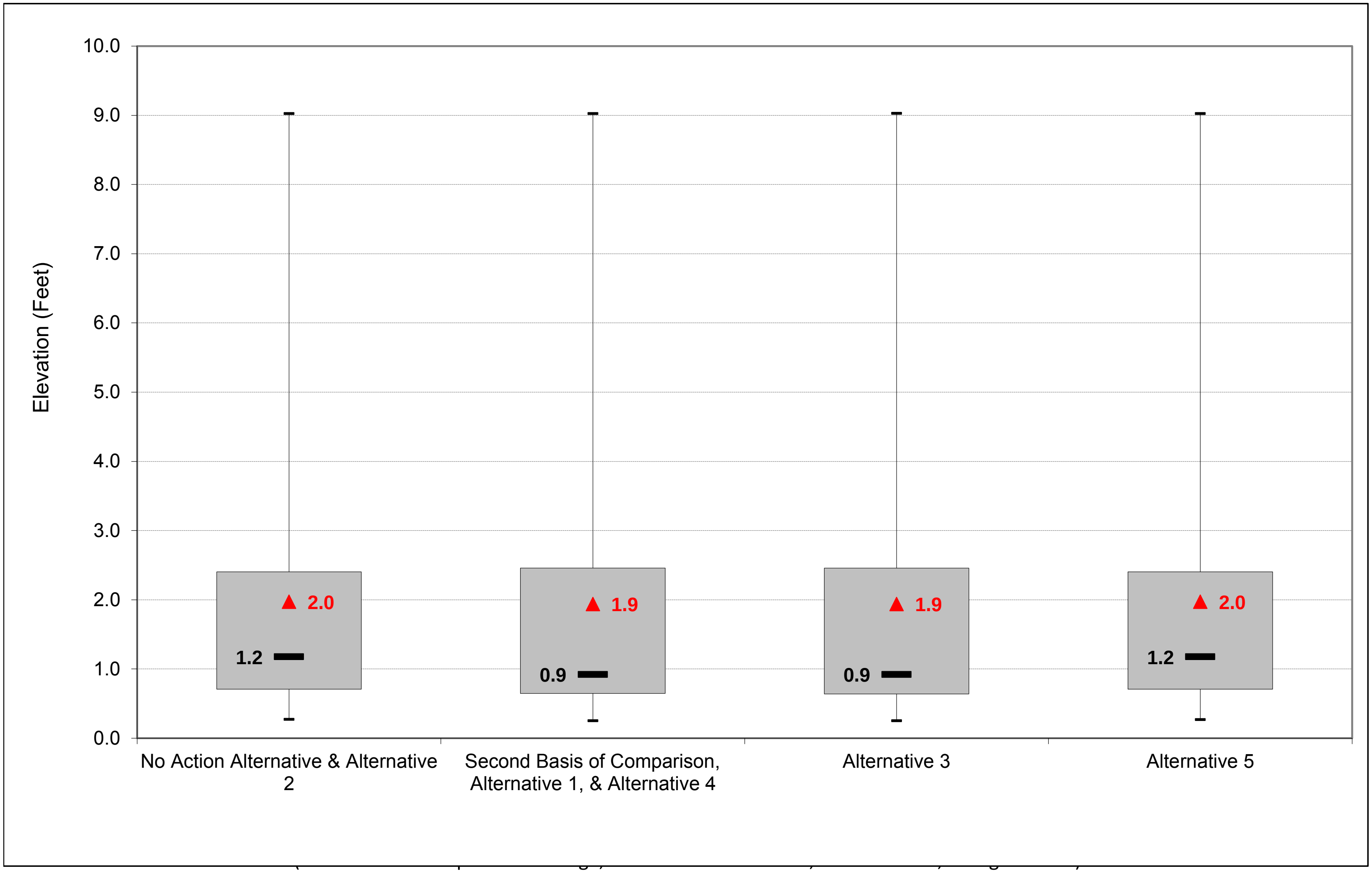
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-2. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, November



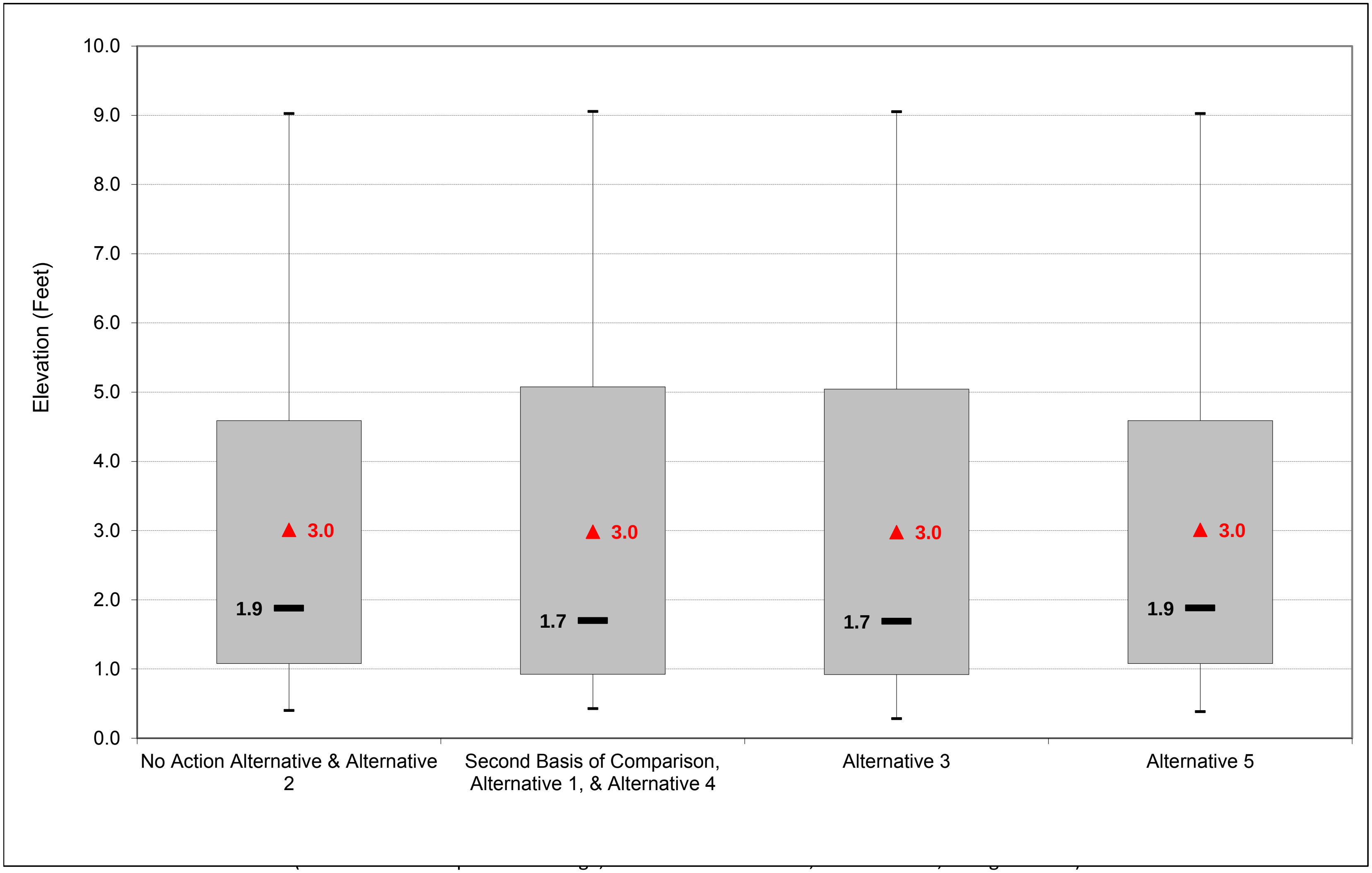
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-3. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, December



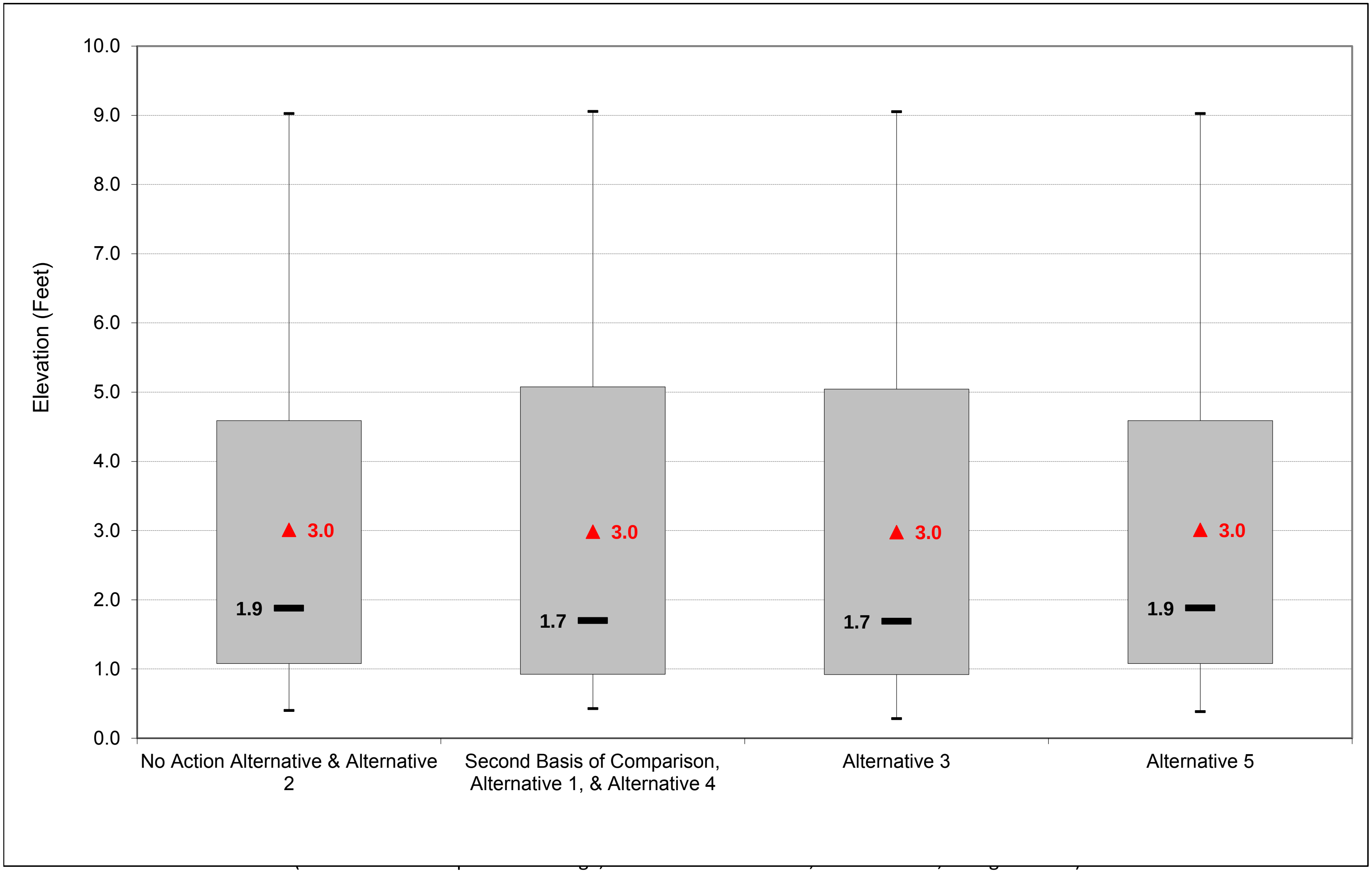
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-4. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, January



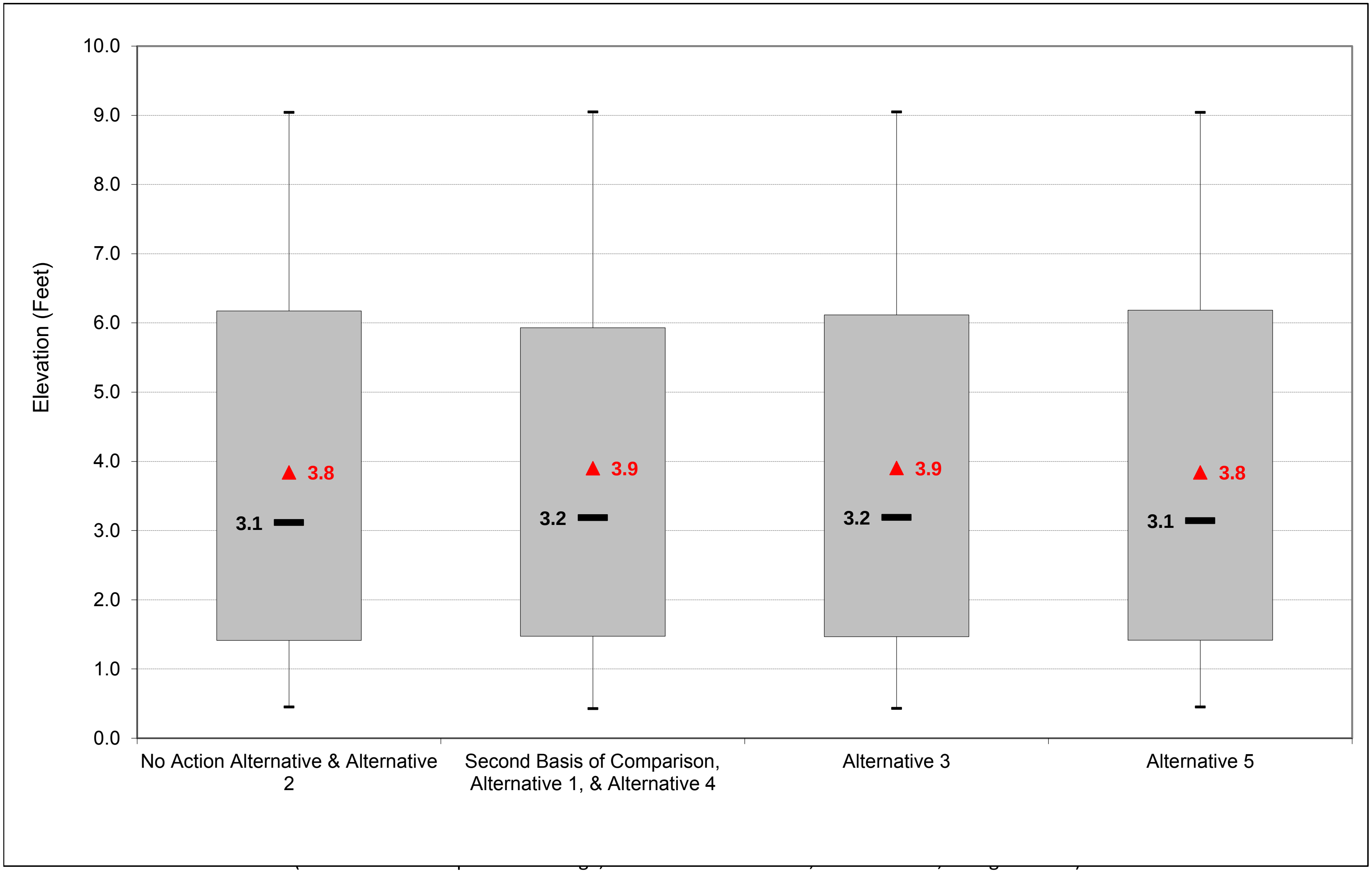
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-5. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, February



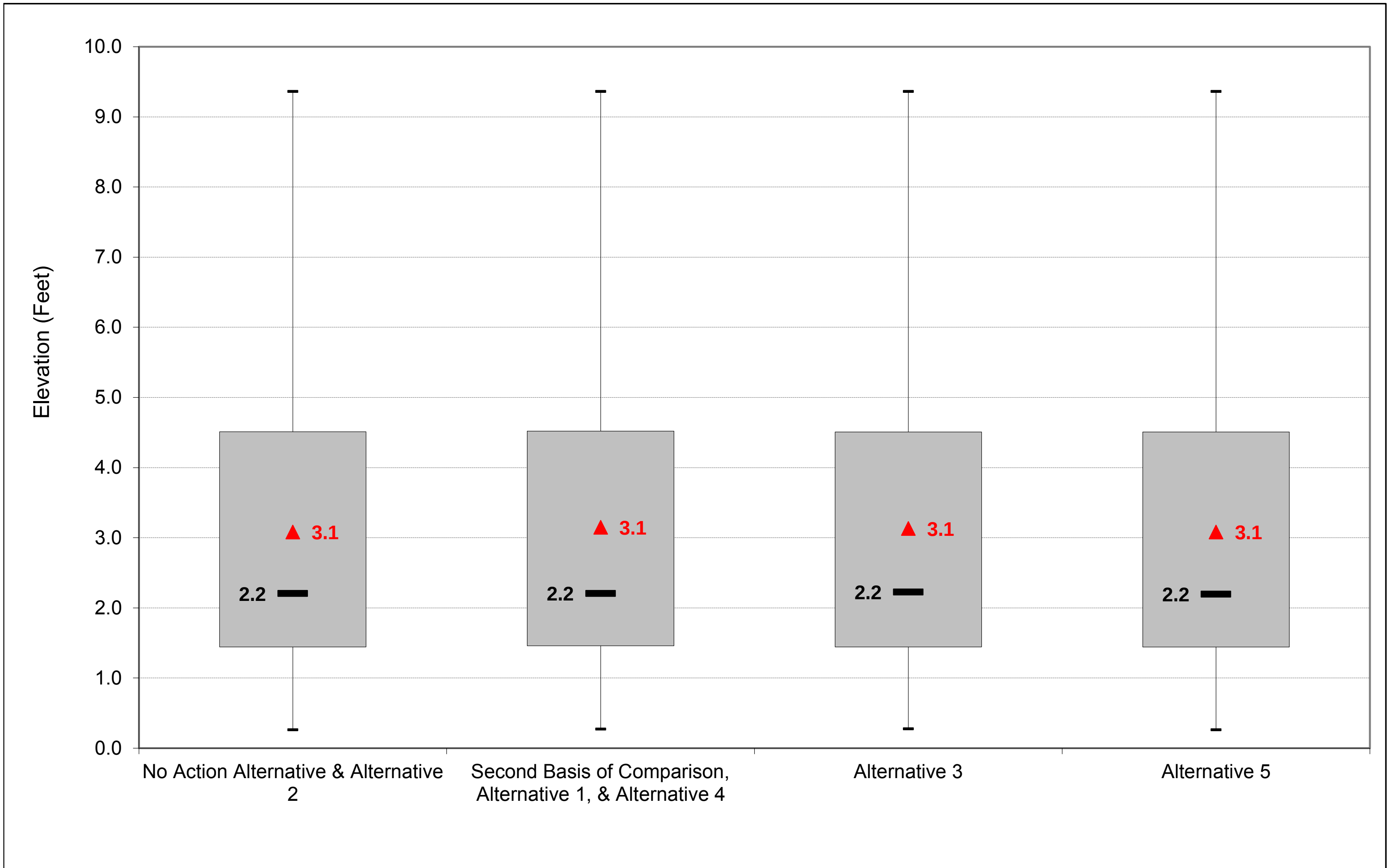
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-6. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, March



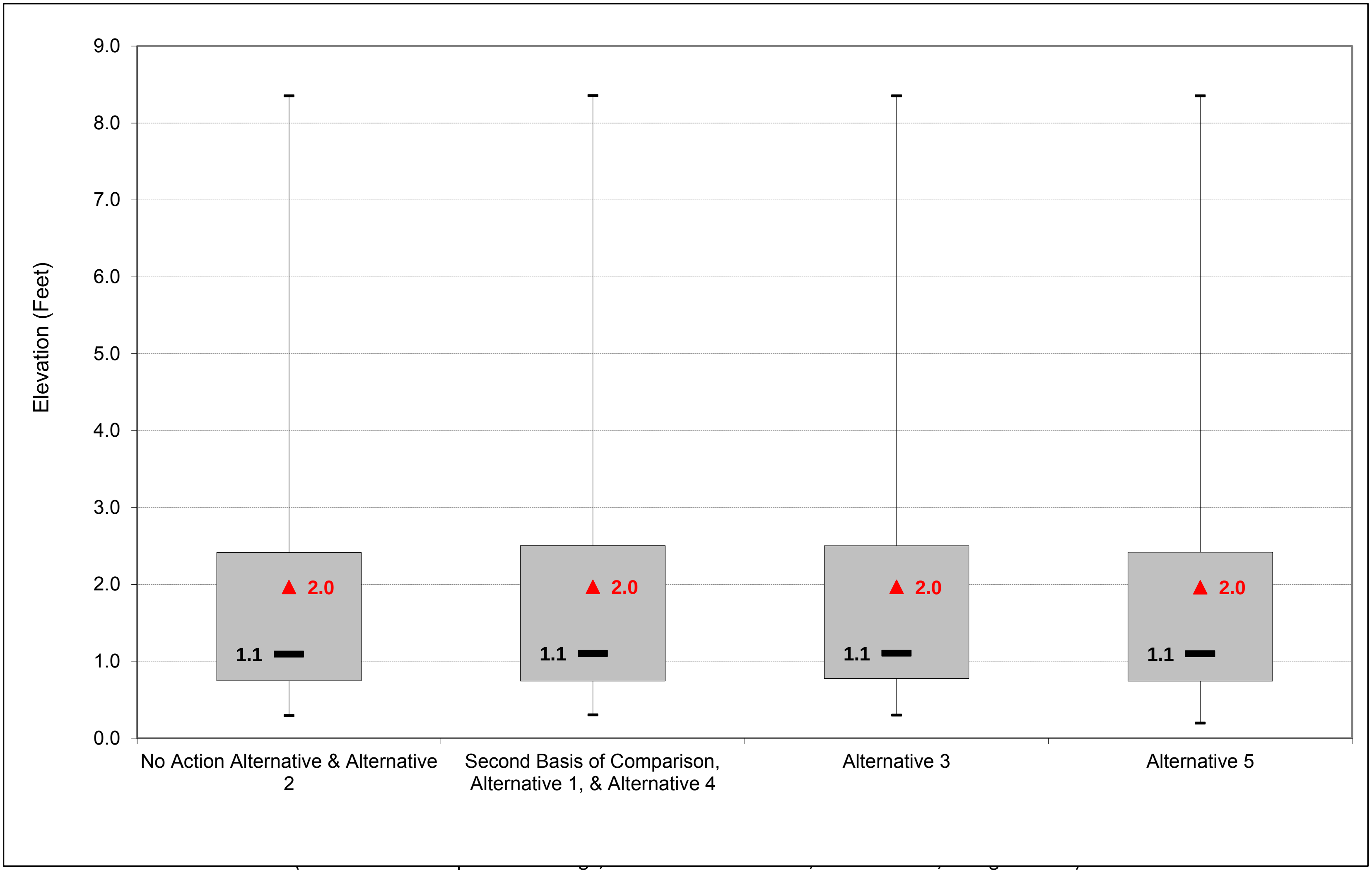
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-7. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, April



