

Appendix F
Levee Stability Analysis

Contents

	Page
Appendix F Levee Stability Analysis	F-1
Introduction	F-1
Critical Velocity Data.....	F-1
Critical Level Data.....	F-1
General Effects	F-3
Localized Effects.....	F-5

Tables and Figures

Table	On Page
F-1 Modeled Channel Water Level—Range of Upstream Level Differences for No Project and With Project and Relative Change	F-2
F-2 Modeled Channel Water Level—Range of Upstream Maximum Level Differences for No Project and With Project	F-2
F-3 Modeled Channel Water Surface Level Elevation—With Project	F-4

Figure	Follows Page
F-1 Average Level Difference (with Gate in Place) 1977 Critical Year (2001 Alternative 2C)	F-6
F-2 Average Level Difference (with Gate in Place) 1977 Critical Year (2020 Alternative 2C)	F-6
F-3 Average Level Difference (with Gate in Place) 1983 Wet Year (2001 Alternative 2C)	F-6
F-4 Average Level Difference (with Gate in Place) 1983 Wet Year (2020 Alternative 2C)	F-6

Appendix F

Levee Stability Analysis

Introduction

This appendix comprises a summary stability analysis of the existing levee systems near and around the planned gate sites. The analysis is based on modeled and measured velocity and water level data. These data are considered critical input data because an increase in water velocities could result in localized scouring or erosion, and an increase in water level could result in a higher potential for levee failure.

Critical Velocity Data

An analysis of velocities in the south Delta was performed to evaluate the potential for erosion (scour) and sedimentation. A summary of this analysis and results are presented in Appendix G. Summarizing, the analysis results indicate that the gates will result in an overall decrease in average and maximum channel velocities. Based on the Delta Simulation Model 2 (DSM2) data, the gates are projected to result in apparent changes of no more than an approximate $\pm 8\%$ difference in velocity compared to existing conditions (no project), depending on the gate site. Localized velocity effects, as a result of flow paths through the gates, will be addressed through engineered features of the gates. These features include: minimum capacity for a 100-year floodflow; riprap revetment upstream and downstream of each gate; and concrete apron entrance and exit structures.

Critical Level Data

An analysis of the water level in the south Delta was performed to evaluate the potential for impact on levee stability. The analysis was supported by data obtained from the DSM2 gate modeling as described in Section 5.2. Analysis of the model data resulted in the determination of summary statistics for two types of water year, critical and wet. Based on the 16-year water year record (1975–1991) analyzed in DSM2, the year 1977 was selected as the “critical” year and 1983 was selected as the “wet” year. These two water year types are representative of the San Joaquin River basin and were selected to present the

potential range flow and conditions in the Sacramento–San Joaquin River Delta (Delta). Data summary is presented for both the 2001 and 2020 level of development (LOD) years, for projected levels for upstream and downstream locations of each gate.

The level difference results for all gate sites are summarized in Tables F-1 and F-2.

Table F-1. Modeled Channel Water Level^a—Range of Upstream Level Differences for No Project and With Project and Relative Change

		Parameter	Demand Year			
			2001		2020	
			No Project	With Project	No Project	With Project
Water Year	1977 (critical)	Average Level (ft msl) ^b	0.68 to 1.36	1.02 to 1.77	0.69 to 1.36	1.02 to 1.77
		Relative Change ^c (feet)	0	0.34 to 0.41 increase	0	0.33 to 0.41 increase
	1983 (wet)	Average Level (ft msl)	2.59 to 9.45	2.69 to 10.39	2.57 to 9.4	2.68 to 10.34
		Relative Change (feet)	0	0.1 to 0.94 increase	0	0.11 to 0.94 increase

^a DSMII Model, Water Years 1975–1991, for upstream locations.
^b feet mean sea level.
^c Relative change in average level from No Project to With Project.

Table F-2. Modeled Channel Water Level^a—Range of Upstream Maximum Level Differences for No Project and With Project

		Parameter	Demand Year			
			2001		2020	
			No Project	With Project	No Project	With Project
Water Year	1977 (critical)	Maximum Level (ft msl) ^b	3.36 to 3.6	3.35 to 3.99	3.35 to 3.59	3.34 to 3.99
		Relative Change ^c (feet)	0	0.01 to 0.39 increase	0	–0.01 to 0.40 increase
	1983 (wet)	Maximum Level (ft msl)	6.64 to 14.61	6.89 to 14.84	6.61 to 14.58	6.86 to 14.81
		Relative Change (feet)	0	0.23 to 0.25 increase	0	0.23 to 0.25 increase

^a DSM2 Model, Water Years 1975–1991, for upstream locations.
^b feet mean sea level.
^c Relative change in maximum level from No Project to With Project.

Maximum modeled level elevations for each water vary less than average level elevations. The maximum variation for the critical year 1977 is forecast for the head of Old River LOD 2001 condition at 0.39 foot. The maximum variation for the wet year 1983 is forecast for the Grant Line Canal for the LOD 2020 condition at 0.50 foot. These variations are believed to be less than for the average level variation because the channel flow capacity and stream velocity increase as a function of total level depth for the same incremental level change.

General Effects

The results indicate that the gates will result in less than 0.5-foot increase in the average upstream level during a dry year and less than a 1-foot effect during a wet year. As a means of examining the specific level effects of each gate on the potential for affecting level stability, a series of level-difference graphs are presented on Figures F-1 through F-4. These graphs present the difference in average level based on modeled average level values for both upstream and downstream of a given gate. The level-difference graphs indicate that the average upstream level does not vary noticeably when comparing results for 2001 or 2020 LOD; the differences for average upstream levels are between 0.2 and 0.4 foot for a critical year and 0.1 and 0.9 foot for a wet year.

Based on top-of-levee elevations ranging from 10.8 to 25 feet mean sea level (msl), no reduction in levee stability is anticipated. Existing minimum upstream levee crown elevations and projected average level water surface elevations when the gates are operating are shown in Table F-3. These data indicate that the average upstream water surface elevation at all gate locations is a minimum 8.2 feet below levee top. When combined with the difference in water surface elevation to the No Project condition, as shown in Table F-1, this represents less than an 8% reduction in freeboard under a worst-case scenario (0.94-foot increase, based on 13 feet freeboard). Although each gate is being designed with the capacity to flow the equivalent of a flood with a 100-year recurrence frequency, gate operation is not planned during periods of high river and Delta flows. Consequently, levee stability during high-flow conditions, when good stability is most critical, is virtually unaffected by the planned gates.

Table F-3. Modeled Channel Water Surface Level Elevation—With Project^a

		Level of Development	Grant Line Canal	Middle River	Head Old River	Old River
Minimum Levee Crown Elevation (ft msl) ^b			10.8	13.6	25	16
Average Upstream Water Surface Elevation (ft msl)	1977 (critical)	2001	0.70	.8	1.36	0.68
		2020	0.71	.81	1.36	0.69
	1983 (wet)	2001	2.6	2.58	9.45	2.59
		2020	2.6	2.57	9.4	2.58

^a DSM2 Model, Water Years 1975–1991, for upstream locations
^b feet mean sea level

A stability failure analysis was performed for the levee systems in the Delta by the U.S. Army Corps of Engineers (November 1992)¹. Based on the analysis results for the levees in and around the planned permanent general gate sites, the probabilities of failure of the existing levees are shown below:

Gate Site	Related Island	Failure Probability
Grant Line	Fabian Island	0.0001
Old River	Fabian Island	0.0001
Head Old River	Stewart Tract	0.0102
Middle River	Robert’s Island	0.0124

Assuming that stability failure is directly proportional to the increase in mean hydrostatic pressure on a submerged levee section and that the pressure is directly proportional to the level depth, the increase in failure probability attributable to gate operation is:

$$P_{\text{new}} = P_{\text{old}} \times \text{Mean New Level/Mean Old Level}$$

¹ U.S. Army Corps of Engineers. 1992. Sacramento–San Joaquin Delta, California Special Study, Office Report, Basis of Design and Cost Estimates.

Based on an assumed channel bottom elevation of -4 feet msl, and a mean flow level for each gate location Without Project, the worst-case increase in failure probability occurs for the Old River gate for a critical dry year and at the head of Old River for the wet year, 2001 LOD:

Year	Level (ft msl) (A)	Head (No Project) (B = A + 4)	Head (Project) C = B + Relative Head Change	Head Increase (%) D = C / B
1977	0.68	4.68	5.02	7.26 (1.0726)
1983	9.45	13.45	14.39	6.99 (1.0699)

The resultant failure probabilities in the above table, using an approximate 7% increase in head (hydrostatic pressure), would increase by a factor of 1.07. The increased failure probabilities are:

Gate Site	Related Island	Failure Probability
Grant Line	Fabian Island	0.0001 x 1.07 = 0.00011
Old River	Fabian Island	0.0001 x 1.07 = 0.00011
Head Old River	Stewart Tract	0.0102 x 1.07 = 0.01092
Middle River	Robert's Island	0.0124 x 1.07 = 0.01327

The change in the probability of levee failure, as a result of gate operation for the Grant Line and Old River gates, increases from 0.01% to 0.011%; for head of Old River from 1.02% to 1.09%; and for Middle River from 1.24% to 1.33%. These results indicate a negligible impact on levee stability as a result of the increase in upstream water level.

Localized Effects

The above data represent the general projected conditions for the south Delta and the gate areas. Although the data results incorporate the general location of each gate, no specific analysis of the immediate localized effects of a gate is possible without a more rigorous evaluation.

Each gate installation amounts to the placement of a control structure in the flow stream of each affected channel. The structures will affect the flow pattern and localized level. Several key design features are planned to address these local effects. These features include: resistance to scour and erosion; debris management; resistance to high-flow-related hydrodynamic forces; and high-flow management.

- Gate erosion protection will include riprapping the channel and levees upstream and downstream of the gate and installing sheet pile walls near the boat lock approaches. The invert of the gate will have a concrete apron and sheet pile cutoffs under the apron. The design floodflow velocity through the gate will not exceed 3 feet per second (feet/sec) for Middle River and 6.5 feet/sec for Grant Line when the gates are open. The erosion protection system will armor the channel to withstand any localized scouring effects from flood and normal operating conditions.
- The three agriculture gates will be operated approximately daily during the irrigation season. Debris will be allowed to pass through the gates upon operation. The gates will also be designed to minimize the number of dead zones to prevent buildup of debris close to the structure.
- The gates will be designed to meet or exceed the U.S. Army Corps of Engineers design criteria. The criteria include load combinations using fluid loads at the maximum water surface differential across the gate and impact loads attributable to floating debris or runaway boats.
- The gates will be designed to pass a 100-year flood. The flow capacity through the gates will be at least equal to the existing channel capacity. Backwater effect will be minimal, less than 3 inches at the Middle River structure, and it will be less than 10 inches at the Grant Line structure.

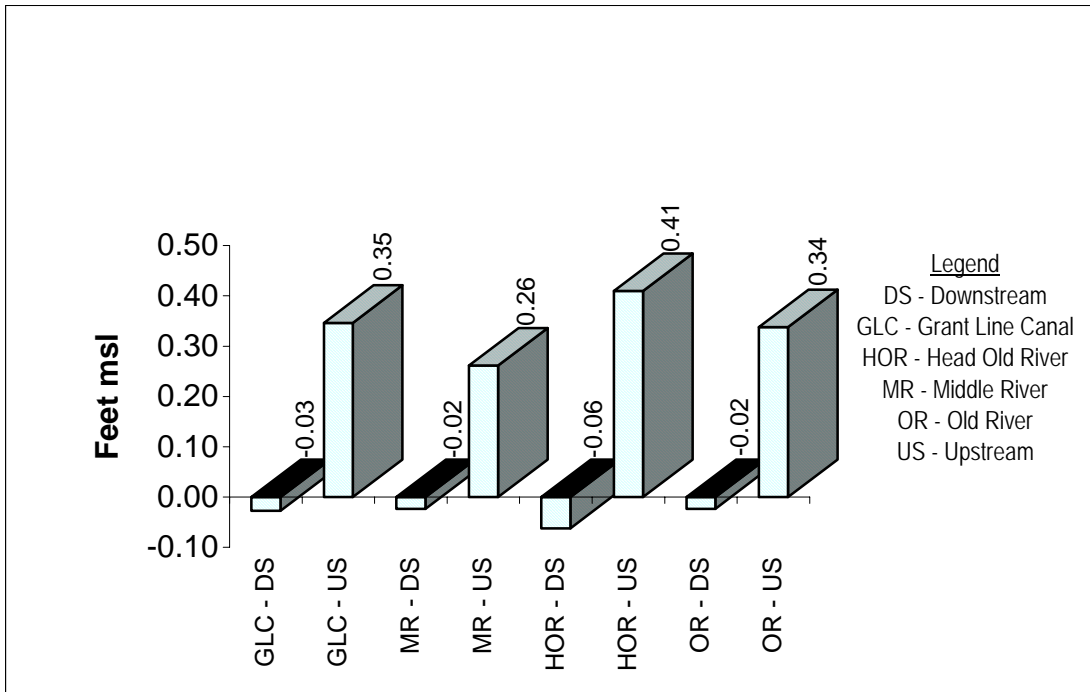


Figure F-1. Average Level Difference (with Gate in Place)
1977 Critical Year (2001 Alternative 2C)

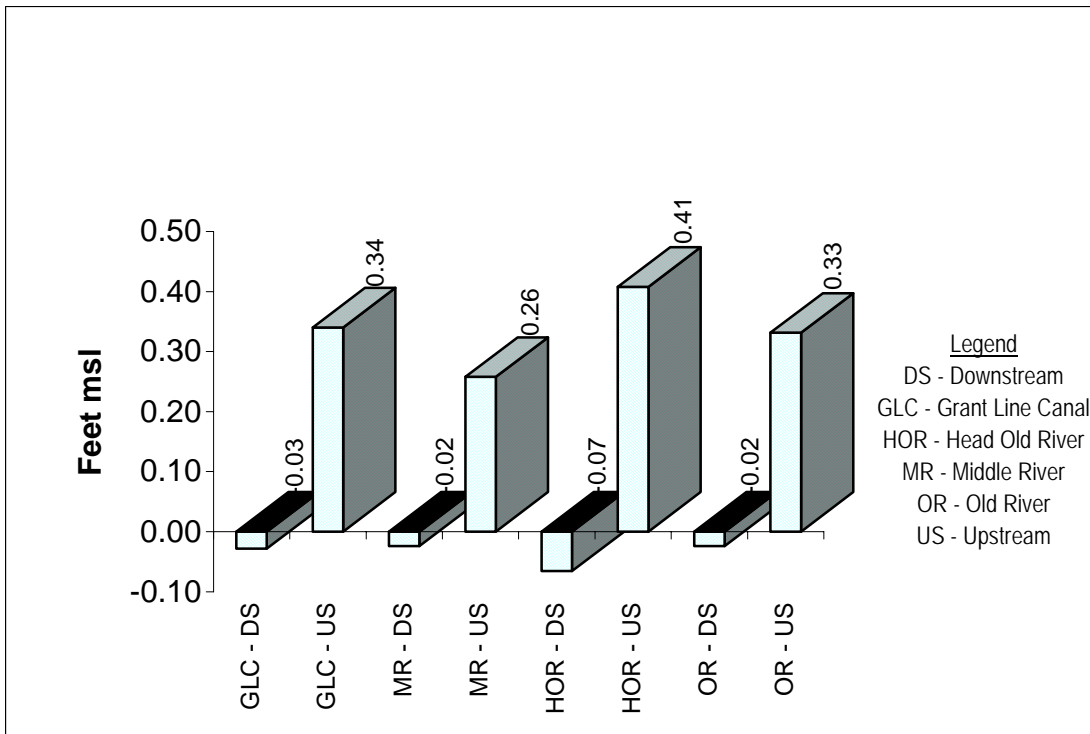


Figure F-2. Average Level Difference (with Gate in Place)
1977 Critical Year (2020 Alternative 2C)

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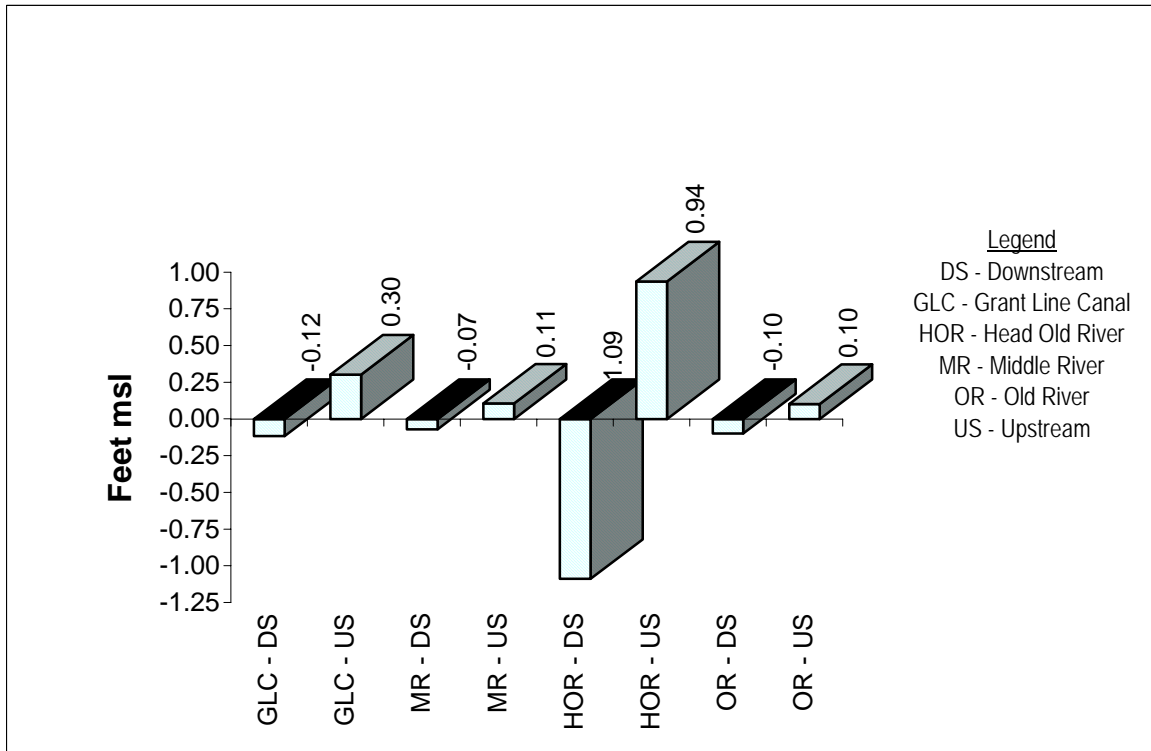


Figure F-3. Average Level Difference (with Gate in Place)
1983 Wet Year (2001 Alternative 2C)

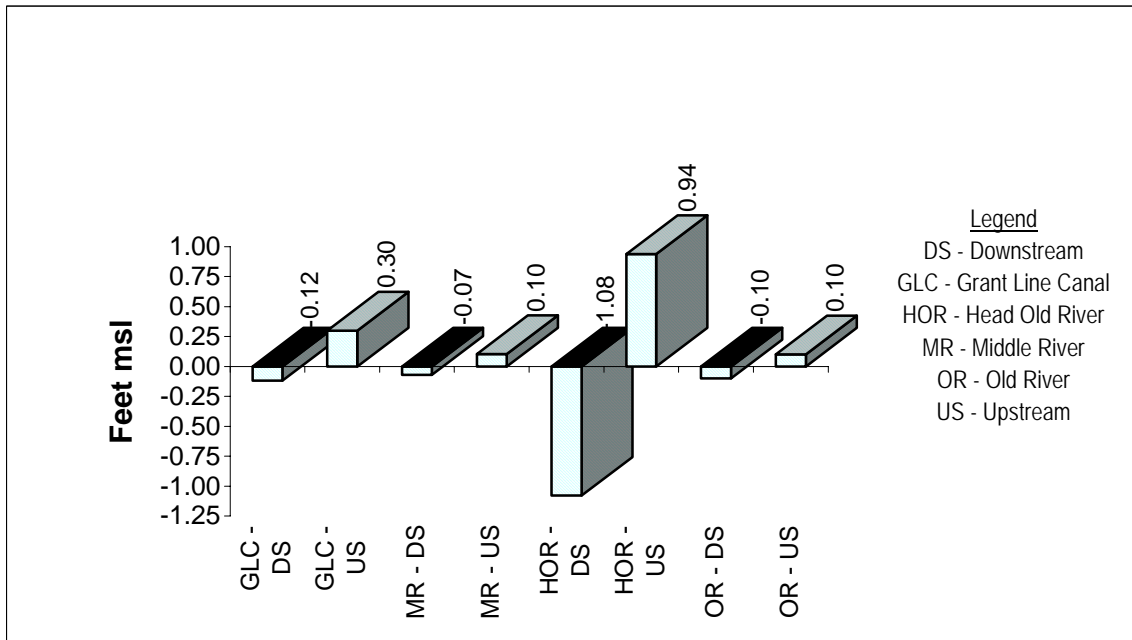


Figure F-4. Average Level Difference (with Gate in Place)
1983 Wet Year (2020 Alternative 2C)

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Appendix G
Velocity Analysis

Contents

	Page
Appendix G Velocity Analysis	G-1
Introduction	G-1
Critical Velocity Data.....	G-1
General Effects	G-2
Localized Effects.....	G-4

Tables and Figures

Table	On Page
G-1 Modeled Channel Water Velocities—Range of Average Velocities and Relative Change for No Project and With Project.....	G-2
G-2 Results of the Grant Line Canal Summary Velocity Data.....	G-3

Figure	Follows Page
G-1 Percent Frequency Velocity Increase/Decrease (with Gate in Place) 1977 Critical Year (2001 Alternative 2C).....	G-4
G-2 Percent Frequency Velocity Increase/Decrease (with Gate in Place) 1977 Critical Year (2020 Alternative 2C).....	G-4
G-3 Percent Frequency Velocity Increase/Decrease (with Gate in Place) 1983 Wet Year (2001 Alternative 2C)	G-4
G-4 Percent Frequency Velocity Increase/Decrease (with Gate in Place) 1983 Wet Year (2020 Alternative 2C)	G-4

Appendix G

Velocity Analysis

Introduction

This appendix comprises a summary velocity analysis of the channel systems near and around the planned gate sites. The analysis is based on modeled and measured velocity water data. These data are considered critical input data because an increase in water velocities could result in localized sedimentation and/or scouring, which could potentially affect recreational and navigation uses and water quality of the Delta.

Critical Velocity Data

Water velocities in the Delta channels are low in general and in some instances can be near zero or negative (reversed flow as a result of tidal influence). An analysis of velocities in the south Delta was performed to evaluate the potential for both sedimentation and erosion (scour). The analysis was supported by data obtained from the DSM2 gate modeling as described in Section 5.2. Analysis of the model data resulted in the determination of summary statistics for two types of water year, critical and wet. Based on the 16-year water year record (1975–1991) analyzed in DSM2, the year 1977 was selected as the “critical” year and 1983 was selected as the “wet” year. These two water year types are representative of the San Joaquin River basin and were selected to present the potential range of flow and conditions in the Delta. Data summary is presented for both the 2001 and 2020 demand years for projected velocities for upstream and downstream locations of each gate. The velocity results for all gate sites are summarized in Table G-1.

Table G-1. Modeled Channel Water Velocities^a—Range of Average Velocities and Relative Change for No Project and With Project

		Parameter	Demand Year			
			2001		2020	
			No Project	With Project	No Project	With Project
Water Year	1977	Average Velocity (feet/sec) ^b	0.05 to 0.59	0.01 to 0.37	0.05 to 0.59	0.01 to 0.37
		Relative Change (%) ^c	0	38 to 80% decrease	0	38 to 80% decrease
		Maximum Velocity (feet/sec)	0.86 to 1.27	0.77 to 1.01	0.86 to 1.27	0.77 to 1.16
		Relative Change (%)	0	10 to 21% decrease	0	0 to 9% decrease
	1983	Average Velocity (feet/sec)	0.90 to 2.81	0.85 to 2.65	0.90 to 2.8	0.84 to 2.64
		Relative Change (%)	0	5 % decrease	0	5 to 6% decrease
		Maximum Velocity (feet/sec)	2.12 to 3.83	2.07 to 3.78	2.11 to 3.83	2.07 to 3.77
		Relative Change (%)	0	1 % decrease	0	1 to 2 % decrease

^a DSM2 Model, Water Years 1975–1991, for upstream and downstream locations.
^b feet per second.
^c Relative change in average (or maximum) velocity from No Project to With Project.

General Effects

The results indicate that the gates will have a more significant effect on average and maximum velocities during critical dry years than during wet years. The modeled decrease in velocity when the gates are operational is as much as 80% for a critical dry year. This result is expected because of the nonlinear relationship between river level and flow capacity and increased resident time of water in the Delta during dry, lower-flow years. Velocity decreases during wet years are projected to be no more than 6%.

As a means of examining the specific velocity effects of each gate on the potential for sedimentation and transport of sediment, a series of frequency graphs are presented on Figures G-1 through G-4. These graphs present the frequency increase or decrease in occurrence of velocities exceeding stream velocities less than 0 feet per second (feet/sec) and greater than 3 feet/sec. These values represent conditions where sedimentation is characterized to be

maximized (~0 feet/sec) or at the onset of transport of the bed sediment load (>3 feet/sec). Based on the data shown on the graphs, the gates are not projected to result in changes of more than an approximate $\pm 8\%$ difference in velocity in comparison to existing conditions (no project), depending on the gate site.