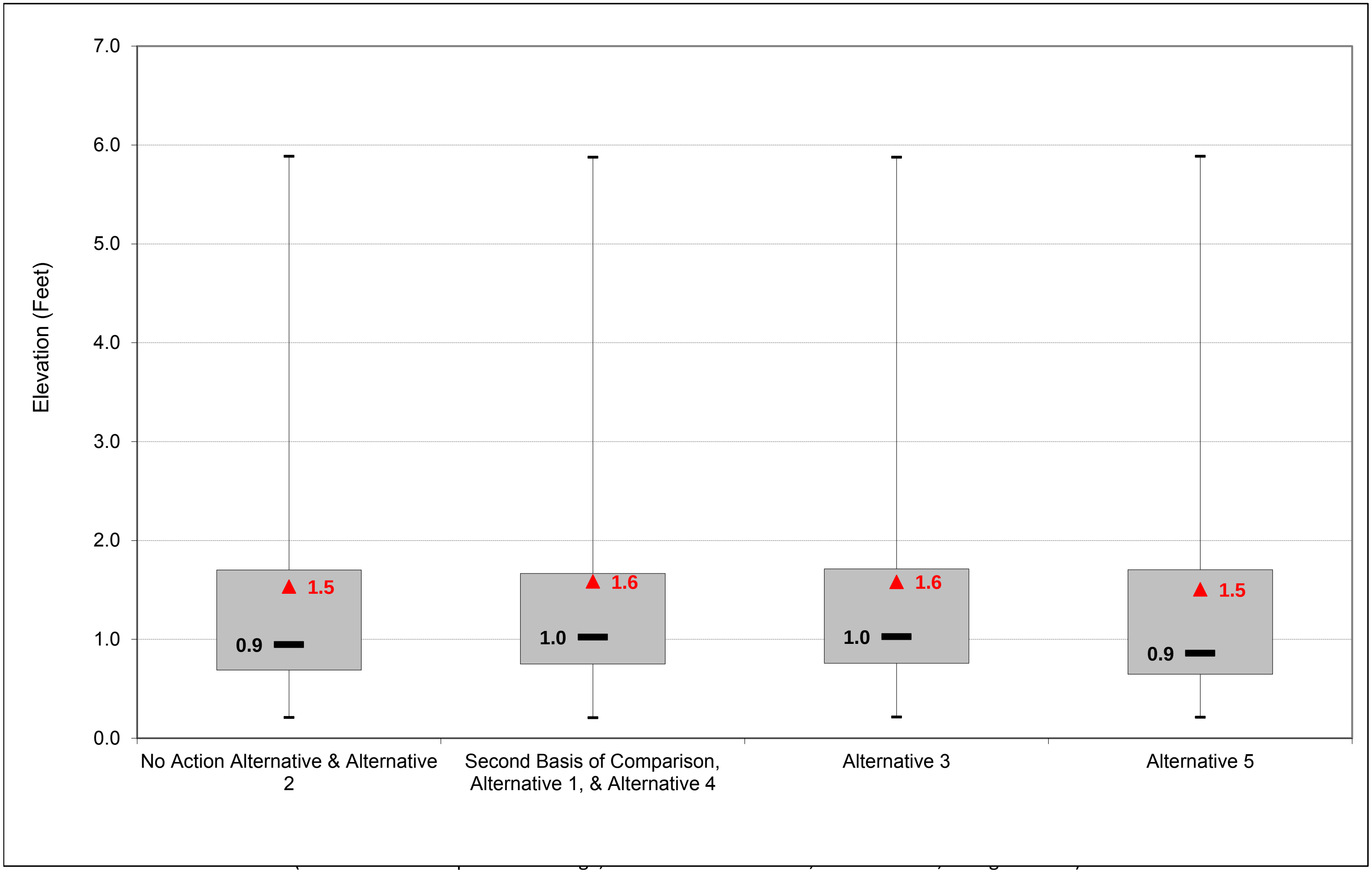
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-8. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, May



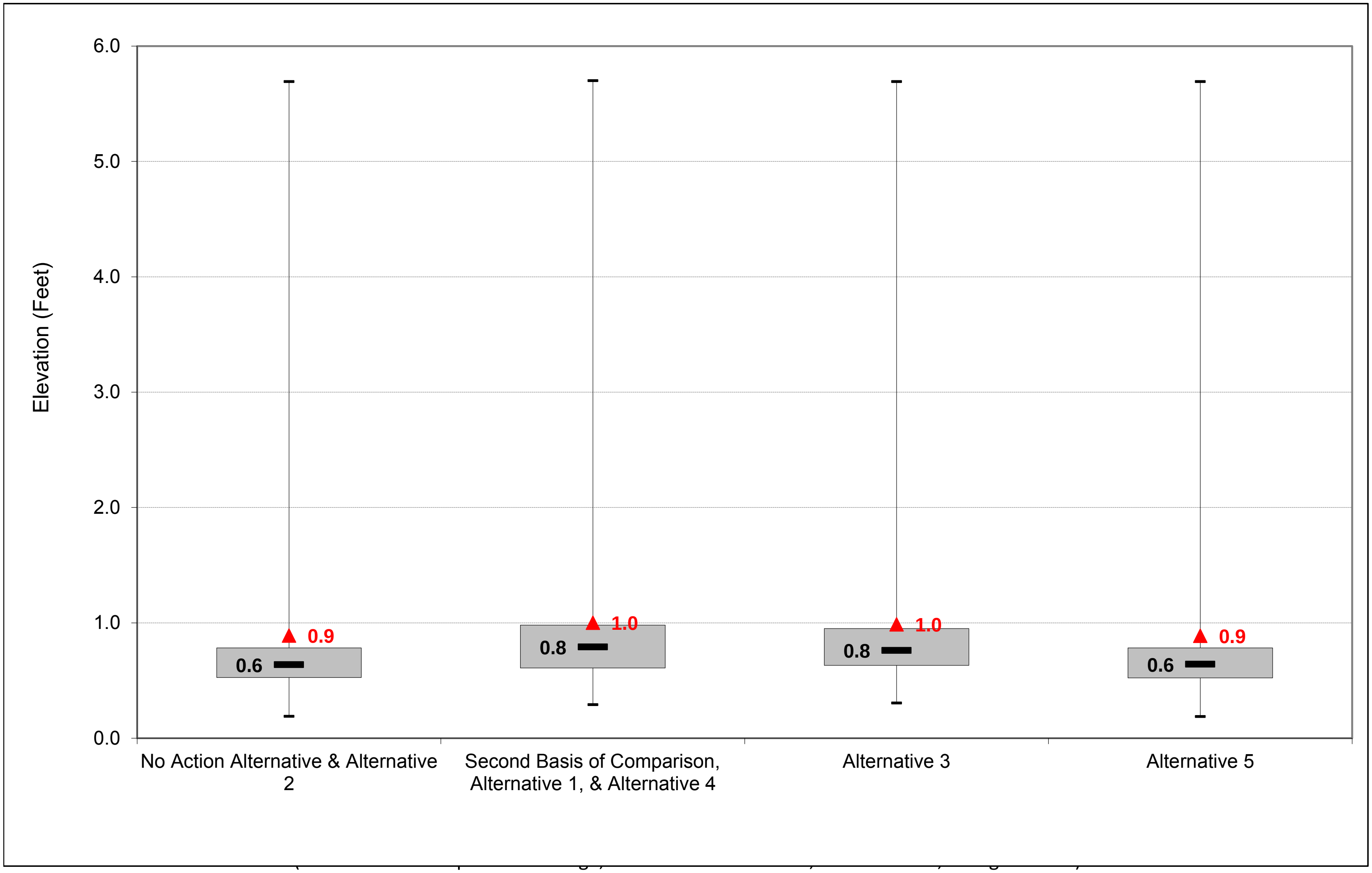
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-9. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, June



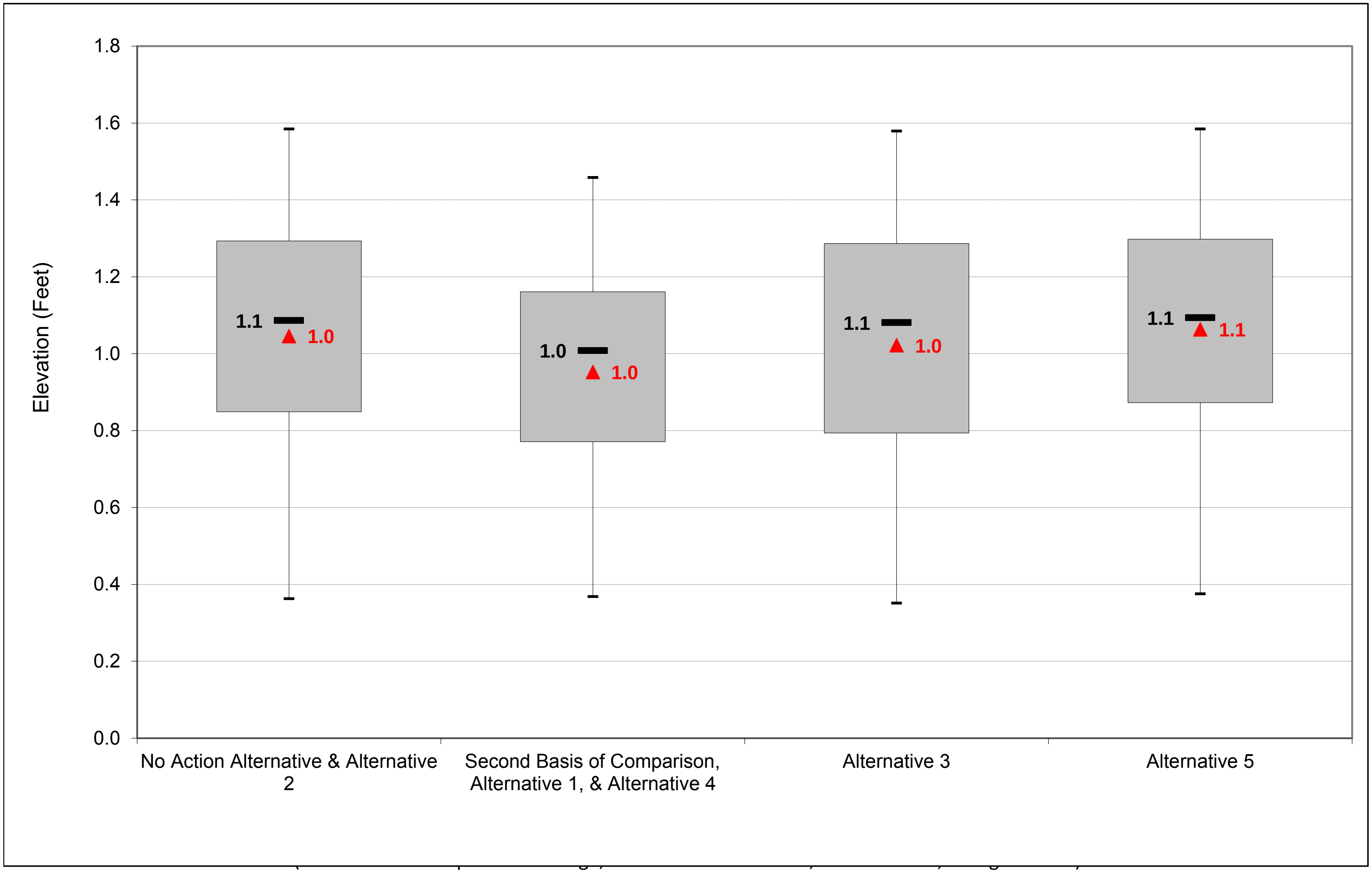
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-10. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, July



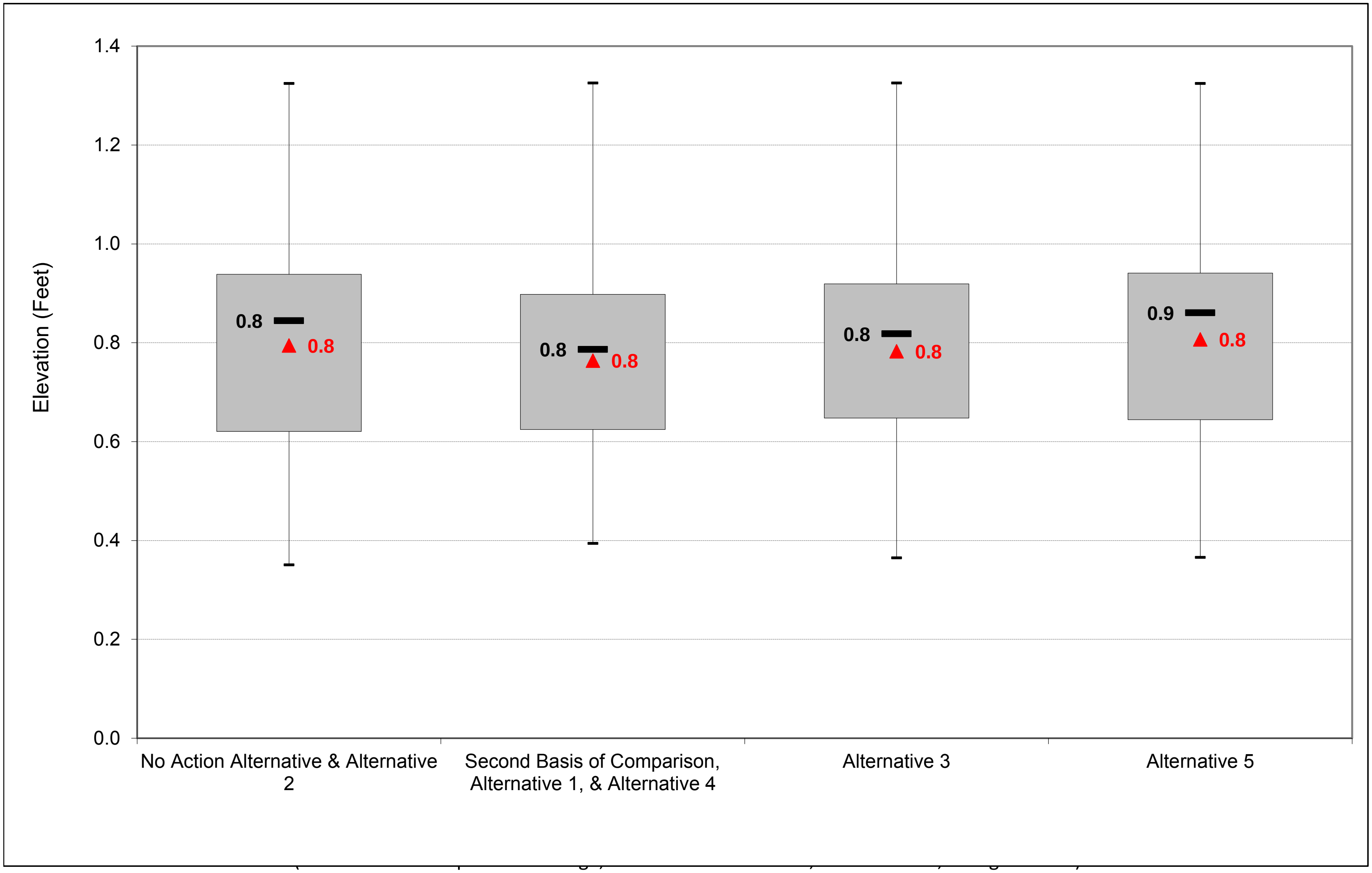
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-11. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-44-2-12. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-2-1. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.1	2.0	5.2	7.0	7.9	6.9	5.0	3.8	1.3	1.4	1.0	2.8
20%	0.9	1.5	3.0	5.6	6.8	5.5	3.3	2.3	0.9	1.3	0.9	2.7
30%	0.8	1.4	1.9	3.8	5.3	3.7	2.0	1.3	0.7	1.3	0.9	1.5
40%	0.7	1.2	1.4	2.4	4.4	2.8	1.6	1.0	0.7	1.2	0.9	1.2
50%	0.6	0.9	1.2	1.9	3.1	2.2	1.1	0.9	0.6	1.1	0.8	0.9
60%	0.5	0.7	1.0	1.4	2.1	1.8	0.9	0.8	0.6	1.0	0.8	0.7
70%	0.4	0.6	0.8	1.1	1.6	1.5	0.8	0.7	0.6	0.9	0.7	0.6
80%	0.4	0.4	0.7	1.0	1.3	1.2	0.7	0.6	0.5	0.8	0.6	0.6
90%	0.3	0.3	0.5	0.8	1.1	0.7	0.6	0.5	0.4	0.6	0.5	0.5
Long Term												
Full Simulation Period[b]	0.7	1.2	2.0	3.0	3.8	3.1	2.0	1.5	0.9	1.0	0.8	1.4
Water Year Types[c]												
Wet (32%)	0.9	1.7	3.6	5.3	6.1	5.1	3.5	2.9	1.5	1.2	0.9	2.6
Above Normal (16%)	0.6	1.4	2.2	3.9	5.0	4.2	2.2	1.4	0.7	1.3	1.0	1.2
Below Normal (13%)	0.7	1.1	1.2	1.6	2.9	1.5	1.0	0.9	0.6	1.2	0.9	0.8
Dry (24%)	0.5	0.8	0.9	1.4	2.1	1.9	1.1	0.8	0.6	0.9	0.6	0.6
Critical (15%)	0.4	0.4	0.7	1.1	1.3	0.9	0.7	0.5	0.4	0.6	0.5	0.5

Alternative 1

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.8	1.5	5.8	7.1	7.9	7.0	5.0	3.8	1.3	1.3	1.0	1.0
20%	0.7	0.9	3.3	6.1	6.8	5.5	3.2	2.5	1.0	1.2	0.9	0.9
30%	0.6	0.8	1.6	4.2	5.4	4.2	2.0	1.4	0.9	1.2	0.9	0.9
40%	0.6	0.7	1.2	2.5	4.7	2.9	1.6	1.1	0.9	1.1	0.8	0.8
50%	0.5	0.6	0.9	1.7	3.2	2.2	1.1	1.0	0.8	1.0	0.8	0.8
60%	0.5	0.5	0.9	1.2	2.2	1.8	0.9	0.9	0.7	0.9	0.7	0.7
70%	0.4	0.5	0.7	1.0	1.7	1.5	0.8	0.8	0.6	0.8	0.7	0.6
80%	0.4	0.4	0.6	0.9	1.3	1.2	0.7	0.7	0.6	0.6	0.6	0.5
90%	0.3	0.2	0.5	0.7	1.1	0.7	0.6	0.6	0.4	0.5	0.5	0.5
Long Term												
Full Simulation Period[b]	0.6	0.9	1.9	3.0	3.9	3.1	2.0	1.6	1.0	1.0	0.8	0.8
Water Year Types[c]												
Wet (32%)	0.7	1.3	3.8	5.4	6.2	5.2	3.5	2.9	1.6	1.1	0.9	0.9
Above Normal (16%)	0.5	1.0	2.0	4.0	5.1	4.4	2.2	1.5	0.9	1.2	0.9	0.8
Below Normal (13%)	0.6	0.8	1.0	1.5	3.1	1.6	1.1	1.1	0.9	1.1	0.8	0.8
Dry (24%)	0.5	0.5	0.8	1.2	2.1	1.9	1.1	0.9	0.7	0.7	0.6	0.6
Critical (15%)	0.4	0.4	0.6	1.0	1.3	1.0	0.7	0.5	0.5	0.5	0.5	0.5

Alternative 1 minus No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	**-0.2**	**-0.5**	0.6	0.1	0.0	0.0	**0.0**	**0.0**	**0.0**	**-0.1**	**0.0**	**-1.8**
20%	**-0.2**	**-0.7**	0.3	0.4	0.0	0.0	**0.0**	0.3	0.1	**-0.1**	**0.0**	**-1.8**
30%	**-0.2**	**-0.6**	**-0.3**	0.3	0.2	0.6	**0.0**	0.1	0.2	**-0.1**	**-0.1**	**-0.6**
40%	**-0.1**	**-0.5**	**-0.3**	0.1	0.3	0.1	**0.0**	0.1	0.2	**-0.1**	**-0.1**	**-0.4**
50%	**-0.1**	**-0.4**	**-0.3**	**-0.2**	0.1	0.0	0.0	0.1	0.2	**-0.1**	**-0.1**	**-0.1**
60%	**0.0**	**-0.2**	**-0.1**	**-0.2**	0.0	0.0	0.0	0.1	0.1	**-0.1**	**-0.1**	**0.0**
70%	0.0	**-0.1**	**-0.1**	**-0.2**	0.1	0.0	0.0	0.1	0.1	**-0.1**	**0.0**	**0.0**
80%	0.0	**-0.1**	**-0.1**	**-0.2**	0.0	0.0	0.0	0.1	0.1	**-0.2**	0.0	**0.0**
90%	0.0	**0.0**	**0.0**	**-0.1**	**0.0**	0.0	0.0	0.0	0.1	**-0.1**	0.0	**0.0**
Long Term												
Full Simulation Period[b]	**-0.1**	**-0.3**	**0.0**	**0.0**	0.1	0.1	0.0	0.1	0.1	**-0.1**	**0.0**	**-0.6**
Water Year Types[c]												
Wet (32%)	**-0.2**	**-0.3**	0.2	0.1	0.1	0.1	**0.0**	0.0	0.0	**-0.1**	**0.0**	**-1.7**
Above Normal (16%)	**-0.1**	**-0.4**	**-0.2**	0.1	0.1	0.2	0.0	0.1	0.2	**-0.1**	**0.0**	**-0.4**
Below Normal (13%)	**-0.1**	**-0.3**	**-0.1**	**-0.1**	0.2	0.1	0.0	0.2	0.3	**-0.1**	**-0.1**	**0.0**
Dry (24%)	**0.0**	**-0.3**	**-0.1**	**-0.2**	0.0	0.0	0.0	0.1	0.1	**-0.1**	0.0	0.0
Critical (15%)	0.0	**0.0**	**-0.1**	**-0.1**	**0.0**	0.0	0.0	**0.0**	0.0	**-0.1**	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-2-2. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	1.1	2.0	5.2	7.0	7.9	6.9	5.0	3.8	1.3	1.4	1.0	2.8
20%	0.9	1.5	3.0	5.6	6.8	5.5	3.3	2.3	0.9	1.3	0.9	2.7
30%	0.8	1.4	1.9	3.8	5.3	3.7	2.0	1.3	0.7	1.3	0.9	1.5
40%	0.7	1.2	1.4	2.4	4.4	2.8	1.6	1.0	0.7	1.2	0.9	1.2
50%	0.6	0.9	1.2	1.9	3.1	2.2	1.1	0.9	0.6	1.1	0.8	0.9
60%	0.5	0.7	1.0	1.4	2.1	1.8	0.9	0.8	0.6	1.0	0.8	0.7
70%	0.4	0.6	0.8	1.1	1.6	1.5	0.8	0.7	0.6	0.9	0.7	0.6
80%	0.4	0.4	0.7	1.0	1.3	1.2	0.7	0.6	0.5	0.8	0.6	0.6
90%	0.3	0.3	0.5	0.8	1.1	0.7	0.6	0.5	0.4	0.6	0.5	0.5
Long Term												
Full Simulation Period[b]	0.7	1.2	2.0	3.0	3.8	3.1	2.0	1.5	0.9	1.0	0.8	1.4
Water Year Types[c]												
Wet (32%)	0.9	1.7	3.6	5.3	6.1	5.1	3.5	2.9	1.5	1.2	0.9	2.6
Above Normal (16%)	0.6	1.4	2.2	3.9	5.0	4.2	2.2	1.4	0.7	1.3	1.0	1.2
Below Normal (13%)	0.7	1.1	1.2	1.6	2.9	1.5	1.0	0.9	0.6	1.2	0.9	0.8
Dry (24%)	0.5	0.8	0.9	1.4	2.1	1.9	1.1	0.8	0.6	0.9	0.6	0.6
Critical (15%)	0.4	0.4	0.7	1.1	1.3	0.9	0.7	0.5	0.4	0.6	0.5	0.5