Additionally, limited empirical velocity was obtained for comparison with modeled results from an ongoing velocity monitor study by the United States Geological Survey (USGS). The USGS study has been testing a sonar-based velocity probe at many locations in the Delta. Of interest to this analysis are data collected for Grant Line Canal and Old River.

The available empirical data, collected under the USGS study, is for the period of late 1999 to late 2001. No data are available for the DSM2 model 16-year period of 1975 through 1991. The period of 1999 through 2001 represents an above normal water year for the San Joaquin River basin. The results of the Grant Line Canal summary velocity data are shown in Table G-2.

Table G-2. Results of the Grant Line Canal Summary Velocity Data

Location	Period	Average Velocity (feet/sec) ^a	Minimum Velocity (feet/sec)	Maximum Velocity (feet/sec)
Grant Line Canal	January 1 through May 21, 2001 (gate out)	0.56	-1.15	2.02
	May 9 through November 12, 2001 (gate in)	0.07	-1.12	2.11
Old River	January 1 through April 21, 2001 (gate out) ^b	0.12	-1.03	2.09
	July 2 through September 11, 2001 (gate in) ^c	-0.04	-0.65	1.40

^a feet per second.
^b Flow monitor device recording problem April 22 through July 1, 2001.
^c Flow monitor device recording problem September 11 through September 30, 2001.

These empirical data show the decrease in the average velocity when the gates are in place. An anomalous result appears to occur for the Grant Line Canal gate maximum velocity. The maximum velocity with the gate in is 2.11 feet/sec and with the gate out is 2.02 feet/sec. This occurrence may be attributable to equipment malfunction.

Localized Effects

The above data represent the general observed conditions for the south Delta and the gate areas. Although the data results incorporate the general location of each gate, no specific analysis of the immediate localized effects of a gate is possible without a more rigorous evaluation.

Each gate installation amounts to the placement of a control structure in the flow stream of each affected channel. The structure changes the flow pattern and localized velocities, resulting in areas of potential sediment deposition or transport.

Several key design features are planned to address these local effects. These features include: resistance to scour and erosion; debris management; resistance to high-flow-related hydrodynamic forces; and high-flow management.

- Gate erosion protection will include riprapping the channel and levees upstream and downstream of the gate and installing sheetpile walls near the boat lock approaches. The invert of the gate will have a concrete apron and sheetpile cutoffs under the apron. The design floodflow velocity through the gate will not exceed 3 feet/sec for Middle River and 6.5 feet/sec for Grant Line Canal when the gates are open. The erosion protection system will armor the channel to withstand any localized scouring effects from flood and normal operating conditions.
- The three agriculture gates will be operated at least daily during the irrigation season. Debris will be allowed to pass through the gates upon operation. The gates will also be designed to minimize the number of dead zones to prevent a buildup of debris close to the structure.
- The gates will be designed to meet or exceed the U.S. Army Corps of Engineers design criteria. The criteria include load combinations using fluid loads at the maximum water surface differential across the gate and impact loads attributable to floating debris or runaway boats.
- The gates will be designed to pass a 100-year flood. The flow capacity through the gates will be at least equal to the existing channel capacity. Backwater effect will be minimal, less than 3 inches at Middle River structure, and it will be less than 10 inches at the Grant Line structure.

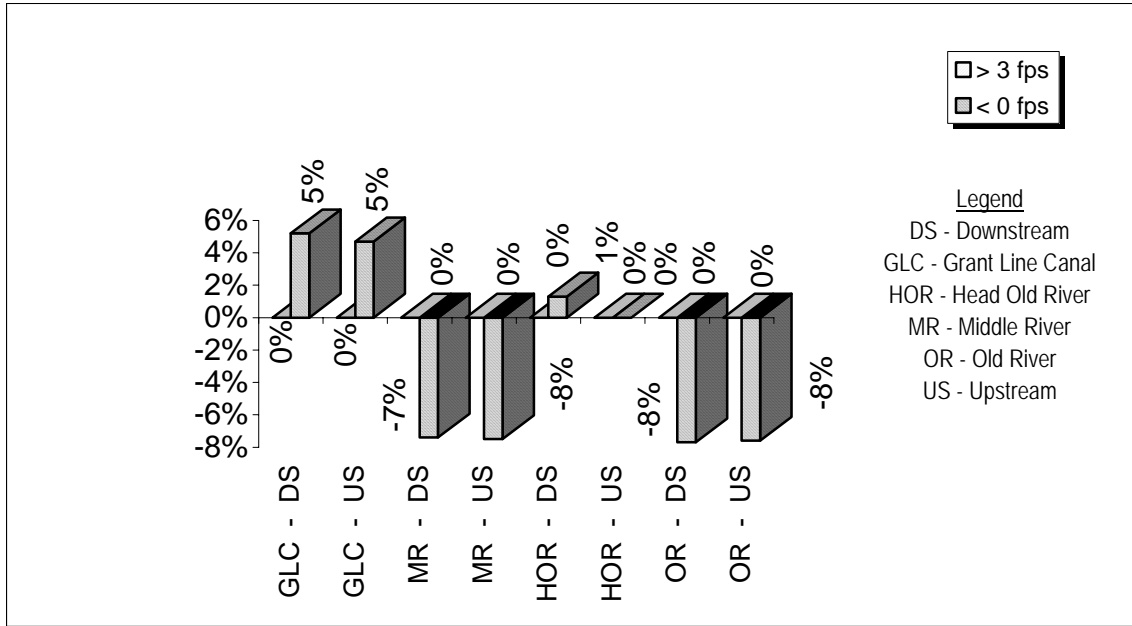


Figure G-1. Percent Frequency Velocity Increase/Decrease (with Gate in Place)
1977 Critical Year (2001 Alternative 2C)

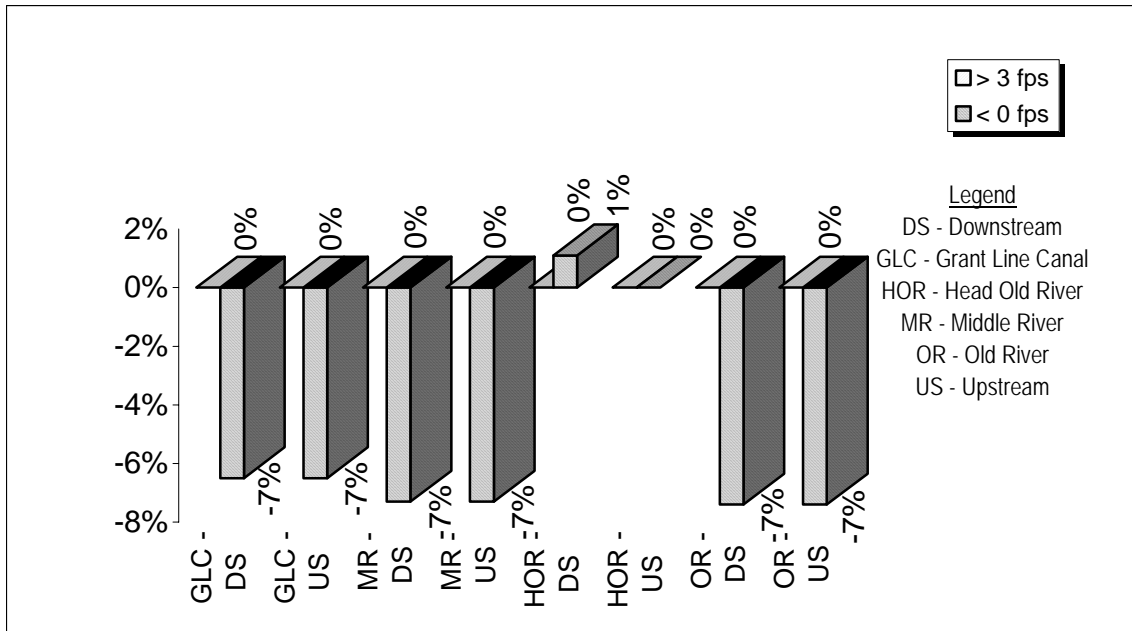


Figure G-2. Percent Frequency Velocity Increase/Decrease (with Gate in Place)
1977 Critical Year (2020 Alternative 2C)

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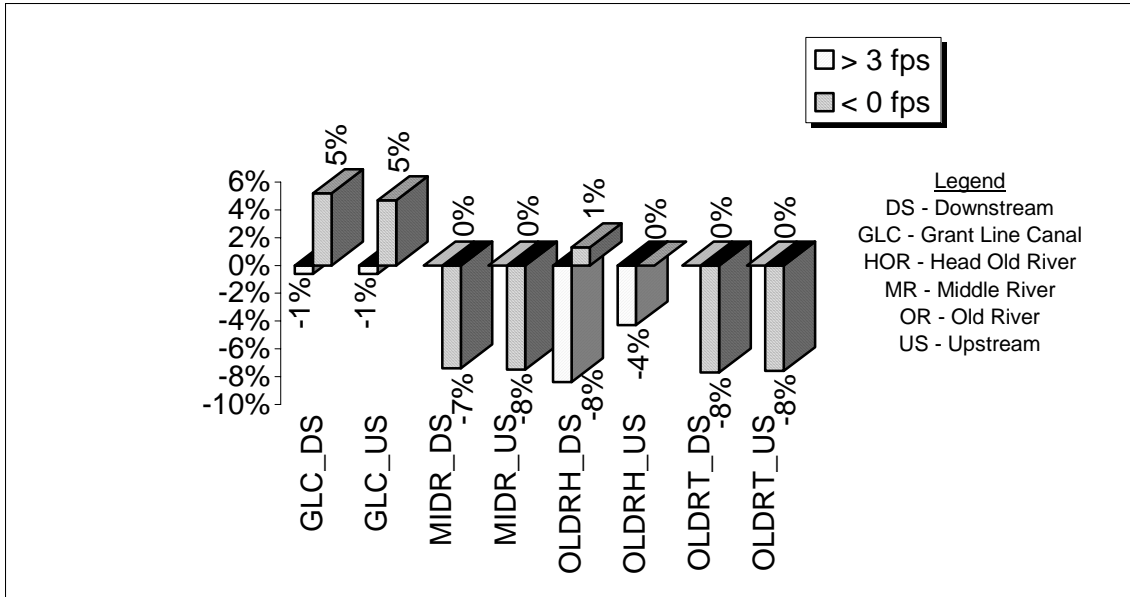


Figure G-3. Percent Frequency Velocity Increase/Decrease (with Gate in Place)
1983 Wet Year (2001 Alternative 2C)

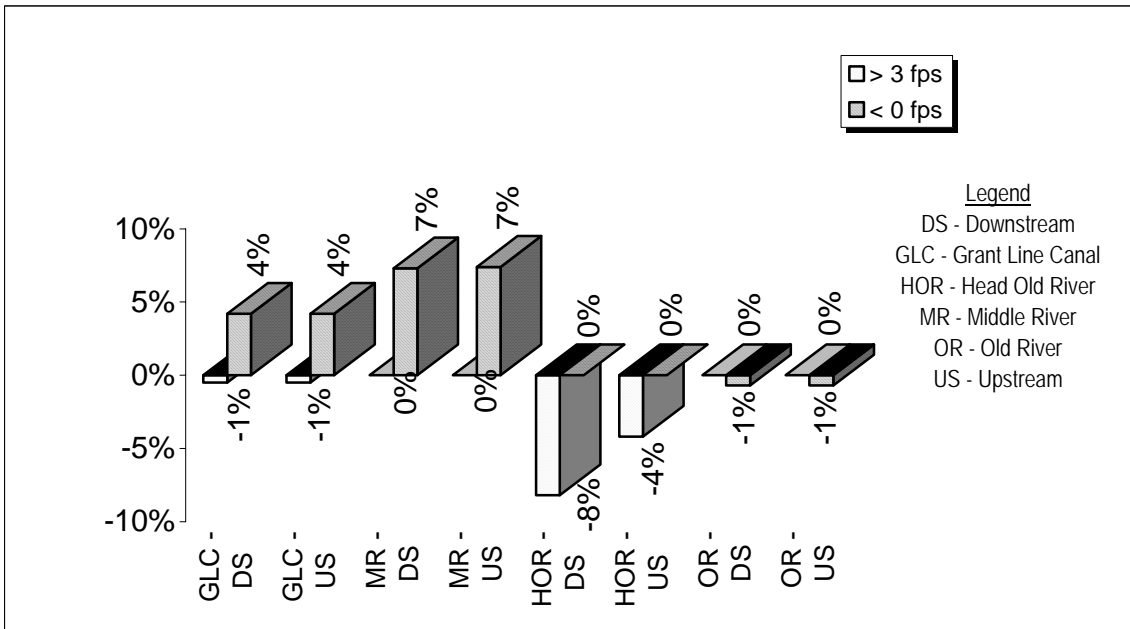


Figure G-4. Percent Frequency Velocity Increase/Decrease (with Gate in Place)
1983 Wet Year (2020 Alternative 2C)

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Appendix H

Environmental Acoustics and State and Federal Noise Regulations

Contents

	Page
Appendix H Environmental Acoustics and State and Federal Noise	
Regulations	H-1
Background Information on Acoustics	H-1
Sound Terminology.....	H-1
Equivalencies between Various Sound Descriptors	H-4
Working with Decibel Values	H-4
Outdoor Sound Propagation	H-5
Guidelines for Interpreting Sound Levels.....	H-6
References	H-8

Table

	On Page
H-1 Typical Noise Levels	H-2

Appendix H

Environmental Acoustics and State and Federal Noise Regulations

Background Information on Acoustics

Sound Terminology

Sound travels through the air as waves of minute air pressure fluctuations caused by some type of vibration. In general, sound waves travel away from the sound source as an expanding spherical surface. The energy contained in a sound wave is consequently spread over an increasing area as it travels away from the source. This results in a decrease in loudness at greater distances from the sound source. The following terms are commonly used in acoustics.

Decibel

Sound-level meters measure the pressure fluctuations caused by sound waves. Because of the ability of the human ear to respond to a wide dynamic range of sound pressure fluctuations, loudness is measured in terms of decibels (dB) on a logarithmic scale. This results in a scale that measures pressure fluctuations with a convenient range of values and corresponds to our auditory perception of increasing or decreasing loudness.

A-Weighted Decibels

Most sounds consist of a broad range of sound frequencies. Because the human ear is not equally sensitive to all frequencies, several frequency-weighting schemes have been used to develop composite decibel scales that approximate the way the human ear responds to sound levels. The “A-weighted” decibel scale (dBA) is the most widely used for this purpose. Typical A-weighted sound levels for various types of sound sources are summarized in Table H-1.

Table H-1. Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 300 meters (1000 feet)		
	— 100 —	
Gas lawn mower at 1 meter (3 feet)		
	— 90 —	
Diesel truck at 15 meters (50 feet) at 80 kph (50 mph)		Food blender at 1 meter (3 feet)
	— 80 —	Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime		
Gas lawn mower, 30 meters (100 feet)	— 70 —	Vacuum cleaner at 3 meters (10 feet)
Commercial area		Normal speech at 1 meter (3 feet)
Heavy traffic at 90 meters (300 feet)	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: California Department of Transportation 1998.

Equivalent Sound Level

Time-varying sound levels are often described in terms of an equivalent constant decibel level. The equivalent sound level (L_{eq}) is the average of sound energy occurring over a specified time period. In effect, L_{eq} is the steady-state sound

level that in a stated time period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period. Equivalent sound levels (L_{eq}) are often used to develop single-value descriptions of average sound exposure over various periods of time. Such average sound exposure values often include additional weighting factors for annoyance potential attributable to time of day or other considerations. The L_{eq} data used for these average sound exposure descriptors are generally based on A-weighted sound-level measurements.

Day-Night Average Sound Level

Average sound exposure over a 24-hour period is often presented as a day-night average sound level (Day-Night Level [L_{dn}]) values are calculated from hourly L_{eq} values, with the L_{eq} values for the nighttime period (10:00 p.m.–7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises.

Community Noise Equivalent Level

The community noise equivalent level (CNEL) is also used to characterize average sound levels over a 24-hour period, with weighting factors included for evening and nighttime sound levels. L_{eq} values for the evening period (7:00 p.m.–10:00 p.m.) are increased by 5 dB, while L_{eq} values for the nighttime period (10:00 p.m.–7:00 a.m.) are increased by 10 dB. For given set of sound measurements, the CNEL value will usually be about 1 dB higher than the L_{dn} value. In practice, CNEL and L_{dn} are often used interchangeably.

Percentile-Exceeded, Maximum, and Minimum Sound Level

The sound level exceeded during a given percentage of a measurement period is the percentile-exceeded sound level (L_x). Examples include L_{10} , L_{50} , and L_{90} . L_{10} is the A-weighted sound level that is exceeded 10% of the measurement period, L_{50} is the level exceeded 50% of the period, and so on. L_{50} is the median sound level measured during the measurement period. L_{90} , the sound level exceeded 90% of the time, excludes high localized sound levels produced by nearby sources such as single car passages or bird chirps. L_{90} is often used to represent the background sound level. L_{50} is also used to provide a less conservative assessment of the background sound level.

The maximum sound level (L_{max}) and the minimum sound level (L_{min}) are the maximum and minimum sound levels respectively, measured during the measurement period. When a sound meter is set to the slow response setting as is typical for most community noise measurements, the L_{max} and L_{min} values are the maximum and minimum levels measured over a one second period.

Ambient Sound

Ambient sound is the all-encompassing sound associated with a given community site, usually being a composite of sounds from many sources, near and far, with no particular sound being dominant.

Equivalencies between Various Sound Descriptors

The L_{dn} value at a site calculated from a set of measurements taken over a given 24-hour period will be slightly lower than the CNEL value calculated over the same period. Except in situations where unusually high evening sound levels occur, the CNEL value will be within about 1.5 dB of the L_{dn} value for the same set of sound measurements.

The relationship between peak hourly L_{eq} values and associated L_{dn} values depends on the distribution of traffic over the entire day. There is no precise way to convert a peak hourly L_{eq} value to an L_{dn} value. However, in urban areas near heavy traffic, the peak hourly L_{eq} value is typically 2–4 dB lower than the daily L_{dn} value. In less heavily developed areas, the peak hourly L_{eq} is often equal to the daily L_{dn} value. For rural areas with little nighttime traffic, the peak hourly L_{eq} value will often be 3–4 dB greater than the daily L_{dn} value.

Working with Decibel Values

The nature of the decibel scale is such that the individual sound levels for different sound sources cannot be added directly to give the combined sound level of these sources. Two sound sources producing equal sound levels at a given location will produce a composite sound level that is 3 dB greater than either sound alone. When two sound sources differ by 10 dB, the composite sound level will be only 0.4 dB greater than the louder source alone.

Most people have difficulty distinguishing the louder of two sound sources if they differ by less than 1.5–2.0 dB. Research into the human perception of changes in sound level indicates the following:

- a 3-dB change is just perceptible,
- a 5-dB change is clearly perceptible, and
- a 10-dB change is perceived as being twice or half as loud.

A doubling or halving of acoustic energy will change the resulting sound level by 3 dB, which corresponds to a change that is just perceptible. In practice, this means that a doubling of traffic volume on a roadway, doubling the number of people in a stadium, or doubling the number of wind turbines in a wind farm will, as a general rule, only result in a 3-dB, or just perceptible, increase in noise.

Outdoor Sound Propagation

There are a number of factors that affect how sound propagates outdoors. These factors, described by Hoover and Keith (1996), are summarized below.

Distance Attenuation

As a general rule, sound from localized or point sound sources spreads out as it travels away from the source and the sound level drops at a rate of 6 dB per doubling of distance. If the sound source is long in one dimension, such as traffic on a highway or a long train, the sound source is considered to be a line source. As a general rule, the sound level from a line source will drop off at a rate of 3 dB per doubling of distance. If the intervening ground between the line source and the receptor is acoustically “soft” (e.g., ground vegetation, scattered trees, clumps of bushes), an attenuation rate of 4.5 dB per doubling of distance is generally used.

Attenuation from Barriers

Any solid structure such as a berm, wall, or building that blocks the line of sight between a source and receiver serves as a sound barrier and will result in additional sound attenuation. The amount of additional attenuation is a function of the difference between the length of the sound path over the barrier and the length of the direct line of sight path. Thus, the sound attenuation of a barrier between a source and a receiver that are very far apart will be much less than the attenuation that would result if either the source or the receiver is very close to the barrier.

Molecular Absorption

Air absorbs sound energy as a function of the temperature, humidity of the air, and frequency of the sound. Additional sound attenuation on the order of 1 to 2 dB per 1,000 feet can occur.

Anomalous Excess Attenuation

Large-scale effects of wind speed, wind direction, and thermal gradients in the air can cause large differences in sound transmission over large distances. These effects when combined result in anomalous excess attenuation, which can be applied to long-term sound-level estimates. Additional sound attenuation on the order of about 1 dB per 1,000 feet can occur.

Other Atmospheric Effects

Short-term atmospheric effects relating to wind and temperature gradients can cause bending of sound waves and can influence changes in sound levels at large distances. These effects can either increase or decrease sound levels depending on the orientation of the source and receptor and the nature of the wind and temperature gradient. Because these effects are normally short-term, it is generally not practical to include them in sound propagation calculations. Understanding these effects, however, can help explain variations that occur between calculated and measured sound levels.

Guidelines for Interpreting Sound Levels

Various federal, state, and local agencies have developed guidelines for evaluating land use compatibility under different sound-level ranges. The following is a summary of federal and state guidelines.

Federal Agency Guidelines

The federal Noise Control Act of 1972 (Public Law 92-574) established a requirement that all federal agencies administer their programs to promote an environment free of noise that jeopardizes public health or welfare. The U.S. Environmental Protection Agency (EPA) was given the responsibility for:

- providing information to the public regarding identifiable effects of noise on public health or welfare,
- publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety,
- coordinating federal research and activities related to noise control, and
- establishing federal noise emission standards for selected products distributed in interstate commerce.

The federal Noise Control Act also directed that all federal agencies comply with applicable federal, state, interstate, and local noise control regulations.

Although the EPA was given major public information and federal agency coordination roles, each federal agency retains authority to adopt noise regulations pertaining to agency programs. The EPA can require other federal agencies to justify their noise regulations in terms of the federal Noise Control Act policy requirements. The Occupational Safety and Health Administration retains primary authority for setting workplace noise exposure standards. The Federal Aviation Administration retains primary jurisdiction over aircraft noise standards, and the Federal Highway Administration (FHWA) retains primary jurisdiction over highway noise standards.

In 1974, in response to the requirements of the federal Noise Control Act, the EPA identified indoor and outdoor noise limits to protect public health and welfare (communication disruption, sleep disturbance, and hearing damage). Outdoor L_{dn} limits of 55 dB and indoor L_{dn} limits of 45 dB are identified as desirable to protect against speech interference and sleep disturbance for residential, educational, and healthcare areas. Sound-level criteria to protect against hearing damage in commercial and industrial areas are identified as 24-hour L_{eq} values of 70 dB (both outdoors and indoors).

FHWA regulations (23 CFR §772) specify criteria for evaluating noise impacts associated with federally funded highway projects and for determining whether these impacts are sufficient to justify funding noise abatement actions. The FHWA noise abatement criteria are based on worst hourly L_{eq} sound levels, not L_{dn} or 24-hour L_{eq} values. The worst-hour 1-hour L_{eq} criteria for residential, educational, and healthcare facilities are 67 dB outdoors and 52 dB indoors. The worst-hour 1-hour L_{eq} criterion for commercial and industrial areas is 72 dB (outdoors).

The U.S. Department of Housing and Urban Development has established guidelines for evaluating noise impacts on residential projects seeking financial support under various grant programs (44 FR §135:40860–40866, January 23, 1979). Sites are generally considered acceptable for residential use if they are exposed to outdoor L_{dn} values of 65 dB or less. Sites are considered “normally unacceptable” if they are exposed to outdoor L_{dn} values of 65–75 dB. Sites are considered unacceptable if they are exposed to outdoor L_{dn} values above 75 dB.

State Agency Guidelines

In 1987, the California Department of Health Services published guidelines for the noise elements of local general plans. These guidelines include a sound level/land use compatibility chart that categorizes various outdoor L_{dn} ranges into up to four compatibility categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable) by land use. For many land uses, the chart shows overlapping L_{dn} ranges for two or more compatibility categories.

The noise element guidelines chart identifies the normally acceptable range for low-density residential uses as less than 60 dB and the conditionally acceptable range as 55–70 dB. The normally acceptable range for high-density residential uses is identified as L_{dn} values below 65 dB, and the conditionally acceptable range is identified as 60–70 dB. For educational and medical facilities, L_{dn} values below 70 dB are considered normally acceptable and L_{dn} values of 60–70 dB are considered conditionally acceptable. For office and commercial land uses, L_{dn} values below 70 dB are considered normally acceptable and L_{dn} values of 67.5–77.5 dB are categorized as conditionally acceptable.

These overlapping L_{dn} ranges are intended to indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land use compatibility at specific locations.

The California Department of Housing and Community Development has adopted noise insulation performance standards for new hotels, motels, and dwellings other than detached single-family structures (24 CCR §25–28). These standards require that “interior CNELs with windows closed, attributable to exterior sources, shall not exceed an annual CNEL of 45 dB in any habitable room”.

The California Department of Transportation uses the FHWA criteria as the basis for evaluating noise impacts from highway projects.

References

- California Department of Transportation. 1998. *Technical noise supplement, a technical supplement to the traffic noise analysis protocol*. Sacramento, CA.
- Hoover, R.M., and R.H. Keith. 1996. *Noise control for buildings and manufacturing plants*. Hoover and Keith, Inc. Houston, TX.

Appendix I

**Results from CALSIM Modeling
of the SDIP Alternatives**

Contents

	Page
Appendix I Results from CALSIM Modeling of the SDIP Alternatives	I-1
Introduction	I-1
Overview of Reservoir and Delta Operations Changes for the SDIP Alternatives.....	I-1
Background for CALSIM Modeling of SDIP Alternatives	I-3
Trinity Reservoir and Trinity River Flows and Exports	I-4
Shasta Reservoir and Sacramento River Flows	I-6
Oroville Reservoir and Feather River Flows	I-7
Folsom Reservoir and American River Flows.....	I-7
Sacramento River Flows at Freeport	I-8
New Melones Reservoir and Stanislaus River Flows	I-8
New Don Pedro Reservoir and Tuolumne River Flows	I-9
Lake McClure and Merced River Flows	I-9
San Joaquin River Flows at Vernalis	I-10
CVP San Luis Reservoir Storage	I-10
SWP San Luis Reservoir Storage.....	I-11
Total San Luis Reservoir Storage.....	I-11
CVP Tracy Export Pumping.....	I-11
SWP Export Pumping	I-12
Combined CVP and SWP Export Pumping	I-13
Delta Outflow	I-13
X2 Location.....	I-13
Upstream Reservoir Carryover Storage	I-13
Upstream River Water Temperatures	I-14
SDIP Operational Scenarios Simulation Results	I-16
References	I-18

Tables

At End of Appendix

- I-1a CALSIM Simulated Trinity Lake Storage, for 2001 Baseline Conditions
- I-1b CALSIM Simulated Trinity Lake Storage, for 2020 Baseline Conditions
- I-1c CALSIM Simulated Trinity Lake Storage, 2020 Baseline minus 2001 Baseline
- I-1d CALSIM Simulated Monthly Cumulative Distribution of Trinity Reservoir Storage for 2001 and 2020 Baselines
- I-2a CALSIM Simulated Trinity River Flow, for 2001 Baseline Conditions
- I-2b CALSIM Simulated Trinity River Flow, for 2020 Baseline Conditions
- I-2c CALSIM Simulated Trinity River Flow, 2020 Baseline minus 2001 Baseline
- I-2d CALSIM Simulated Monthly Cumulative Distribution of Trinity River Flows for 2001 and 2020 Baselines
- I-3a CALSIM Simulated Trinity Export Flow to Sacramento River, for 2001 Baseline Conditions
- I-3b CALSIM Simulated Trinity Export Flow to Sacramento River, for 2020 Baseline Conditions
- I-3c CALSIM Simulated Trinity Export Flow to Sacramento River, 2020 Baseline minus 2001 Baseline
- I-3d CALSIM Simulated Monthly Cumulative Distribution of Trinity River Exports for 2001 and 2020 Baselines
- I-4a CALSIM Simulated Shasta Storage, for 2001 Baseline Conditions
- I-4b CALSIM Simulated Shasta Storage, for 2020 Baseline Conditions
- I-4c CALSIM Simulated Shasta Storage, 2020 Baseline minus 2001 Baseline
- I-4d CALSIM Simulated Monthly Cumulative Distribution of Shasta Reservoir Storage for 2001 and 2020 Baselines
- I-5a CALSIM Simulated Keswick Release Flow, for 2001 Baseline Conditions
- I-5b CALSIM Simulated Keswick Release Flow, for 2020 Baseline Conditions
- I-5c CALSIM Simulated Keswick Release Flow, 2020 Baseline minus 2001 Baseline
- I-5d CALSIM Simulated Monthly Cumulative Distribution of Keswick Reservoir Release Flows for 2001 and 2020 Baselines
- I-6a CALSIM Simulated Sacramento River Flow at Wilkins Slough, for 2001 Baseline Conditions

- I-6b CALSIM Simulated Sacramento River Flow at Wilkins Slough, for 2020 Baseline Conditions
- I-6c CALSIM Simulated Sacramento River Flow at Wilkins Slough, 2020 Baseline minus 2001 Baseline
- I-6d CALSIM Simulated Sacramento River Flow at Wilkins Slough, Percentiles for 2001 and 2020 Baseline
- I-7a CALSIM Simulated Oroville Storage, for 2001 Baseline Conditions
- I-7b CALSIM Simulated Oroville Storage, for 2020 Baseline Conditions
- I-7c CALSIM Simulated Oroville Storage, 2020 Baseline minus 2001 Baseline
- I-7d CALSIM Simulated Monthly Cumulative Distribution of Oroville Reservoir Storage for 2001 and 2020 Baselines
- I-8a CALSIM Simulated Feather River Flow below Thermalito Release, for 2001 Baseline Conditions
- I-8b CALSIM Simulated Feather River Flow below Thermalito Release, for 2020 Baseline Conditions
- I-8c CALSIM Simulated Feather River Flow below Thermalito Release, 2020 Baseline minus 2001 Baseline
- I-8d CALSIM Simulated Monthly Cumulative Distribution of Feather River Flows below Thermalito Reservoir for 2001 and 2020 Baselines
- I-9a CALSIM Simulated Folsom Storage, for 2001 Baseline Conditions
- I-9b CALSIM Simulated Folsom Storage, for 2020 Baseline Conditions
- I-9c CALSIM Simulated Folsom Storage, 2020 Baseline minus 2001 Baseline
- I-9d CALSIM Simulated Monthly Cumulative Distribution of Folsom Reservoir Storage for 2001 and 2020 Baselines
- I-10a CALSIM Simulated American River Flow below Nimbus Dam, for 2001 Baseline Conditions
- I-10b CALSIM Simulated American River Flow below Nimbus Dam, for 2020 Baseline Conditions
- I-10c CALSIM Simulated American River Flow below Nimbus Dam, 2020 Baseline minus 2001 Baseline
- I-10d CALSIM Simulated Monthly Cumulative Distribution of Nimbus Reservoir Release Flows for 2001 and 2020 Baselines
- I-11a CALSIM Simulated Sacramento River Flow at Freeport, for 2001 Baseline Conditions
- I-11b CALSIM Simulated Sacramento River Flow at Freeport, for 2020 Baseline Conditions
- I-11c CALSIM Simulated Sacramento River Flow at Freeport, 2020 Baseline minus 2001 Baseline
- I-11d CALSIM Simulated Monthly Cumulative Distribution of Sacramento River Flows at Freeport for 2001 and 2020 Baselines
- I-12a CALSIM Simulated Yolo Bypass Inflow, for 2001 Baseline Conditions

- I-12b CALSIM Simulated Yolo Bypass Inflow, for 2020 Baseline Conditions
- I-12c CALSIM Simulated Yolo Bypass Inflow, 2020 Baseline minus 2001 Baseline
- I-12d CALSIM Simulated Yolo Bypass Inflow, Percentiles for 2001 and 2020 Baselines
- I-13a CALSIM Simulated New Melones Reservoir Storage, for 2001 Baseline Conditions
- I-13b CALSIM Simulated New Melones Reservoir Storage, for 2020 Baseline Conditions
- I-13c CALSIM Simulated New Melones Reservoir Storage, 2020 Baseline minus 2001 Baseline
- I-13d CALSIM Simulated Monthly Cumulative Distribution of New Melones Reservoir Storage for 2001 and 2020 Baselines
- I-14a CALSIM Simulated Stanislaus River Flow below Goodwin Dam, for 2001 Baseline Conditions
- I-14b CALSIM Simulated Stanislaus River Flow below Goodwin Dam, for 2020 Baseline Conditions
- I-14c CALSIM Simulated Stanislaus River Flow below Goodwin Dam, 2020 Baseline minus 2001 Baseline
- I-14d CALSIM Simulated Monthly Cumulative Distribution of Stanislaus River Flows below Goodwin Dam for 2001 and 2020 Baselines
- I-15a CALSIM Simulated New Don Pedro Reservoir Storage, for 2001 Baseline Conditions
- I-15b CALSIM Simulated New Don Pedro Reservoir Storage, for 2020 Baseline Conditions
- I-15c CALSIM Simulated New Don Pedro Reservoir Storage, 2020 Baseline minus 2001 Baseline
- I-15d CALSIM Simulated New Don Pedro Reservoir Storage, Percentiles for 2001 and 2020 Baselines
- I-16a CALSIM Simulated Tuolumne River Flow below La Grange Dam, for 2001 Baseline Conditions
- I-16b CALSIM Simulated Tuolumne River Flow below La Grange Dam, for 2020 Baseline Conditions
- I-16c CALSIM Simulated Tuolumne River Flow below La Grange Dam, 2020 Baseline minus 2001 Baseline
- I-16d CALSIM Simulated Tuolumne River Flow below La Grange Dam, Percentiles for 2001 and 2020 Baselines
- I-17a CALSIM Simulated Lake McClure Storage, for 2001 Baseline Conditions
- I-17b CALSIM Simulated Lake McClure Storage, for 2020 Baseline Conditions
- I-17c CALSIM Simulated Lake McClure Storage, 2020 Baseline minus 2001 Baseline
- I-17d CALSIM Simulated Lake McClure Storage, Percentiles for 2001 and 2020 Baselines
- I-18a CALSIM Simulated Merced River Flow below Merced Falls Dam, for 2001 Baseline Conditions
- I-18b CALSIM Simulated Merced River Flow below Merced Falls Dam, for 2020 Baseline Conditions

- I-18c CALSIM Simulated Merced River Flow below Merced Falls Dam, 2020 Baseline minus 2001 Baseline
- I-18d CALSIM Simulated Merced River Flow below Merced Falls Dam, 2020 Baseline minus 2001 Baseline
- I-19a CALSIM Simulated San Joaquin River Flow at Vernalis, for 2001 Baseline Conditions
- I-19b CALSIM Simulated San Joaquin River Flow at Vernalis, for 2020 Baseline Conditions
- I-19c CALSIM Simulated San Joaquin River Flow at Vernalis, 2020 Baseline minus 2001 Baseline
- I-19d CALSIM Simulated Monthly Cumulative Distribution of San Joaquin River Flows at Vernalis for 2001 and 2020 Baselines
- I-20a CALSIM Simulated CVP San Luis Reservoir Storage, for 2001 Baseline Conditions
- I-20b CALSIM Simulated CVP San Luis Reservoir Storage, for 2020 Baseline Conditions
- I-20c CALSIM Simulated CVP San Luis Reservoir Storage, 2020 Baseline minus 2001 Baseline
- I-20d CALSIM Simulated Monthly Cumulative Distribution of CVP San Luis Reservoir Storage for 2001 and 2020 Baselines
- I-21a CALSIM Simulated SWP San Luis Reservoir Storage, for 2001 Baseline Conditions
- I-21b CALSIM Simulated SWP San Luis Reservoir Storage, for 2020 Baseline Conditions
- I-21c CALSIM Simulated SWP San Luis Reservoir Storage, 2020 Baseline minus 2001 Baseline
- I-21d CALSIM Simulated Monthly Cumulative Distribution of SWP San Luis Reservoir Storage for 2001 and 2020 Baselines
- I-22a CALSIM Simulated Total San Luis Reservoir Storage, for 2001 Baseline Conditions
- I-22b CALSIM Simulated Total San Luis Reservoir Storage, for 2020 Baseline Conditions
- I-22c CALSIM Simulated Total San Luis Reservoir Storage, 2020 Baseline minus 2001 Baseline
- I-22d CALSIM Simulated Total San Luis Reservoir Storage, Percentiles for 2001 and 2020 Baselines
- I-23a CALSIM Simulated CVP Tracy Pumping, for 2001 Baseline Conditions
- I-23b CALSIM Simulated CVP Tracy Pumping, for 2020 Baseline Conditions
- I-23c CALSIM Simulated CVP Tracy Pumping, 2020 Baseline minus 2001 Baseline
- I-23d CALSIM Simulated Monthly Cumulative Distribution of CVP Tracy Pumping, for 2001 and 2020 Baselines
- I-24a CALSIM Simulated SWP Banks Pumping, for 2001 Baseline Conditions
- I-24b CALSIM Simulated SWP Banks Pumping, for 2020 Baseline Conditions
- I-24c CALSIM Simulated SWP Banks Pumping, 2020 Baseline minus 2001 Baseline
- I-24d CALSIM Simulated Monthly Cumulative Distribution of SWP Banks Pumping, for 2001 and 2020 Baselines

- I-25a CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, for 2001 Baseline Conditions
- I-25b CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, for 2020 Baseline Conditions
- I-25c CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Baseline minus 2001 Baseline
- I-25d CALSIM Simulated Monthly Cumulative Distribution of Combined CVP Tracy and SWP Banks Pumping, for 2001 and 2020 Baselines
- I-26a CALSIM Simulated Total Delta Outflow, for 2001 Baseline Conditions
- I-26b CALSIM Simulated Total Delta Outflow, for 2020 Baseline Conditions
- I-26c CALSIM Simulated Total Delta Outflow, 2020 Baseline minus 2001 Baseline
- I-26d CALSIM Simulated Total Delta Outflow, Percentiles for 2001 and 2020 Baselines
- I-27a CALSIM Simulated Beginning-of-Month X2 Location, for 2001 Baseline Conditions
- I-27b CALSIM Simulated Beginning-of-Month X2 Location, for 2020 Baseline Conditions
- I-27c CALSIM Simulated Beginning-of-Month X2 Location, 2020 Baseline minus 2001 Baseline
- I-27d CALSIM Simulated Beginning-of-Month X2 Location, Percentiles for 2001 and 2020 Baselines
- I-28a CALSIM Simulated CVP Tracy Pumping, for 2001 Scenario A Conditions
- I-28b CALSIM Simulated CVP Tracy Pumping, 2001 Scenario A minus 2001 Baseline
- I-29a CALSIM Simulated CVP Tracy Pumping, for 2020 Scenario A Conditions
- I-29b CALSIM Simulated CVP Tracy Pumping, 2020 Scenario A minus 2020 Baseline
- I-30a CALSIM Simulated SWP Banks Pumping, 2001 Scenario A Conditions
- I-30b CALSIM Simulated SWP Banks Pumping, 2001 Scenario A minus 2001 Baseline
- I-31a CALSIM Simulated SWP Banks Pumping, 2020 Scenario A Conditions
- I-31b CALSIM Simulated SWP Banks Pumping, 2020 Scenario A minus 2020 Baseline
- I-32a CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario A Conditions
- I-32b CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario A Conditions
- I-33a CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario A Conditions
- I-33b CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario A minus 2020 Baseline
- I-34a CALSIM Simulated CVP Tracy Pumping, for 2001 Scenario B Conditions
- I-34b CALSIM Simulated CVP Tracy Pumping, 2001 Scenario B minus 2001 Baseline
- I-35a CALSIM Simulated CVP Tracy Pumping, for 2020 Scenario B Conditions
- I-35b CALSIM Simulated CVP Tracy Pumping, 2020 Scenario B minus 2020 Baseline

- I-36a CALSIM Simulated SWP Banks Pumping, 2001 Scenario B Conditions
- I-36b CALSIM Simulated SWP Banks Pumping, 2001 Scenario B minus 2001 Baseline
- I-37a CALSIM Simulated SWP Banks Pumping, for 2020 Scenario B Conditions
- I-37b CALSIM Simulated SWP Banks Pumping, 2020 Scenario B minus 2020 Baseline
- I-38a CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario B Conditions
- I-38b CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario B minus 2002 Baseline
- I-39a CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, for 2020 Scenario B Conditions
- I-39b CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario B minus 2002 Baseline
- I-40a CALSIM Simulated CVP Tracy Pumping, for 2001 Scenario C Conditions
- I-40b CALSIM Simulated CVP Tracy Pumping, 2001 Scenario C minus 2001 Baseline
- I-41a CALSIM Simulated CVP Tracy Pumping, for 2020 Scenario C Conditions
- I-41b CALSIM Simulated CVP Tracy Pumping, 2020 Scenario C minus 2020 Baseline
- I-42a CALSIM Simulated SWP Banks Pumping, 2001 Scenario C Conditions
- I-42b CALSIM Simulated SWP Banks Pumping, 2001 Scenario C minus 2001 Baseline
- I-43a CALSIM Simulated SWP Banks Pumping, 2020 Scenario C Conditions
- I-43b CALSIM Simulated SWP Banks Pumping, 2020 Scenario C minus 2020 Baseline
- I-44a CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario C Conditions
- I-44b CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario C minus 2001 Baseline
- I-45a CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario C Conditions
- I-45b CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario C minus 2020 Baseline
- I-46a CALSIM Simulated CVP Tracy Pumping, for 2020 OCAP Conditions
- I-46b CALSIM Simulated CVP Tracy Pumping, 2020 OCAP minus 2020 SDIP 2A Scenario
- I-47a CALSIM Simulated SWP Banks Pumping, for 2020 OCAP Conditions
- I-47b CALSIM Simulated SWP Banks Pumping, 2020 OCAP minus 2020 SDIP 2A Scenario
- I-48a CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, for 2020 OCAP Conditions
- I-48b CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 OCAP minus 2020 SDIP 2A Scenario
- I-49a CALSIM Simulated Delta Outflow, for 2020 OCAP Conditions
- I-49b CALSIM Simulated Delta Outflow, 2020 OCAP minus 2020 SDIP 2A Scenario

- I-50a CALSIM-Simulated Monthly Range of Sacramento River Flow at Keswick, for 2001 Scenario A Compared to 2001 Baseline
- I-50b CALSIM-Simulated Monthly Range of Sacramento River Flow at Keswick, for 2020 Scenario A Compared to 2020 Baseline
- I-51a CALSIM-Simulated Monthly Range of Feather River Flow below Thermalito, for 2001 Scenario A Compared to 2001 Baseline
- I-51b CALSIM-Simulated Monthly Range of Feather River Flow below Thermalito, for 2020 Scenario A Compared to 2020 Baseline
- I-52a CALSIM-Simulated Monthly Range of American River Flow below Nimbus Dam, for 2001 Scenario A Compared to 2001 Baseline
- I-52b CALSIM-Simulated Monthly Range of American River Flow below Nimbus Dam, for 2020 Scenario A Compared to 2020 Baseline
- I-53a CALSIM-Simulated Monthly Range of Sacramento River Flow at Freeport, for 2001 Scenario A Compared to 2001 Baseline
- I-53b CALSIM-Simulated Monthly Range of Sacramento River Flow at Freeport, for 2020 Scenario A Compared to 2020 Baseline
- I-54a CALSIM-Simulated Monthly San Joaquin River Flow at Vernalis, for 2001 Scenario A Compared to 2001 Baseline
- I-54b CALSIM-Simulated Monthly San Joaquin River Flow at Vernalis, for 2020 Scenario A Compared to 2020 Baseline
- I-55a CALSIM-Simulated Monthly Range of Combined CVP Tracy and SWP Banks Pumping, for 2001 Scenario A Compared to 2001 Baseline
- I-55b CALSIM-Simulated Monthly Range of Combined CVP Tracy and SWP Banks Pumping, for 2020 Scenario A Compared to 2020 Baseline
- I-56a CALSIM-Simulated Monthly Range of Total Delta Outflow, for 2001 Scenario A Compared to 2001 Baseline
- I-56b CALSIM-Simulated Monthly Range of Total Delta Outflow, for 2020 Scenario A Compared to 2020 Baseline
- I-57a CALSIM-Simulated Beginning of Month X2 Location, for 2001 Scenario A Compared to 2001 Baseline
- I-57b CALSIM-Simulated Beginning of Month X2 Location, for 2020 Scenario A Compared to 2020 Baseline
- I-58a CALSIM-Simulated Monthly CVP San Luis Reservoir Storage, for 2001 Scenario A Compared to 2001 Baseline
- I-58b CALSIM-Simulated Monthly CVP San Luis Reservoir Storage, for 2001 Scenario A Compared to 2001 Baseline
- I-59a CALSIM-Simulated Monthly SWP San Luis Reservoir Storage, for 2001 Scenario A Compared to 2001 Baseline
- I-59b CALSIM-Simulated Monthly SWP San Luis Reservoir Storage, for 2020 Scenario A Compared to 2020 Baseline

- I-60 Monthly Distribution of Trinity Reservoir Inflows (cfs) for 2001 and 2020 Baseline Conditions
- I-61 Monthly Distribution of Shasta Reservoir Inflows (cfs) for 2001 and 2020 Baseline Conditions
- I-62 Monthly Distribution of Oroville Reservoir Inflows (cfs) for 2001 and 2020 Baseline Conditions
- I-63 Monthly Distribution of Folsom Reservoir Inflows (cfs) for 2001 and 2020 Baseline Conditions
- I-64 Monthly Distribution of New Melones Reservoir Inflows (cfs) for 2001 and 2020 Baseline Conditions
- I-65 Monthly Distribution of New Don Pedro Reservoir Inflows (cfs) for 2001 and 2020 Baseline Conditions
- I-66 Monthly Distribution of Lake McClure Inflows (cfs) for 2001 and 2020 Baseline Conditions
- I-67 Monthly Distribution of Yuba River Inflows (cfs) to Feather River for 2001 and 2020 Baseline Conditions
- I-68 Monthly Distribution of Mokelumne River and Cosumnes River Inflows (cfs) for 2001 and 2020 Baseline Conditions
- I-69a CALSIM-Simulated SWP San Luis Reservoir for 2020 Baseline Conditions Prior To Environmental Water Account Actions
- I-69b CALSIM-Simulated SWP Article 21 Deliveries for 2020 Baseline Conditions Prior To Environmental Water Account Actions

Figures

At End of Appendix

- I-1 Use of CALSIM and DSM2 Model Results for SDIP Alternatives Impact Assessments
- I-2 Annual CVP South-of-Delta Deliveries for 2001 and 2020 SDIP Alternatives
- I-3 Annual SWP South-of-Delta Table A Deliveries for 2001 and 2020 SDIP Alternatives
- I-4 Annual SWP Article 21 Deliveries for 2001 and 2020 SDIP Alternatives
- I-5 San Luis Reservoir Storage for 2001 and 2020 Baselines
- I-6 Upstream Reservoir Carryover (End-of-September) Storage for 2001 and 2020 Baselines
- I-7a Simulated Monthly Trinity River Temperatures at Lewiston for 2001 Baseline Conditions
- I-7b Simulated Monthly Trinity River Temperatures at North Fork for 2001 Baseline Conditions
- I-7c Relationship Between Trinity River at Lewiston Water Temperatures and Trinity Reservoir Storage for June, July, August, and September
- I-7d Relationship Between Trinity River at Lewiston Water Temperatures and Trinity River Exports for June, July, August, and September
- I-8a Simulated Shasta Carryover Storage and Sacramento River Water Temperatures for 2001 Baseline Conditions
- I-8b Relationship between Shasta Storage and Water Temperatures below Keswick for 2001 Baseline Conditions
- I-8c Relationship between Sacramento River Flow and Downstream September Temperatures for 2001 Baseline Conditions
- I-8d Relationship between Sacramento River Water Temperatures and Winter-Run Egg Mortality for 2001 Baseline Conditions
- I-9a Simulated Oroville Carryover Storage and September Feather River Water Temperatures for 2001 Baseline Conditions
- I-9b Relationship between Oroville End-of-Month Storage and Water Temperatures below Thermalito for 2001 Baseline Conditions
- I-9c Simulated Feather River Water Temperatures below Thermalito for 2001 Baseline Conditions
- I-9d Relationship between Feather River Flow and Water Temperatures at Yuba for 2001 Baseline Conditions

- I-10a Simulated Folsom Carryover Storage and September American River Water Temperatures for 2001 Baseline Conditions
- I-10b Relationship between Folsom End-of-Month Storage and Water Temperatures below Nimbus for 2001 Baseline Conditions
- I-10c Simulated American River Water Temperatures at Watt Avenue for 2001 Baseline Conditions
- I-10d Relationship between American River Flow and Water Temperatures at Watt Avenue for 2001 Baseline Conditions

Acronyms and Abbreviations

CALSIM	water supply operations model CALSIM II
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CVP	Central Valley Project
CVP Tracy	CVP Tracy Pumping Plant
D-1641	State Water Resources Control Board Delta water rights decision 1641
Delta	Sacramento–San Joaquin River Delta
DMC	Delta-Mendota Canal
DSM2	Delta tidal hydraulics model
DWR	California Department of Water Resources
EC	electrical conductivity
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
EWA	Environmental Water Account
km	kilometers
LOD	level of development
M&I	municipal and industrial
maf	million acre-feet
Metropolitan	The Metropolitan Water District of Southern California
NEPA	National Environmental Policy Act
ppt	parts per thousand
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
SCVWD	Santa Clara Valley Water District
SDIP	South Delta Improvements Program
State Water Board	State Water Resources Control Board
SWP	State Water Project
SWP Banks	SWP Harvey O. Banks Pumping Plant
taf	thousand acre-feet
taf/yr	thousand acre-feet per year
VAMP	Vernalis Adaptive Management Plan
WY	water years

Appendix I

Results from CALSIM Modeling of the SDIP Alternatives

Introduction

This appendix provides a summary of results from the water supply operations model (CALSIM II, abbreviated as CALSIM) simulations of the South Delta Improvements Program (SDIP) alternatives. CALSIM simulations of the 2001 and 2020 baselines were based on the 2002 Benchmark studies (California Department of Water Resources 2002). Simulations of the alternatives were made during 2003. Results from the monthly CALSIM model are presented in a series of tables and figures. Comparisons of the 2001 and 2020 simulations are given. These modeling results are used in the SDIP Draft Environmental Impact Statement/Environmental Impact Report (SDIP Draft EIS/EIR), Section 5.1, Water Supply Management, to evaluate the water supply changes from the baseline conditions. These CALSIM results provide the basis for Sacramento–San Joaquin River Delta (Delta) tidal hydraulic and water quality modeling, which is described and summarized in Section 5.2 and Appendix D. CALSIM results are also used for evaluation of fish habitat conditions described in Section 6.1. A general review of the CALSIM modeling effort and results is presented here.