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.8	1.5	5.7	7.1	7.9	7.0	5.0	3.8	1.2	1.4	1.0	1.0
20%	0.7	0.9	3.4	6.0	6.8	5.5	3.2	2.3	1.0	1.3	0.9	0.9
30%	0.6	0.8	1.6	4.2	5.5	3.9	2.0	1.5	0.9	1.3	0.9	0.9
40%	0.6	0.6	1.2	2.5	4.7	2.9	1.6	1.1	0.8	1.2	0.9	0.8
50%	0.5	0.6	0.9	1.7	3.2	2.2	1.1	1.0	0.8	1.1	0.8	0.8
60%	0.5	0.5	0.8	1.3	2.2	1.8	0.9	0.9	0.7	1.0	0.8	0.7
70%	0.4	0.4	0.7	1.0	1.7	1.5	0.8	0.8	0.7	0.8	0.7	0.6
80%	0.3	0.3	0.6	0.9	1.3	1.2	0.7	0.7	0.6	0.7	0.6	0.6
90%	0.3	0.2	0.4	0.7	1.1	0.7	0.6	0.5	0.4	0.6	0.5	0.5
Long Term												
Full Simulation Period[b]	0.6	0.9	1.9	3.0	3.9	3.1	2.0	1.6	1.0	1.0	0.8	0.8
Water Year Types[c]												
Wet (32%)	0.7	1.3	3.8	5.4	6.2	5.1	3.5	2.9	1.6	1.2	0.9	0.9
Above Normal (16%)	0.5	1.0	2.0	3.9	5.1	4.3	2.2	1.5	0.8	1.3	0.9	0.8
Below Normal (13%)	0.6	0.7	1.1	1.5	3.1	1.6	1.1	1.0	0.8	1.3	0.9	0.8
Dry (24%)	0.5	0.5	0.8	1.3	2.1	1.9	1.1	0.9	0.7	0.8	0.6	0.6
Critical (15%)	0.4	0.4	0.6	0.9	1.3	0.9	0.7	0.5	0.5	0.5	0.5	0.5

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.2	-0.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.8
20%	-0.2	-0.7	0.4	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-1.8
30%	-0.2	-0.6	-0.3	0.3	0.2	0.3	0.0	0.1	0.2	0.0	0.0	-0.6
40%	-0.1	-0.5	-0.2	0.1	0.3	0.1	0.0	0.1	0.1	0.0	0.0	-0.4
50%	-0.1	-0.4	-0.3	-0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	-0.1
60%	0.0	-0.2	-0.1	-0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
70%	0.0	-0.1	-0.1	-0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
80%	0.0	-0.1	-0.1	-0.2	0.0	0.0	0.0	0.1	0.1	-0.1	0.1	0.0
90%	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	-0.1	-0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	-0.6
Water Year Types[c]												
Wet (32%)	-0.2	-0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-1.7
Above Normal (16%)	-0.1	-0.4	-0.2	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.0	-0.4
Below Normal (13%)	-0.2	-0.4	-0.1	0.0	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0
Dry (24%)	0.0	-0.3	-0.1	-0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Critical (15%)	0.0	-0.1	-0.1	-0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-2-3. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.1	2.0	5.2	7.0	7.9	6.9	5.0	3.8	1.3	1.4	1.0	2.8
20%	0.9	1.5	3.0	5.6	6.8	5.5	3.3	2.3	0.9	1.3	0.9	2.7
30%	0.8	1.4	1.9	3.8	5.3	3.7	2.0	1.3	0.7	1.3	0.9	1.5
40%	0.7	1.2	1.4	2.4	4.4	2.8	1.6	1.0	0.7	1.2	0.9	1.2
50%	0.6	0.9	1.2	1.9	3.1	2.2	1.1	0.9	0.6	1.1	0.8	0.9
60%	0.5	0.7	1.0	1.4	2.1	1.8	0.9	0.8	0.6	1.0	0.8	0.7
70%	0.4	0.6	0.8	1.1	1.6	1.5	0.8	0.7	0.6	0.9	0.7	0.6
80%	0.4	0.4	0.7	1.0	1.3	1.2	0.7	0.6	0.5	0.8	0.6	0.6
90%	0.3	0.3	0.5	0.8	1.1	0.7	0.6	0.5	0.4	0.6	0.5	0.5
Long Term												
Full Simulation Period[b]	0.7	1.2	2.0	3.0	3.8	3.1	2.0	1.5	0.9	1.0	0.8	1.4
Water Year Types[c]												
Wet (32%)	0.9	1.7	3.6	5.3	6.1	5.1	3.5	2.9	1.5	1.2	0.9	2.6
Above Normal (16%)	0.6	1.4	2.2	3.9	5.0	4.2	2.2	1.4	0.7	1.3	1.0	1.2
Below Normal (13%)	0.7	1.1	1.2	1.6	2.9	1.5	1.0	0.9	0.6	1.2	0.9	0.8
Dry (24%)	0.5	0.8	0.9	1.4	2.1	1.9	1.1	0.8	0.6	0.9	0.6	0.6
Critical (15%)	0.4	0.4	0.7	1.1	1.3	0.9	0.7	0.5	0.4	0.6	0.5	0.5

Alternative 5

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.1	2.0	5.2	7.0	7.9	6.9	5.0	3.8	1.3	1.4	1.0	2.8
20%	0.9	1.5	3.0	5.6	6.8	5.5	3.3	2.3	0.9	1.3	1.0	2.7
30%	0.8	1.4	1.9	3.8	5.3	3.7	2.0	1.3	0.8	1.3	0.9	1.5
40%	0.7	1.2	1.4	2.3	4.4	2.8	1.6	1.0	0.7	1.2	0.9	1.2
50%	0.6	0.9	1.2	1.9	3.1	2.2	1.1	0.9	0.6	1.1	0.9	0.9
60%	0.5	0.7	1.0	1.4	2.1	1.8	0.9	0.8	0.6	1.0	0.8	0.8
70%	0.4	0.6	0.8	1.1	1.6	1.5	0.8	0.7	0.6	0.9	0.7	0.6
80%	0.4	0.4	0.7	1.0	1.3	1.2	0.7	0.6	0.5	0.8	0.6	0.6
90%	0.3	0.3	0.5	0.8	1.1	0.7	0.5	0.5	0.4	0.6	0.5	0.5
Long Term												
Full Simulation Period[b]	0.7	1.2	2.0	3.0	3.8	3.1	2.0	1.5	0.9	1.1	0.8	1.3
Water Year Types[c]												
Wet (32%)	0.9	1.7	3.6	5.3	6.1	5.1	3.5	2.9	1.5	1.2	0.9	2.6
Above Normal (16%)	0.6	1.4	2.2	3.9	5.0	4.2	2.2	1.4	0.7	1.3	1.0	1.2
Below Normal (13%)	0.7	1.1	1.2	1.6	2.9	1.5	1.0	0.9	0.6	1.2	0.9	0.8
Dry (24%)	0.5	0.8	0.9	1.4	2.1	1.9	1.1	0.8	0.6	0.9	0.6	0.6
Critical (15%)	0.4	0.4	0.7	1.1	1.3	0.9	0.6	0.5	0.4	0.6	0.5	0.5

Alternative 5 minus No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-2-4. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.8	1.5	5.8	7.1	7.9	7.0	5.0	3.8	1.3	1.3	1.0	1.0
20%	0.7	0.9	3.3	6.1	6.8	5.5	3.2	2.5	1.0	1.2	0.9	0.9
30%	0.6	0.8	1.6	4.2	5.4	4.2	2.0	1.4	0.9	1.2	0.9	0.9
40%	0.6	0.7	1.2	2.5	4.7	2.9	1.6	1.1	0.9	1.1	0.8	0.8
50%	0.5	0.6	0.9	1.7	3.2	2.2	1.1	1.0	0.8	1.0	0.8	0.8
60%	0.5	0.5	0.9	1.2	2.2	1.8	0.9	0.9	0.7	0.9	0.7	0.7
70%	0.4	0.5	0.7	1.0	1.7	1.5	0.8	0.8	0.6	0.8	0.7	0.6
80%	0.4	0.4	0.6	0.9	1.3	1.2	0.7	0.7	0.6	0.6	0.6	0.5
90%	0.3	0.2	0.5	0.7	1.1	0.7	0.6	0.6	0.4	0.5	0.5	0.5
Long Term												
Full Simulation Period[b]	0.6	0.9	1.9	3.0	3.9	3.1	2.0	1.6	1.0	1.0	0.8	0.8
Water Year Types[c]												
Wet (32%)	0.7	1.3	3.8	5.4	6.2	5.2	3.5	2.9	1.6	1.1	0.9	0.9
Above Normal (16%)	0.5	1.0	2.0	4.0	5.1	4.4	2.2	1.5	0.9	1.2	0.9	0.8
Below Normal (13%)	0.6	0.8	1.0	1.5	3.1	1.6	1.1	1.1	0.9	1.1	0.8	0.8
Dry (24%)	0.5	0.5	0.8	1.2	2.1	1.9	1.1	0.9	0.7	0.7	0.6	0.6
Critical (15%)	0.4	0.4	0.6	1.0	1.3	1.0	0.7	0.5	0.5	0.5	0.5	0.5

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.1	2.0	5.2	7.0	7.9	6.9	5.0	3.8	1.3	1.4	1.0	2.8
20%	0.9	1.5	3.0	5.6	6.8	5.5	3.3	2.3	0.9	1.3	0.9	2.7
30%	0.8	1.4	1.9	3.8	5.3	3.7	2.0	1.3	0.7	1.3	0.9	1.5
40%	0.7	1.2	1.4	2.4	4.4	2.8	1.6	1.0	0.7	1.2	0.9	1.2
50%	0.6	0.9	1.2	1.9	3.1	2.2	1.1	0.9	0.6	1.1	0.8	0.9
60%	0.5	0.7	1.0	1.4	2.1	1.8	0.9	0.8	0.6	1.0	0.8	0.7
70%	0.4	0.6	0.8	1.1	1.6	1.5	0.8	0.7	0.6	0.9	0.7	0.6
80%	0.4	0.4	0.7	1.0	1.3	1.2	0.7	0.6	0.5	0.8	0.6	0.6
90%	0.3	0.3	0.5	0.8	1.1	0.7	0.6	0.5	0.4	0.6	0.5	0.5
Long Term												
Full Simulation Period[b]	0.7	1.2	2.0	3.0	3.8	3.1	2.0	1.5	0.9	1.0	0.8	1.4
Water Year Types[c]												
Wet (32%)	0.9	1.7	3.6	5.3	6.1	5.1	3.5	2.9	1.5	1.2	0.9	2.6
Above Normal (16%)	0.6	1.4	2.2	3.9	5.0	4.2	2.2	1.4	0.7	1.3	1.0	1.2
Below Normal (13%)	0.7	1.1	1.2	1.6	2.9	1.5	1.0	0.9	0.6	1.2	0.9	0.8
Dry (24%)	0.5	0.8	0.9	1.4	2.1	1.9	1.1	0.8	0.6	0.9	0.6	0.6
Critical (15%)	0.4	0.4	0.7	1.1	1.3	0.9	0.7	0.5	0.4	0.6	0.5	0.5

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.2	0.5	-0.6	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.8
20%	0.2	0.7	-0.3	-0.4	0.0	0.0	0.0	-0.3	-0.1	0.1	0.0	1.8
30%	0.2	0.6	0.3	-0.3	-0.2	-0.6	0.0	-0.1	-0.2	0.1	0.1	0.6
40%	0.1	0.5	0.3	-0.1	-0.3	-0.1	0.0	-0.1	-0.2	0.1	0.1	0.4
50%	0.1	0.4	0.3	0.2	-0.1	0.0	0.0	-0.1	-0.2	0.1	0.1	0.1
60%	0.0	0.2	0.1	0.2	0.0	0.0	0.0	-0.1	-0.1	0.1	0.1	0.0
70%	0.0	0.1	0.1	0.2	-0.1	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
80%	0.0	0.1	0.1	0.2	0.0	0.0	0.0	-0.1	-0.1	0.2	0.0	0.0
90%	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.1	0.3	0.0	0.0	-0.1	-0.1	0.0	-0.1	-0.1	0.1	0.0	0.6
Water Year Types[c]												
Wet (32%)	0.2	0.3	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.0	1.7
Above Normal (16%)	0.1	0.4	0.2	-0.1	-0.1	-0.2	0.0	-0.1	-0.2	0.1	0.0	0.4
Below Normal (13%)	0.1	0.3	0.1	0.1	-0.2	-0.1	0.0	-0.2	-0.3	0.1	0.1	0.0
Dry (24%)	0.0	0.3	0.1	0.2	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-2-5. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.8	1.5	5.8	7.1	7.9	7.0	5.0	3.8	1.3	1.3	1.0	1.0
20%	0.7	0.9	3.3	6.1	6.8	5.5	3.2	2.5	1.0	1.2	0.9	0.9
30%	0.6	0.8	1.6	4.2	5.4	4.2	2.0	1.4	0.9	1.2	0.9	0.9
40%	0.6	0.7	1.2	2.5	4.7	2.9	1.6	1.1	0.9	1.1	0.8	0.8
50%	0.5	0.6	0.9	1.7	3.2	2.2	1.1	1.0	0.8	1.0	0.8	0.8
60%	0.5	0.5	0.9	1.2	2.2	1.8	0.9	0.9	0.7	0.9	0.7	0.7
70%	0.4	0.5	0.7	1.0	1.7	1.5	0.8	0.8	0.6	0.8	0.7	0.6
80%	0.4	0.4	0.6	0.9	1.3	1.2	0.7	0.7	0.6	0.6	0.6	0.5
90%	0.3	0.2	0.5	0.7	1.1	0.7	0.6	0.6	0.4	0.5	0.5	0.5
Long Term												
Full Simulation Period[b]	0.6	0.9	1.9	3.0	3.9	3.1	2.0	1.6	1.0	1.0	0.8	0.8
Water Year Types[c]												
Wet (32%)	0.7	1.3	3.8	5.4	6.2	5.2	3.5	2.9	1.6	1.1	0.9	0.9
Above Normal (16%)	0.5	1.0	2.0	4.0	5.1	4.4	2.2	1.5	0.9	1.2	0.9	0.8
Below Normal (13%)	0.6	0.8	1.0	1.5	3.1	1.6	1.1	1.1	0.9	1.1	0.8	0.8
Dry (24%)	0.5	0.5	0.8	1.2	2.1	1.9	1.1	0.9	0.7	0.7	0.6	0.6
Critical (15%)	0.4	0.4	0.6	1.0	1.3	1.0	0.7	0.5	0.5	0.5	0.5	0.5

Alternative 3

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.8	1.5	5.7	7.1	7.9	7.0	5.0	3.8	1.2	1.4	1.0	1.0
20%	0.7	0.9	3.4	6.0	6.8	5.5	3.2	2.3	1.0	1.3	0.9	0.9
30%	0.6	0.8	1.6	4.2	5.5	3.9	2.0	1.5	0.9	1.3	0.9	0.9
40%	0.6	0.6	1.2	2.5	4.7	2.9	1.6	1.1	0.8	1.2	0.9	0.8
50%	0.5	0.6	0.9	1.7	3.2	2.2	1.1	1.0	0.8	1.1	0.8	0.8
60%	0.5	0.5	0.8	1.3	2.2	1.8	0.9	0.9	0.7	1.0	0.8	0.7
70%	0.4	0.4	0.7	1.0	1.7	1.5	0.8	0.8	0.7	0.8	0.7	0.6
80%	0.3	0.3	0.6	0.9	1.3	1.2	0.7	0.7	0.6	0.7	0.6	0.6
90%	0.3	0.2	0.4	0.7	1.1	0.7	0.6	0.5	0.4	0.6	0.5	0.5
Long Term												
Full Simulation Period[b]	0.6	0.9	1.9	3.0	3.9	3.1	2.0	1.6	1.0	1.0	0.8	0.8
Water Year Types[c]												
Wet (32%)	0.7	1.3	3.8	5.4	6.2	5.1	3.5	2.9	1.6	1.2	0.9	0.9
Above Normal (16%)	0.5	1.0	2.0	3.9	5.1	4.3	2.2	1.5	0.8	1.3	0.9	0.8
Below Normal (13%)	0.6	0.7	1.1	1.5	3.1	1.6	1.1	1.0	0.8	1.3	0.9	0.8
Dry (24%)	0.5	0.5	0.8	1.3	2.1	1.9	1.1	0.9	0.7	0.8	0.6	0.6
Critical (15%)	0.4	0.4	0.6	0.9	1.3	0.9	0.7	0.5	0.5	0.5	0.5	0.5

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
20%	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.2	0.0	0.1	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	-0.3	0.0	0.1	0.0	0.1	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Below Normal (13%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.1	0.1	0.1
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-44-2-6. Sacramento River d/s of Delta Cross Channel, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.8	1.5	5.8	7.1	7.9	7.0	5.0	3.8	1.3	1.3	1.0	1.0
20%	0.7	0.9	3.3	6.1	6.8	5.5	3.2	2.5	1.0	1.2	0.9	0.9
30%	0.6	0.8	1.6	4.2	5.4	4.2	2.0	1.4	0.9	1.2	0.9	0.9
40%	0.6	0.7	1.2	2.5	4.7	2.9	1.6	1.1	0.9	1.1	0.8	0.8
50%	0.5	0.6	0.9	1.7	3.2	2.2	1.1	1.0	0.8	1.0	0.8	0.8
60%	0.5	0.5	0.9	1.2	2.2	1.8	0.9	0.9	0.7	0.9	0.7	0.7
70%	0.4	0.5	0.7	1.0	1.7	1.5	0.8	0.8	0.6	0.8	0.7	0.6
80%	0.4	0.4	0.6	0.9	1.3	1.2	0.7	0.7	0.6	0.6	0.6	0.5
90%	0.3	0.2	0.5	0.7	1.1	0.7	0.6	0.6	0.4	0.5	0.5	0.5
Long Term												
Full Simulation Period[b]	0.6	0.9	1.9	3.0	3.9	3.1	2.0	1.6	1.0	1.0	0.8	0.8
Water Year Types[c]												
Wet (32%)	0.7	1.3	3.8	5.4	6.2	5.2	3.5	2.9	1.6	1.1	0.9	0.9
Above Normal (16%)	0.5	1.0	2.0	4.0	5.1	4.4	2.2	1.5	0.9	1.2	0.9	0.8
Below Normal (13%)	0.6	0.8	1.0	1.5	3.1	1.6	1.1	1.1	0.9	1.1	0.8	0.8
Dry (24%)	0.5	0.5	0.8	1.2	2.1	1.9	1.1	0.9	0.7	0.7	0.6	0.6
Critical (15%)	0.4	0.4	0.6	1.0	1.3	1.0	0.7	0.5	0.5	0.5	0.5	0.5

Alternative 5

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	1.1	2.0	5.2	7.0	7.9	6.9	5.0	3.8	1.3	1.4	1.0	2.8
20%	0.9	1.5	3.0	5.6	6.8	5.5	3.3	2.3	0.9	1.3	1.0	2.7
30%	0.8	1.4	1.9	3.8	5.3	3.7	2.0	1.3	0.8	1.3	0.9	1.5
40%	0.7	1.2	1.4	2.3	4.4	2.8	1.6	1.0	0.7	1.2	0.9	1.2
50%	0.6	0.9	1.2	1.9	3.1	2.2	1.1	0.9	0.6	1.1	0.9	0.9
60%	0.5	0.7	1.0	1.4	2.1	1.8	0.9	0.8	0.6	1.0	0.8	0.8
70%	0.4	0.6	0.8	1.1	1.6	1.5	0.8	0.7	0.6	0.9	0.7	0.6
80%	0.4	0.4	0.7	1.0	1.3	1.2	0.7	0.6	0.5	0.8	0.6	0.6
90%	0.3	0.3	0.5	0.8	1.1	0.7	0.5	0.5	0.4	0.6	0.5	0.5
Long Term												
Full Simulation Period[b]	0.7	1.2	2.0	3.0	3.8	3.1	2.0	1.5	0.9	1.1	0.8	1.3
Water Year Types[c]												
Wet (32%)	0.9	1.7	3.6	5.3	6.1	5.1	3.5	2.9	1.5	1.2	0.9	2.6
Above Normal (16%)	0.6	1.4	2.2	3.9	5.0	4.2	2.2	1.4	0.7	1.3	1.0	1.2
Below Normal (13%)	0.7	1.1	1.2	1.6	2.9	1.5	1.0	0.9	0.6	1.2	0.9	0.8
Dry (24%)	0.5	0.8	0.9	1.4	2.1	1.9	1.1	0.8	0.6	0.9	0.6	0.6
Critical (15%)	0.4	0.4	0.7	1.1	1.3	0.9	0.6	0.5	0.4	0.6	0.5	0.5