Overview of Reservoir and Delta Operations Changes for the SDIP Alternatives

The SDIP involves operational changes at the Clifton Court Forebay intake gates and subsequent changes in Delta channel flows and upstream reservoir operations and river flows. There are two basic models that have been used by the California Department of Water Resources (DWR) and the U.S. Department of the Interior, Bureau of Reclamation (Reclamation), to track and evaluate these variables for the 2001 and 2020 baseline conditions and for each of the SDIP alternatives evaluated in this EIR/EIS. Because the State Water Project (SWP) and the Central Valley Project (CVP) water supply systems are operated along with non-project (local) water supply and flood control reservoirs in a semi-integrated manner, monthly changes in SWP pumping that could be allowed with

an SDIP alternative, may cause changes in upstream SWP or CVP reservoir releases and storage, which may cause environmental impacts in the reservoirs, downstream rivers, or in the Delta channels.

Figure I-1 shows the general flow of information from the CALSIM model and the Delta tidal hydraulics model (DSM2) to the various natural resource topics that are evaluated for potential environmental and socioeconomic impacts. The water supply operations and Delta tidal hydraulic models are also used to evaluate the ability of the SDIP alternatives to meet the project purposes of increased CVP and SWP south-of-Delta water supply, improved south Delta water quality, and reduced entrainment of fish in the south Delta. Changes in these SDIP project purposes are simulated with the CALSIM and DSM2 models but are not evaluated as potential environmental impacts that require mitigation.

The CALSIM model separately tracks CVP and SWP exports and deliveries to fully disclose the shifts in water supply allocations and sharing that will result from the SDIP alternatives compared to the baseline water supply conditions. These possible shifts between CVP and SWP water exports and deliveries are governed by the State Water Resources Control Board (State Water Board) Delta water rights decision 1641 (D-1641), and by agreements and protocols that are established between SWP and CVP contractors (e.g., Coordinated Operations Agreement and the Napa Agreement). Because increased water supply is one of the SDIP objectives, no mitigation is required for these changes in water supply conditions or shifts in CVP and SWP allocations.

The DSM2 Delta tidal hydraulic and water quality model is used in a similar way to simulate the expected changes in south Delta tidal stage and flow conditions that may influence the SDIP goals of local diversions and reduced salinity. The CALSIM monthly flows and exports for the 16-year study period 1976–1991 were used in the DSM2 simulations.

Many other potential environmental impacts are related to the monthly CVP and SWP reservoir and Delta operations that may change under the SDIP alternatives. The CALSIM estimates of Delta outflow and exports are the most important variables for water quality and fisheries evaluations. The CALSIM model includes an estimate (i.e., ANN-salinity) of the relationship between Delta monthly inflow, exports, and the corresponding outflow and salinity.

The CVP and SWP reservoirs and Delta baseline conditions simulated by CALSIM for 2001 (existing conditions) and for 2020 (future no action) are fully described in Section 5.1. Environmental impacts that may result from changes in reservoir operations or Delta operations caused by the SDIP alternatives are identified and evaluated in subsequent resource topic sections. This appendix provides a consistent summary of the CALSIM results that were used for each of these resource evaluations.

Background for CALSIM Modeling of SDIP Alternatives

The monthly water supply modeling for SDIP alternatives was accomplished with CALSIM II. CALSIM II refers to the CVP-SWP implementation of the CALSIM model code. The CALSIM II modeling inputs and assumptions (i.e., model improvements) are being incorporated in an ongoing effort by Reclamation and DWR. All future references to the CALSIM II modeling used to evaluate the SDIP alternatives will use the abbreviation CALSIM. The version of CALSIM used for the evaluation of SDIP operational scenarios is presented in detail in a series of DWR reports. These reports can be obtained from the DWR Bay-Delta Office (formerly Office of State Water Supply Planning) web site at:

<http://modeling.water.ca.gov>

The CALSIM model documentation is available in three segments—a user’s manual that describes the model formulation and development, a user’s guide that describes the steps in actually setting up assumptions and input data files for running the model, and a model language reference that gives technical details of the computer instructions that can be modified by the user to change the model structure and formulation.

A recent review by the California Bay-Delta Authority Science Program describes some general aspects of the CALSIM model performance based on interviews with current model users (CALFED Bay-Delta Authority Science Program 2003).

Another recent report (California Department of Water Resources Bay-Delta Office 2003) provides some comparison and discussion of CALSIM results with recent historical CVP and SWP operations (i.e., water years [WY] 1975–1998) that indicates the general ability of the CALSIM model to reproduce historical operations if the rules and water supply demands are properly specified.

The CALSIM assumptions for the simulations of the SDIP operational scenarios are described in the September 2002 Benchmark Studies for 2001 and 2020 Level of Development (LOD). There are three reports in this series that are available in pdf format from the modeling web site:

Benchmark Assumptions and Appendices

2001 LOD Benchmark Study

2020 LOD Benchmark Study

The reader is directed to these DWR documents for a more detailed explanation of the analytical methods and assumptions used for estimating water supply effects and subsequent environmental impacts of SDIP alternative operational scenarios.

Table 5.1-1 gives a general list of the CALSIM assumptions used for the 2001 and 2020 simulations of the baseline and SDIP operational scenarios in comparison to the assumptions described in the 2002 benchmark studies. (See Section 5.1, Water Supply Management.) Although this list does not indicate the amount of water required for each minimum flow or Delta objective that is simulated by the model, it can be used to distinguish the 2001 and 2020 simulations, as well as differences from other studies of water supply projects that use CALSIM modeling results.

The CALSIM 2001 LOD simulations were used to provide an evaluation of the SDIP operational alternatives under existing conditions as required by the California Environmental Quality Act (CEQA). Existing conditions refers to the current system of CVP and SWP reservoirs, current CVP and SWP water supply demands, and current Delta water quality objectives and constraints as required under the D-1641 water rights decision.

The CALSIM 2020 LOD simulations were used to provide an evaluation of the SDIP operational alternatives under future no action conditions as suggested for federal projects under National Environmental Policy Act (NEPA) guidelines. However, both the 2001 and 2020 LOD simulations provide an evaluation of likely SDIP operational alternatives for an assumed repeat of the 1922–1994 historical sequence of rainfall and runoff conditions. Both simulations, therefore, include a similar sequence of reservoir inflows and un-impounded river runoff flows. The water supply conditions simulated by CALSIM for 2001 and 2020 LOD generally differ only by the effects from adjustments in land use and associated consumptive water losses for municipal and industrial (M&I) and agricultural uses between current conditions (2001) and future conditions (2020). The full Trinity River restoration flows are included in the 2020 LOD, whereas only partial Trinity River restoration flows are simulated in the 2001 LOD.

Many of the results from the CALSIM modeling with these two assumed LOD conditions are similar. Therefore, the potential environmental impacts that may result from the SDIP operational alternatives under these two LOD conditions are expected to be similar. The CALSIM 2020 baseline results are shown in comparison with the 2001 baseline results in this appendix to indicate the potential differences in the 2001 and 2020 CALSIM results. The 2001 project effects and the 2020 project effects have been evaluated separately in the impact assessments in other sections (e.g., Delta hydraulics and water quality, aquatic resources, vegetation). Results from the 2001 and 2020 impact assessments are available in Excel files that can be obtained from the SDIP ftp website at:

<ftp://ftpmodeling.water.ca.gov/pub/sdelta/>

Trinity Reservoir and Trinity River Flows and Exports

Two table formats are used to give the CALSIM results. Monthly results are given for each of the 876 months in month x year tables. The 2001 results are shown on the first page, along with annual totals and monthly average, minimum,

and maximum values. The 2020 baselines are given on the second page, and the differences between the 2020 values and the 2001 values are given on the third page. All the monthly values are therefore shown in the month x year tables. Reservoir storage is given with units of thousands of acre-feet (taf). Flows and export pumping are given with units of cubic feet per second (cfs), and the annual totals are given with units of taf.

The range of monthly results is summarized in percentile tables that show the minimum to maximum range for each month, using the 10th percentiles of the cumulative distribution (i.e., lowest, 8th, 15th, 22nd...73rd lowest) for each selected CALSIM variable. The 2001 percentile values for each month are summarized at the top of the page, the 2020 percentile values are given in the middle panel, and the differences between the 2020 percentile values and the 2001 percentile values are given at the bottom of the page. This allows the changes in the percentile pattern to be identified. Potential environmental impacts are more likely to be related to the general change in the monthly distribution of flows or reservoir storages; individual monthly change may not itself be considered an environmental impact.

Table I-1 gives the month by year results for simulated Trinity Reservoir storage (taf) for the 2001 baseline (existing conditions) and the 2020 baseline (future no action) for the 1922–1994 period of historical inflows. The monthly differences between the 2020 baseline simulation and the 2001 baseline simulation are also given to allow the monthly changes to be easily identified. The percentile table indicates that the simulation of Trinity storage is relatively similar for the 2001 and 2020 baselines. The maximum storage (i.e., safety of dam criteria) is easily identified from the monthly percentile table. The maximum storage is first allowed in June, and storage generally declines in subsequent months.

Table I-2 gives the month by year results for simulated Trinity River flow (cfs) for the 2001 baseline (existing conditions) and the 2020 baseline (future no action) for the 1922–1994 period of historical inflows. The monthly differences between the 2020 baseline simulation and the 2001 baseline simulation are also given to allow the changes to be easily identified. The 2020 baseline simulation includes increased Trinity River restoration flows in above normal and wet years during May, June, and July. A few months with a flow of less than 300 cfs are ignored as modeling errors. River spills are infrequent for the Trinity River. The simulated pattern of monthly river flow changes is summarized in the percentile table.

Table I-3 gives the month by year results for simulated Trinity River exports (cfs) for the 2001 baseline (existing conditions) and the 2020 baseline (future no action) for the 1922–1994 period of historical inflows. The monthly differences between the 2020 baseline simulation and the 2001 baseline simulation are also given to allow the changes to be easily identified. The 2020 baseline simulation shows reduced exports in above normal and wet years when higher Trinity River restoration flows are required. The normal season pattern of higher exports in the summer months is easily identified in the percentile table.

Because the Trinity division is a separate river, and the CALSIM modeling of the basic operations of a reservoir with a seasonal diversion and minimum river flow schedule can be easily described. The monthly Trinity Reservoir inflow (see Table I-60) is generally stored, unless the maximum storage is reached and a spill to the river is necessary. Trinity Reservoir has a maximum storage that is lower in the rainfall months to provide a margin of safety for the spillway capacity. The export capacity of 3,300 cfs and the seasonal pattern of exports are used to balance the drawdown of the reservoir storage in the summer and fall (June–October). The normal drawdown is about 500 taf each year. The required Trinity River fish flow varies in some months (April–July) with the water year type (using a Trinity River runoff index). The minimum river flow is released from storage as specified from the model input for each water year type. The only simulation logic that is needed for the Trinity operations is the monthly export target, which is controlled by monthly regression equations that depend on Trinity and Shasta storage. Although the CALSIM model used linear programming to weight these various requirements and limits, the model is able to satisfy each of these objectives on a month-by-month basis, because the set of regression equations for the exports is consistent with the variation in Trinity storage and minimum Trinity River flow requirements.

Shasta Reservoir and Sacramento River Flows

Table I-4 gives the month by year results for simulated Shasta Reservoir storage (taf) for the 2001 baseline (existing conditions) and the 2020 baseline (future no action) for the 1922–1994 period of historical inflows. The monthly differences between the 2020 baseline simulation and the 2001 baseline simulation are also given to allow the changes to be easily identified. The percentile table indicates that simulation of Shasta storage is relatively similar for the 2001 and 2020 baselines. The 2001 and 2020 monthly Shasta Reservoir inflows are given in Table I-61 (percentiles). Shasta Reservoir operations are simulated in a manner similar to the Trinity Reservoir operations, but Shasta operations are controlled by downstream diversions along the Sacramento River, minimum flow targets at Wilkins Slough, and Delta operations and CVP Tracy Pumping Plant (CVP Tracy) export targets.

The maximum Shasta storage is determined by flood control rules that vary with the runoff index in the winter months. The monthly maximum storage is input to the model for the 73-year sequence. The seasonal drawdown varies from about 500 taf in drier years to more than 1.5 million acre-feet (maf) in wetter years with higher maximum storage. The Shasta carryover storage is reduced by an average of 94 taf in the 2020 baseline. The annual reductions in carryover storage are generally less than 15% of the 2001 carryover storage values.

Table I-5 gives the month by year results for simulated Keswick Dam release flows for the 2001 and 2020 baseline conditions. The Keswick Dam powerhouse capacity is about 15,000 cfs, and most summer flows remain below this capacity. The monthly differences between the 2020 and 2001 simulated values are given. The average reduction of 143 taf in the 2020 baseline Keswick Dam releases

(because of reduced Trinity exports) is about 2% of the 2001 baseline average Keswick release volume of 6,263 thousand acre-feet per year (taf/yr).

Table I-6 gives the month by year results for simulated Sacramento River flow at Wilkins Slough, which is the “navigation control” location with a minimum flow requirement that is 5,000 cfs in normal years, and is reduced to 3,500 cfs in dry years. The average reduction of 126 taf in the 2020 baseline Wilkins Slough flows (because of reduced Trinity exports) is about 2% of the 2001 baseline average Wilkins Slough flow volume of 6,586 taf/yr. The tributary inflows and irrigation diversion between Keswick and Wilkins Slough are almost equal on a long-term basis. The large seasonal diversions (at the Red Bluff diversion dam and at the Glen-Colusa Irrigation District pumps) can be identified by comparing the monthly flow values at Wilkins Slough in Table I-6 with those at Keswick in Table I-5.

Oroville Reservoir and Feather River Flows

Table I-7 gives the month by year results for simulated Oroville Reservoir storage (taf) for the 2001 baseline (existing conditions) and the 2020 baseline (future no action) for the 1922–1994 period of historical inflows. The monthly differences between the 2020 baseline and the 2001 baseline storage values are also given to allow the changes to be easily identified. The percentile table indicates that the simulation of Oroville storage is relatively similar for the 2001 and 2020 baselines. The 2001 and 2020 monthly Oroville Reservoir inflows are summarized in Table I-62 (percentiles).

The maximum Oroville storage has a seasonal variation for flood control purposes. The normal seasonal drawdown is about 1 maf, but varies depending on the maximum storage and annual SWP deliveries. The 2020 baseline Oroville carryover storage is reduced by an average of 52 taf from the 2001 baseline values. These annual reductions are generally less than 10% of the CALSIM 2001 carryover storage values.

Table I-8 gives the month by year results for simulated Feather River flows below the Thermalito Dam releases for the 2001 and 2020 baseline conditions. The seasonal patterns are a combination of higher demands for Delta SWP exports in the summer and considerable spill releases in wetter years. The 2020 annual release volumes below Thermalito are slightly increased by an average of 28 taf/yr compared to the 2001 baseline values. These annual changes are generally less than 10% of the 2001 baseline values.

Folsom Reservoir and American River Flows

Table I-9 gives the month by year results for simulated Folsom Reservoir storage for 1922–1994 under the 2001 and 2020 baseline conditions. The 2001 and 2020 Folsom Reservoir inflows are given in Table I-63 (percentiles). The maximum

storage is reduced in the winter months, with more flood control space required in wetter years. The average seasonal drawdown is about 325 taf, but varies depending on the maximum storage and downstream demands. The average Folsom carryover storage under the 2020 baseline conditions was reduced by an average of 22 taf because of the increased deliveries from Folsom to satisfy the increased American River demands.

Table I-10 gives the month by year results for simulated American River flows at Nimbus Dam for 1922–1994 under the 2001 and 2020 baseline conditions. The percentile table indicates that the average reduction in Nimbus Dam releases for the 2020 baseline was about 150 taf/yr because of the increased American River demands, representing an average decrease of 6% from the 2001 baseline American River flows.

Sacramento River Flows at Freeport

Table I-11 gives the month by year results for simulated Sacramento River flow at Freeport for 1922–1994 under the 2001 and 2020 baseline conditions. The simulated monthly changes from the 2001 baseline to the 2020 baseline conditions are also given. The 2001 baseline annual flow volume for the Sacramento River at Freeport averaged 16,106 taf/yr. The 2020 annual value averaged 16,072 taf/yr. The average annual change was a decrease of 34 taf/yr. This represents a decrease of 0.1% of the long-term 2001 baseline Sacramento River inflows.

Monthly changes of more than 10% of the average Freeport flow (i.e., 2,246 cfs) were simulated in 58 of the 876 simulated months (7%). Monthly changes of more than 5% of the long-term average flow (i.e., 1,123 cfs) were simulated in 161 (18%) of the 876 simulated months. This indicates the tendency for the CALSIM model to make many small changes in the monthly flow values in each year, without substantially changing the annual or long-term results. Although there may be a considerable number of months with changes, the annual values that characterize the water supply conditions in the Delta are similar for the 2001 and 2020 results.

Table I-12 gives the month by year results for simulated Yolo Bypass flow for 1922–1994 under the 2001 and 2020 baseline conditions. The simulated monthly changes from the 2001 baseline to the 2020 baseline conditions are also given. The Yolo Bypass flows are most frequent in the months of December–April. The differences in Yolo Bypass flows are the result of slightly different simulated reservoir spills.

New Melones Reservoir and Stanislaus River Flows

Table I-13 gives the month by year results for simulated New Melones Reservoir storage for 1922–1994 under the 2001 and 2020 baseline conditions. The

differences between 2002 and 2001 storage values are also given. The percentile table indicates that the 2020 baseline simulation of New Melones carryover storage is similar to the 2001 simulation, because both follow the Interim Operations plan with similar diversions to the local irrigation districts. The 2001 and 2020 New Melones Reservoir inflows are given in Table I-64 (percentiles). The maximum difference between 2020 carryover values and 2001 carryover values was just 12 taf.

Table I-14 gives the month by year results for simulated Stanislaus River flows below Goodwin Dam for the 2001 and 2020 baseline conditions. The monthly differences between the 2020 and 2001 simulated values are very small. The largest change between 2020 annual flow volumes and 2001 annual flow volumes was 8 taf/yr.

New Don Pedro Reservoir and Tuolumne River Flows

Table I-15 gives the month by year results for simulated New Don Pedro Reservoir storage for 1922–1994 under the 2001 and 2020 baseline conditions. The differences between 2002 and 2001 storage values are also given. The table indicates that the 2020 baseline simulation of New Don Pedro carryover storage had a very different initial storage (1,000 taf lower) than the 2001 simulation. The simulations are not similar until after 1938 when the reservoir spills. The 2001 and 2020 New Don Pedro Reservoir inflows are given in Table I-66 (percentiles).

Table I-16 gives the month by year results for simulated Tuolumne River flows below La Grange Dam for the 2001 and 2020 baseline conditions. The monthly differences between the 2020 and 2001 simulated values are very small in most months, but less spill occurs under the 2020 simulations (because of reduced inflows or increased diversions).

Lake McClure and Merced River Flows

Table I-17 gives the month by year results for simulated Lake McClure storage for 1922–1994 under the 2001 and 2020 baseline conditions. The differences between 2002 and 2001 storage values are also given. The table indicates that the 2020 baseline simulation of Lake McClure carryover storage had a different initial storage (300 taf lower) from that of the 2001 simulation. The simulations are similar because the reservoir spilled in June of 1922 under both simulations. The percentile table indicates that the summer storage was slightly higher in the 2020 simulations. The 2001 and 2020 Lake McClure inflows are given in Table I-67 (percentiles).

Table I-18 gives the month by year results for simulated Merced River flows below Merced Falls Dam for the 2001 and 2020 baseline conditions. The monthly differences between the 2020 and 2001 simulated values are small in

most months, but a different pattern of required minimum flows was specified, and the October spills were less frequent in the 2020 simulations.

San Joaquin River Flows at Vernalis

Table I-19 gives the month by year (monthly) results for simulated San Joaquin River flow at Vernalis for 1922–1994 under the 2001 and 2020 baseline conditions. The simulated monthly changes from the 2001 baseline to the 2020 baseline conditions are also given. Because there are major water supply reservoirs and substantial irrigation diversions on the upper San Joaquin River (Friant Dam), on the Merced River (New Exchequer Dam), on the Tuolumne River (New Don Pedro Dam), and on the Stanislaus River (New Melones Dam), the San Joaquin River flow at Vernalis is generally regulated to minimum required flows during the summer and fall period. The reservoir operations assumptions for these San Joaquin River reservoirs are generally the same for the 2001 and 2020 simulations.

Because the Vernalis flows are adjusted for the Vernalis Adaptive Management Plan (VAMP) period (April 15 to May 15), the CALSIM model calculates flows and corresponding CVP and SWP exports using two calculation periods (i.e., cycles 2 and 5) for each month. The first half of April and the second half of May indicate the San Joaquin River flows without the VAMP pulse flow (cycle 2). The additional flows in the second half of April and first half of May were assumed to be supplied by upstream water districts as part of the VAMP program. The target pulse flows during VAMP range from 2,000 cfs to 7,000 cfs. No VAMP flows are required in some dry year sequences.

The CALSIM 2001 baseline annual flow volumes for the San Joaquin River at Vernalis ranged from a minimum of 833 taf to a maximum of 13,927 taf, with an average of 2,660 taf/yr. The CALSIM 2020 annual values ranged from 832 taf to 13,854 taf, with an average of 2,587 taf. The average change was a decrease of 73 taf/yr. This represents a decrease of 2.7% of the long-term 2001 baseline value. Some of this reduction can be attributed to the lower initial storage values for New Don Pedro Reservoir and Lake McClure that were used in the 2020 CALSIM simulations.

Although there may be a considerable number of months with changes of more than 10% of the 2001 baseline monthly flow, and a few years with more than a 5% change from the 2001 baseline annual flow, the long-term 2020 Vernalis flow was reduced by just 2% (adjusted for the different initial storage values) from the 2001 results.

CVP San Luis Reservoir Storage

Table I-20 gives the month by year results for the simulated CVP portion of the San Luis Reservoir storage for 1922–1994 under the 2001 and 2020 baseline

conditions. The San Luis Reservoir essentially has no local inflow and is filled seasonally by CVP Tracy pumping. The San Luis Reservoir has maximum CVP storage of 972 taf and is generally filled to maximum in February or March. The CVP San Luis Reservoir storage is drawn down for irrigation deliveries along the Delta-Mendota Canal (DMC) throughout the summer months. The carryover storage averages 240 taf. The percentile table indicates that the 2020 simulations of CVP San Luis Reservoir are similar to the 2001 simulations.

SWP San Luis Reservoir Storage

Table I-21 gives the month by year results for the simulated SWP portion of the San Luis Reservoir storage for 1922–1994 under the 2001 and 2020 baseline conditions. The San Luis Reservoir essentially has no local inflow and is filled seasonally by SWP Harvey O. Banks Pumping Plant (SWP Banks) pumping. The San Luis Reservoir has maximum SWP storage of 1,076 taf and is generally filled to maximum in February or March. The SWP San Luis Reservoir storage is drawn down for water supply deliveries throughout the summer months. The carryover storage averages about 350 taf. The percentile table indicates that the 2020 simulations of CVP San Luis Reservoir are similar to the 2001 simulations.

Total San Luis Reservoir Storage

Table I-22 gives the month by year results for simulated combined CVP and SWP (total) San Luis Reservoir storage for 1922–1994 under the 2001 and 2020 baseline conditions. The San Luis Reservoir essentially has no local inflow and is filled seasonally by CVP Tracy and SWP Banks pumping. The San Luis Reservoir has a maximum storage of 2,039 taf and is generally filled to the annual maximum in February or March. The San Luis Reservoir was filled to more than 2,000 taf in only about 10% of the years. The minimum San Luis Reservoir storage is usually in the months of July–September. A minimum storage of less than 200 taf may cause water quality problems for the Santa Clara Valley Water District (SCVWD) diversions at the Pacheco pumping plant. The percentile table indicates that the San Luis Reservoir carryover storage averages about 600 taf for the 2001 simulation and about 575 taf for the 2020 simulations.

Figure I-2 shows the monthly distribution of San Luis Reservoir storage and the monthly distribution of the SWP San Luis Reservoir storage for the 2001 and 2020 baseline simulations. The seasonal filling and drawdown is evident from these graphs.

CVP Tracy Export Pumping

Table I-23 gives the month by year results for simulated CVP Tracy pumping for 1922–1994 under the 2001 and 2020 baseline conditions. The maximum CVP

Tracy pumping is 4,600 cfs, but is limited by the DMC capacity in the winter months. The percentile table indicates that the 2020 simulation of CVP Tracy pumping was similar to the 2001 simulation. CVP Tracy pumping is reduced substantially during the VAMP period of April 15 through May 15. CVP Tracy pumping is generally limited in the post-Vamp portion of May and June. CVP Tracy pumping of more than 4,000 cfs is simulated in more than 50% of the years for each month other than April, May, and June.

Figure I-3 shows the cumulative distribution of simulated annual (water year) CVP south-of-Delta deliveries for the 2001 and 2020 baseline simulations and each of the alternative operational scenarios. The annual CVP deliveries and changes in the CVP deliveries for each of the operational scenarios is given in Table 5.1-5. (See Section 5.1, Water Supply Management.) The average CVP delivery was 2,645 taf for the baseline 2001 simulation. The CVP water supply was more than 3,000 taf (90% of demand) in about 30% of the years. The CVP delivery dropped below 2,000 taf (60% of demand) in about 20% of the years. The CVP delivery was less than 1,500 taf (45% of demand) in about 10% of the years. The 2001 and 2020 baseline CVP deliveries were very similar.

SWP Export Pumping

Table I-24 gives the month by year results for simulated SWP Banks pumping for 1922–1994 under the 2001 and 2020 baseline conditions. The maximum SWP Banks pumping is 6,680 cfs but can be increased by 1/3 of the San Joaquin River inflow from December 15 through March 15. The monthly maximum pumping of 8,500 cfs is assumed in the months of January and February, with maximum pumping of 7,687 cfs in December and 7,561 cfs in March. The 2001 baseline SWP Banks pumping is more than 7,000 cfs in about 30% of the years in the months of December–March because of the allowable increased pumping from December 15 to March 15. The SWP Banks pumping is reduced substantially during the VAMP period of April 15 through May 15. SWP Banks pumping of more than 5,000 cfs is simulated in at least 50% of the years for each month other than April, May, and June. The July–September SWP pumping is allowed to be 7,180 (with 500 cfs for Environmental Water Account [EWA] transfer pumping). The percentile table indicates that the 2020 simulation of SWP Banks pumping was similar to the 2001 simulation.

Figure I-4 shows the cumulative distribution of annual (water year) SWP south-of-Delta Table A (firm) deliveries for the 2001 and 2020 baselines and the alternative operational scenarios. The annual SWP deliveries and changes in the SWP deliveries for each of the operational scenarios are given in Table 5.1-7. (See Section 5.1, Water Supply Management.) The average simulated SWP water supply demand was 3,712 taf/yr for the 2001 baseline CALSIM simulation (the maximum of 4,100 taf/yr was reduced as assumed in the variable demands for The Metropolitan Water District of Southern California [Metropolitan] and Kern County). The average simulated SWP Table A delivery for the 2001 baseline was 3,107 taf/yr. The SWP water supply deliveries were more than 3,500 taf in about 40% of the years, while SWP delivery dropped below 3 maf

(about 75% of the total Table A amount) in about 30% of the years. The SWP delivery was less than 2 maf (50% of the total Table A amount) in about 15% of the years.

Figure I-5 shows the cumulative distribution of the Article 21 deliveries. An average of 148 taf/yr of Article 21 (surplus) deliveries was simulated for the 2001 baseline. Article 21 deliveries occur in about 60% of the years for the 2001 baseline and about 50% of the years for the 2020 baseline. The combined SWP deliveries (Table A and Article 21) for the 2001 and 2020 baseline simulations are shown in Figure I-4.

Combined CVP and SWP Export Pumping

Table I-25 gives the month by year results for simulated combined CVP Tracy and SWP Banks pumping for 1922–1994 under the 2001 and 2020 baseline conditions. The maximum combined pumping in the summer months of July–September would be 11,780 cfs. The entrainment of fish from the south Delta is related to the combined pumping from CVP Tracy and SWP Banks.

Delta Outflow

Table I-26 gives the month by year results for simulated Delta outflow for 1922–1994 under the 2001 and 2020 baseline conditions. The minimum allowed Delta outflow is 3,000 cfs in August and September of critical years. Minimum outflow requirements often control Delta operations in the months of July–September. These Delta outflows are used in the DSM2 simulations of Delta tidal hydraulics and salinity (electrical conductivity [EC]) conditions.

X2 Location

Table I-27 gives the month by year results for simulated location of the 2 parts per thousand (ppt) salinity gradient in the western Delta. The X2 location is regulated in D-1641 during the months of February–June. The minimum Delta outflow that is required to maintain X2 during this period is normally 7,000 cfs. The X2 location is in kilometers upstream of the Golden Gate Bridge. The X2 is supposed to be downstream of Collinsville (<81 kilometers [km]) in the months of February–June and is often required to be downstream of Mallard Slough (<75 km).

Upstream Reservoir Carryover Storage

The overall range of hydrological conditions and simulated reservoir operations is summarized in Figure I-6, which shows the cumulative distribution of

upstream reservoir carryover storage (i.e., end of September) for the five major CVP and SWP reservoirs that are simulated in CALSIM. The monthly variations as well as the annual sequence of carryover storage have been shown in previous tables; these figures identify changes between the 2001 and 2020 baseline conditions (but without SDIP effects).

Upstream River Water Temperatures

The CALSIM results for reservoir storage and releases are used in the Reclamation Water Temperature Model to estimate monthly river temperatures at several locations where Chinook salmon spawning and rearing occur. The monthly temperatures are used in a mortality model to estimate the fraction of the Chinook salmon eggs for each run using the river below each reservoir. Details of the temperature model are described in Attachment B, "Fish Habitat Water Quality," of the CVPIA Programmatic EIS (Bureau of Reclamation 1997). Temperature calculations are made for the Trinity River, Sacramento River, Feather River, and American River.

Water temperature results for the 2001 baseline conditions are shown here to introduce the methods and the basic relationships between storage and river flow that characterize each river. These graphs provide background information for the fish impact assessments of Chinook salmon and steelhead below these dams, which rely on the reservoir storage and flow simulation results, as well as these temperature calculations that are derived from the CALSIM results.

Trinity River Temperatures

Figure I-7 shows the temperature simulation results for the Trinity River for the 2001 baseline conditions. Figure I-7a shows the summer temperatures below Lewiston Dam, and Figure I-7b shows the downstream temperatures at the confluence of the North Fork Trinity River. These summer temperatures are generally less than 55°F at Lewiston, and remain between 65°F and 70°F during July at North Fork. Other months are slightly cooler at North Fork.

Figure I-7c shows the strong relationship between Trinity Reservoir storage and the monthly temperature at Lewiston in the months of June, July, August, and September. Lewiston temperatures are generally less than 50°F if the Trinity Reservoir storage is more than 1,000 taf. As the storage decreases to 500 taf, the Lewiston temperature increases to 60°F. In August and September, when storage may decline to less than 250 taf in a few years, Lewiston temperatures increase to about 70°F.

Figure I-7d shows the weaker relationship between export flow and Lewiston temperatures during the summer months. Although the Trinity River flow is released from Trinity Reservoir and flows through Lewiston Reservoir, this is generally not enough flow to prevent warming above 50°F in June (river flow of

950 cfs) unless the export flow is also more than 2,000 cfs. Similar warming is calculated for July and August unless the export flows are high.

Sacramento River Temperatures

Figure I-8 shows the Sacramento River temperatures below Keswick Dam calculated for the 2001 baseline conditions. Figure I-8a indicates that Keswick temperatures are generally less than 50°F in September, unless storage is less than 2.0 maf. The September temperatures warm to between 55 and 60°F, unless the Keswick release temperature was already warmer than 60°F. Figure I-8b shows the very strong relationship between Shasta Reservoir Storage and Keswick temperature. In June, all Keswick temperatures are less than 50°F. In July the Keswick temperatures warm above 50°F if the storage is less than 1.5 maf, increasing by 5°F for every 500 taf of storage decline, to a maximum of 60°F at 500 taf of storage. In August the temperature is higher than 50°F if the storage is less than 2 maf, again increasing by 5°F for every 500 taf of storage decline to a maximum of 65°F at 500 taf of storage. The September temperatures are higher than 50°F for storage of less than 2.5 maf, increasing by 5°F for every 500 taf of storage decline to a maximum of 65°F at 1.0 maf or less of storage.

Figure I-8c shows the relatively weak relationship between Sacramento River flow and warming in September. Because flows are generally between 6,000 cfs and 12,000 cfs, the warming from Keswick to Bend Bridge and Red Bluff is about 5°F. When the flows are less than 5,000 cfs, the Shasta Reservoir storage is low and the Keswick temperatures are already warm; additional warming to Bend Bridge and Red Bluff is small, and river temperatures remain at about 65°F. Figure I-8d shows the resulting winter run Chinook salmon egg mortality for the 72-year sequence of 1922–1993. Mortality of these winter-run Chinook salmon eggs, which emerge in the months of June–September, is generally good. However, in low storage years, the calculated temperature mortality for winter-run Chinook salmon eggs is high.

Feather River Temperatures

Figure I-9 shows the Feather River temperatures below Thermalito calculated for the 2001 baseline conditions. Figure I-9a indicates that Feather River temperatures at Thermalito are generally between 60°F and 65°F, with less than 5°F warming to the Yuba River confluence. Figure I-9b suggests that there is almost no dependence of water temperature on Oroville Reservoir storage, because the selective withdrawal facilities allow the release temperature to be specified at 55°F. July and August temperatures are warmest, with a range of 65–75°F at Thermalito. June and September temperatures are slightly less, with a range of 60–70°F.

Figure I-9c shows that the warming to Yuba is moderate, with July and August temperatures between 70°F and 75°F, with a maximum of 80°F. The June and

September temperatures are about 5°F cooler, ranging from 65–70°F, with a maximum of 75°F. Figure I-9d shows the relatively weak relationship between Feather River flow and warming to the Yuba River confluence. Warming is about 5°F warmer when the flows are 2,000 cfs compared to when the river flow is 8,000 cfs in these summer months.

American River Temperatures

Figure I-10 shows the American River temperatures below Nimbus Dam calculated for the 2001 baseline conditions. Figure I-10a indicates that American River temperatures at Nimbus in September are generally between 65°F and 70°F, with very little additional warming to Watt Avenue. Figure I-10b suggests that there is a weak relationship between Folsom Reservoir storage and Nimbus temperature, with temperatures of less than 65°F when storage is more than 800 taf. Temperatures warm slightly from 65°F to 70°F as storage declines from 800 taf to 200 taf. Nimbus temperatures are warmer than 70°F only when storage is less than 200 taf.

Figure I-10c shows that the warming to Watt Avenue is moderate, with temperatures of between 65 and 70°F, with a maximum of 75°F all summer. Figure I-10d shows the relatively weak relationship between American River flow and warming to Watt Avenue. Temperatures are about 65°F when the flow is above 5,000 cfs, and increase to 70°F when flows are about 2,000 cfs or less.

These monthly water temperature calculations are used in the fisheries impact assessments. Different months are used to evaluate habitat conditions for each life stage for each Chinook salmon run (and steelhead) that use each river. The results of these temperature evaluations for each alternative are described in Chapter 6 of the EIS/EIR.

SDIP Operational Scenarios Simulation Results

Several additional tables are provided to document the relatively small changes that were simulated for SDIP Operational Scenario A, Scenario B, and Scenario C. A few tables of the CVP Tracy and SWP Banks pumping are given to compare the 2020 OCAP simulations to the 2020 Scenario A results (for cumulative assessments). The following list provides a guide to these comparative tables that give the month x year results for each scenario and the monthly differences (impacts) between the Scenario results and the 2001 or 2020 baseline conditions.

Table Number	CALSIM Variable	Table Format
28	CVP Tracy Pumping 2001 Scenario A	month x year
29	CVP Tracy Pumping 2020 Scenario A	month x year
30	SWP Banks Pumping 2001 Scenario A	month x year
31	SWP Banks Pumping 2020 Scenario A	month x year
32	Combined CVP and SWP Pumping 2001 Scenario A	month x year
33	Combined CVP and SWP Pumping 2001 Scenario A	month x year
34	CVP Tracy Pumping 2001 Scenario B	month x year
35	CVP Tracy Pumping 2020 Scenario B	month x year
36	SWP Banks Pumping 2001 Scenario B	month x year
37	SWP Banks Pumping 2020 Scenario B	month x year
38	Combined CVP and SWP Pumping 2001 Scenario B	month x year
39	Combined CVP and SWP Pumping 2001 Scenario B	month x year
40	CVP Tracy Pumping 2001 Scenario C	month x year
41	CVP Tracy Pumping 2020 Scenario C	month x year
42	SWP Banks Pumping 2001 Scenario C	month x year
43	SWP Banks Pumping 2020 Scenario C	month x year
44	Combined CVP and SWP Pumping 2001 Scenario C	month x year
45	Combined CVP and SWP Pumping 2001 Scenario C	month x year
46	CVP Tracy Pumping 2020 OCAP compared to 2020 Scenario A	month x year
47	SWP Banks Pumping 2020 OCAP compared to 2020 Scenario A	month x year
48	Combined CVP and SWP Pumping 2020 OCAP compared to 2020 Scenario A	month x year
49	Delta Outflow for 2020 OCAP compared to 2020 Scenario A	month x year
50	Sacramento River Flow at Keswick Dam for 2001 and 2020 Scenario A	percentiles
51	Feather River Flow below Thermalito Release for 2001 and 2020 Scenario A	percentiles
52	American River Flow below Nimbus Dam for 2001 and 2020 Scenario A	percentiles
53	Sacramento River Flow at Freeport for 2001 and 2020 Scenario A	percentiles
54	San Joaquin River Flow at Vernalis for 2001 and 2020 Scenario A	percentiles
55	Combined CVP and SWP Pumping for 2001 and 2020 Scenario A	percentiles
56	Delta Outflow for 2001 and 2020 Scenario A	percentiles
57	X2 Location for 2001 and 2020 Scenario A	percentiles
58	CVP San Luis Reservoir Storage for 2001 and 2020 Scenario A	percentiles
59	SWP San Luis Reservoir Storage for 2001 and 2020 Scenario A	percentiles
60	Trinity Reservoir Inflows for 2001 and 2020 Conditions	percentiles
61	Shasta Reservoir Inflows for 2001 and 2020 Conditions	percentiles

Table Number	CALSIM Variable	Table Format
62	Oroville Reservoir Inflows for 2001 and 2020 Conditions	percentiles
63	Folsom Reservoir Inflows for 2001 and 2020 Conditions	percentiles
64	New Melones Reservoir Inflows for 2001 and 2020 Conditions	percentiles
65	New Don Pedro Inflows for 2001 and 2020 Conditions	percentiles
66	Lake McClure Inflows for 2001 and 2020 Conditions	percentiles
67	Yuba River Inflows for 2001 and 2020 Conditions	percentiles
68	Mokelumne and Cosumnes River Inflows for 2001 and 2020 Conditions	percentiles
69	SWP San Luis Reservoir for 2020 Baseline Conditions prior to Environmental Water Account Actions	month x year

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Table I-1a. CALSIM Simulated Trinity Lake Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	1,782	1,679	1,666	1,663	1,677	1,727	1,825	1,889	1,855	1,743	1,544	1,351	538
1923	1,266	1,238	1,250	1,276	1,300	1,357	1,472	1,432	1,350	1,181	1,001	873	599
1924	803	769	763	758	816	822	820	727	612	491	273	240	580
1925	240	315	357	399	670	805	1,098	1,187	1,194	994	819	703	491
1926	677	672	690	691	836	938	1,157	1,061	977	813	631	547	610
1927	521	677	872	980	1,218	1,396	1,620	1,720	1,851	1,770	1,656	1,470	381
1928	1,411	1,469	1,487	1,544	1,653	1,860	2,003	2,012	1,916	1,802	1,570	1,381	631
1929	1,288	1,263	1,255	1,179	1,195	1,251	1,270	1,311	1,227	1,007	826	695	616
1930	663	646	774	790	889	1,014	1,115	1,027	974	815	650	567	548
1931	535	521	512	521	540	604	652	621	591	476	268	240	412
1932	240	240	241	253	275	427	517	541	552	446	329	245	307
1933	240	240	240	240	241	358	511	500	618	528	413	332	286
1934	299	292	301	362	452	609	718	702	605	490	334	240	478
1935	240	305	336	377	461	522	736	773	778	670	553	470	308
1936	441	430	427	535	669	787	961	963	968	857	695	614	354
1937	581	564	549	534	532	638	864	1,007	1,076	973	813	702	374
1938	678	820	1,039	1,136	1,293	1,554	1,856	2,125	2,298	2,270	2,150	1,975	323
1939	1,850	1,830	1,818	1,735	1,737	1,845	1,930	1,878	1,715	1,484	1,250	1,030	900
1940	952	912	966	1,132	1,458	1,760	1,982	2,014	1,957	1,771	1,575	1,391	623
1941	1,304	1,285	1,424	1,644	1,894	2,100	2,300	2,420	2,447	2,270	2,150	1,975	472
1942	1,850	1,850	1,850	1,900	2,000	1,987	2,183	2,352	2,447	2,270	2,150	1,975	472
1943	1,850	1,850	1,850	1,900	2,000	2,100	2,278	2,241	2,256	2,151	2,032	1,841	437
1944	1,738	1,658	1,653	1,641	1,685	1,752	1,790	1,844	1,766	1,583	1,388	1,243	601
1945	1,150	1,153	1,218	1,271	1,437	1,491	1,622	1,658	1,646	1,542	1,347	1,203	455
1946	1,160	1,215	1,406	1,537	1,592	1,721	1,939	2,028	1,992	1,824	1,631	1,444	584
1947	1,353	1,347	1,359	1,350	1,411	1,530	1,614	1,523	1,479	1,337	1,158	984	630
1948	952	939	931	1,114	1,128	1,153	1,332	1,389	1,504	1,418	1,307	1,226	278
1949	1,172	1,179	1,181	1,174	1,206	1,422	1,679	1,758	1,709	1,604	1,411	1,268	490
1950	1,206	1,175	1,156	1,174	1,230	1,352	1,507	1,521	1,503	1,319	1,169	1,028	493
1951	1,090	1,206	1,464	1,554	1,774	1,878	2,052	2,088	2,022	1,914	1,720	1,531	557
1952	1,370	1,376	1,523	1,582	1,772	1,938	2,281	2,420	2,447	2,270	2,150	1,975	472
1953	1,850	1,845	1,850	1,900	1,943	2,071	2,273	2,342	2,447	2,270	2,150	1,975	472
1954	1,850	1,850	1,825	1,900	2,000	2,100	2,300	2,314	2,264	2,167	2,057	1,875	439
1955	1,771	1,822	1,850	1,786	1,781	1,807	1,850	1,848	1,790	1,605	1,413	1,244	606
1956	1,151	1,135	1,444	1,777	1,915	2,060	2,264	2,420	2,447	2,270	2,150	1,975	472
1957	1,850	1,837	1,800	1,783	1,945	2,100	2,164	2,243	2,302	2,197	2,002	1,819	483
1958	1,850	1,850	1,850	1,900	2,011	2,100	2,300	2,420	2,447	2,270	2,150	1,975	472
1959	1,850	1,840	1,807	1,900	2,000	2,004	2,133	2,089	2,024	1,802	1,572	1,355	778
1960	1,262	1,209	1,189	1,188	1,321	1,500	1,614	1,622	1,675	1,496	1,333	1,159	516
1961	1,069	1,049	1,129	1,160	1,383	1,511	1,656	1,697	1,773	1,674	1,477	1,304	469
1962	1,211	1,190	1,212	1,216	1,351	1,427	1,640	1,634	1,652	1,550	1,365	1,223	429
1963	1,328	1,380	1,554	1,595	1,890	1,962	2,225	2,358	2,408	2,270	2,146	1,975	433
1964	1,850	1,850	1,812	1,872	1,869	1,912	1,954	1,851	1,765	1,585	1,398	1,233	721
1965	1,149	1,156	1,692	1,900	1,971	1,947	2,177	2,195	2,239	2,144	1,962	1,780	459
1966	1,673	1,761	1,802	1,884	1,952	2,100	2,300	2,382	2,407	2,270	2,049	1,836	571
1967	1,637	1,645	1,788	1,900	2,000	2,100	2,206	2,420	2,447	2,270	2,150	1,975	472
1968	1,850	1,840	1,821	1,829	2,000	2,100	2,182	2,146	2,068	1,883	1,690	1,505	677
1969	1,342	1,337	1,397	1,541	1,666	1,827	2,157	2,420	2,447	2,270	2,150	1,975	472
1970	1,850	1,850	1,850	1,900	2,000	2,080	2,121	2,123	2,080	1,900	1,685	1,478	645
1971	1,388	1,494	1,625	1,859	1,930	2,100	2,277	2,420	2,447	2,270	2,150	1,975	472
1972	1,850	1,834	1,829	1,891	2,000	2,100	2,245	2,254	2,207	2,094	1,901	1,709	545
1973	1,552	1,584	1,694	1,854	2,000	2,100	2,254	2,400	2,447	2,270	2,069	1,884	563
1974	1,810	1,850	1,850	1,900	2,000	2,100	2,300	2,419	2,447	2,270	2,150	1,975	472
1975	1,850	1,837	1,827	1,816	1,913	2,100	2,218	2,420	2,447	2,270	2,150	1,975	472
1976	1,850	1,850	1,837	1,703	1,737	1,781	1,867	1,850	1,757	1,539	1,339	1,198	669
1977	1,102	1,068	1,042	1,022	1,008	1,000	964	914	783	598	485	415	549
1978	283	313	507	908	1,093	1,379	1,574	1,692	1,873	1,829	1,718	1,560	313
1979	1,452	1,449	1,445	1,467	1,521	1,670	1,796	1,882	1,805	1,697	1,497	1,356	526
1980	1,293	1,328	1,392	1,621	1,923	2,060	2,198	2,213	2,177	2,094	1,897	1,708	505
1981	1,598	1,501	1,541	1,648	1,787	1,913	2,029	1,960	1,856	1,659	1,455	1,275	754
1982	1,192	1,436	1,767	1,858	2,000	2,100	2,300	2,384	2,391	2,270	2,150	1,975	416
1983	1,850	1,850	1,850	1,900	2,000	2,100	2,300	2,420	2,447	2,270	2,150	1,975	472
1984	1,850	1,850	1,850	1,900	1,998	2,100	2,210	2,277	2,244	2,150	1,959	1,773	504
1985	1,669	1,798	1,850	1,762	1,789	1,836	1,982	1,902	1,797	1,584	1,372	1,198	784
1986	1,111	1,076	1,077	1,196	1,680	2,022	2,067	2,055	2,001	1,782	1,574	1,391	676
1987	1,306	1,271	1,258	1,268	1,345	1,557	1,710	1,627	1,433	1,209	1,012	891	819
1988	808	770	939	1,009	1,089	1,173	1,261	1,211	1,156	947	768	678	583
1989	641	677	690	711	737	1,081	1,282	1,246	1,205	1,031	865	758	524
1990	771	768	758	817	838	924	980	946	954	785	663	577	403
1991	540	521	503	492	496	574	640	668	659	552	438	355	313
1992	322	306	296	304	443	586	822	815	756	645	525	439	383
1993	408	401	418	474	612	984	1,190	1,482	1,681	1,698	1,588	1,489	192
1994	1,427	1,414	1,435	1,472	1,503	1,570	1,620	1,628	1,498	1,277	1,039	903	725
Avg	1,222	1,230	1,281	1,339	1,445	1,566	1,716	1,758	1,746	1,600	1,435	1,286	514
Min	240	240	240	240	241	358	511	500	552	446	268	240	192
Max	1,850	1,850	1,850	1,900	2,011	2,100	2,300	2,420	2,447	2,270	2,150	1,975	900