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.2	0.5	-0.6	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.8
20%	0.2	0.7	-0.3	-0.4	-0.1	0.0	0.0	-0.3	-0.2	0.1	0.0	1.8
30%	0.2	0.7	0.3	-0.3	-0.1	-0.6	0.0	-0.1	-0.2	0.1	0.1	0.6
40%	0.1	0.5	0.3	-0.1	-0.3	-0.1	0.0	-0.1	-0.2	0.1	0.1	0.4
50%	0.1	0.4	0.3	0.2	0.0	0.0	0.0	-0.2	-0.1	0.1	0.1	0.1
60%	0.0	0.2	0.1	0.2	0.0	0.0	0.0	-0.2	-0.1	0.1	0.1	0.0
70%	0.0	0.1	0.1	0.2	-0.1	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
80%	0.0	0.1	0.1	0.2	0.0	0.0	-0.1	-0.1	-0.1	0.2	0.0	0.0
90%	0.0	0.0	0.0	0.1	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0
Long Term												
Full Simulation Period[b]	0.1	0.3	0.0	0.0	-0.1	-0.1	0.0	-0.1	-0.1	0.1	0.0	0.6
Water Year Types[c]												
Wet (32%)	0.2	0.4	-0.2	-0.1	0.0	-0.1	0.0	0.0	0.0	0.1	0.1	1.6
Above Normal (16%)	0.1	0.4	0.2	-0.1	-0.1	-0.2	0.0	-0.1	-0.2	0.1	0.0	0.4
Below Normal (13%)	0.1	0.3	0.1	0.1	-0.2	-0.1	0.0	-0.2	-0.3	0.1	0.1	0.0
Dry (24%)	0.0	0.3	0.1	0.2	0.0	0.0	0.0	-0.1	-0.1	0.2	0.0	0.0
Critical (15%)	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

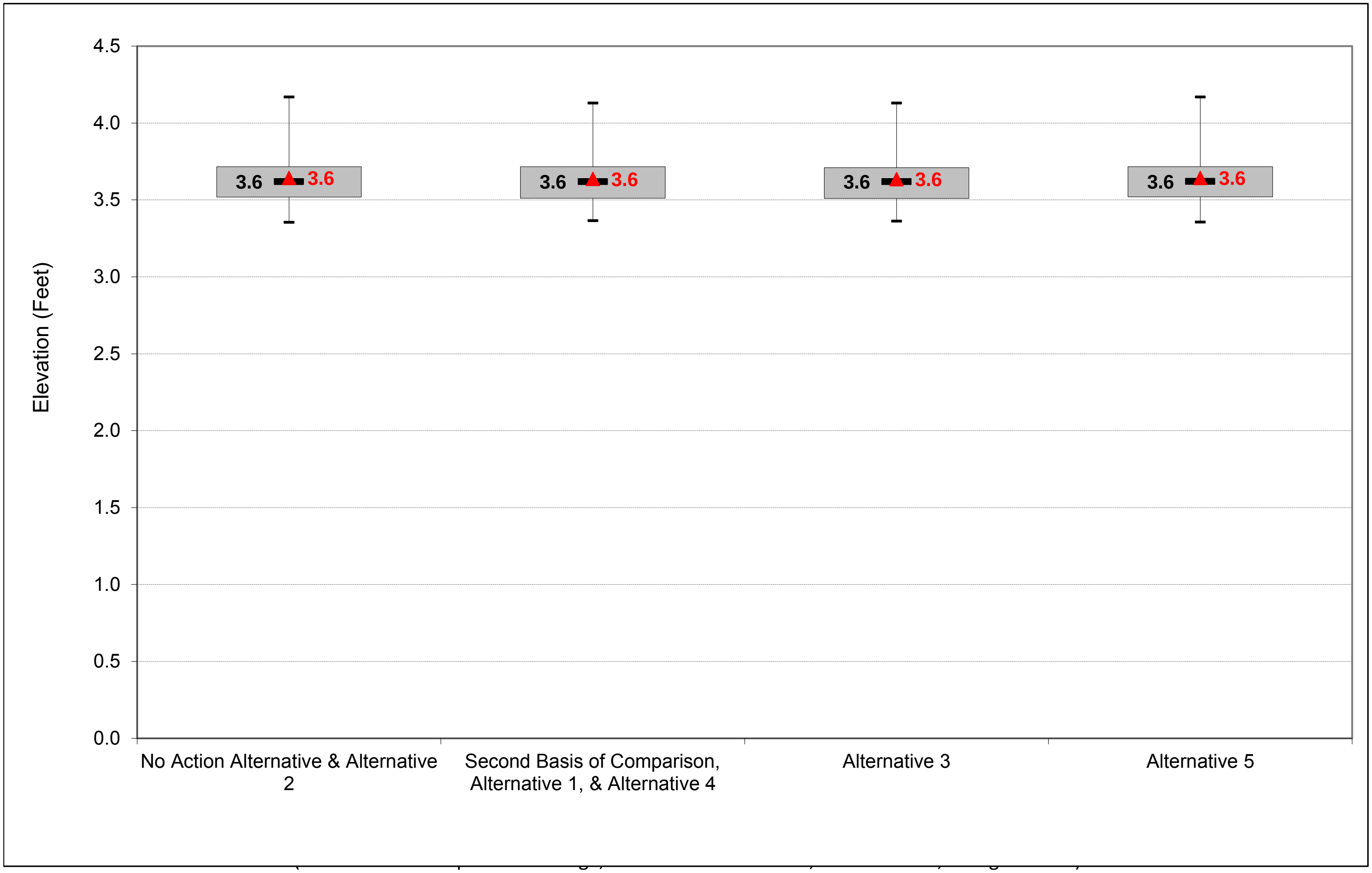
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

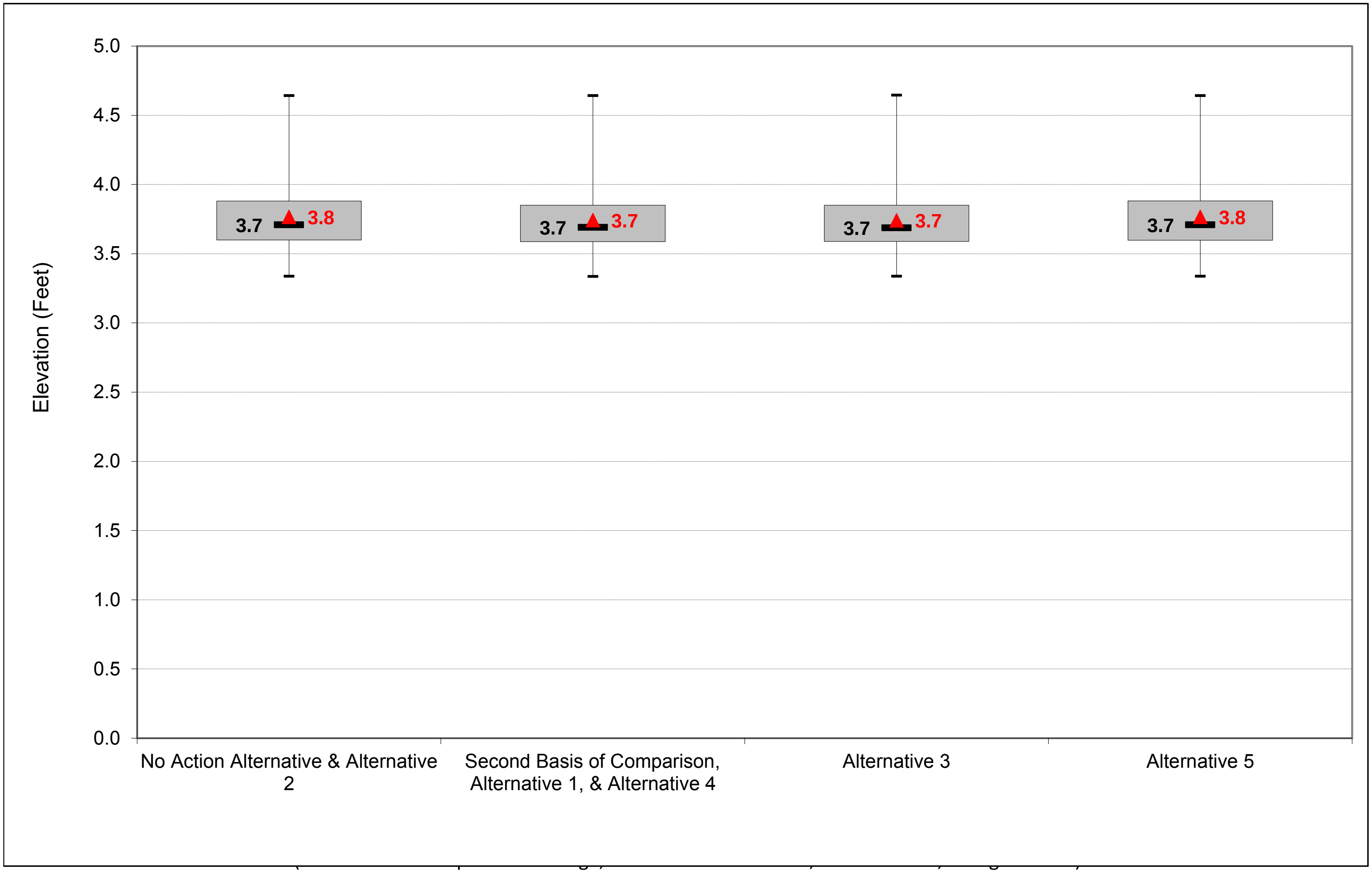
C.45. Sacramento River at Rio Vista Water Surface Elevation

Figure C-45-1-1. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, October



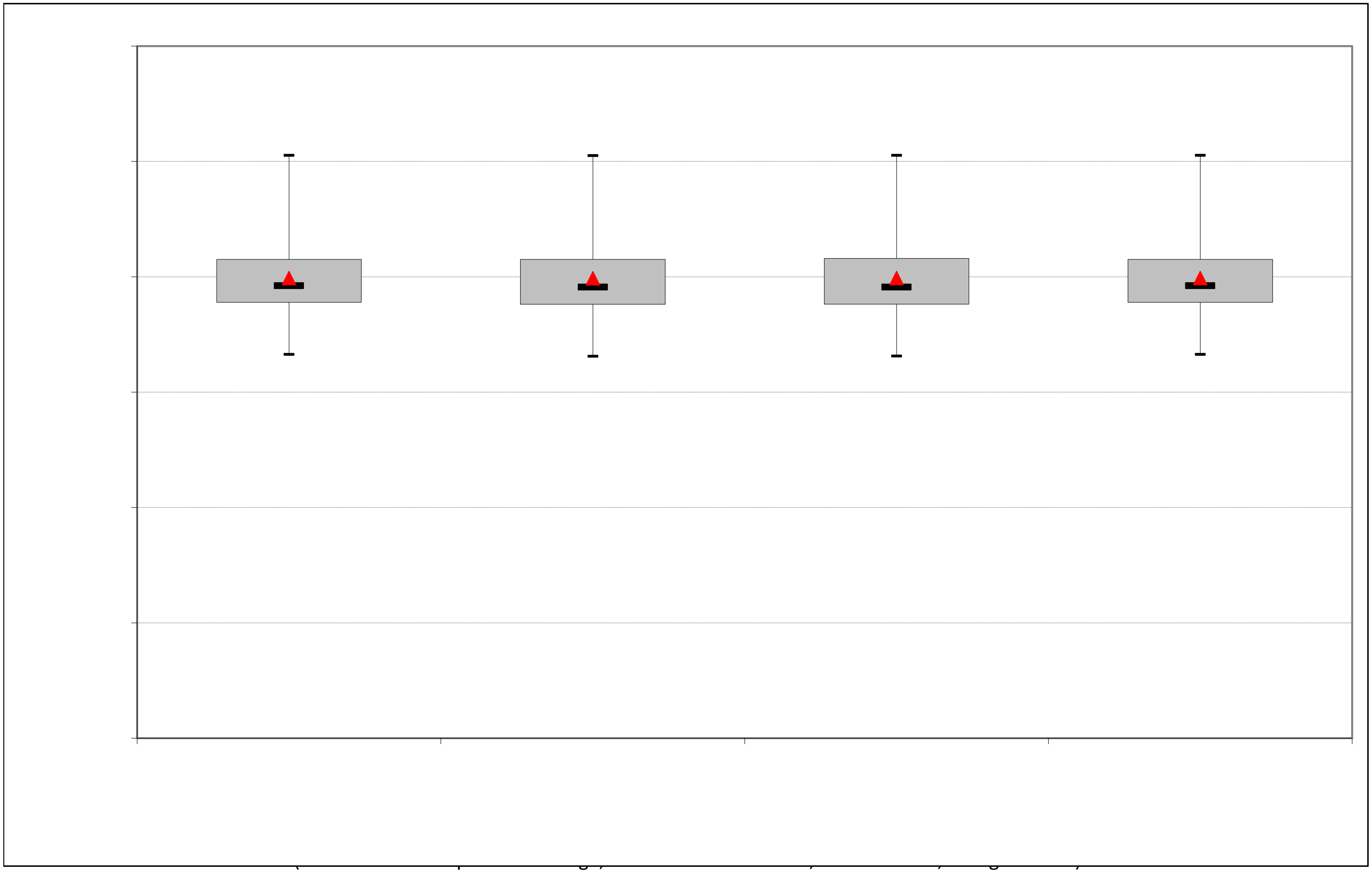
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-2. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, November



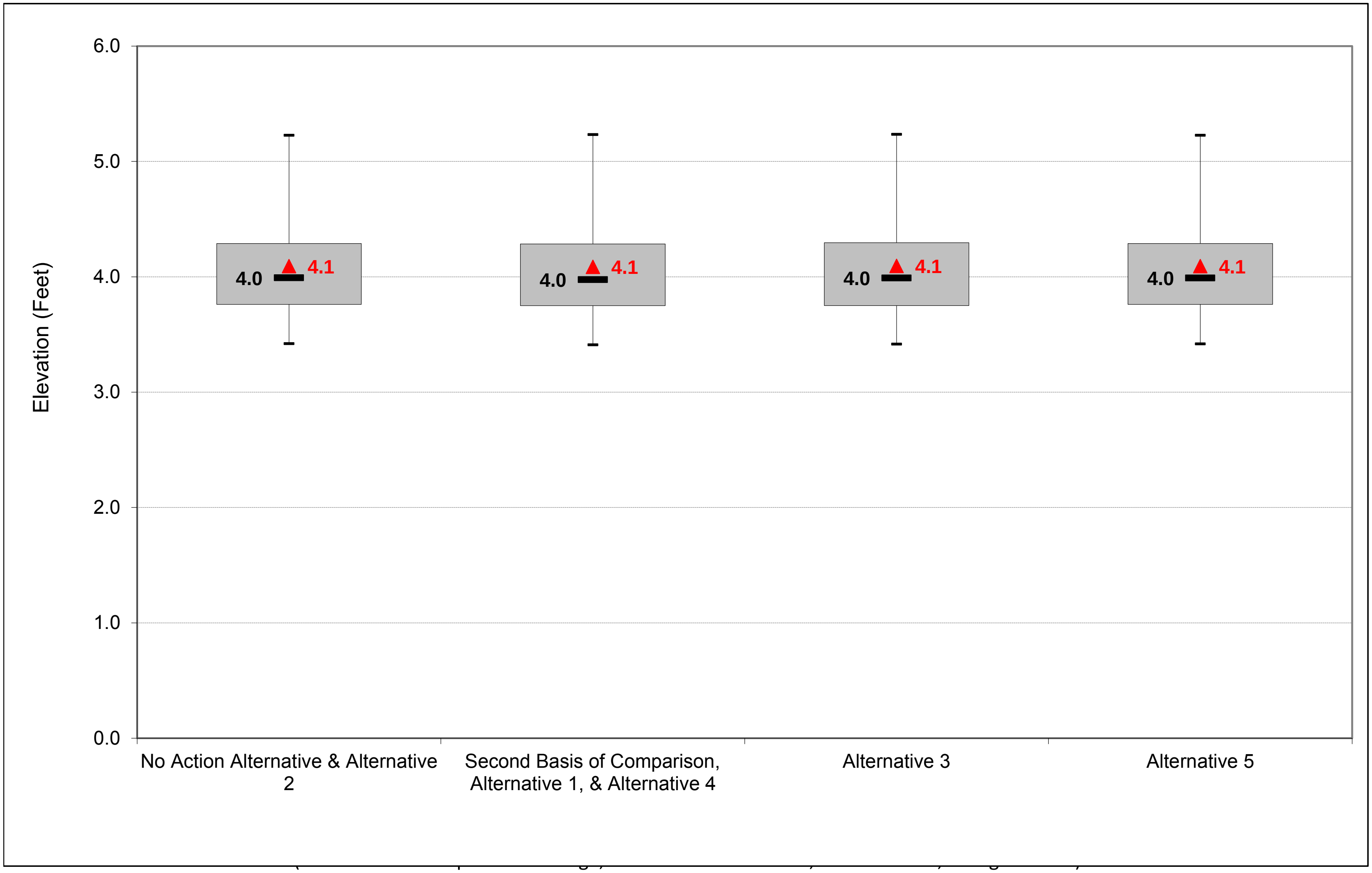
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-3. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, December



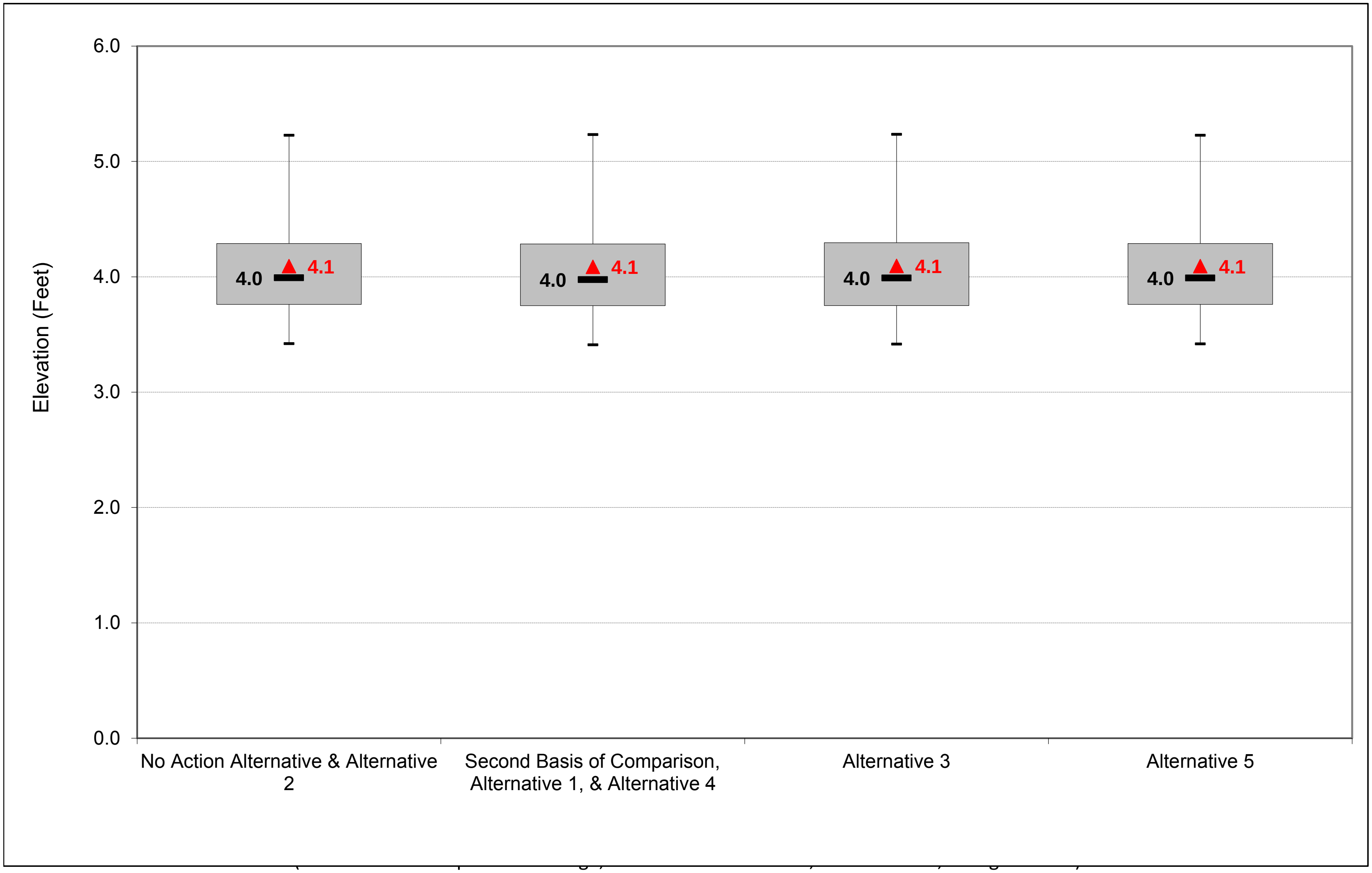
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-4. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, January