Table I-1b. CALSIM Simulated Trinity Lake Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	1,782	1,698	1,700	1,696	1,711	1,761	1,859	1,923	1,933	1,821	1,667	1,519	414
1923	1,464	1,436	1,438	1,456	1,479	1,531	1,645	1,568	1,424	1,236	1,071	988	657
1924	964	953	947	869	913	894	828	734	616	516	342	240	588
1925	240	315	363	399	670	811	1,108	1,094	1,043	926	813	741	367
1926	716	710	729	730	880	982	1,201	1,105	1,035	898	756	671	530
1927	660	822	1,017	1,134	1,372	1,550	1,778	1,769	1,798	1,677	1,564	1,422	376
1928	1,363	1,420	1,438	1,495	1,604	1,811	1,957	1,895	1,764	1,611	1,384	1,270	687
1929	1,208	1,183	1,183	1,152	1,176	1,234	1,253	1,295	1,241	1,067	894	806	489
1930	752	730	858	874	973	1,098	1,199	1,111	1,041	927	803	720	479
1931	688	680	676	691	716	780	821	759	669	539	401	259	562
1932	240	240	241	253	275	427	517	541	552	522	427	374	178
1933	345	339	334	332	333	450	603	591	674	590	514	477	197
1934	426	415	424	485	575	732	786	754	642	533	471	278	508
1935	240	305	342	383	467	528	742	779	784	676	636	597	187
1936	583	578	581	695	835	946	1,110	1,040	995	890	790	708	402
1937	675	664	654	646	650	755	981	1,124	1,222	1,088	988	906	316
1938	882	1,024	1,243	1,340	1,497	1,757	2,066	2,240	2,185	2,153	2,037	1,975	265
1939	1,850	1,836	1,823	1,742	1,744	1,852	1,921	1,869	1,708	1,477	1,243	1,112	809
1940	984	947	1,010	1,185	1,511	1,813	2,040	1,977	1,861	1,682	1,532	1,422	618
1941	1,366	1,347	1,486	1,706	1,956	2,100	2,300	2,420	2,447	2,270	2,150	1,975	472
1942	1,850	1,831	1,850	1,900	2,000	1,987	2,188	2,248	2,320	2,270	2,150	1,975	345
1943	1,850	1,850	1,850	1,900	2,000	2,100	2,281	2,172	2,104	1,960	1,841	1,696	585
1944	1,639	1,619	1,606	1,551	1,594	1,662	1,700	1,754	1,706	1,547	1,383	1,268	486
1945	1,205	1,208	1,273	1,317	1,480	1,534	1,668	1,632	1,540	1,397	1,279	1,165	503
1946	1,153	1,202	1,393	1,524	1,579	1,708	1,931	1,926	1,831	1,701	1,554	1,412	519
1947	1,351	1,345	1,357	1,349	1,401	1,526	1,610	1,519	1,504	1,330	1,162	1,035	575
1948	1,048	1,059	1,060	1,253	1,266	1,291	1,473	1,467	1,503	1,377	1,265	1,158	345
1949	1,134	1,142	1,144	1,139	1,176	1,392	1,652	1,660	1,576	1,432	1,301	1,188	472
1950	1,157	1,149	1,140	1,167	1,223	1,351	1,505	1,510	1,492	1,370	1,235	1,123	387
1951	1,216	1,311	1,568	1,659	1,879	1,983	2,162	2,093	1,932	1,784	1,636	1,492	670
1952	1,439	1,445	1,591	1,651	1,841	2,007	2,300	2,412	2,447	2,270	2,150	1,975	472
1953	1,850	1,845	1,850	1,900	1,949	2,077	2,288	2,248	2,341	2,270	2,150	1,975	366
1954	1,850	1,850	1,850	1,900	2,000	2,100	2,300	2,272	2,125	1,989	1,802	1,665	635
1955	1,608	1,629	1,685	1,704	1,730	1,765	1,817	1,815	1,801	1,652	1,507	1,397	420
1956	1,309	1,293	1,601	1,900	2,000	2,100	2,280	2,382	2,302	2,184	2,071	1,975	407
1957	1,850	1,837	1,796	1,778	1,939	2,100	2,180	2,196	2,176	2,031	1,837	1,698	498
1958	1,781	1,850	1,850	1,900	2,011	2,100	2,300	2,420	2,431	2,270	2,150	1,975	456
1959	1,850	1,834	1,801	1,900	2,000	1,997	2,136	2,036	1,936	1,705	1,501	1,285	851
1960	1,208	1,169	1,158	1,166	1,308	1,487	1,604	1,549	1,523	1,366	1,235	1,121	483
1961	1,092	1,096	1,185	1,222	1,445	1,573	1,717	1,687	1,684	1,545	1,415	1,302	415
1962	1,240	1,218	1,241	1,245	1,380	1,456	1,672	1,594	1,533	1,392	1,268	1,156	516
1963	1,247	1,298	1,472	1,513	1,808	1,886	2,154	2,194	2,059	1,915	1,792	1,676	518
1964	1,673	1,791	1,799	1,853	1,844	1,881	1,838	1,736	1,679	1,546	1,390	1,284	554
1965	1,231	1,237	1,774	1,900	1,971	1,958	2,193	2,108	2,048	1,913	1,778	1,641	552
1966	1,581	1,669	1,709	1,792	1,860	2,067	2,300	2,312	2,248	2,037	1,851	1,713	599
1967	1,563	1,645	1,788	1,900	2,000	2,100	2,211	2,333	2,434	2,270	2,150	1,975	459
1968	1,850	1,838	1,819	1,826	2,000	2,100	2,193	2,085	1,928	1,720	1,573	1,404	789
1969	1,348	1,344	1,403	1,547	1,672	1,834	2,170	2,420	2,349	2,225	2,109	1,975	445
1970	1,850	1,850	1,850	1,900	2,000	2,080	2,132	2,039	1,938	1,713	1,530	1,412	720
1971	1,353	1,459	1,590	1,825	1,906	2,100	2,282	2,332	2,345	2,270	2,150	1,975	370
1972	1,850	1,845	1,838	1,900	2,000	2,100	2,247	2,185	2,059	1,912	1,765	1,618	629
1973	1,538	1,547	1,657	1,817	1,971	2,097	2,255	2,320	2,189	2,052	1,852	1,711	609
1974	1,653	1,850	1,850	1,900	2,000	2,100	2,300	2,400	2,394	2,270	2,150	1,975	425
1975	1,850	1,836	1,826	1,816	1,913	2,100	2,219	2,332	2,447	2,270	2,150	1,975	472
1976	1,850	1,850	1,837	1,703	1,737	1,784	1,870	1,853	1,804	1,586	1,447	1,336	534
1977	1,271	1,236	1,210	1,190	1,183	1,169	1,045	995	870	642	537	511	534
1978	500	504	648	1,048	1,234	1,520	1,721	1,737	1,693	1,609	1,468	1,385	352
1979	1,323	1,305	1,295	1,318	1,371	1,520	1,642	1,719	1,687	1,549	1,411	1,299	420
1980	1,267	1,303	1,357	1,586	1,889	2,026	2,190	2,103	1,971	1,850	1,698	1,554	636
1981	1,459	1,422	1,453	1,550	1,690	1,816	1,932	1,863	1,804	1,653	1,465	1,344	588
1982	1,277	1,501	1,833	1,900	2,000	2,100	2,300	2,311	2,179	2,063	1,948	1,832	479
1983	1,850	1,850	1,850	1,900	2,000	2,100	2,300	2,420	2,447	2,270	2,150	1,975	472
1984	1,850	1,850	1,850	1,900	1,998	2,100	2,215	2,178	2,050	1,916	1,772	1,631	584
1985	1,574	1,702	1,756	1,729	1,758	1,805	1,952	1,872	1,796	1,569	1,368	1,237	715
1986	1,127	1,116	1,126	1,254	1,738	2,080	2,083	1,977	1,864	1,657	1,467	1,358	725
1987	1,304	1,269	1,255	1,266	1,343	1,546	1,698	1,607	1,412	1,188	1,001	888	810
1988	852	837	1,007	1,085	1,165	1,250	1,336	1,276	1,213	1,050	868	772	564
1989	713	749	762	783	809	1,153	1,356	1,249	1,161	1,013	909	832	524
1990	844	841	832	891	911	997	1,030	996	991	883	760	674	356
1991	652	639	627	622	632	710	775	803	769	662	597	558	245
1992	540	530	526	534	673	815	1,050	1,043	926	748	587	538	512
1993	522	521	544	606	750	1,122	1,333	1,514	1,609	1,587	1,477	1,411	198
1994	1,349	1,335	1,356	1,393	1,424	1,491	1,541	1,550	1,476	1,273	1,050	895	655
Avg	1,244	1,260	1,313	1,370	1,477	1,597	1,744	1,740	1,689	1,546	1,405	1,286	514
Min	240	240	241	253	275	427	517	541	552	516	342	240	192
Max	1,850	1,850	1,850	1,900	2,011	2,100	2,300	2,420	2,447	2,270	2,150	1,975	900

Table I-1c. CALSIM Simulated Trinity Lake Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	19	34	33	34	34	34	34	78	78	123	168
1923	198	198	188	180	179	174	173	136	74	55	70	115
1924	161	184	184	111	97	72	8	7	4	25	69	0
1925	0	0	6	0	0	6	10	-93	-151	-68	-6	38
1926	39	38	39	39	44	44	44	44	58	85	125	124
1927	139	145	145	154	154	154	158	49	-53	-93	-92	-48
1928	-48	-49	-49	-49	-49	-49	-46	-117	-152	-191	-186	-111
1929	-80	-80	-72	-27	-19	-17	-17	-16	14	60	68	111
1930	89	84	84	84	84	84	84	84	67	112	153	153
1931	153	159	164	170	176	176	169	138	78	63	133	19
1932	0	0	0	0	0	0	0	0	0	76	98	129
1933	105	99	94	92	92	92	92	91	56	62	101	145
1934	127	123	123	123	123	123	68	52	37	43	137	38
1935	0	0	6	6	6	6	6	6	6	6	83	127
1936	142	148	154	160	166	159	149	77	27	33	95	94
1937	94	100	105	112	118	117	117	117	146	115	175	204
1938	204	204	204	204	204	203	210	115	-113	-117	-113	0
1939	0	6	5	7	7	7	-9	-9	-7	-7	-7	82
1940	32	35	44	53	53	53	58	-37	-96	-89	-43	31
1941	62	62	62	62	62	0	0	0	0	0	0	0
1942	0	-19	0	0	0	0	5	-104	-127	0	0	0
1943	0	0	0	0	0	0	3	-69	-152	-191	-191	-145
1944	-99	-39	-47	-90	-91	-90	-90	-90	-60	-36	-5	25
1945	55	55	55	46	43	43	46	-26	-106	-145	-68	-38
1946	-7	-13	-13	-13	-13	-13	-8	-102	-161	-123	-77	-32
1947	-2	-2	-2	-1	-10	-4	-4	-4	25	-7	4	51
1948	96	120	129	139	138	138	141	78	-1	-41	-42	-68
1949	-38	-37	-37	-35	-30	-30	-27	-98	-133	-172	-110	-80
1950	-49	-26	-16	-7	-7	-1	-2	-11	-11	51	66	95
1951	126	105	104	105	105	105	110	5	-90	-130	-84	-39
1952	69	69	68	69	69	69	19	-8	0	0	0	0
1953	0	0	0	0	6	6	15	-94	-106	0	0	0
1954	0	0	25	0	0	0	0	-42	-139	-178	-255	-210
1955	-163	-193	-165	-82	-51	-42	-33	-33	11	47	94	153
1956	158	158	157	123	85	40	16	-38	-145	-86	-79	0
1957	0	0	-4	-5	-6	0	16	-47	-126	-166	-165	-121
1958	-69	0	0	0	0	0	0	0	-16	0	0	0
1959	0	-6	-6	0	0	-7	3	-53	-88	-97	-71	-70
1960	-54	-40	-31	-22	-13	-13	-10	-73	-152	-130	-98	-38
1961	23	47	56	62	62	62	61	-10	-89	-129	-62	-2
1962	29	28	29	29	29	29	32	-40	-119	-158	-97	-67
1963	-81	-82	-82	-82	-82	-76	-71	-164	-349	-355	-354	-299
1964	-177	-59	-13	-19	-25	-31	-116	-115	-86	-39	-8	51
1965	82	81	82	0	0	11	16	-87	-191	-231	-184	-139
1966	-92	-92	-93	-92	-92	-33	0	-70	-159	-233	-198	-123
1967	-74	0	0	0	0	0	5	-87	-13	0	0	0
1968	0	-2	-2	-3	0	0	11	-61	-140	-163	-117	-101
1969	6	7	6	6	6	7	13	0	-98	-45	-41	0
1970	0	0	0	0	0	0	11	-84	-142	-187	-155	-66
1971	-35	-35	-35	-34	-24	0	5	-88	-102	0	0	0
1972	0	11	9	9	0	0	2	-69	-148	-182	-136	-91
1973	-14	-37	-37	-37	-29	-3	1	-80	-258	-218	-217	-173
1974	-157	0	0	0	0	0	0	-19	-53	0	0	0
1975	0	-1	-1	0	0	0	1	-88	0	0	0	0
1976	0	0	0	0	0	3	3	3	47	47	108	138
1977	169	168	168	168	175	169	81	81	87	44	52	96
1978	217	191	141	140	141	141	147	45	-180	-220	-250	-175
1979	-129	-144	-150	-149	-150	-150	-154	-163	-118	-148	-86	-57
1980	-26	-25	-35	-35	-34	-34	-8	-110	-206	-244	-199	-154
1981	-139	-79	-88	-98	-97	-97	-97	-52	-52	-6	10	69
1982	85	65	66	42	0	0	0	-73	-212	-207	-202	-143
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	5	-99	-194	-234	-187	-142
1985	-95	-96	-94	-33	-31	-31	-30	-30	-1	-15	-4	39
1986	16	40	49	58	58	58	16	-78	-137	-125	-107	-33
1987	-2	-2	-3	-2	-2	-11	-12	-20	-21	-21	-11	-3
1988	44	67	68	76	76	77	75	65	57	103	100	94
1989	72	72	72	72	72	72	74	3	-44	-18	44	74
1990	73	73	74	74	73	73	50	50	37	98	97	97
1991	112	118	124	130	136	136	135	135	110	110	159	203
1992	218	224	230	230	230	229	228	228	170	103	62	99
1993	114	120	126	132	138	138	143	32	-72	-111	-111	-78
1994	-78	-79	-79	-79	-79	-79	-79	-78	-22	-4	11	-8
Avg	22	30	32	31	32	31	28	-18	-57	-54	-30	0
Min	-177	-193	-165	-149	-150	-150	-154	-164	-349	-355	-354	-299
Max	218	224	230	230	230	229	228	228	170	115	175	204

Table I-1d. CALSIM Simulated Monthly Cumulative Distribution of Trinity Reservoir Storage for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	240	240	240	240	241	358	511	500	552	446	268	240
10	322	315	418	474	532	609	820	773	756	598	485	415
20	663	677	758	790	838	1,000	1,157	1,187	1,156	973	813	695
30	952	939	1,039	1,132	1,206	1,357	1,507	1,521	1,498	1,319	1,158	984
40	1,151	1,175	1,212	1,196	1,351	1,511	1,640	1,692	1,709	1,550	1,365	1,223
50	1,288	1,271	1,406	1,537	1,653	1,752	1,856	1,878	1,805	1,697	1,497	1,351
60	1,370	1,414	1,523	1,641	1,772	1,860	2,003	2,028	1,992	1,802	1,631	1,470
70	1,637	1,645	1,694	1,777	1,894	1,987	2,164	2,195	2,207	2,094	1,901	1,709
80	1,850	1,837	1,821	1,872	1,971	2,100	2,225	2,352	2,407	2,270	2,146	1,975
90	1,850	1,850	1,850	1,900	2,000	2,100	2,281	2,420	2,447	2,270	2,150	1,975
Max	1,850	1,850	1,850	1,900	2,011	2,100	2,300	2,420	2,447	2,270	2,150	1,975
Avg	1,222	1,230	1,281	1,339	1,445	1,566	1,716	1,758	1,746	1,600	1,435	1,286
B: 2020 Baseline												
Min	240	240	241	253	275	427	517	541	552	516	342	240
10	522	521	544	606	670	780	828	803	784	662	587	538
20	716	749	832	874	913	1,122	1,201	1,124	1,161	1,013	868	772
30	1,048	1,059	1,126	1,166	1,234	1,392	1,541	1,519	1,492	1,330	1,162	1,035
40	1,208	1,202	1,241	1,254	1,401	1,531	1,672	1,660	1,609	1,477	1,301	1,188
50	1,277	1,303	1,393	1,495	1,594	1,761	1,859	1,853	1,796	1,609	1,465	1,336
60	1,353	1,420	1,568	1,651	1,738	1,834	2,040	1,977	1,864	1,701	1,532	1,412
70	1,563	1,619	1,700	1,742	1,879	1,997	2,170	2,108	2,048	1,912	1,765	1,618
80	1,782	1,834	1,819	1,900	1,971	2,100	2,219	2,248	2,185	2,052	1,852	1,713
90	1,850	1,850	1,850	1,900	2,000	2,100	2,300	2,333	2,349	2,270	2,150	1,975
Max	1,850	1,850	1,850	1,900	2,011	2,100	2,300	2,420	2,447	2,270	2,150	1,975
Avg	1,244	1,260	1,313	1,370	1,477	1,597	1,744	1,740	1,689	1,546	1,405	1,286
Comparison: B – A												
Min	0	0	1	13	34	69	6	41	0	70	74	0
10	200	206	126	132	138	171	8	30	28	64	102	123
20	53	72	74	84	75	122	44	-63	5	40	55	77
30	96	120	87	34	28	35	34	-2	-6	11	4	51
40	57	27	29	58	50	20	32	-32	-100	-73	-64	-35
50	-11	32	-13	-42	-59	9	3	-25	-9	-88	-32	-15
60	-17	6	45	10	-34	-26	37	-51	-128	-101	-99	-58
70	-74	-26	6	-35	-15	10	6	-87	-159	-182	-136	-91
80	-68	-3	-2	28	0	0	-6	-104	-222	-218	-294	-262
90	0	0	0	0	0	0	19	-87	-98	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0
Avg	22	30	32	31	32	31	28	-18	-57	-54	-30	0

Table I-2a. CALSIM Simulated Trinity River Flow, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1923	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1924	373	300	300	300	300	300	600	1,498	783	450	450	25	345
1925	0	300	300	300	300	300	540	2,924	783	450	450	450	431
1926	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1927	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1928	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1929	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1930	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1931	373	300	300	300	300	300	600	1,498	783	450	450	0	343
1932	0	34	300	300	300	300	540	2,924	783	450	450	450	415
1933	173	273	268	267	300	300	540	2,924	783	450	450	450	436
1934	373	300	300	300	300	300	600	1,498	783	450	450	407	367
1935	0	300	300	300	300	300	540	2,924	783	450	450	450	431
1936	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1937	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1938	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1939	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1940	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1941	373	300	300	300	300	411	540	3,294	1,793	1,949	450	450	635
1942	373	300	1,180	300	300	300	540	2,924	783	450	450	450	508
1943	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1944	373	300	300	300	300	300	600	1,498	783	450	450	450	370
1945	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1946	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1947	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1948	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1949	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1950	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1951	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1952	373	300	300	300	300	300	540	2,924	783	646	450	450	466
1953	373	300	300	1,875	300	300	540	2,924	783	1,068	450	450	588
1954	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1955	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1956	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1957	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1958	373	300	300	300	9,634	300	540	3,651	1,053	879	450	450	1,059
1959	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1960	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1961	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1962	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1963	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1964	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1965	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1966	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1967	373	300	300	300	300	300	540	2,924	783	505	450	450	457
1968	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1969	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1970	373	300	517	6,776	300	300	540	2,924	783	450	450	450	865
1971	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1972	373	300	300	300	300	749	540	2,924	783	450	450	450	482
1973	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1974	373	4,221	1,438	6,513	300	1,334	540	2,924	792	641	450	450	1,215
1975	373	300	300	300	300	300	540	2,924	828	487	450	450	458
1976	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1977	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1978	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1979	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1980	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1981	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1982	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1983	373	300	300	316	1,487	7,057	540	4,371	4,942	3,439	450	450	1,456
1984	373	300	2,768	300	300	300	540	2,924	783	450	450	450	606
1985	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1986	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1987	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1988	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1989	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1990	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1991	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1992	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1993	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1994	373	300	300	300	300	300	600	1,498	783	450	450	450	369
Avg	355	350	364	495	444	414	547	2,783	858	532	450	437	487
Min	0	34	268	267	300	300	540	1,498	783	450	450	0	343
Max	373	4,221	2,768	6,776	9,634	7,057	600	4,371	4,942	3,439	450	450	1,456

Table I-2b. CALSIM Simulated Trinity River Flow, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1923	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1924	373	300	300	300	300	300	600	1,498	783	450	450	450	370
1925	146	300	300	300	300	300	460	4,709	2,526	1,102	450	450	688
1926	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1927	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1928	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	649
1929	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1930	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1931	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1932	0	186	300	300	300	300	540	2,924	783	450	450	450	424
1933	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1934	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1935	0	300	300	300	300	300	540	2,924	783	450	450	450	431
1936	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	649
1937	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1938	373	300	300	300	300	300	427	4,570	4,626	1,102	450	450	817
1939	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1940	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	703
1941	373	300	300	300	300	1,421	427	4,570	4,626	1,949	450	450	938
1942	373	300	873	300	300	300	460	4,709	2,526	1,102	450	450	738
1943	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	648
1944	373	300	300	300	300	300	600	1,498	783	450	450	450	370
1945	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	648
1946	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1947	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1948	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	649
1949	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	648
1950	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1951	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1952	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	703
1953	373	300	300	1,875	300	300	460	4,709	2,526	1,102	450	450	799
1954	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1955	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1956	373	300	300	300	300	300	427	4,570	4,626	1,102	450	450	817
1957	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	648
1958	373	300	300	300	9,634	300	427	4,570	4,626	1,102	450	450	1,335
1959	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	648
1960	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	649
1961	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	648
1962	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	648
1963	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1964	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1965	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1966	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	648
1967	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1968	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	649
1969	373	300	300	300	300	300	427	4,570	4,626	1,102	450	450	817
1970	373	300	517	6,776	300	300	460	4,709	2,526	1,102	450	450	1,114
1971	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1972	373	300	300	300	300	749	493	4,189	2,120	1,102	450	450	676
1973	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1974	373	1,585	1,438	6,513	300	1,334	427	4,570	4,626	1,102	450	450	1,409
1975	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1976	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1977	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1978	373	300	300	300	300	300	427	4,570	4,626	1,102	450	450	817
1979	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1980	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	703
1981	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1982	373	300	300	300	300	300	427	4,570	4,626	1,102	450	450	817
1983	373	300	300	316	1,487	7,057	427	4,570	4,942	3,439	450	450	1,462
1984	373	300	2,768	300	300	300	460	4,709	2,526	1,102	450	450	855
1985	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1986	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1987	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1988	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1989	373	300	300	300	300	300	493	4,189	2,120	1,102	450	450	648
1990	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1991	373	300	300	300	300	300	600	1,498	783	450	450	450	369
1992	373	300	300	300	300	300	540	2,924	783	450	450	450	454
1993	373	300	300	300	300	300	460	4,709	2,526	1,102	450	450	702
1994	373	300	300	300	300	300	600	1,498	783	450	450	450	369
Avg	360	316	360	496	444	428	502	3,700	2,013	887	450	450	631
Min	0	186	300	300	300	300	427	1,498	783	450	450	450	369
Max	373	1,585	2,768	6,776	9,634	7,057	600	4,709	4,942	3,439	450	450	1,462

Table I-2c. CALSIM Simulated Trinity River Flow, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	0	0	0	0	0	0	0	0	0	0	0
1923	0	0	0	0	0	0	0	0	0	0	0	0	0
1924	0	0	0	0	0	0	0	0	0	0	0	425	25
1925	146	0	0	0	0	0	-80	1,785	1,743	652	0	0	258
1926	0	0	0	0	0	0	0	0	0	0	0	0	0
1927	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1928	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	450	27
1932	0	152	0	0	0	0	0	0	0	0	0	0	9
1933	200	27	32	33	0	0	0	0	0	0	0	0	18
1934	0	0	0	0	0	0	0	0	0	0	0	43	3
1935	0	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1937	0	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	-113	1,646	3,843	652	0	0	363
1939	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1941	0	0	0	0	0	1,010	-113	1,276	2,833	0	0	0	302
1942	0	0	-307	0	0	0	-80	1,785	1,743	652	0	0	230
1943	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1944	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1946	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1947	0	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1949	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1950	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1952	0	0	0	0	0	0	-80	1,785	1,743	456	0	0	237
1953	0	0	0	0	0	0	-80	1,785	1,743	34	0	0	211
1954	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	-113	1,646	3,843	652	0	0	363
1957	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1958	0	0	0	0	0	0	-113	919	3,573	223	0	0	276
1959	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1960	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1961	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1962	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1963	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1966	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1967	0	0	0	0	0	0	-80	1,785	1,743	597	0	0	245
1968	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1969	0	0	0	0	0	0	-113	1,646	3,843	652	0	0	363
1970	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1971	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1972	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1973	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1974	0	-2,636	0	0	0	0	-113	1,646	3,834	461	0	0	194
1975	0	0	0	0	0	0	-80	1,785	1,698	615	0	0	244
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	-113	1,646	3,843	652	0	0	363
1979	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1981	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	-113	1,646	3,843	652	0	0	363
1983	0	0	0	0	0	0	-113	199	0	0	0	0	6
1984	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1985	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	195
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	-80	1,785	1,743	652	0	0	249
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg	5	-34	-4	1	0	14	-45	917	1,155	355	0	13	144
Min	0	-2,636	-307	0	0	0	-113	0	0	0	0	0	0
Max	200	152	32	33	0	1,010	0	1,785	3,843	652	0	450	363

Table I-2d. CALSIM Simulated Monthly Cumulative Distribution of Trinity River Flows for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	0	34	268	267	300	300	540	1,498	783	450	450	0	
10	373	300	300	300	300	300	540	1,498	783	450	450	450	
20	373	300	300	300	300	300	540	2,924	783	450	450	450	
30	373	300	300	300	300	300	540	2,924	783	450	450	450	
40	373	300	300	300	300	300	540	2,924	783	450	450	450	
50	373	300	300	300	300	300	540	2,924	783	450	450	450	
60	373	300	300	300	300	300	540	2,924	783	450	450	450	
70	373	300	300	300	300	300	540	2,924	783	450	450	450	
80	373	300	300	300	300	300	540	2,924	783	450	450	450	
90	373	300	300	300	300	300	600	2,924	783	487	450	450	
Max	373	4,221	2,768	6,776	9,634	7,057	600	4,371	4,942	3,439	450	450	
Avg	355	350	364	495	444	414	547	2783	858	532	450	437	487
B: 2020 Baseline													
Min	0	186	300	300	300	300	427	1,498	783	450	450	450	
10	373	300	300	300	300	300	427	1,498	783	450	450	450	
20	373	300	300	300	300	300	460	2,924	783	450	450	450	
30	373	300	300	300	300	300	460	2,924	783	450	450	450	
40	373	300	300	300	300	300	460	2,924	783	450	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	540	4,570	2,526	1,102	450	450	
80	373	300	300	300	300	300	540	4,709	2,526	1,102	450	450	
90	373	300	300	300	300	300	600	4,709	4,626	1,102	450	450	
Max	373	1585	2768	6776	9634	7057	600	4709	4942	3439	450	450	
Avg	360	316	360	496	444	428	502	3700	2013	887	450	450	631
Comparison: B – A													
Min	0	152	32	33	0	0	-113	0	0	0	0	450	
10	0	0	0	0	0	0	-113	0	0	0	0	0	
20	0	0	0	0	0	0	-80	0	0	0	0	0	
30	0	0	0	0	0	0	-80	0	0	0	0	0	
40	0	0	0	0	0	0	-80	0	0	0	0	0	
50	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	
60	0	0	0	0	0	0	-47	1,265	1,337	652	0	0	
70	0	0	0	0	0	0	0	1,646	1,743	652	0	0	
80	0	0	0	0	0	0	0	1,785	1,743	652	0	0	
90	0	0	0	0	0	0	0	1,785	3,843	615	0	0	
Max	0	-2,636	0	0	0	0	0	338	0	0	0	0	
Avg	5	-34	-4	1	0	14	-45	917	1,155	355	0	13	144

Table I-3b. CALSIM Simulated Trinity Export Flow to Sacramento River, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	3,300	1,437	254	250	250	100	333	250	750	1,500	2,000	2,000	754
1923	750	500	250	250	100	189	317	845	2,523	2,816	2,250	1,000	716
1924	250	100	100	1,297	329	509	1,179	407	1,227	1,153	2,365	1,270	618
1925	113	0	0	264	0	0	100	0	250	1,250	1,500	1,000	273
1926	250	100	100	100	0	191	100	100	750	1,812	1,852	1,000	387
1927	0	0	100	100	0	100	0	0	0	1,500	1,500	2,000	322
1928	750	14	105	100	100	0	267	0	750	1,502	3,224	1,500	506
1929	750	500	104	694	100	100	365	100	1,000	2,500	2,343	1,038	584
1930	603	180	100	100	100	100	403	100	1,033	1,500	1,562	1,000	411
1931	250	0	0	0	0	0	120	483	1,351	1,720	1,791	1,954	465
1932	431	0	40	0	0	0	0	0	250	250	1,155	470	158
1933	178	72	43	0	0	0	0	0	859	1,397	859	250	223
1934	544	58	0	0	0	0	912	256	1,490	1,390	563	2,832	484
1935	815	0	0	0	0	0	0	0	250	1,500	250	250	188
1936	0	0	0	0	0	100	210	0	250	1,000	1,250	1,000	231
1937	250	0	0	0	0	0	0	100	250	2,250	1,250	1,000	311
1938	250	100	0	0	0	0	0	0	0	113	1,500	643	159
1939	1,941	491	723	1,589	323	0	470	501	2,255	3,300	3,300	1,750	1,012
1940	1,799	461	100	100	0	0	250	0	750	2,000	2,000	1,500	545
1941	750	500	0	0	0	2,313	2,295	2,024	467	3,300	1,951	2,716	992
1942	1,858	610	3,300	2,367	2,118	1,593	100	0	0	524	1,603	2,558	1,004
1943	1,784	431	1,055	848	396	1,163	319	0	136	1,500	1,500	2,000	677
1944	750	500	250	1,065	100	100	450	250	1,250	2,363	2,250	1,500	658
1945	750	500	250	250	51	100	303	0	750	1,500	1,500	1,500	452
1946	250	100	0	0	100	0	100	0	750	1,500	2,000	2,000	412
1947	750	500	250	250	250	0	407	250	750	2,545	2,337	1,712	607
1948	250	100	100	100	250	250	100	0	750	1,500	1,500	1,500	388
1949	250	0	100	100	0	0	100	0	750	1,500	1,750	1,500	367
1950	250	100	104	100	100	0	250	250	750	1,750	1,750	1,500	419
1951	250	349	0	0	0	100	369	0	1,374	1,500	2,000	2,000	480
1952	750	500	0	0	0	0	909	0	116	2,844	1,670	2,567	567
1953	1,781	0	586	2,679	1,356	0	67	0	0	1,544	1,745	2,603	747
1954	1,890	1,395	875	570	2,039	2,256	2,290	0	1,374	1,500	2,750	2,000	1,139
1955	750	500	0	100	137	100	47	250	750	2,160	2,000	1,500	504
1956	1,159	500	0	565	651	830	1,449	0	0	1,500	1,500	1,229	568
1957	1,856	308	795	366	0	259	767	0	0	1,500	2,750	2,000	646
1958	147	170	1,650	1,756	0	1,993	1,287	2,381	0	2,813	1,820	2,602	1,014
1959	1,809	269	547	1,336	79	2,201	807	0	750	2,809	2,869	3,300	1,021
1960	1,000	500	104	100	100	250	286	0	750	1,750	1,750	1,500	491
1961	250	100	100	0	0	0	268	0	750	1,500	1,750	1,500	377
1962	750	500	250	250	0	100	406	0	750	1,500	1,750	1,500	471
1963	250	0	0	100	0	0	0	0	1,374	1,500	1,500	1,500	377
1964	0	0	568	420	1,071	100	1,527	250	1,250	2,000	2,250	1,500	660
1965	750	500	129	1,437	465	1,492	0	0	32	1,500	2,000	2,000	626
1966	750	0	0	0	0	0	1,361	0	189	2,750	2,750	2,040	598
1967	2,265	500	0	44	666	997	0	0	0	2,494	1,755	2,657	690
1968	1,998	311	663	1,337	1,978	829	396	0	1,500	2,481	2,000	2,500	966
1969	750	500	250	0	0	0	0	154	0	1,500	1,500	1,801	392
1970	1,873	14	3,300	1,589	1,020	1,117	542	0	750	2,821	2,500	1,500	1,036
1971	750	500	0	0	1,070	41	0	0	35	882	1,559	2,481	438
1972	1,770	318	490	801	281	3,300	0	0	1,500	1,500	2,011	2,000	851
1973	1,250	500	0	0	0	0	749	0	1,374	1,500	2,750	2,000	613
1974	1,250	2,354	2,809	1,752	168	2,263	651	0	39	1,977	1,693	2,511	1,062
1975	1,694	222	509	642	0	1,057	452	0	127	2,685	1,650	2,599	709
1976	1,982	524	862	2,456	100	191	182	250	750	3,300	2,000	1,500	861
1977	750	500	250	250	133	240	2,095	100	1,698	3,249	1,373	250	660
1978	51	446	905	4	0	0	0	0	0	1,500	2,000	1,500	390
1979	750	250	100	100	100	100	185	250	750	2,000	1,750	1,500	476
1980	750	500	250	0	0	100	170	0	1,374	1,500	2,021	2,000	525
1981	1,250	500	250	250	100	0	100	100	750	2,000	2,500	1,500	566
1982	1,000	318	0	379	2,870	1,348	584	0	0	1,500	1,500	1,500	655
1983	26	615	2,268	2,620	1,769	0	1,024	2,914	3,300	3,300	2,512	2,909	1,404
1984	1,972	2,161	2,326	1,660	0	813	315	0	1,374	1,500	2,000	2,000	980
1985	750	0	0	973	271	164	391	250	1,250	3,300	2,809	1,800	727
1986	1,602	100	100	100	0	0	2,616	0	750	2,470	2,665	1,500	722
1987	750	500	250	250	250	250	251	1,004	3,159	3,300	2,618	1,375	846
1988	250	100	100	100	100	100	247	250	1,844	2,500	2,526	1,095	560
1989	621	100	100	100	100	100	100	0	250	1,414	1,250	1,000	312
1990	250	100	112	100	100	100	489	100	536	1,500	1,500	1,000	357
1991	0	0	0	0	0	0	0	0	652	1,500	680	250	188
1992	0	0	0	0	0	0	0	100	1,979	2,694	2,171	363	445
1993	0	0	0	0	0	100	0	0	0	0	1,500	672	138
1994	750	0	2	100	100	100	405	250	777	2,754	3,070	2,064	631
Avg	851	341	396	482	298	410	455	199	799	1,894	1,909	1,632	586
Min	0	0	0	0	0	0	0	0	0	0	250	250	138
Max	3,300	2,354	3,300	2,679	2,870	3,300	2,616	2,914	3,300	3,300	3,300	3,300	1,404

Table I-3c. CALSIM Simulated Trinity Export Flow to Sacramento River, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	0	-313	-246	0	0	0	0	0	-750	0	-750	-750	-169
1923	-500	0	150	150	0	89	0	595	1,032	316	-250	-750	51
1924	-750	-400	0	1,197	229	409	1,079	14	43	-347	-712	728	88
1925	-146	0	-100	100	0	-100	0	-100	-750	-2,000	-1,000	-750	-295
1926	0	0	0	0	-100	0	0	0	-250	-438	-648	0	-87
1927	-250	-100	0	-150	0	0	0	0	-36	0	0	-750	-77
1928	0	14	0	0	0	0	0	-100	-750	2	-76	-1,250	-129
1929	-500	0	-146	-718	-150	-39	0	0	-500	-750	-157	-712	-223
1930	353	80	0	0	0	0	0	0	283	-750	-688	0	-45
1931	0	-100	-100	-100	-100	0	120	483	1,011	220	-1,144	1,459	103
1932	309	-152	0	0	0	0	0	0	0	-1,250	-345	-530	-120
1933	178	72	43	0	0	0	0	0	590	-103	-641	-750	-37
1934	294	58	0	0	0	0	912	256	259	-110	-1,532	1,616	102
1935	610	0	-100	0	0	0	0	0	0	0	-1,250	-750	-90
1936	-250	-100	-100	-100	-100	100	210	-100	-500	-750	-1,000	0	-164
1937	0	-100	-100	-100	-100	0	0	0	-500	500	-1,000	-500	-114
1938	0	0	0	0	0	0	0	-115	0	-588	-59	-1,895	-160
1939	0	-95	10	-38	12	0	281	-13	-25	0	0	-1,500	-82
1940	799	-39	-150	-150	0	0	0	-250	-750	-750	-750	-1,250	-198
1941	-500	0	0	0	0	0	113	-1,276	-2,833	0	0	0	-271
1942	0	317	0	0	0	0	0	0	-1,361	-2,719	0	0	-229
1943	0	0	0	0	0	0	0	-100	54	0	0	-750	-48
1944	-750	-1,000	112	721	0	0	0	0	-500	-387	-500	-500	-168
1945	-500	0	0	150	51	0	0	-100	0	0	-1,250	-500	-131
1946	-500	100	0	0	0	0	0	-250	-750	-1,250	-750	-750	-252
1947	-500	0	0	0	150	-100	7	0	-500	517	-163	-788	-83
1948	-750	-400	-150	-150	0	0	0	-250	0	0	0	456	-77
1949	-500	0	0	-37	-100	0	0	-100	-750	0	-1,000	-500	-181
1950	-500	-400	-146	-150	0	-100	14	150	0	-1,000	-250	-500	-175
1951	-500	349	0	0	0	0	0	-100	-126	0	-750	-750	-114
1952	-1,750	0	0	0	0	0	909	-1,335	-1,885	-456	0	0	-276
1953	0	0	0	0	-107	0	-83	0	-1,537	-1,756	0	0	-210
1954	0	0	-407	407	0	0	80	-1,089	-126	0	1,250	-750	-37
1955	-750	500	-456	-1,333	-565	-142	-150	0	-750	-590	-750	-1,000	-362
1956	-91	0	0	565	651	730	521	-772	-2,026	-1,614	-108	-1,326	-210
1957	0	6	56	22	0	-84	-210	-250	0	0	0	-750	-73
1958	-828	-1,167	0	0	0	0	113	-919	-3,300	-487	0	0	-397
1959	0	108	-7	-98	0	115	-128	-346	-750	-491	-431	0	-123
1960	-250	-250	-146	-150	-150	0	0	-250	0	-1,000	-503	-1,000	-224
1961	-1,000	-400	-150	-100	0	0	50	-100	0	0	-1,095	-1,000	-231
1962	-500	0	0	0	0	0	0	-100	0	0	-1,000	-500	-128
1963	250	0	0	0	0	-100	0	-262	1,374	-541	0	-900	-12
1964	-1,980	-1,983	-750	103	98	100	1,427	0	-500	-750	-500	-1,000	-349
1965	-500	0	0	1,327	0	-182	0	-100	0	0	-750	-750	-57
1966	-750	0	0	0	0	-960	-510	-130	169	563	-550	-1,260	-208
1967	-793	-1,250	0	0	0	0	0	-295	-2,982	-806	0	0	-368
1968	0	39	-6	2	-36	0	-134	-100	0	-269	-750	-250	-92
1969	-1,750	0	0	0	0	0	0	-1,434	-2,191	-1,520	-51	-693	-464
1970	0	0	0	0	0	0	-94	-250	-750	71	-500	-1,500	-181
1971	-500	0	0	0	-204	-381	0	-274	-1,497	-2,315	0	0	-314
1972	0	-183	27	0	161	0	0	-100	0	-92	-739	-750	-102
1973	-1,250	386	0	0	-152	-414	21	-479	1,262	-1,289	0	-750	-165
1974	-250	0	0	0	0	0	113	-1,334	-3,261	-1,323	0	0	-366
1975	0	7	-1	-1	0	-4	59	-335	-3,173	-615	0	0	-244
1976	0	0	0	0	0	-45	0	0	-750	0	-1,000	-500	-139
1977	-500	0	0	0	-117	78	1,481	0	-113	695	-127	-750	39
1978	-1,974	446	805	0	0	0	0	0	-37	0	500	-1,250	-91
1979	-750	250	100	0	0	0	85	150	-750	500	-1,000	-500	-116
1980	-500	0	150	0	0	0	-374	-123	-126	0	-729	-750	-148
1981	-250	-1,000	150	150	0	0	0	0	-750	-750	-250	-1,000	-222
1982	-250	318	0	379	754	0	113	-451	-1,500	-726	-75	-983	-149
1983	-2,327	0	0	0	0	0	113	-199	0	0	0	0	-149
1984	0	0	0	0	0	0	0	-100	-126	0	-750	-750	-104
1985	-750	0	-31	-990	-43	0	0	0	-500	240	-191	-700	-180
1986	352	-400	-150	-150	0	0	793	-250	-750	-830	-283	-1,250	-176
1987	-500	0	0	0	0	150	0	147	0	0	-164	-125	-30
1988	-750	-400	0	-150	0	0	27	150	126	-750	26	95	-100
1989	371	0	0	0	0	0	0	-100	-547	-1,086	-1,000	-500	-174
1990	0	0	0	0	0	0	389	0	215	-1,000	0	0	-26
1991	-250	-100	-100	-100	-100	0	0	0	402	0	-820	-750	-110
1992	-250	-100	-100	0	0	0	0	0	955	1,072	671	-637	99
1993	-250	-100	-100	-100	-100	0	0	0	0	0	0	-538	-71
1994	3	0	0	0	0	0	0	0	-926	-314	-230	310	-70
Avg	-358	-102	-30	5	-1	-12	100	-170	-486	-409	-391	-516	-144
Min	-2,327	-1,983	-750	-1,333	-565	-960	-510	-1,434	-3,300	-2,719	-1,532	-1,895	-464
Max	799	500	805	1,327	754	730	1,481	595	1,374	1,072	1,250	1,616	103

Table I-3d. CALSIM Simulated Monthly Cumulative Distribution of Trinity River Exports for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	0	0	0	0	0	0	0	0	0	0	1,500	495	
10	250	0	0	0	0	0	0	0	36	1,500	1,500	1,000	
20	250	0	0	0	0	0	0	100	321	1,500	1,551	1,210	
30	750	100	100	100	0	0	100	100	750	1,500	1,670	1,750	
40	1,000	100	100	100	100	100	100	100	1,024	1,750	2,095	2,000	
50	1,250	302	100	100	100	100	218	115	1,500	2,500	2,500	2,500	
60	1,250	500	250	250	100	100	303	250	1,500	2,750	2,750	2,555	
70	1,500	500	250	250	152	236	391	250	1,500	2,789	2,750	2,716	
80	1,858	500	554	848	311	829	530	335	1,750	3,250	2,750	2,750	
90	1,998	1,395	1,282	1,660	1,020	1,593	928	857	2,280	3,300	3,000	2,750	
Max	3,300	2,354	3,300	2,679	2,118	3,300	2,210	3,300	3,300	3,300	3,300	3,300	
Avg	1,209	443	426	477	299	422	355	369	1,285	2,303	2,300	2,148	730
B: 2020 Baseline													
Min	0	0	0	0	0	0	0	0	0	0	250	250	
10	26	0	0	0	0	0	0	0	0	1,153	1,250	643	
20	250	0	0	0	0	0	0	0	39	1,500	1,500	1,000	
30	250	100	0	4	0	0	100	0	250	1,500	1,559	1,500	
40	621	100	100	100	0	41	182	0	750	1,500	1,750	1,500	
50	750	269	100	100	100	100	268	0	750	1,500	1,820	1,500	
60	750	446	129	250	100	100	365	0	750	1,977	2,000	1,800	
70	1,000	500	250	379	137	191	407	100	1,000	2,363	2,021	2,000	
80	1,770	500	568	973	323	829	749	250	1,374	2,694	2,500	2,040	
90	1,873	500	905	1,589	1,070	1,492	1,287	407	1,500	2,844	2,750	2,599	
Max	3,300	2,354	3,300	2,679	2,870	3,300	2,616	2,914	3,300	3,300	3,300	3,300	
Avg	851	341	396	482	298	410	455	199	799	1,894	1,909	1,632	586
Comparison: B - A													
Min	0	0	0	0	0	0	0	0	0	0	-1,250	-245	
10	-224	0	0	0	0	0	0	0	-36	-347	-250	-357	
20	0	0	0	0	0	0	0	-100	-282	0	-51	-210	
30	-500	0	-100	-96	0	0	0	-100	-500	0	-111	-250	
40	-379	0	0	0	-100	-59	82	-100	-274	-250	-345	-500	
50	-500	-33	0	0	0	0	50	-115	-750	-1,000	-680	-1,000	
60	-500	-54	-121	0	0	0	62	-250	-750	-773	-750	-755	
70	-500	0	0	129	-15	-45	16	-150	-500	-426	-729	-716	
80	-88	0	14	125	12	0	219	-85	-376	-556	-250	-710	
90	-125	-895	-377	-71	50	-101	359	-450	-780	-456	-250	-151	
Max	0	0	0	0	752	0	406	-386	0	0	0	0	
Avg	-358	-102	-30	5	-1	-12	100	-170	-486	-409	-391	-516	-144

Table I-4a. CALSIM Simulated Shasta Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	2,724	2,799	2,895	2,997	3,365	3,747	4,165	4,288	4,040	3,419	3,058	2,938	1,350
1923	2,949	3,029	3,121	3,319	3,447	3,570	3,813	3,506	3,158	2,667	2,293	2,192	1,621
1924	2,174	2,122	2,070	2,081	2,231	2,189	1,889	1,548	1,159	649	563	550	1,339
1925	550	666	771	948	2,200	2,415	3,015	3,038	2,794	2,471	2,208	2,133	905
1926	2,099	2,127	2,140	2,186	2,912	3,117	3,363	3,180	2,809	2,401	2,113	1,970	1,393
1927	1,906	2,390	2,899	3,448	3,462	4,094	4,552	4,552	4,264	3,708	3,299	3,151	1,401
1928	3,077	3,252	3,331	3,599	4,064	3,965	4,412	4,264	3,911	3,200	2,852	2,739	1,673
1929	2,679	2,628	2,628	2,764	2,959	3,129	3,152	2,978	2,767	2,389	2,015	1,889	1,263
1930	1,779	1,715	2,253	2,476	2,868	3,365	3,489	3,369	2,993	2,640	2,330	2,200	1,289
1931	2,121	2,116	2,102	2,179	2,269	2,432	2,105	1,772	1,381	695	561	550	1,555
1932	550	550	741	898	1,036	1,485	1,634	1,819	1,624	1,311	1,048	956	863
1933	889	880	868	899	939	1,512	1,554	1,595	1,456	1,097	822	726	869
1934	650	640	779	1,089	1,428	1,704	1,711	1,533	1,140	737	586	550	1,161
1935	550	650	702	1,009	1,351	1,755	2,751	3,006	2,711	2,359	2,005	1,869	1,137
1936	1,792	1,786	1,796	2,429	3,316	3,672	3,834	3,659	3,434	2,953	2,564	2,373	1,461
1937	2,233	2,119	2,031	2,003	2,102	2,753	3,328	3,396	3,202	2,802	2,430	2,245	1,151
1938	2,153	2,715	3,310	3,668	3,560	3,416	4,058	4,552	4,467	4,097	3,700	3,400	1,152
1939	3,250	3,145	3,258	3,462	3,597	4,001	3,800	3,537	3,054	2,526	2,216	2,166	1,634
1940	2,113	2,016	2,112	2,993	3,252	3,435	4,092	4,019	3,706	3,250	2,907	2,841	1,251
1941	2,787	2,804	3,293	3,317	3,423	3,940	4,456	4,552	4,500	4,071	3,700	3,400	1,152
1942	3,250	3,200	3,316	3,389	3,516	3,938	4,521	4,552	4,500	4,098	3,700	3,400	1,152
1943	3,250	3,252	3,356	3,541	3,848	4,118	4,520	4,493	4,242	3,662	3,267	3,175	1,345
1944	3,139	3,191	3,171	3,256	3,562	3,873	3,888	3,797	3,591	3,108	2,812	2,687	1,201
1945	2,653	2,858	3,166	3,357	3,948	4,236	4,366	4,358	4,127	3,598	3,253	3,095	1,271
1946	3,076	3,252	3,265	3,622	3,571	3,967	4,159	4,096	3,779	3,397	3,061	2,949	1,210
1947	2,869	2,928	2,989	3,001	3,260	3,784	3,917	3,587	3,411	2,845	2,449	2,400	1,517
1948	2,374	2,409	2,423	2,996	2,795	3,111	3,936	4,266	4,274	3,914	3,540	3,400	874
1949	3,185	3,091	3,094	3,099	3,295	4,071	4,375	4,381	4,100	3,434	3,086	3,003	1,378
1950	2,868	2,832	2,788	3,073	3,481	3,930	4,206	4,080	3,730	3,354	2,966	2,851	1,355
1951	3,144	3,252	3,322	3,624	3,794	4,236	4,323	4,328	3,989	3,365	3,025	2,925	1,403
1952	2,954	3,137	3,306	3,604	3,739	4,022	4,290	4,552	4,500	4,088	3,700	3,400	1,152
1953	3,250	3,240	3,345	3,366	3,753	4,226	4,517	4,552	4,500	4,150	3,700	3,400	1,152
1954	3,250	3,252	3,278	3,552	3,661	4,106	4,546	4,370	4,190	3,611	3,306	3,254	1,292
1955	3,160	3,252	3,360	3,564	3,692	3,839	3,872	3,948	3,676	3,111	2,596	2,578	1,370
1956	2,556	2,649	3,252	3,252	3,288	3,998	4,447	4,552	4,499	4,149	3,700	3,400	1,152
1957	3,250	3,163	3,194	3,312	3,675	4,129	4,154	4,402	4,142	3,591	3,310	3,236	1,166
1958	3,250	3,252	3,338	3,531	3,252	3,416	4,173	4,552	4,500	4,150	3,700	3,400	1,152
1959	3,250	3,172	3,219	3,648	3,777	4,077	4,123	3,929	3,314	2,804	2,449	2,402	1,721
1960	2,212	2,150	2,139	2,341	3,067	3,764	3,930	3,952	3,675	3,116	2,704	2,692	1,260
1961	2,613	2,733	3,176	3,389	3,914	4,280	4,305	4,248	3,880	3,200	2,707	2,676	1,629
1962	2,544	2,434	2,722	2,841	3,675	4,175	4,440	4,349	4,017	3,490	3,168	2,974	1,466
1963	3,250	3,252	3,349	3,514	3,944	3,976	4,137	4,408	4,155	3,743	3,439	3,400	1,008
1964	3,250	3,252	3,234	3,649	3,877	4,028	3,853	3,673	3,488	3,005	2,689	2,572	1,281
1965	2,549	2,696	3,252	3,368	3,809	3,922	4,500	4,450	4,142	3,540	3,295	3,239	1,261
1966	3,191	3,252	3,340	3,725	4,037	4,229	4,552	4,418	3,801	3,200	2,924	2,831	1,721
1967	2,774	3,137	3,335	3,551	3,920	4,033	4,479	4,552	4,500	4,150	3,698	3,400	1,152
1968	3,250	3,173	3,270	3,561	3,654	4,248	4,250	4,125	3,589	3,047	2,822	2,680	1,570
1969	2,750	2,765	3,066	3,358	3,480	4,030	4,434	4,552	4,500	4,033	3,670	3,400	1,152
1970	3,250	3,252	3,317	3,252	3,431	4,104	4,028	3,900	3,652	2,958	2,704	2,594	1,434
1971	2,610	3,105	3,319	3,515	3,708	3,873	4,386	4,552	4,500	4,150	3,700	3,400	1,152
1972	3,250	3,156	3,291	3,686	3,979	4,249	4,421	4,306	3,807	3,200	2,853	2,858	1,563
1973	3,007	3,252	3,346	3,552	3,636	4,162	4,419	4,422	4,024	3,554	3,290	3,178	1,244
1974	3,248	3,252	3,267	3,252	3,694	3,416	4,289	4,545	4,500	4,150	3,700	3,400	1,145
1975	3,250	3,162	3,290	3,461	3,936	3,756	4,293	4,552	4,500	4,150	3,700	3,400	1,152
1976	3,250	3,252	3,328	3,543	3,724	3,957	3,999	3,820	3,396	2,952	2,842	2,818	1,181
1977	2,821	2,842	2,780	2,799	2,805	2,802	2,368	2,200	1,686	1,025	570	550	1,818
1978	550	556	1,014	2,931	3,567	4,000	4,552	4,552	4,233	3,630	3,292	3,297	1,255
1979	3,222	3,200	3,159	3,308	3,667	4,182	4,312	4,334	3,869	3,347	3,078	2,914	1,420
1980	2,949	3,099	3,230	3,528	3,292	3,994	4,252	4,180	3,882	3,342	3,068	3,062	1,190
1981	3,066	3,100	3,198	3,506	3,922	4,256	4,390	4,215	3,655	3,065	2,753	2,608	1,782
1982	2,613	3,252	3,276	3,616	3,530	3,953	4,094	4,299	4,209	3,868	3,568	3,400	899
1983	3,250	3,252	3,328	3,371	3,252	3,417	4,074	4,552	4,500	4,150	3,700	3,400	1,152
1984	3,250	3,252	3,285	3,650	4,005	4,246	4,350	4,316	4,086	3,479	3,248	3,183	1,167
1985	3,220	3,252	3,360	3,525	3,710	3,921	4,042	3,749	3,360	2,873	2,554	2,553	1,489
1986	2,422	2,410	2,544	3,111	3,252	3,534	3,869	3,818	3,454	3,117	2,823	2,840	1,029
1987	2,878	2,862	2,862	2,990	3,339	4,075	3,818	3,522	3,000	2,559	2,321	2,219	1,599
1988	2,065	2,083	2,564	3,010	3,042	3,117	3,074	3,007	2,466	1,951	1,586	1,459	1,615
1989	1,320	1,547	1,664	1,791	1,919	3,322	3,680	3,463	3,152	2,678	2,421	2,359	1,321
1990	2,421	2,462	2,467	2,714	2,680	2,924	2,723	2,777	2,571	2,157	1,848	1,793	984
1991	1,694	1,639	1,641	1,666	1,652	2,098	2,260	2,183	1,910	1,604	1,391	1,339	921
1992	1,283	1,231	1,248	1,310	1,981	2,443	2,669	2,396	1,939	1,426	996	952	1,717
1993	865	827	1,079	1,749	2,500	3,979	4,551	4,552	4,500	3,924	3,599	3,400	1,152
1994	3,250	3,165	3,223	3,346	3,579	3,689	3,589	3,351	2,844	2,261	1,825	1,653	1,936
Avg	2,564	2,614	2,743	2,987	3,245	3,602	3,848	3,825	3,549	3,068	2,732	2,607	1,305
Min	550	550	702	898	939	1,485	1,554	1,533	1,140	649	561	550	863
Max	3,250	3,252	3,360	3,725	4,064	4,280	4,552	4,552	4,500	4,150	3,700	3,400	1,936