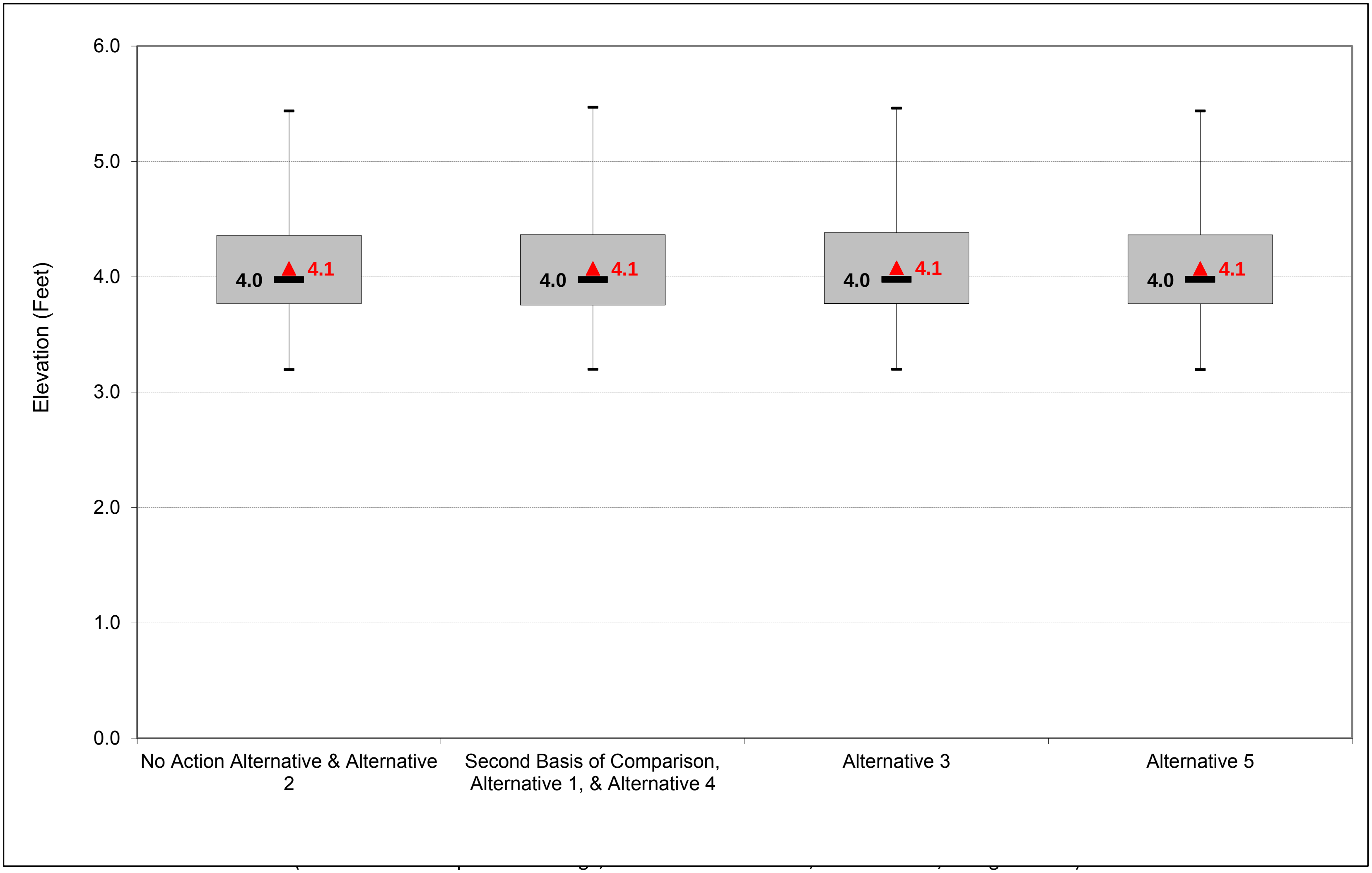
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-5. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, February



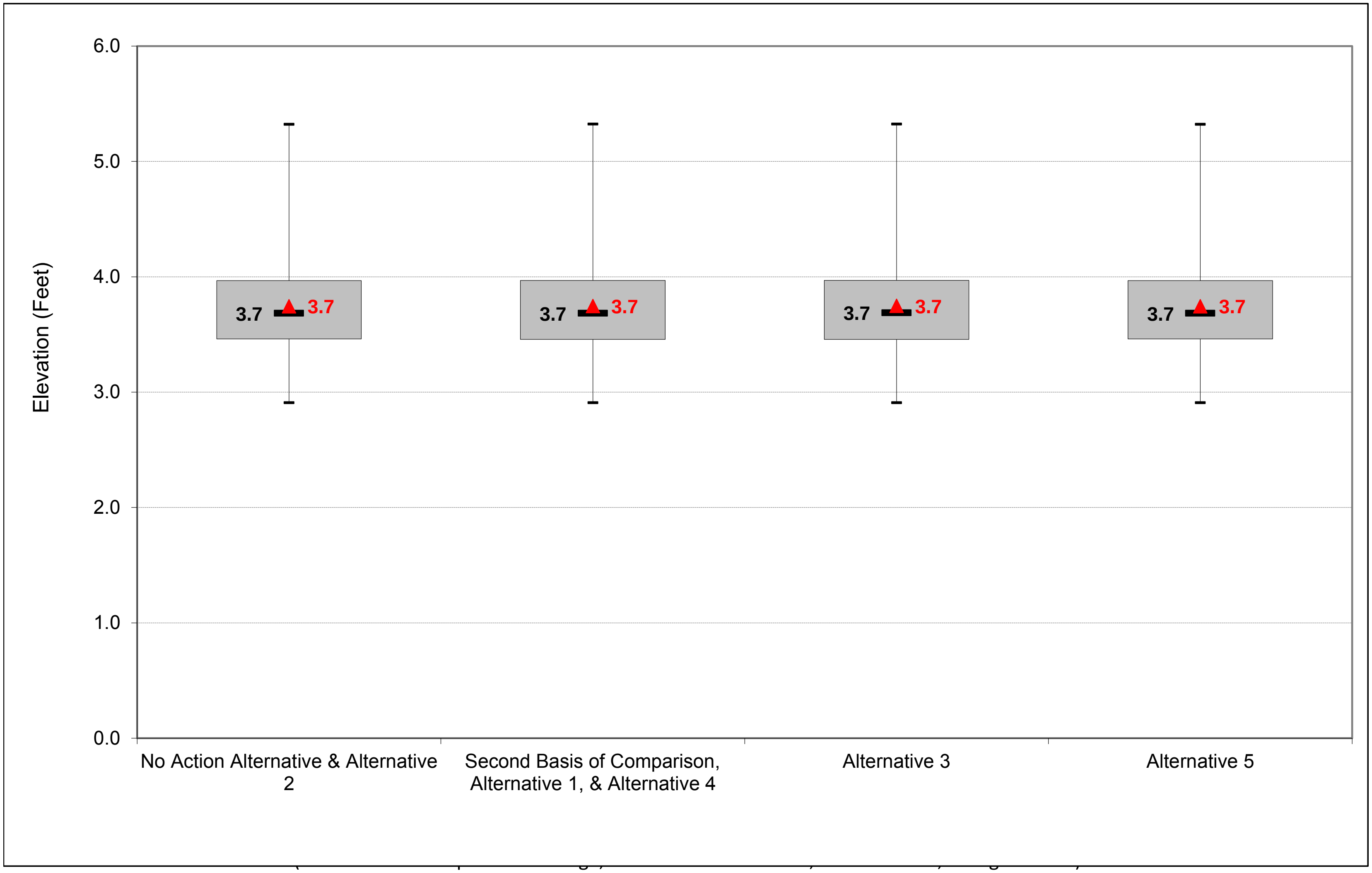
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-6. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, March



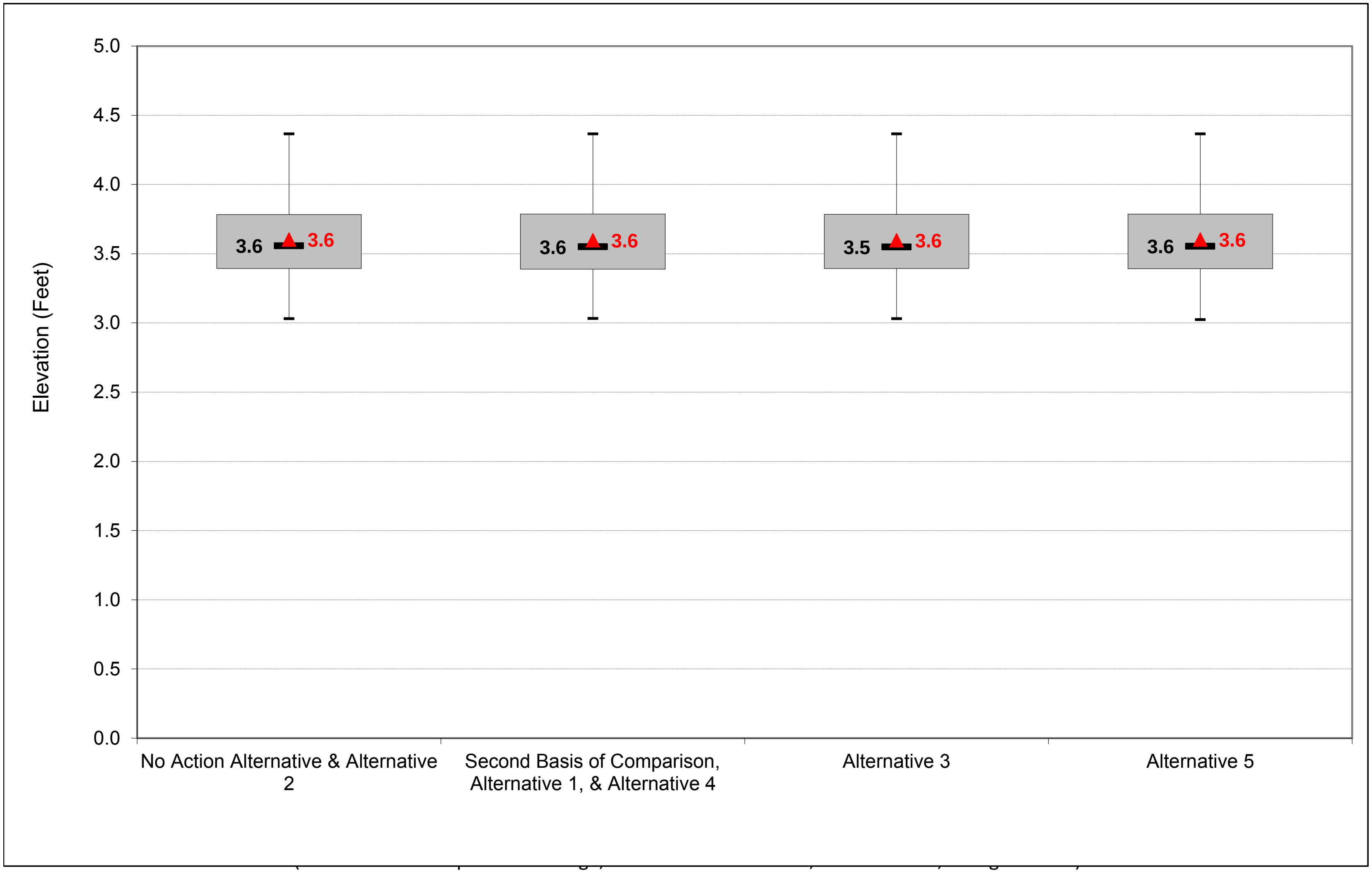
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-7. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, April



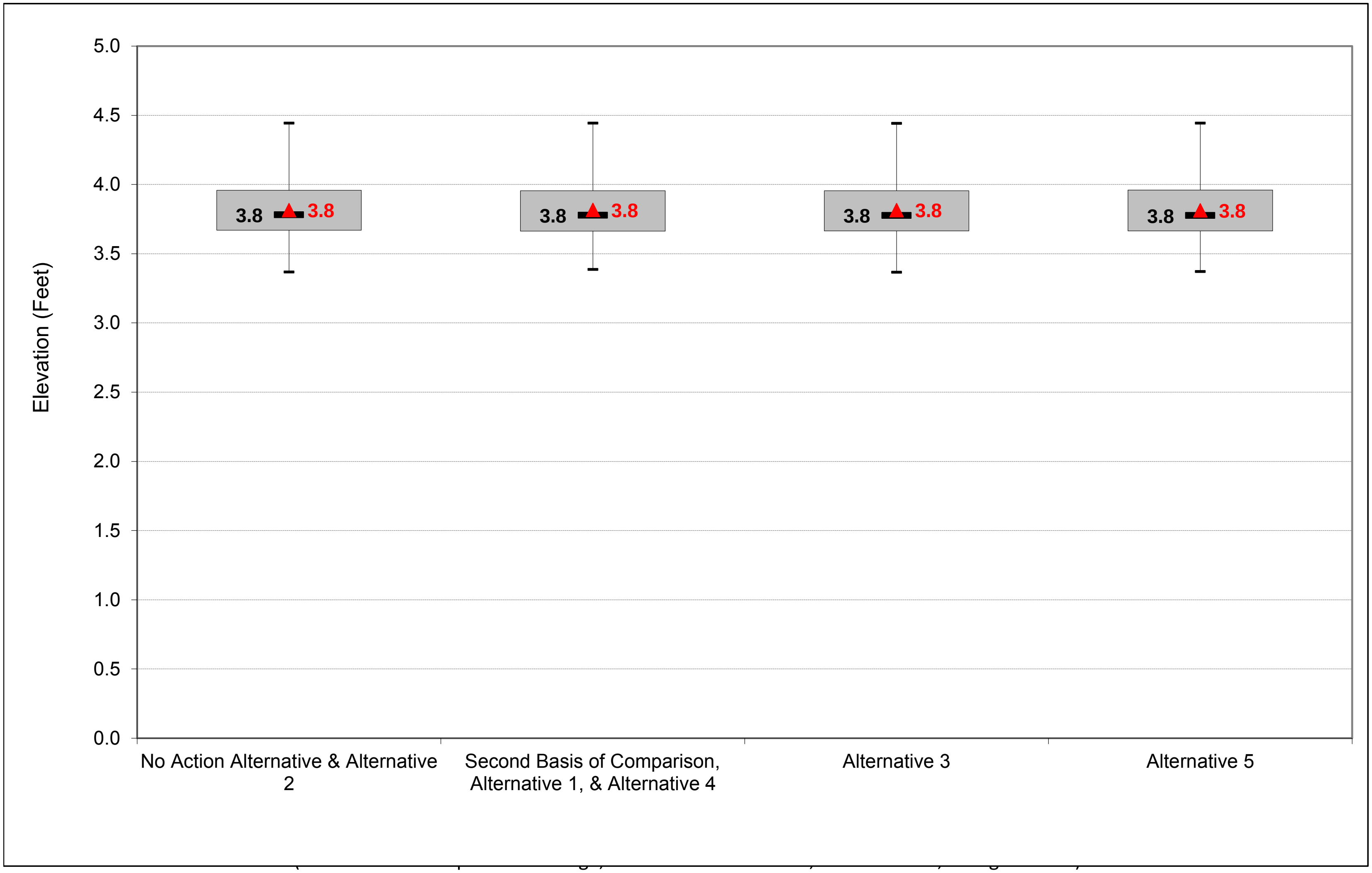
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-8. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, May



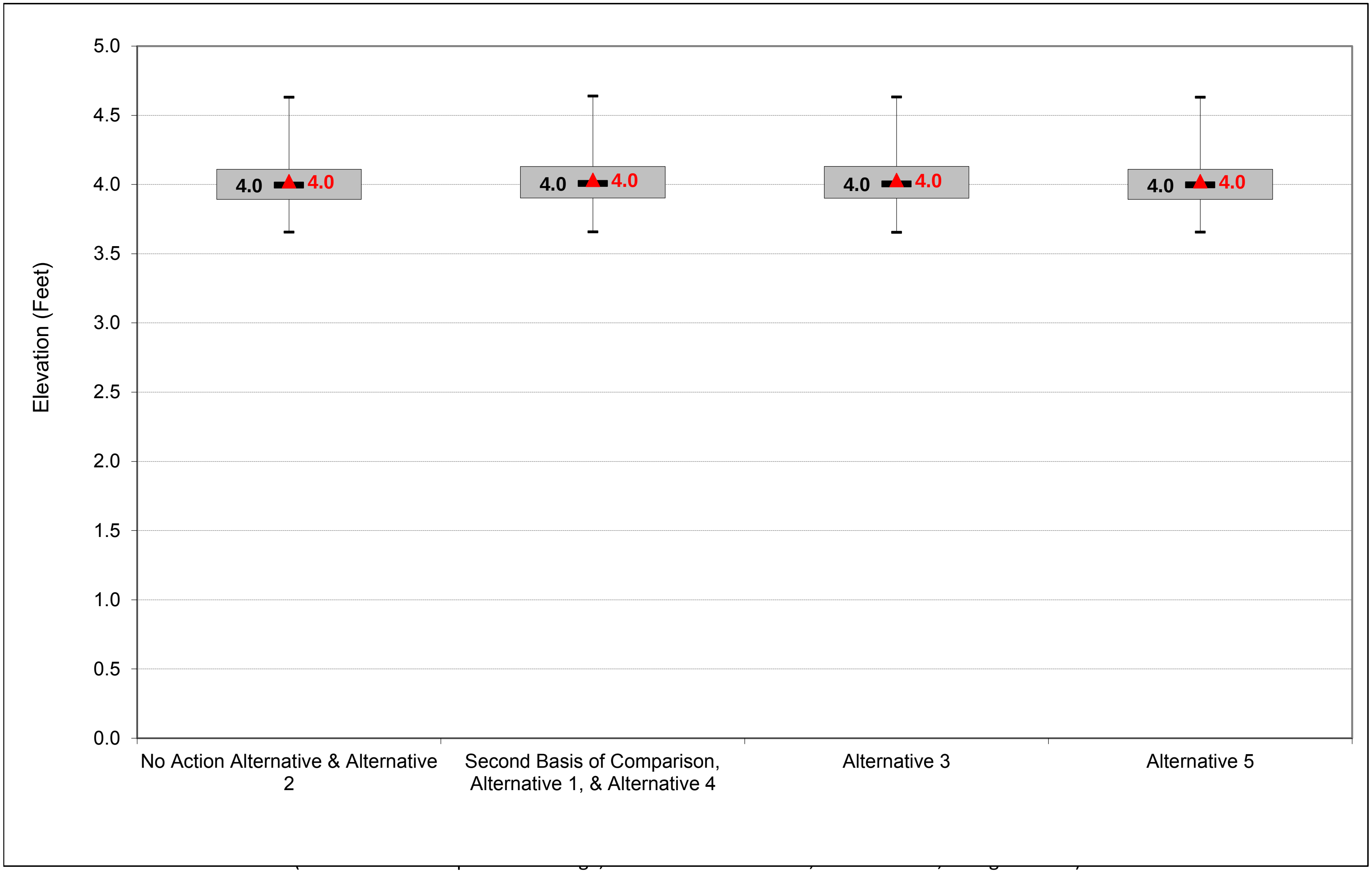
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-9. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, June



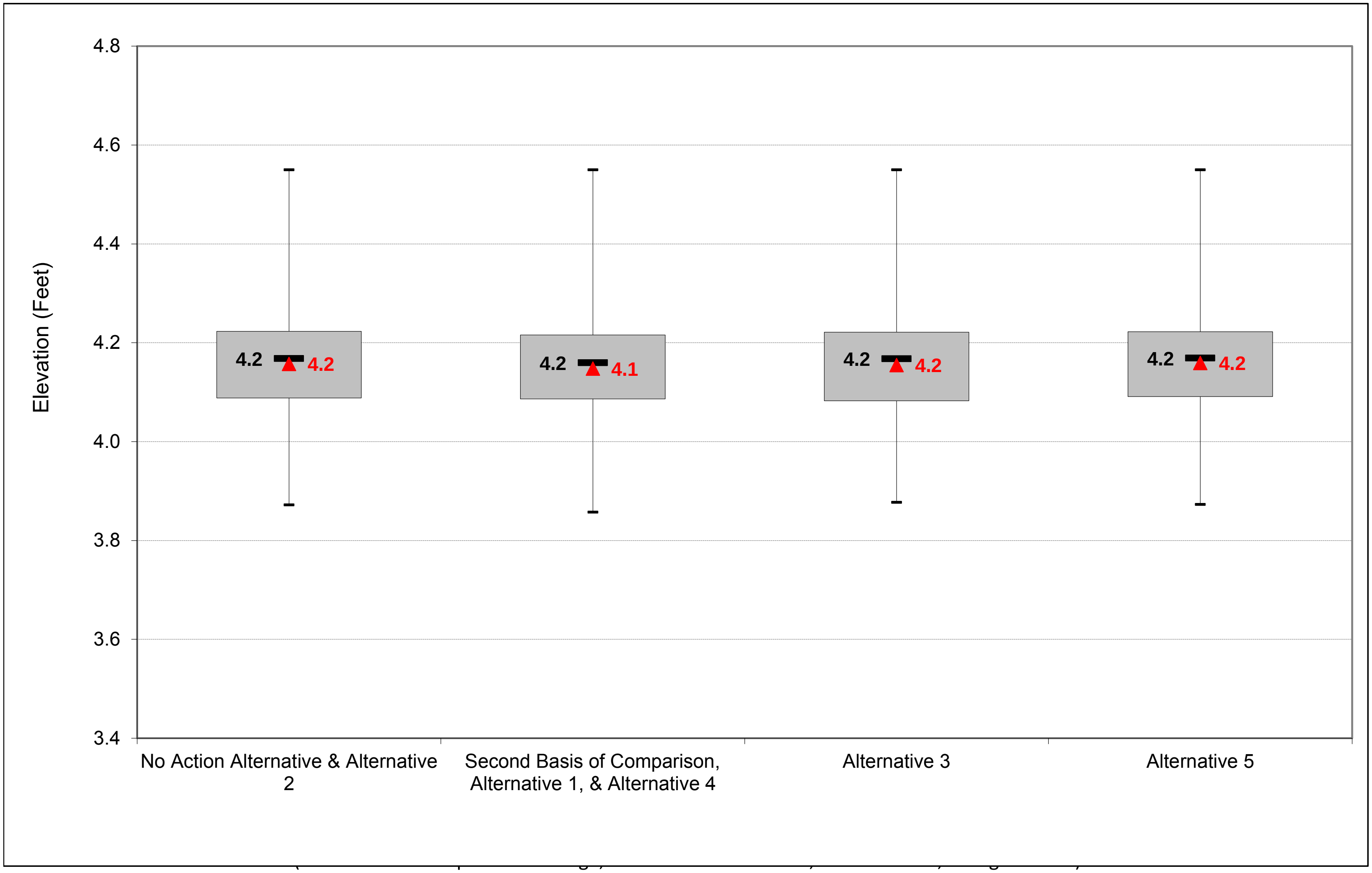
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-10. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, July



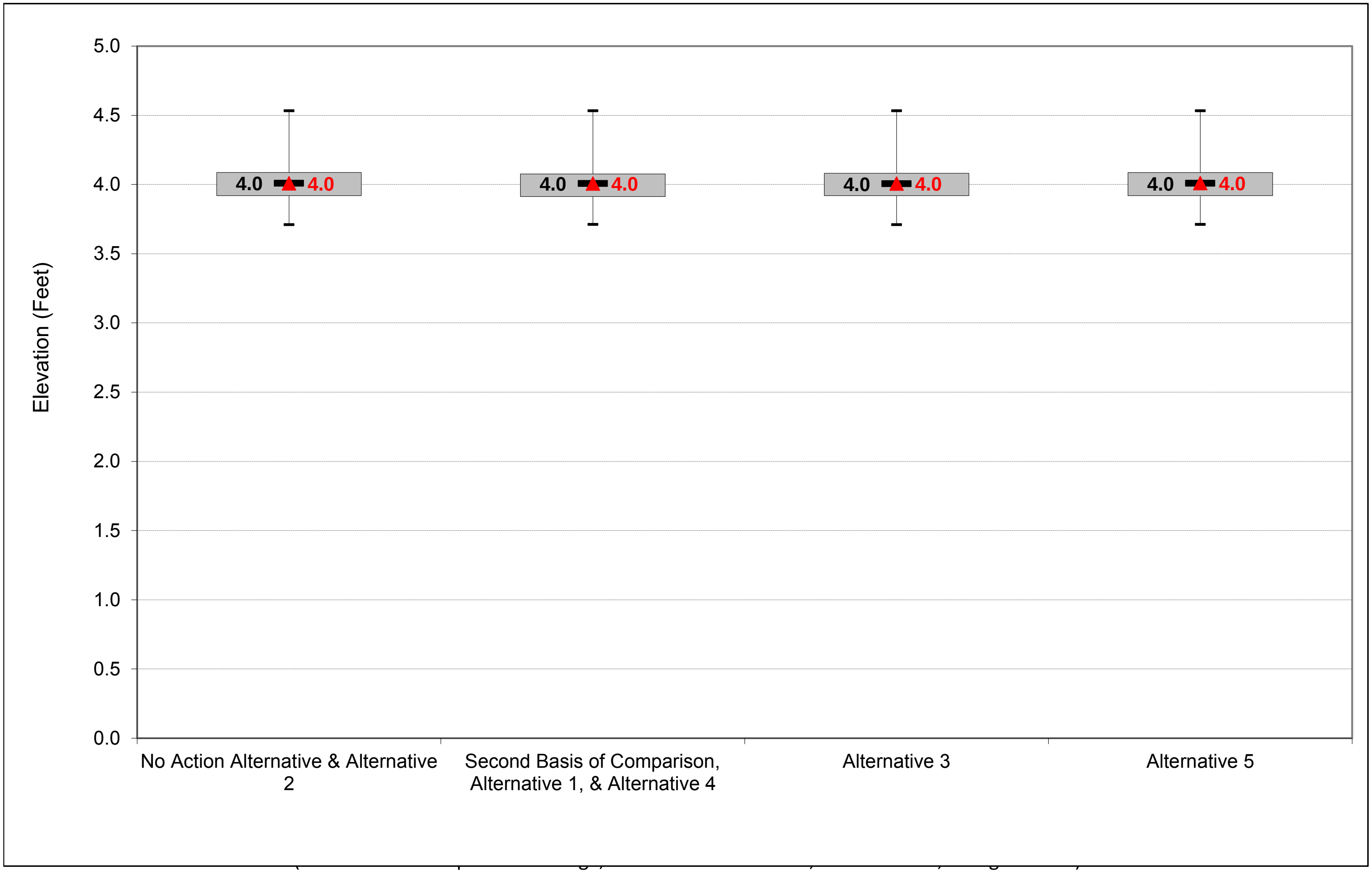
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-11. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-1-12. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-1-1. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.3	4.1	4.1
20%	3.8	3.9	4.3	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	4.0
30%	3.7	3.8	4.1	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	4.0
40%	3.7	3.8	4.0	4.1	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.9
60%	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.8	3.7	3.7	3.4	3.4	3.6	3.9	4.1	3.9	3.8
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.8	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.8	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.9
Water Year Types[c]												
Wet (32%)	3.7	3.9	4.3	4.4	4.4	4.0	3.8	4.0	4.1	4.2	4.0	4.1
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.8	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.2	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.2	4.1	4.0
20%	3.8	3.9	4.4	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	3.9
30%	3.7	3.8	4.0	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	3.9
40%	3.7	3.8	4.0	4.0	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.8
60%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.7	3.7	3.7	3.4	3.3	3.7	3.9	4.1	3.9	3.7
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.7	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.8
Water Year Types[c]												
Wet (32%)	3.7	3.8	4.3	4.4	4.4	4.1	3.8	3.9	4.1	4.2	4.0	3.9
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.9	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.1	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-1-2. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.3	4.1	4.1
20%	3.8	3.9	4.3	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	4.0
30%	3.7	3.8	4.1	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	4.0
40%	3.7	3.8	4.0	4.1	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.9
60%	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.8	3.7	3.7	3.4	3.4	3.6	3.9	4.1	3.9	3.8
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.8	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.8	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.9
Water Year Types[c]												
Wet (32%)	3.7	3.9	4.3	4.4	4.4	4.0	3.8	4.0	4.1	4.2	4.0	4.1
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.8	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.2	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 3

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.3	4.1	4.0
20%	3.8	3.9	4.4	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	3.9
30%	3.7	3.8	4.1	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	3.9
40%	3.7	3.8	4.0	4.0	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.5	3.8	4.0	4.2	4.0	3.8
60%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.7	3.7	3.7	3.4	3.3	3.7	3.9	4.1	3.9	3.7
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.7	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.8
Water Year Types[c]												
Wet (32%)	3.7	3.8	4.3	4.5	4.4	4.0	3.8	3.9	4.1	4.2	4.0	3.9
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.8	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.2	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 3 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-1-3. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.3	4.1	4.1
20%	3.8	3.9	4.3	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	4.0
30%	3.7	3.8	4.1	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	4.0
40%	3.7	3.8	4.0	4.1	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.9
60%	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.8	3.7	3.7	3.4	3.4	3.6	3.9	4.1	3.9	3.8
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.8	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.8	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.9
Water Year Types[c]												
Wet (32%)	3.7	3.9	4.3	4.4	4.4	4.0	3.8	4.0	4.1	4.2	4.0	4.1
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.8	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.2	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 5

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.3	4.2	4.1
20%	3.8	3.9	4.3	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	4.0
30%	3.7	3.8	4.1	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	4.0
40%	3.7	3.8	4.0	4.1	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.9
60%	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.8	3.7	3.7	3.4	3.4	3.6	3.9	4.1	3.9	3.8
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.8	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.8	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.9
Water Year Types[c]												
Wet (32%)	3.7	3.9	4.3	4.4	4.4	4.0	3.8	4.0	4.1	4.2	4.0	4.1
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.8	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.2	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 5 minus No Action Alternative

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-1-4. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.2	4.1	4.0
20%	3.8	3.9	4.4	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	3.9
30%	3.7	3.8	4.0	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	3.9
40%	3.7	3.8	4.0	4.0	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.8
60%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.7	3.7	3.7	3.4	3.3	3.7	3.9	4.1	3.9	3.7
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.7	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.8
Water Year Types[c]												
Wet (32%)	3.7	3.8	4.3	4.4	4.4	4.1	3.8	3.9	4.1	4.2	4.0	3.9
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.9	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.1	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.3	4.1	4.1
20%	3.8	3.9	4.3	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	4.0
30%	3.7	3.8	4.1	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	4.0
40%	3.7	3.8	4.0	4.1	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.9
60%	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.8	3.7	3.7	3.4	3.4	3.6	3.9	4.1	3.9	3.8
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.8	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.8	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.9
Water Year Types[c]												
Wet (32%)	3.7	3.9	4.3	4.4	4.4	4.0	3.8	4.0	4.1	4.2	4.0	4.1
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.8	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.2	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

No Action Alternative minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-1-5. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.2	4.1	4.0
20%	3.8	3.9	4.4	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	3.9
30%	3.7	3.8	4.0	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	3.9
40%	3.7	3.8	4.0	4.0	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.8
60%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.7	3.7	3.7	3.4	3.3	3.7	3.9	4.1	3.9	3.7
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.7	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.8
Water Year Types[c]												
Wet (32%)	3.7	3.8	4.3	4.4	4.4	4.1	3.8	3.9	4.1	4.2	4.0	3.9
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.9	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.1	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.3	4.1	4.0
20%	3.8	3.9	4.4	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	3.9
30%	3.7	3.8	4.1	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	3.9
40%	3.7	3.8	4.0	4.0	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.5	3.8	4.0	4.2	4.0	3.8
60%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.7	3.7	3.7	3.4	3.3	3.7	3.9	4.1	3.9	3.7
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.7	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.8
Water Year Types[c]												
Wet (32%)	3.7	3.8	4.3	4.5	4.4	4.0	3.8	3.9	4.1	4.2	4.0	3.9
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.8	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.2	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Maximum Elevation (Feet)											
Probability of Exceedance[a]												
10%	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**0.0**	**0.0**
20%	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	**0.0**	0.0	0.0	**0.0**	**0.0**
30%	**0.0**	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	**0.0**	0.0	0.0	**0.0**
40%	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0	0.0	**0.0**
50%	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	**0.0**	**0.0**
60%	**0.0**	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**
70%	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	**0.0**	0.0
80%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**
90%	0.0	0.0	0.0	0.0	**0.0**	0.0	**0.0**	**0.0**	**0.0**	0.0	**0.0**	0.0
Long Term												
Full Simulation Period[b]	**0.0**	**0.0**	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**
Above Normal (16%)	**0.0**	0.0	0.0	0.0	0.0	**0.0**	0.0	**0.0**	**0.0**	0.0	0.0	0.0
Below Normal (13%)	**0.0**	**0.0**	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0	0.0	0.0
Dry (24%)	**0.0**	**0.0**	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0	0.0	**0.0**	**0.0**
Critical (15%)	**0.0**	**0.0**	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	**0.0**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-1-6. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.2	4.1	4.0
20%	3.8	3.9	4.4	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	3.9
30%	3.7	3.8	4.0	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	3.9
40%	3.7	3.8	4.0	4.0	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.8
60%	3.6	3.7	3.8	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.7	3.7	3.7	3.4	3.3	3.7	3.9	4.1	3.9	3.7
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.9	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.7	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.1	4.0	3.8
Water Year Types[c]												
Wet (32%)	3.7	3.8	4.3	4.4	4.4	4.1	3.8	3.9	4.1	4.2	4.0	3.9
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.9	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.1	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 5

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	3.9	4.0	4.5	4.7	4.7	4.3	4.0	4.1	4.2	4.3	4.2	4.1
20%	3.8	3.9	4.3	4.5	4.5	4.0	3.8	4.0	4.1	4.2	4.1	4.0
30%	3.7	3.8	4.1	4.2	4.3	3.9	3.7	3.9	4.1	4.2	4.1	4.0
40%	3.7	3.8	4.0	4.1	4.1	3.8	3.6	3.8	4.1	4.2	4.0	3.9
50%	3.6	3.7	3.9	4.0	4.0	3.7	3.6	3.8	4.0	4.2	4.0	3.9
60%	3.6	3.7	3.9	3.9	3.9	3.6	3.5	3.7	4.0	4.1	4.0	3.8
70%	3.5	3.6	3.8	3.8	3.8	3.5	3.4	3.7	3.9	4.1	3.9	3.8
80%	3.5	3.6	3.8	3.7	3.7	3.4	3.4	3.6	3.9	4.1	3.9	3.8
90%	3.5	3.5	3.6	3.7	3.5	3.3	3.3	3.6	3.8	4.0	3.9	3.7
Long Term												
Full Simulation Period[b]	3.6	3.8	4.0	4.1	4.1	3.7	3.6	3.8	4.0	4.2	4.0	3.9
Water Year Types[c]												
Wet (32%)	3.7	3.9	4.3	4.4	4.4	4.0	3.8	4.0	4.1	4.2	4.0	4.1
Above Normal (16%)	3.6	3.8	4.0	4.2	4.3	3.8	3.6	3.8	4.0	4.2	4.0	3.8
Below Normal (13%)	3.6	3.7	3.9	3.9	3.9	3.5	3.5	3.7	4.0	4.2	4.0	3.9
Dry (24%)	3.6	3.6	3.8	3.8	3.8	3.6	3.5	3.7	4.0	4.1	4.0	3.8
Critical (15%)	3.7	3.7	3.9	3.8	3.8	3.5	3.5	3.7	4.0	4.1	4.0	3.8

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Maximum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

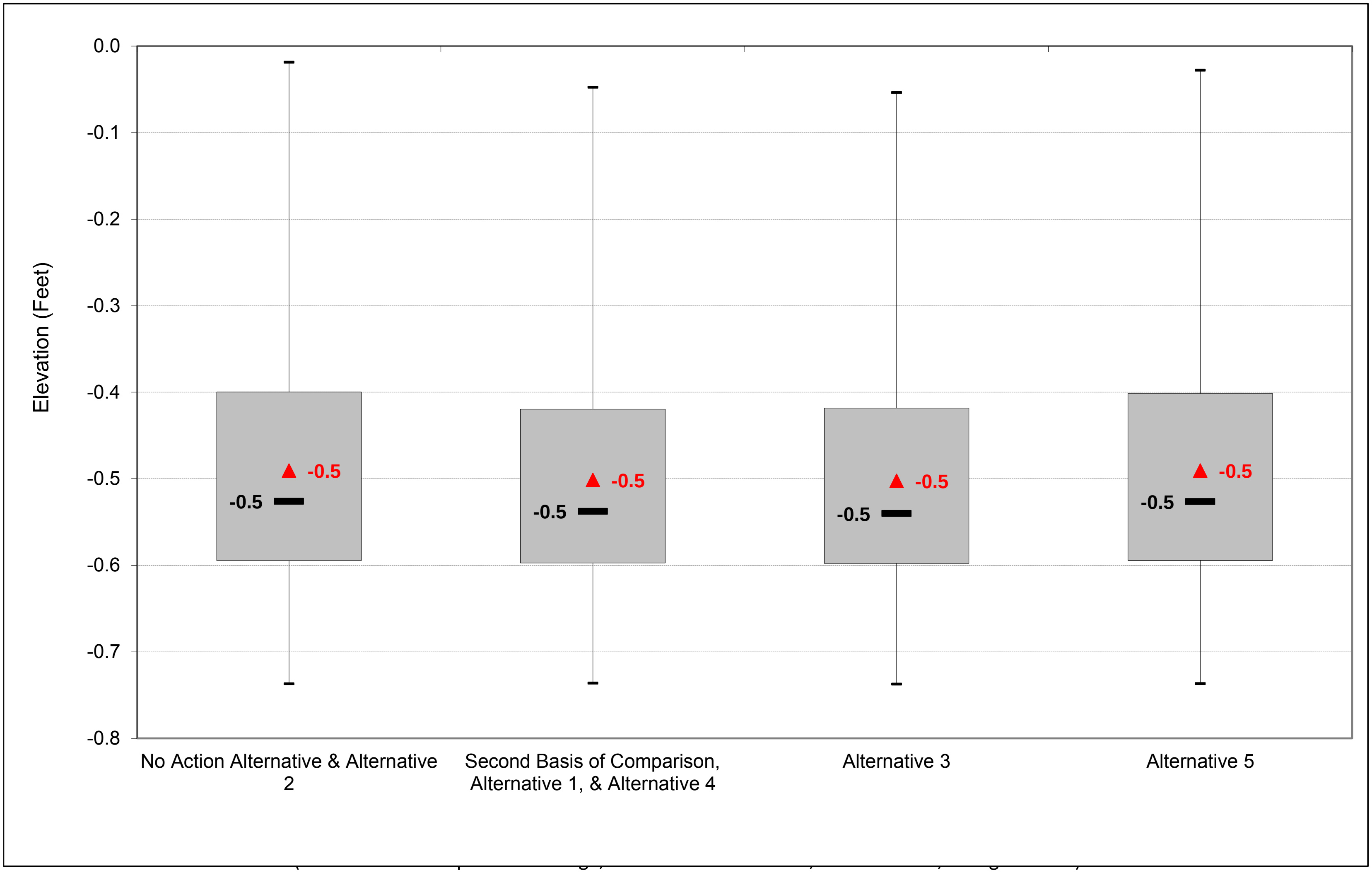
a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

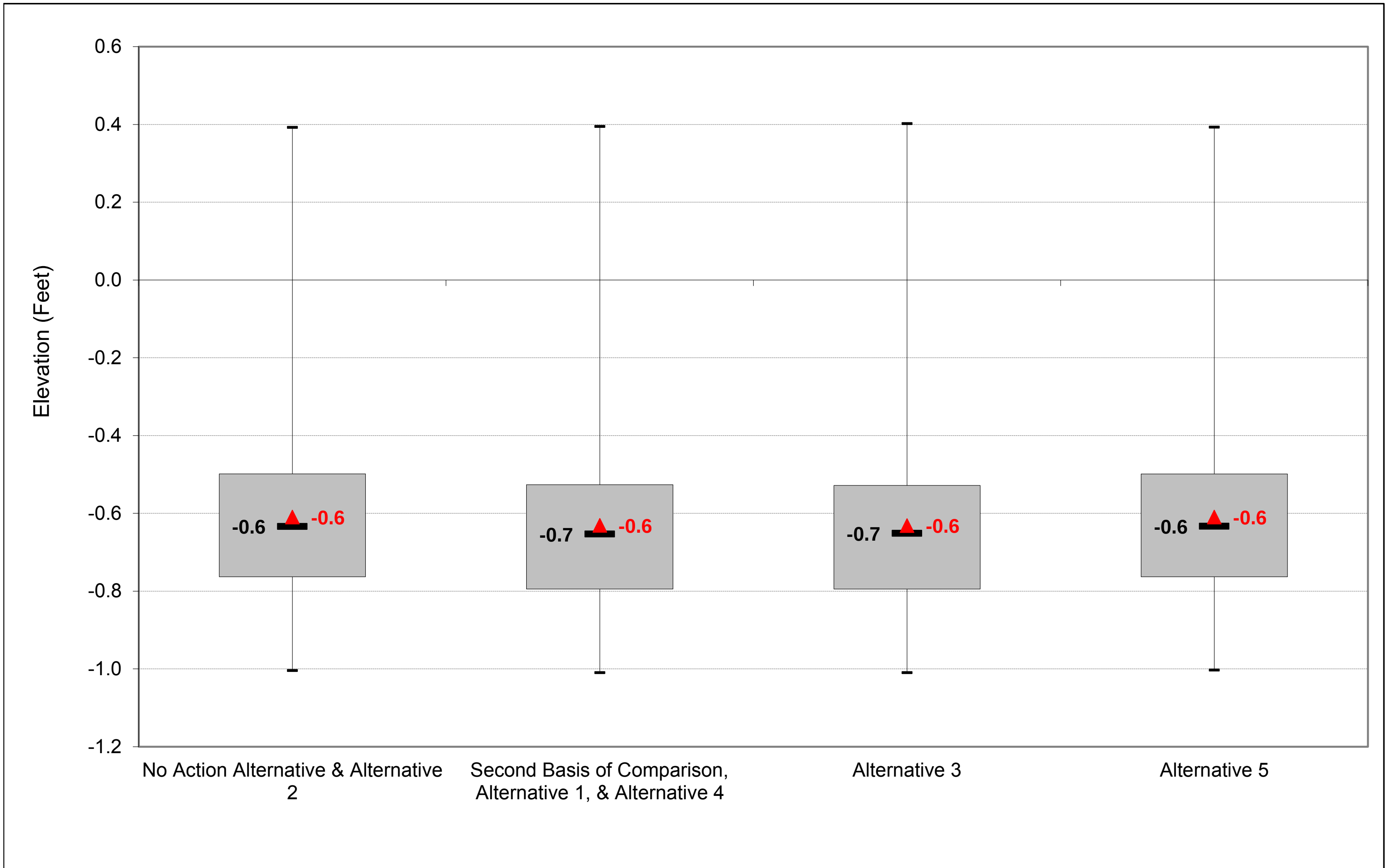
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-1. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, October



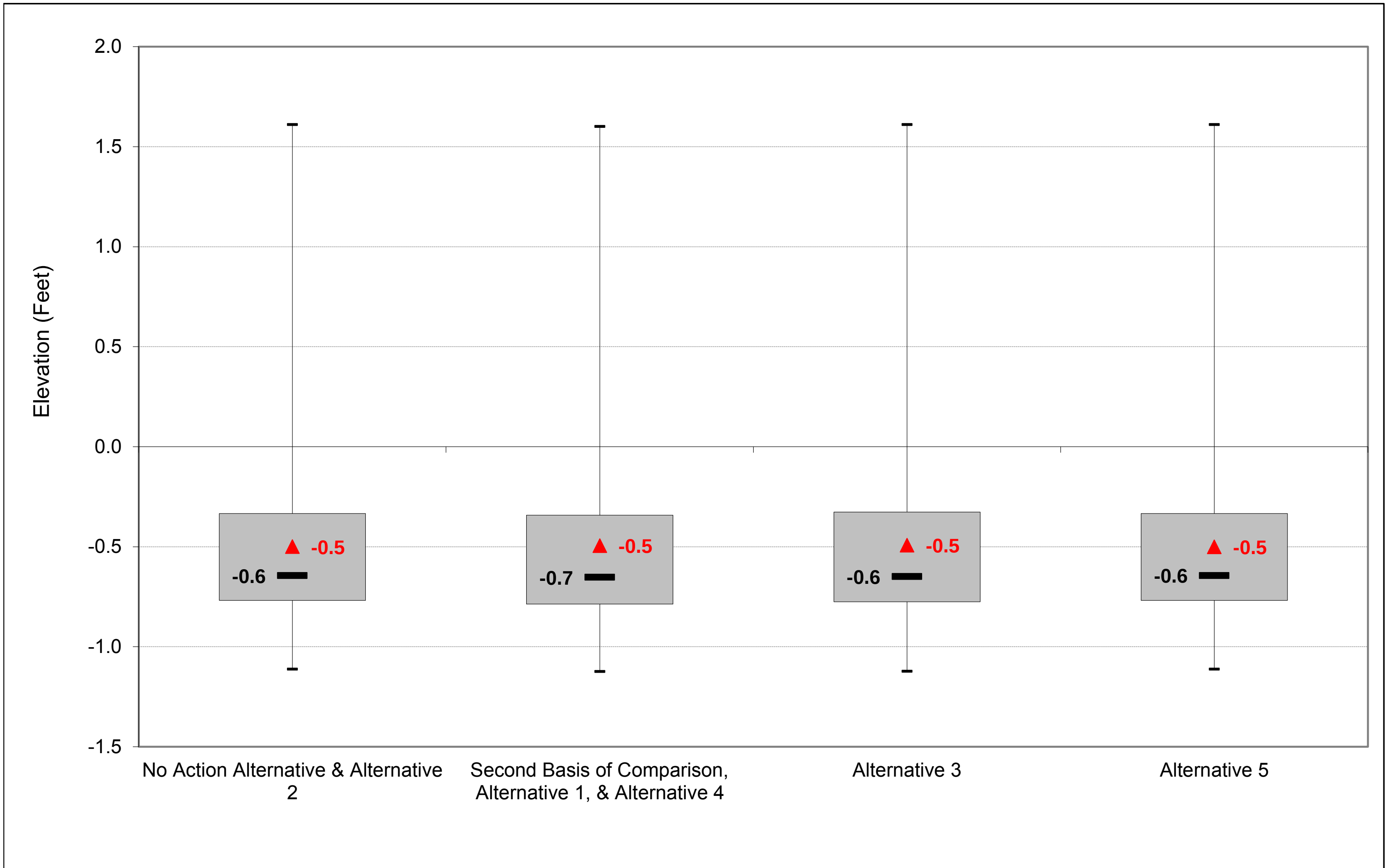
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-2. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, November



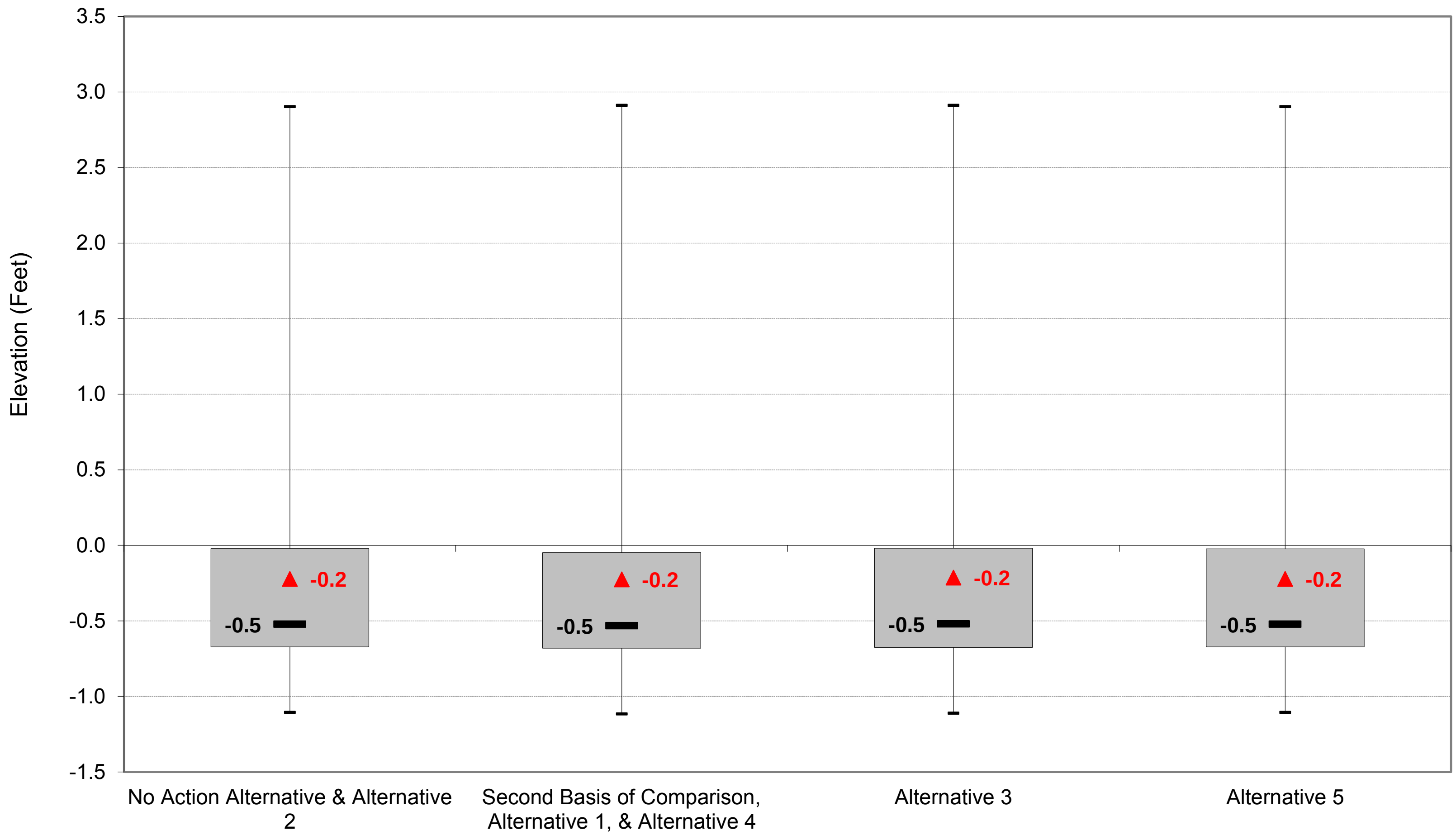
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-3. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, December



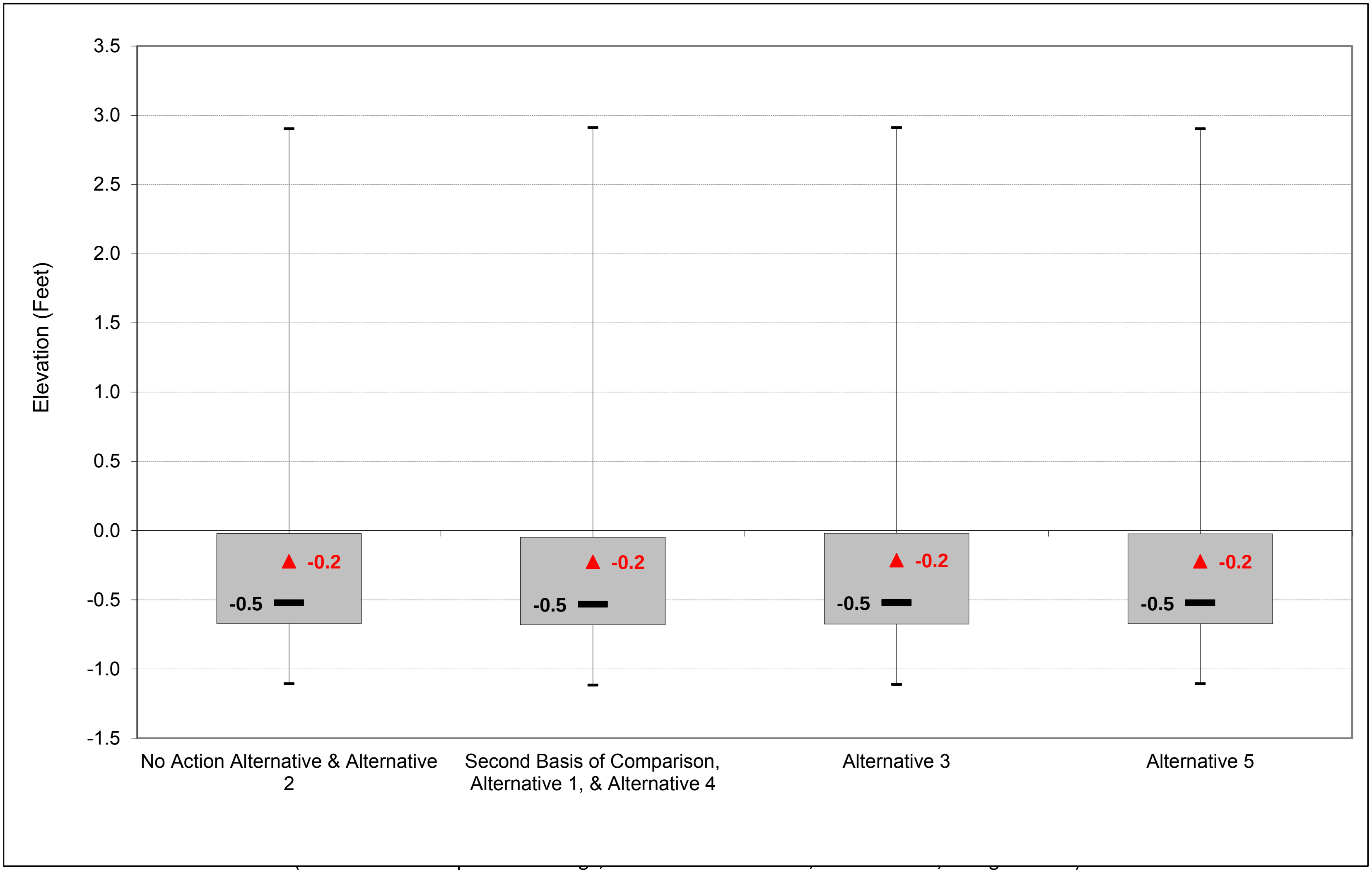
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-4. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, January



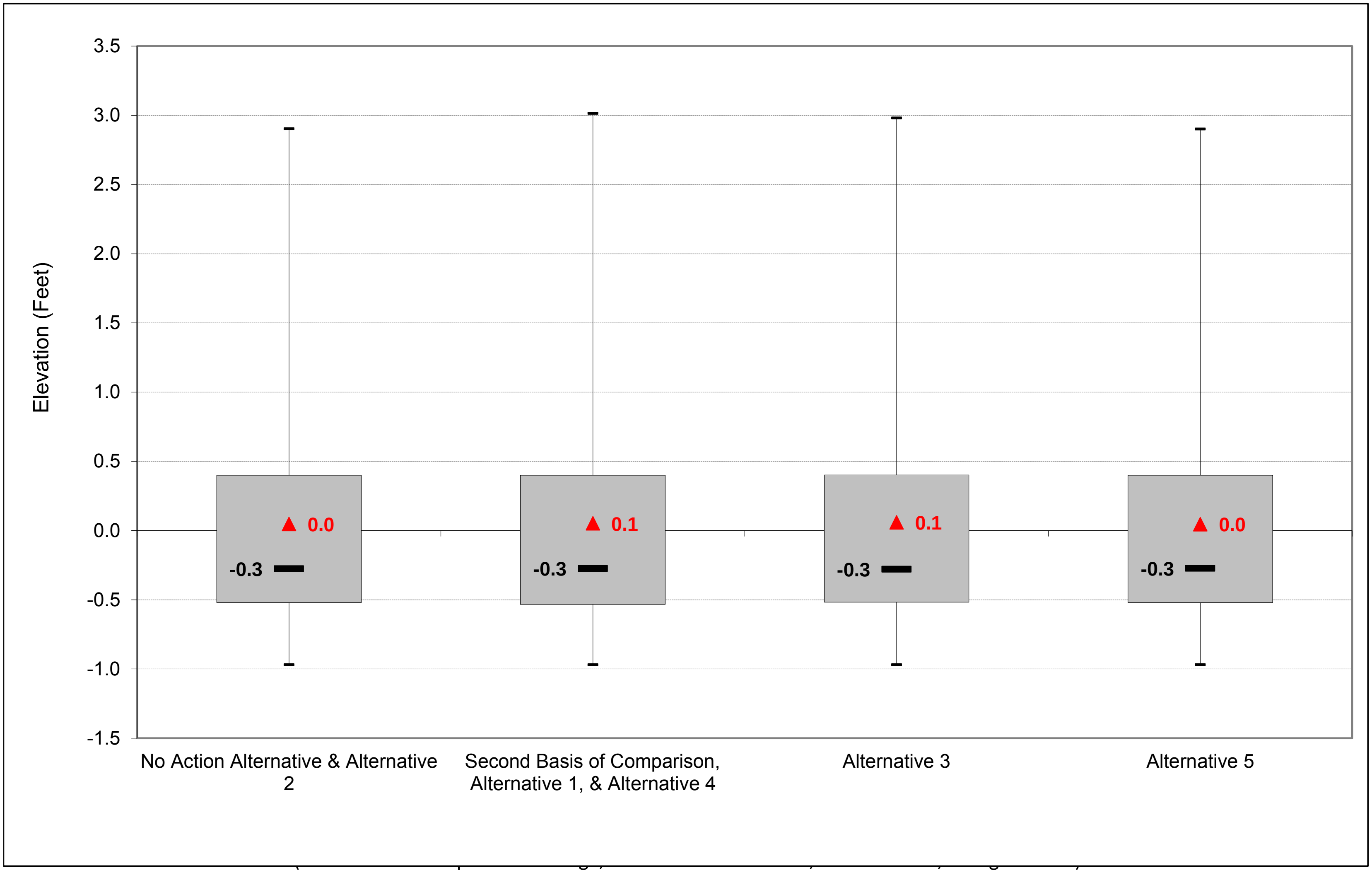
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-5. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, February



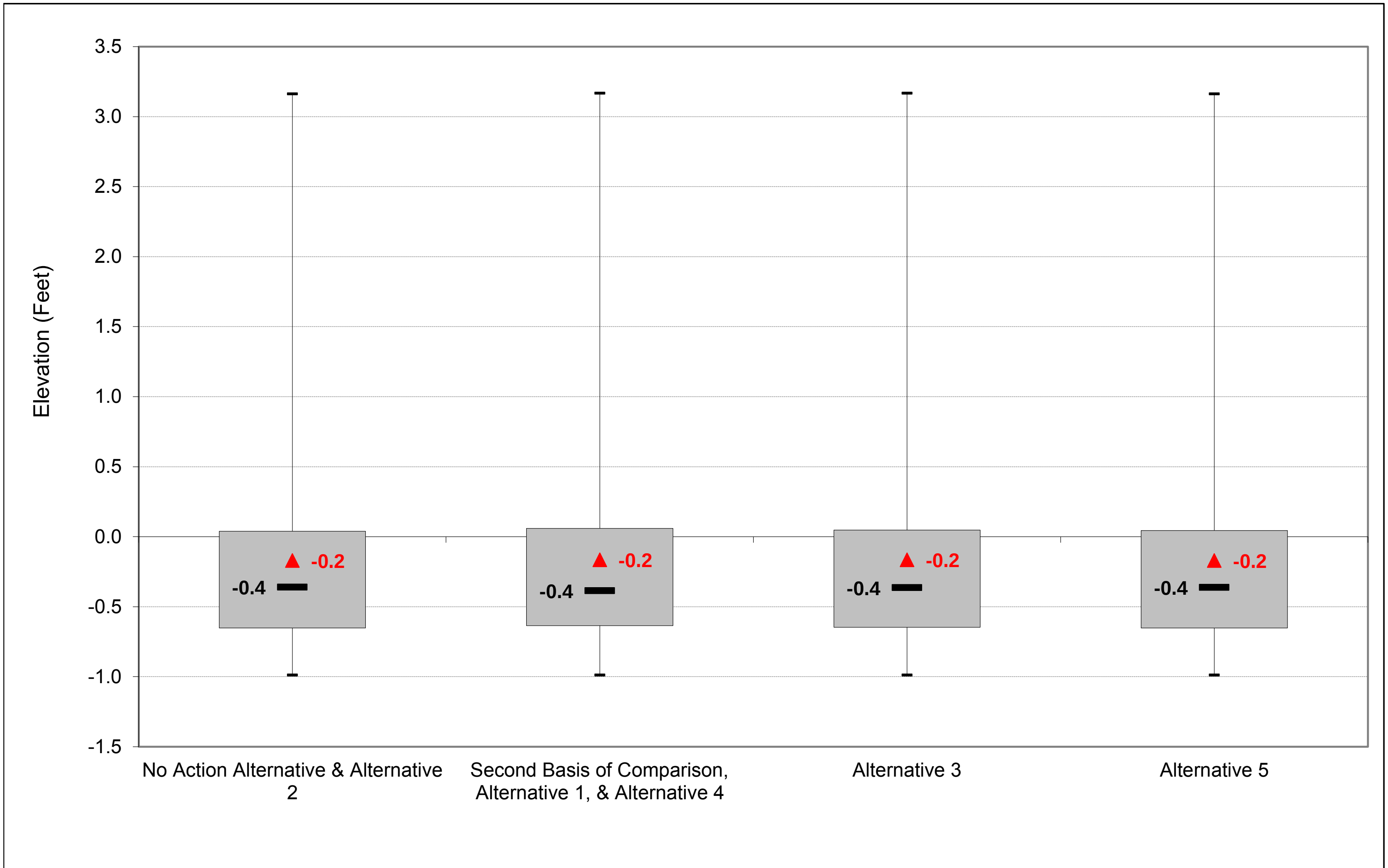
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-6. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, March



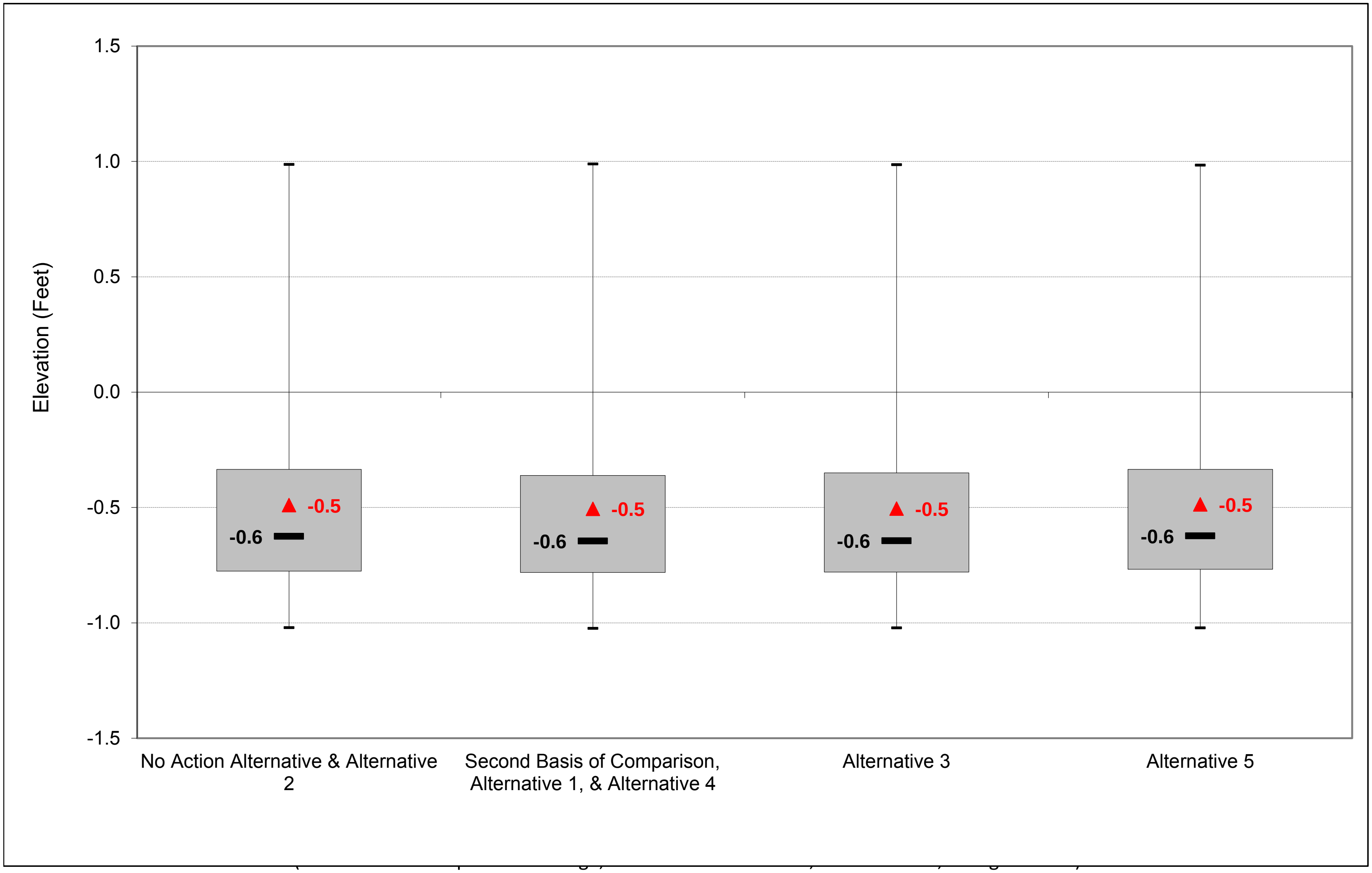
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-7. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, April



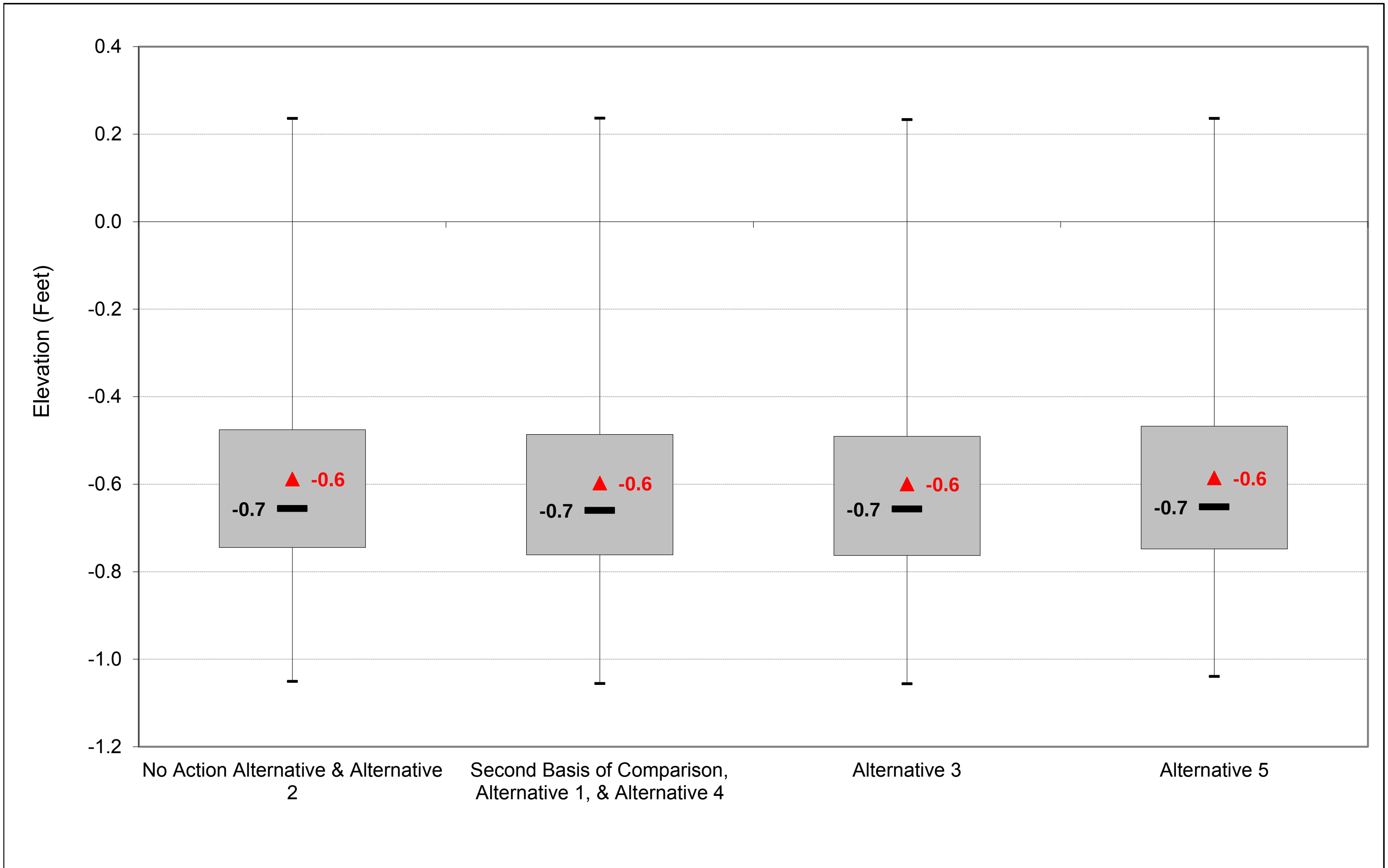
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-8. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, May



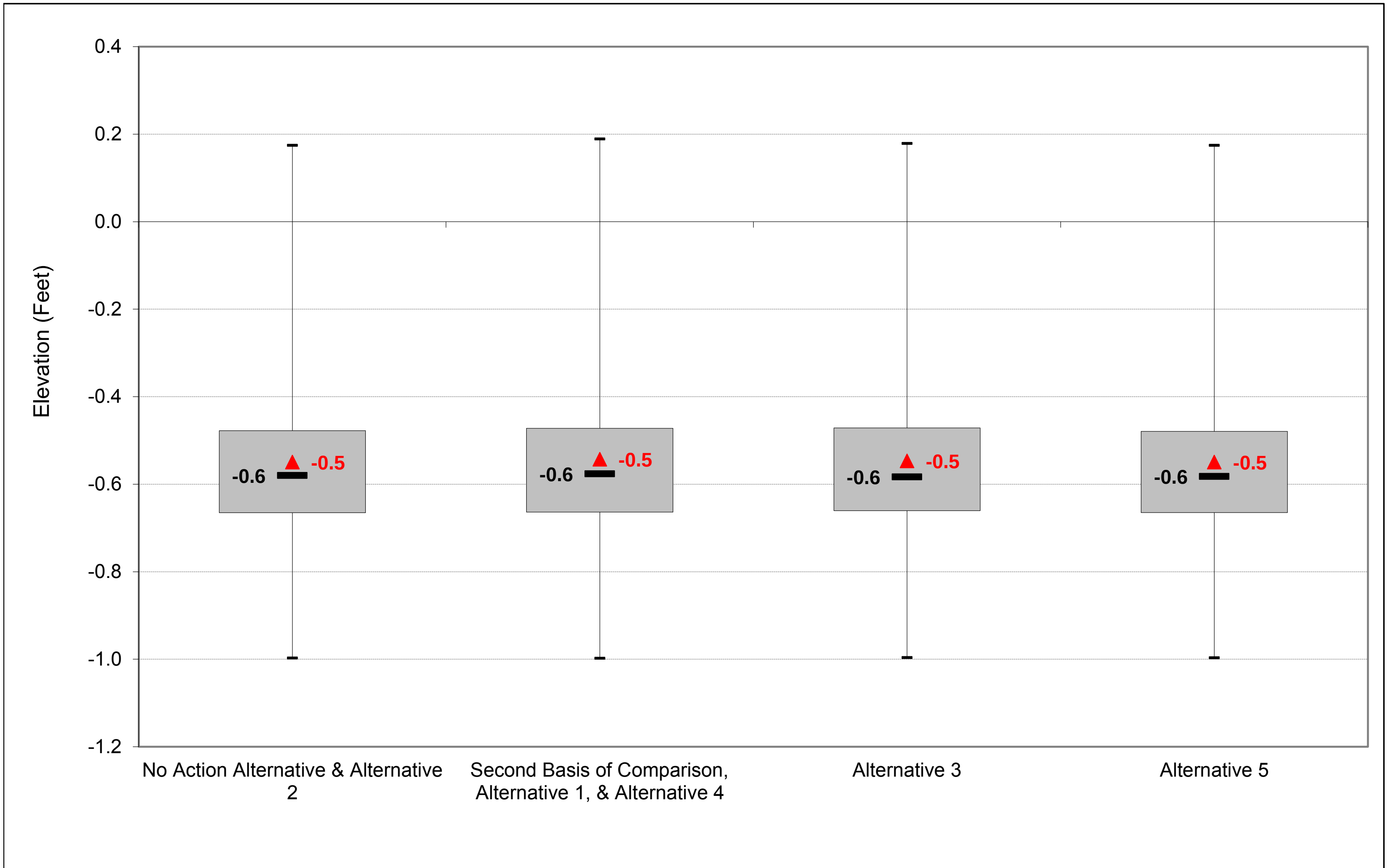
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-9. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, June



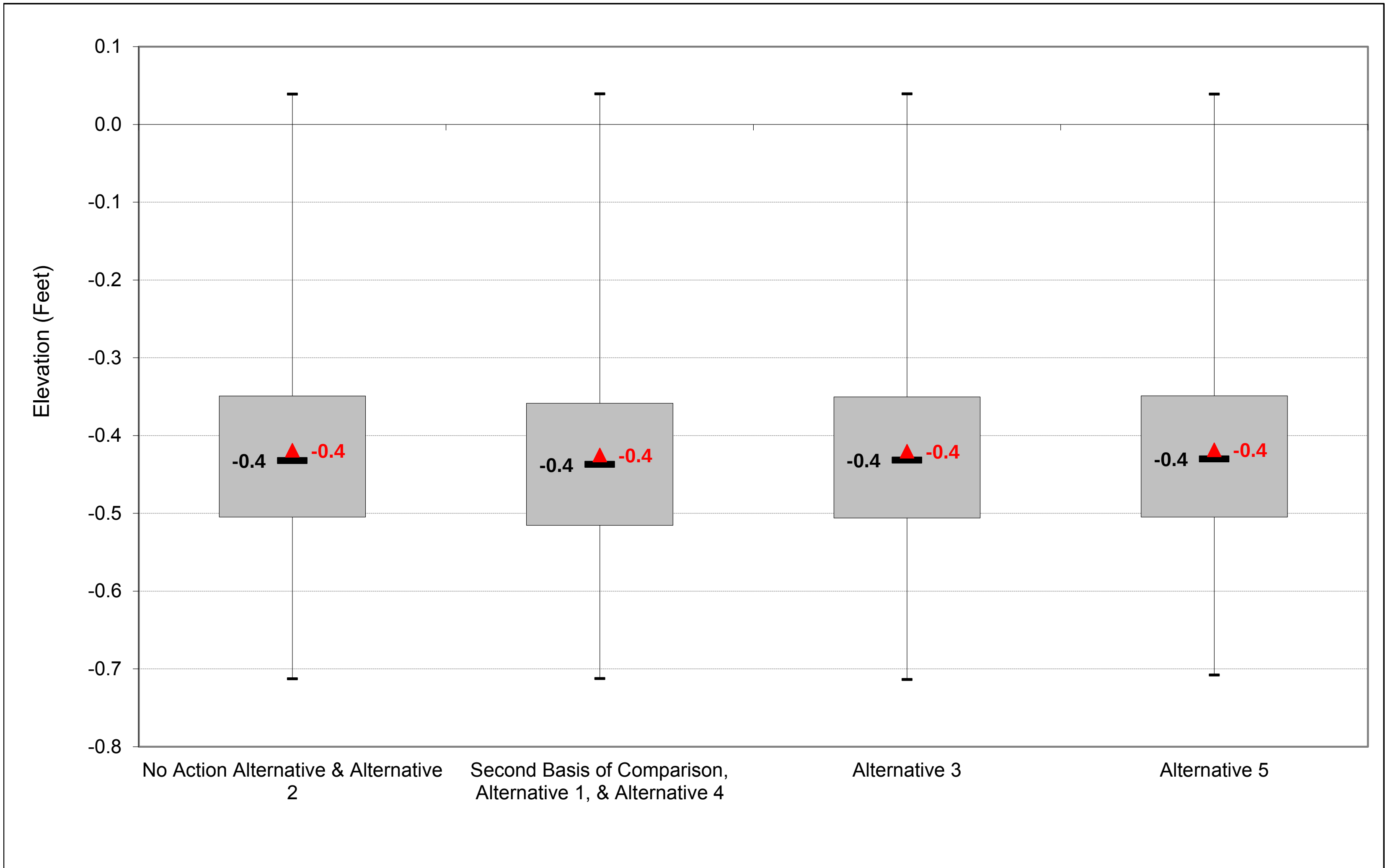
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-10. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, July



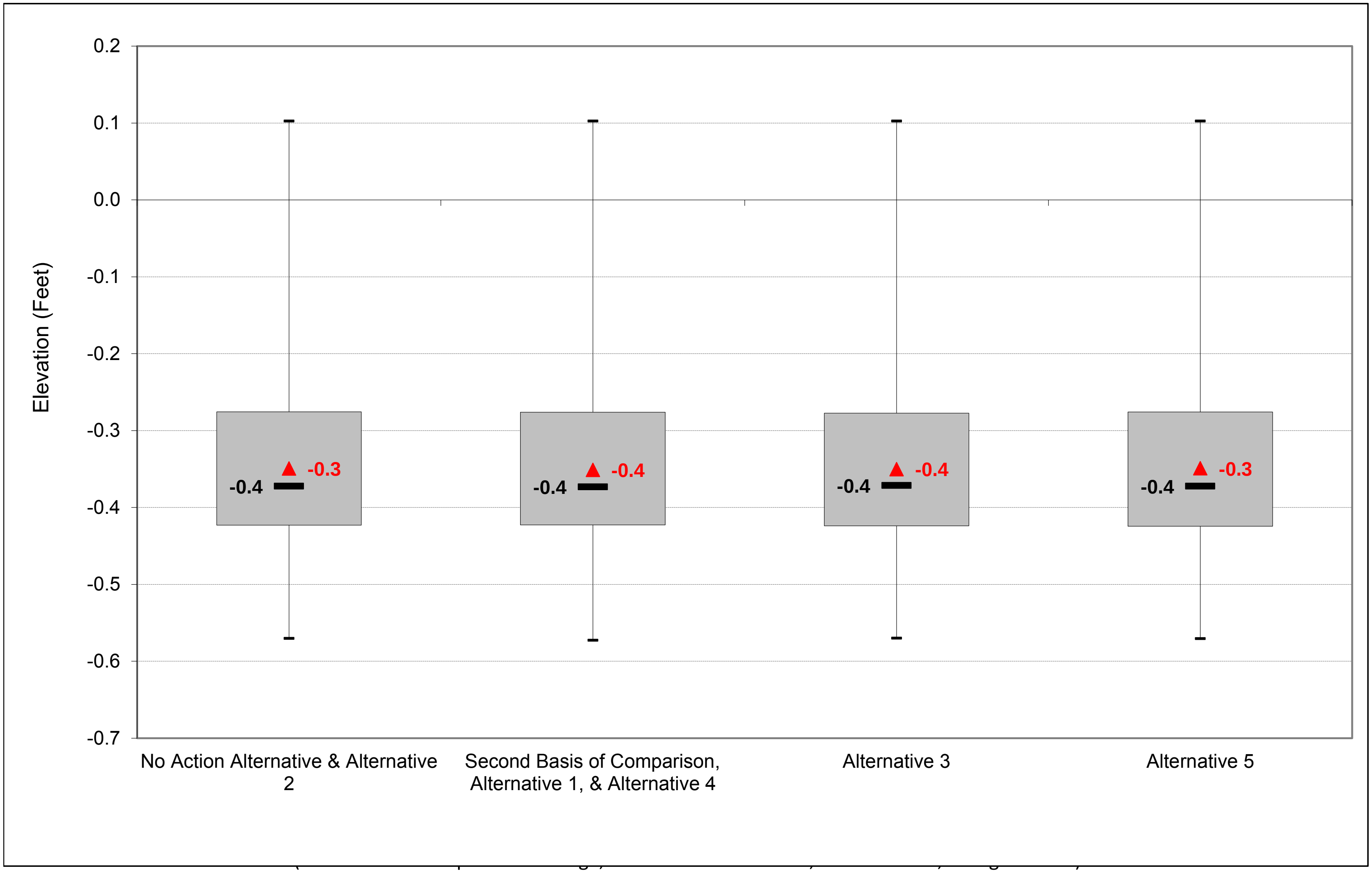
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-11. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, August



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure C-45-2-12. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation, September



Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-2-1. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.2	0.8	1.3	0.7	0.1	-0.2	-0.4	-0.2	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.5	-0.3	-0.3	-0.1
30%	-0.4	-0.5	-0.5	-0.2	0.3	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.6	-0.6	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.8	-0.9	-0.8	-0.7	-0.7	-0.8	-0.8	-0.7	-0.6	-0.5	-0.4
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.0	-0.2	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.2	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.1
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	-0.1	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 1

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.3	0.8	1.4	0.7	0.0	-0.2	-0.4	-0.3	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
30%	-0.5	-0.6	-0.5	-0.2	0.3	0.0	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.7	-0.7	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.8	-0.7	-0.7	-0.5	-0.5	-0.8	-0.7	-0.6	-0.5	-0.4	-0.4
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.7	-0.9	-0.8	-0.7	-0.6	-0.5	-0.5
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.1	-0.2	-0.5	-0.6	-0.5	-0.4	-0.4	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.1	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	0.0	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.7	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 1 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
30%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-2-2. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.2	0.8	1.3	0.7	0.1	-0.2	-0.4	-0.2	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.5	-0.3	-0.3	-0.1
30%	-0.4	-0.5	-0.5	-0.2	0.3	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.6	-0.6	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.8	-0.9	-0.8	-0.7	-0.7	-0.8	-0.8	-0.7	-0.6	-0.5	-0.4
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.0	-0.2	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.2	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.1
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	-0.1	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.3	0.8	1.4	0.7	0.0	-0.2	-0.4	-0.2	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.4	0.5	0.1	-0.2	-0.4	-0.5	-0.3	-0.3	-0.2
30%	-0.5	-0.6	-0.5	-0.2	0.3	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.7	-0.6	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.8	-0.7	-0.6	-0.5	-0.5	-0.8	-0.7	-0.6	-0.5	-0.4	-0.4
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.7	-0.9	-0.8	-0.7	-0.6	-0.5	-0.4
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.1	-0.2	-0.5	-0.6	-0.5	-0.4	-0.4	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.1	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	0.0	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.7	-0.6	-0.6	-0.2	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 3 minus No Action Alternative

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
30%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-2-3. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.2	0.8	1.3	0.7	0.1	-0.2	-0.4	-0.2	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.5	-0.3	-0.3	-0.1
30%	-0.4	-0.5	-0.5	-0.2	0.3	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.6	-0.6	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.8	-0.9	-0.8	-0.7	-0.7	-0.8	-0.8	-0.7	-0.6	-0.5	-0.4
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.0	-0.2	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.2	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.1
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	-0.1	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 5

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.2	0.8	1.3	0.7	0.1	-0.2	-0.4	-0.2	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.5	-0.3	-0.3	-0.1
30%	-0.4	-0.5	-0.5	-0.2	0.3	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.6	-0.6	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.8	-0.9	-0.8	-0.7	-0.7	-0.8	-0.8	-0.7	-0.6	-0.5	-0.4
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.0	-0.2	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.2	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.1
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	-0.1	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 5 minus No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0	0.0	0.0	**0.0**
20%	0.0	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	**0.0**
30%	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	**0.0**
40%	**0.0**	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	**0.0**	**0.0**	**0.0**	**0.0**
50%	**0.0**	0.0	0.0	**0.0**	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	0.0
60%	**0.0**	0.0	**0.0**	0.0	**0.0**	**0.0**	0.0	0.0	0.0	**0.0**	0.0	**0.0**
70%	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	**0.0**	0.0	**0.0**	**0.0**
80%	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0.0
90%	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	0.0	0.0	0.0	**0.0**
Long Term												
Full Simulation Period[b]	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Water Year Types[c]												
Wet (32%)	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0	0.0	**0.0**
Above Normal (16%)	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	**0.0**	**0.0**
Below Normal (13%)	**0.0**	0.0	**0.0**	**0.0**	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	0.0
Dry (24%)	**0.0**	0.0	**0.0**	**0.0**	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0
Critical (15%)	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	**0.0**	**0.0**	**0.0**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-2-4. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.3	0.8	1.4	0.7	0.0	-0.2	-0.4	-0.3	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
30%	-0.5	-0.6	-0.5	-0.2	0.3	0.0	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.7	-0.7	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.8	-0.7	-0.7	-0.5	-0.5	-0.8	-0.7	-0.6	-0.5	-0.4	-0.4
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.7	-0.9	-0.8	-0.7	-0.6	-0.5	-0.5
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.1	-0.2	-0.5	-0.6	-0.5	-0.4	-0.4	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.1	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	0.0	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.7	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

No Action Alternative

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.2	0.8	1.3	0.7	0.1	-0.2	-0.4	-0.2	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.5	-0.3	-0.3	-0.1
30%	-0.4	-0.5	-0.5	-0.2	0.3	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.6	-0.6	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.8	-0.9	-0.8	-0.7	-0.7	-0.8	-0.8	-0.7	-0.6	-0.5	-0.4
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.0	-0.2	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.2	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.1
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	-0.1	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly Averaged Daily Minimum Elevation (Feet)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	0.0	0.0	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
30%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-2-5. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.3	0.8	1.4	0.7	0.0	-0.2	-0.4	-0.3	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
30%	-0.5	-0.6	-0.5	-0.2	0.3	0.0	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.7	-0.7	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.8	-0.7	-0.7	-0.5	-0.5	-0.8	-0.7	-0.6	-0.5	-0.4	-0.4
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.7	-0.9	-0.8	-0.7	-0.6	-0.5	-0.5
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.1	-0.2	-0.5	-0.6	-0.5	-0.4	-0.4	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.1	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	0.0	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.7	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 3

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.3	0.8	1.4	0.7	0.0	-0.2	-0.4	-0.2	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.4	0.5	0.1	-0.2	-0.4	-0.5	-0.3	-0.3	-0.2
30%	-0.5	-0.6	-0.5	-0.2	0.3	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.7	-0.6	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.8	-0.7	-0.6	-0.5	-0.5	-0.8	-0.7	-0.6	-0.5	-0.4	-0.4
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.7	-0.9	-0.8	-0.7	-0.6	-0.5	-0.4
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.1	-0.2	-0.5	-0.6	-0.5	-0.4	-0.4	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.1	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	0.0	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.7	-0.6	-0.6	-0.2	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 3 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-45-2-6. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation

Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.3	0.8	1.4	0.7	0.0	-0.2	-0.4	-0.3	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
30%	-0.5	-0.6	-0.5	-0.2	0.3	0.0	-0.4	-0.5	-0.5	-0.4	-0.3	-0.3
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.7	-0.7	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.8	-0.7	-0.7	-0.5	-0.5	-0.8	-0.7	-0.6	-0.5	-0.4	-0.4
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.7	-0.9	-0.8	-0.7	-0.6	-0.5	-0.5
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.1	-0.2	-0.5	-0.6	-0.5	-0.4	-0.4	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.1	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.2
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	0.0	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.7	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 5

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	-0.3	-0.4	0.2	0.8	1.3	0.7	0.1	-0.2	-0.4	-0.2	-0.2	-0.1
20%	-0.4	-0.5	-0.2	0.3	0.5	0.1	-0.2	-0.4	-0.5	-0.3	-0.3	-0.1
30%	-0.4	-0.5	-0.5	-0.2	0.3	-0.1	-0.4	-0.5	-0.5	-0.4	-0.3	-0.2
40%	-0.5	-0.6	-0.6	-0.4	0.1	-0.3	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
50%	-0.5	-0.6	-0.6	-0.5	-0.3	-0.4	-0.6	-0.7	-0.6	-0.4	-0.4	-0.3
60%	-0.6	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
70%	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3
80%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.8	-0.8	-0.7	-0.5	-0.4	-0.4
90%	-0.7	-0.8	-0.9	-0.8	-0.7	-0.7	-0.8	-0.8	-0.7	-0.6	-0.5	-0.4
Long Term												
Full Simulation Period[b]	-0.5	-0.6	-0.5	-0.2	0.0	-0.2	-0.5	-0.6	-0.5	-0.4	-0.3	-0.3
Water Year Types[c]												
Wet (32%)	-0.4	-0.5	-0.2	0.4	0.7	0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.1
Above Normal (16%)	-0.5	-0.6	-0.5	-0.1	0.3	-0.1	-0.5	-0.6	-0.6	-0.4	-0.3	-0.3
Below Normal (13%)	-0.5	-0.6	-0.6	-0.6	-0.3	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.3
Dry (24%)	-0.5	-0.7	-0.8	-0.6	-0.4	-0.4	-0.7	-0.7	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.7	-0.7	-0.5	-0.6	-0.7	-0.8	-0.7	-0.5	-0.4	-0.4

Alternative 5 minus Second Basis of Comparison

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Monthly Averaged Daily Minimum Elevation (Feet)											
Probability of Exceedance[a]												
10%	0.0	0.0	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
30%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[c]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

This page left blank intentionally.