Table I-4b. CALSIM Simulated Shasta Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	2,728	2,774	2,846	2,940	3,308	3,690	4,109	4,232	3,930	3,447	3,025	2,847	1,385
1923	2,825	2,848	2,932	3,138	3,266	3,395	3,638	3,362	3,073	2,635	2,231	2,085	1,553
1924	2,024	1,949	1,913	2,015	2,179	2,107	1,863	1,541	1,159	721	589	550	1,313
1925	550	666	771	948	2,200	2,438	3,035	3,049	2,812	2,392	2,053	1,935	1,114
1926	1,904	1,935	1,986	2,035	2,756	2,962	3,208	3,030	2,640	2,217	1,881	1,762	1,446
1927	1,729	2,207	2,713	3,252	3,462	4,094	4,552	4,552	4,246	3,739	3,300	3,145	1,407
1928	3,037	3,252	3,351	3,627	4,093	3,965	4,412	4,241	3,844	3,200	2,862	2,691	1,721
1929	2,604	2,606	2,621	2,724	2,911	3,079	3,109	2,932	2,686	2,247	1,839	1,693	1,416
1930	1,582	1,501	2,040	2,260	2,652	3,149	3,274	3,155	2,795	2,389	2,030	1,901	1,373
1931	1,826	1,822	1,808	1,877	1,962	2,127	1,836	1,558	1,258	818	601	557	1,279
1932	550	550	741	898	1,036	1,485	1,653	1,840	1,644	1,258	1,017	884	956
1933	812	797	786	809	849	1,434	1,447	1,487	1,367	1,039	727	641	846
1934	622	606	739	1,031	1,371	1,639	1,708	1,548	1,195	803	550	564	1,144
1935	550	650	702	1,003	1,345	1,749	2,745	3,009	2,710	2,344	1,899	1,721	1,288
1936	1,675	1,663	1,671	2,294	3,176	3,536	3,697	3,527	3,277	2,797	2,344	2,149	1,548
1937	2,011	1,891	1,865	1,846	1,938	2,585	3,160	3,229	3,009	2,643	2,203	1,984	1,245
1938	1,895	2,458	3,310	3,668	3,560	3,416	4,058	4,545	4,460	4,040	3,665	3,400	1,145
1939	3,250	3,161	3,276	3,479	3,614	4,018	3,774	3,514	3,052	2,530	2,219	2,101	1,673
1940	2,079	2,022	2,108	2,979	3,252	3,435	4,092	4,005	3,618	3,109	2,688	2,538	1,554
1941	2,504	2,457	3,293	3,317	3,423	3,940	4,456	4,552	4,488	4,150	3,700	3,400	1,152
1942	3,250	3,147	3,316	3,389	3,516	3,938	4,521	4,552	4,459	4,039	3,660	3,400	1,152
1943	3,250	3,252	3,356	3,541	3,848	4,118	4,520	4,490	4,221	3,620	3,193	3,016	1,504
1944	2,983	2,939	2,926	3,055	3,362	3,673	3,714	3,624	3,394	2,967	2,643	2,539	1,175
1945	2,469	2,671	2,975	3,175	3,948	4,258	4,387	4,377	4,121	3,601	3,147	2,969	1,418
1946	2,936	3,221	3,265	3,622	3,673	4,068	4,291	4,214	3,846	3,389	2,996	2,847	1,444
1947	2,691	2,743	2,814	2,828	3,096	3,614	3,748	3,423	3,199	2,700	2,353	2,272	1,476
1948	2,231	2,249	2,260	2,825	2,624	2,940	3,765	4,080	4,089	3,703	3,296	3,190	899
1949	3,035	2,995	2,999	3,005	3,198	4,071	4,378	4,379	4,053	3,372	3,007	2,895	1,484
1950	2,729	2,654	2,592	2,865	3,276	3,722	4,002	3,893	3,546	3,104	2,698	2,551	1,451
1951	2,815	3,252	3,322	3,624	3,794	4,236	4,361	4,360	3,993	3,456	3,043	2,860	1,501
1952	2,749	2,941	3,306	3,604	3,739	4,022	4,290	4,552	4,404	4,071	3,700	3,400	1,152
1953	3,250	3,200	3,345	3,366	3,775	4,257	4,552	4,552	4,500	4,079	3,700	3,400	1,152
1954	3,250	3,252	3,364	3,552	3,661	4,106	4,546	4,312	4,098	3,502	3,277	3,222	1,324
1955	3,063	3,193	3,360	3,482	3,565	3,734	3,799	3,885	3,506	3,008	2,613	2,529	1,356
1956	2,511	2,612	3,252	3,252	3,288	4,014	4,494	4,552	4,377	4,032	3,694	3,400	1,152
1957	3,250	3,162	3,181	3,289	3,675	4,129	4,199	4,432	4,141	3,558	3,190	3,132	1,300
1958	3,250	3,242	3,338	3,531	3,252	3,416	4,173	4,552	4,500	4,150	3,700	3,400	1,152
1959	3,250	3,154	3,198	3,648	3,777	4,055	4,132	3,914	3,271	2,710	2,331	2,293	1,839
1960	2,115	2,092	2,072	2,265	2,982	3,680	3,846	3,853	3,601	3,014	2,604	2,531	1,322
1961	2,449	2,556	3,001	3,205	3,914	4,280	4,355	4,382	4,026	3,276	2,737	2,650	1,732
1962	2,488	2,544	2,796	2,887	3,675	4,175	4,440	4,338	3,992	3,439	3,029	2,797	1,643
1963	3,190	3,233	3,349	3,514	3,944	3,949	4,137	4,392	4,240	3,810	3,473	3,371	1,021
1964	3,250	3,252	3,188	3,610	3,816	3,956	3,605	3,418	3,224	2,849	2,517	2,410	1,195
1965	2,347	2,511	3,252	3,368	3,809	3,968	4,500	4,435	4,106	3,504	3,213	3,072	1,428
1966	3,037	3,252	3,340	3,725	4,037	4,229	4,552	4,411	3,786	3,209	2,900	2,711	1,841
1967	2,625	2,963	3,335	3,551	3,920	4,033	4,479	4,552	4,500	4,150	3,700	3,400	1,152
1968	3,250	3,167	3,263	3,555	3,654	4,248	4,278	4,148	3,584	3,025	2,700	2,518	1,760
1969	2,519	2,598	2,930	3,358	3,480	4,030	4,434	4,552	4,385	3,871	3,481	3,400	1,152
1970	3,250	3,214	3,317	3,252	3,431	4,104	4,059	3,916	3,625	2,964	2,670	2,470	1,589
1971	2,464	2,974	3,319	3,515	3,623	3,873	4,386	4,552	4,495	4,025	3,688	3,400	1,152
1972	3,250	3,186	3,323	3,714	3,979	4,249	4,500	4,387	3,910	3,200	2,853	2,814	1,686
1973	2,886	3,154	3,346	3,552	3,636	4,162	4,420	4,393	4,059	3,414	3,127	2,977	1,443
1974	3,015	3,252	3,267	3,252	3,694	3,416	4,289	4,463	4,307	4,052	3,700	3,400	1,063
1975	3,250	3,161	3,289	3,460	3,936	3,756	4,296	4,552	4,408	4,105	3,700	3,400	1,152
1976	3,250	3,252	3,328	3,543	3,728	3,962	4,041	3,860	3,409	3,008	2,837	2,783	1,258
1977	2,756	2,804	2,824	2,877	2,876	2,880	2,571	2,410	1,907	1,191	818	762	1,809
1978	584	664	1,197	3,113	3,567	4,000	4,552	4,552	4,203	3,598	3,257	3,188	1,364
1979	3,086	3,056	3,025	3,173	3,524	4,031	4,157	4,189	3,682	3,177	2,842	2,659	1,530
1980	2,675	2,852	3,017	3,528	3,292	3,994	4,230	4,150	3,827	3,314	2,963	2,906	1,324
1981	2,885	2,875	2,982	3,300	3,716	4,256	4,390	4,213	3,592	2,957	2,605	2,375	2,015
1982	2,341	3,252	3,276	3,616	3,530	3,953	4,094	4,271	4,094	3,761	3,457	3,377	894
1983	3,250	3,252	3,328	3,371	3,252	3,417	4,074	4,552	4,500	4,150	3,700	3,400	1,152
1984	3,250	3,252	3,285	3,650	4,005	4,246	4,314	4,267	4,017	3,411	3,124	3,041	1,273
1985	2,985	3,252	3,360	3,452	3,634	3,846	3,967	3,668	3,213	2,743	2,395	2,337	1,630
1986	2,270	2,300	2,459	3,027	3,252	3,534	3,916	3,853	3,445	3,086	2,765	2,707	1,209
1987	2,715	2,698	2,699	2,827	3,176	3,921	3,767	3,460	2,938	2,547	2,311	2,184	1,583
1988	1,991	1,991	2,512	2,950	2,972	3,055	3,030	2,972	2,550	2,063	1,705	1,574	1,456
1989	1,438	1,664	1,781	1,908	2,032	3,435	3,792	3,558	3,208	2,658	2,318	2,227	1,565
1990	2,287	2,327	2,334	2,581	2,553	2,798	2,612	2,689	2,527	2,084	1,760	1,680	1,009
1991	1,565	1,512	1,513	1,531	1,524	1,967	2,129	2,055	1,803	1,496	1,229	1,128	1,001
1992	1,074	1,019	1,030	1,091	1,763	2,225	2,482	2,239	1,872	1,425	974	871	1,611
1993	763	731	977	1,641	2,386	3,866	4,438	4,552	4,500	3,899	3,575	3,400	1,152
1994	3,231	3,165	3,222	3,345	3,579	3,696	3,621	3,394	2,949	2,347	1,911	1,677	1,944
Avg	2,459	2,530	2,687	2,933	3,196	3,559	3,814	3,790	3,500	3,019	2,662	2,513	1,305
Min	550	550	702	809	849	1,434	1,447	1,487	1,159	721	550	550	863
Max	3,250	3,252	3,364	3,725	4,093	4,280	4,552	4,552	4,500	4,150	3,700	3,400	1,936

Table I-4c. CALSIM Simulated Shasta Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	4	-25	-49	-57	-57	-57	-56	-56	-110	28	-33	-91
1923	-124	-181	-189	-181	-181	-175	-175	-144	-85	-32	-62	-107
1924	-150	-173	-157	-66	-52	-82	-26	-7	0	72	26	0
1925	0	0	0	0	0	23	20	11	18	-79	-155	-198
1926	-195	-192	-154	-151	-156	-155	-155	-150	-169	-184	-232	-208
1927	-177	-183	-186	-196	0	0	0	0	-18	31	1	-6
1928	-40	0	20	28	29	0	0	-23	-67	0	10	-48
1929	-75	-22	-7	-40	-48	-50	-43	-46	-81	-142	-176	-196
1930	-197	-214	-213	-216	-216	-216	-215	-214	-198	-251	-300	-299
1931	-295	-294	-294	-302	-307	-305	-269	-214	-123	123	40	7
1932	0	0	0	0	0	0	19	21	20	-53	-31	-72
1933	-77	-83	-82	-90	-90	-78	-107	-108	-89	-58	-95	-85
1934	-28	-34	-40	-58	-57	-65	-3	15	55	66	-36	14
1935	0	0	0	-6	-6	-6	-6	3	-1	-15	-106	-148
1936	-117	-123	-125	-135	-140	-136	-137	-132	-157	-156	-220	-224
1937	-222	-228	-166	-157	-164	-168	-168	-167	-193	-159	-227	-261
1938	-258	-257	0	0	0	0	0	-7	-7	-57	-35	0
1939	0	16	18	17	17	17	-26	-23	-2	4	3	-65
1940	-34	6	-4	-14	0	0	0	-14	-88	-141	-219	-303
1941	-283	-347	0	0	0	0	0	0	-12	79	0	0
1942	0	-53	0	0	0	0	0	0	-41	-59	-40	0
1943	0	0	0	0	0	0	0	-3	-21	-42	-74	-159
1944	-156	-252	-245	-201	-200	-200	-174	-173	-197	-141	-169	-148
1945	-184	-187	-191	-182	0	22	21	19	-6	3	-106	-126
1946	-140	-31	0	0	102	101	132	118	67	-8	-65	-102
1947	-178	-185	-175	-173	-164	-170	-169	-164	-212	-145	-96	-128
1948	-143	-160	-163	-171	-171	-171	-171	-186	-185	-211	-244	-210
1949	-150	-96	-95	-94	-97	0	3	-2	-47	-62	-79	-108
1950	-139	-178	-196	-208	-205	-208	-204	-187	-184	-250	-268	-300
1951	-329	0	0	0	0	0	38	32	4	91	18	-65
1952	-205	-196	0	0	0	0	0	0	-96	-17	0	0
1953	0	-40	0	0	22	31	35	0	0	-71	0	0
1954	0	0	86	0	0	0	0	-58	-92	-109	-29	-32
1955	-97	-59	0	-82	-127	-105	-73	-63	-170	-103	17	-49
1956	-45	-37	0	0	0	16	47	0	-122	-117	-6	0
1957	0	-1	-13	-23	0	0	45	30	-1	-33	-120	-104
1958	0	-10	0	0	0	0	0	0	0	0	0	0
1959	0	-18	-21	0	0	-22	9	-15	-43	-94	-118	-109
1960	-97	-58	-67	-76	-85	-84	-84	-99	-74	-102	-100	-161
1961	-164	-177	-175	-184	0	0	50	134	146	76	30	-26
1962	-56	110	74	46	0	0	0	-11	-25	-51	-139	-177
1963	-60	-19	0	0	0	-27	0	-16	85	67	34	-29
1964	0	0	-46	-39	-61	-72	-248	-255	-264	-156	-172	-162
1965	-202	-185	0	0	0	46	0	-15	-36	-36	-82	-167
1966	-154	0	0	0	0	0	0	-7	-15	9	-24	-120
1967	-149	-174	0	0	0	0	0	0	0	0	2	0
1968	0	-6	-7	-6	0	0	28	23	-5	-22	-122	-162
1969	-231	-167	-136	0	0	0	0	0	-115	-162	-189	0
1970	0	-38	0	0	0	0	31	16	-27	6	-34	-124
1971	-146	-131	0	0	-85	0	0	0	-5	-125	-12	0
1972	0	30	32	28	0	0	79	81	103	0	0	-44
1973	-121	-98	0	0	0	0	1	-29	35	-140	-163	-201
1974	-233	0	0	0	0	0	0	-82	-193	-98	0	0
1975	0	-1	-1	-1	0	0	3	0	-92	-45	0	0
1976	0	0	0	0	4	5	42	40	13	56	-5	-35
1977	-65	-38	44	78	71	78	203	210	221	166	248	212
1978	34	108	183	182	0	0	0	0	-30	-32	-35	-109
1979	-136	-144	-134	-135	-143	-151	-155	-145	-187	-170	-236	-255
1980	-274	-247	-213	0	0	0	-22	-30	-55	-28	-105	-156
1981	-181	-225	-216	-206	-206	0	0	-2	-63	-108	-148	-233
1982	-272	0	0	0	0	0	0	-28	-115	-107	-111	-23
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	-36	-49	-69	-68	-124	-142
1985	-235	0	0	-73	-76	-75	-75	-81	-147	-130	-159	-216
1986	-152	-110	-85	-84	0	0	47	35	-9	-31	-58	-133
1987	-163	-164	-163	-163	-163	-154	-51	-62	-62	-12	-10	-35
1988	-74	-92	-52	-60	-70	-62	-44	-35	84	112	119	115
1989	118	117	117	117	113	113	112	95	56	-20	-103	-132
1990	-134	-135	-133	-133	-127	-126	-111	-88	-44	-73	-88	-113
1991	-129	-127	-128	-135	-128	-131	-131	-128	-107	-108	-162	-211
1992	-209	-212	-218	-219	-218	-218	-187	-157	-67	-1	-22	-81
1993	-102	-96	-102	-108	-114	-113	-113	0	0	-25	-24	0
1994	-19	0	-1	-1	0	7	32	43	105	86	86	24
Avg	-105	-84	-56	-54	-49	-43	-34	-35	-49	-49	-70	-94
Min	-329	-347	-294	-302	-307	-305	-269	-255	-264	-251	-300	-303
Max	118	117	183	182	113	113	203	210	221	166	248	212

Table I-4d. CALSIM Simulated Monthly Cumulative Distribution of Shasta Reservoir Storage for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	550	550	702	898	939	1,485	1,554	1,533	1,140	649	561	550
10	889	880	1,079	1,666	1,981	2,415	2,368	2,200	1,910	1,426	1,048	956
20	2,099	2,116	2,112	2,429	2,805	3,117	3,363	3,351	2,844	2,471	2,208	2,133
30	2,374	2,410	2,564	2,990	3,252	3,417	3,834	3,587	3,314	2,804	2,449	2,373
40	2,613	2,733	2,899	3,099	3,316	3,756	3,936	3,900	3,589	3,047	2,704	2,608
50	2,821	2,928	3,176	3,317	3,481	3,930	4,123	4,180	3,779	3,200	2,853	2,840
60	3,007	3,137	3,252	3,371	3,579	3,976	4,250	4,306	3,989	3,397	3,068	2,949
70	3,185	3,173	3,278	3,514	3,675	4,028	4,323	4,381	4,142	3,591	3,290	3,178
80	3,250	3,252	3,317	3,552	3,777	4,106	4,421	4,552	4,274	3,914	3,568	3,400
90	3,250	3,252	3,338	3,622	3,922	4,229	4,517	4,552	4,500	4,149	3,700	3,400
Max	3,250	3,252	3,360	3,725	4,064	4,280	4,552	4,552	4,500	4,150	3,700	3,400
Avg	2,564	2,614	2,743	2,987	3,245	3,602	3,848	3,825	3,549	3,068	2,732	2,607
B: 2020 Baseline												
Min	550	550	702	809	849	1,434	1,447	1,487	1,159	721	550	550
10	812	797	1,030	1,531	1,938	2,127	2,482	2,239	1,872	1,425	1,017	884
20	1,895	1,935	1,986	2,265	2,652	3,055	3,208	3,155	2,812	2,389	2,030	1,901
30	2,231	2,300	2,512	2,865	3,176	3,417	3,748	3,514	3,208	2,700	2,331	2,227
40	2,469	2,598	2,824	3,027	3,266	3,680	3,916	3,860	3,445	2,967	2,613	2,518
50	2,691	2,804	3,001	3,252	3,462	3,873	4,094	4,150	3,682	3,177	2,837	2,691
60	2,825	2,974	3,252	3,358	3,567	3,962	4,230	4,271	3,992	3,389	3,007	2,847
70	3,035	3,161	3,285	3,479	3,661	4,022	4,355	4,387	4,094	3,504	3,190	3,041
80	3,250	3,221	3,322	3,551	3,775	4,104	4,434	4,545	4,246	3,810	3,473	3,377
90	3,250	3,252	3,345	3,622	3,920	4,236	4,500	4,552	4,460	4,052	3,700	3,400
Max	3,250	3,252	3,364	3,725	4,093	4,280	4,552	4,552	4,500	4,150	3,700	3,400
Avg	2,459	2,530	2,687	2,933	3,196	3,559	3,814	3,790	3,500	3,019	2,662	2,513
Comparison: B – A												
Min	0	0	0	-89	-90	-51	-107	-46	19	72	-11	0
10	-77	-83	-49	-135	-43	-288	114	39	-38	-1	-31	-72
20	-204	-181	-126	-164	-153	-62	-155	-196	-32	-82	-178	-232
30	-143	-110	-52	-125	-76	0	-86	-73	-106	-104	-118	-146
40	-144	-135	-75	-72	-50	-76	-20	-40	-144	-80	-91	-90
50	-130	-124	-175	-65	-19	-57	-29	-30	-97	-23	-16	-149
60	-182	-163	0	-13	-12	-14	-20	-35	3	-8	-61	-102
70	-150	-12	7	-35	-14	-6	32	6	-48	-87	-100	-137
80	0	-31	5	-1	-2	-2	13	-7	-28	-104	-95	-23
90	0	0	7	0	-2	7	-17	0	-40	-97	0	0
Max	0	0	4	0	29	0	0	0	0	0	0	0
Avg	-105	-84	-56	-54	-49	-43	-34	-35	-49	-49	-70	-94

Table I-5a. CALSIM Simulated Keswick Release Flow, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	7,386	4,337	4,120	3,296	3,250	3,250	5,500	8,000	10,745	14,753	11,459	7,723	5,080
1923	4,875	3,420	3,907	3,250	3,250	3,250	5,500	10,633	11,337	13,486	11,305	6,500	4,892
1924	4,946	4,756	4,275	3,420	3,250	4,376	8,483	8,345	10,216	12,254	8,353	3,337	4,609
1925	3,539	3,000	3,000	3,000	3,000	5,143	5,000	7,000	9,567	11,293	9,339	6,000	4,172
1926	4,625	3,794	3,863	3,250	3,250	3,250	5,000	7,154	10,025	11,327	9,542	6,061	4,307
1927	4,625	3,250	3,250	3,250	25,869	3,600	9,889	8,606	10,208	13,842	11,007	8,264	6,282
1928	5,291	4,749	4,218	3,375	3,250	17,802	5,500	8,505	11,048	16,090	11,664	7,539	6,021
1929	5,458	5,385	4,275	3,420	3,250	3,250	6,201	7,786	8,513	11,940	10,989	6,587	4,667
1930	5,066	4,192	3,000	3,000	3,000	3,000	5,000	7,000	10,315	10,644	9,794	6,000	4,237
1931	4,625	3,371	3,250	3,250	3,250	3,250	9,434	8,406	9,365	15,000	8,828	3,163	4,555
1932	2,876	3,000	3,000	3,000	3,000	3,000	4,743	4,204	6,928	8,864	8,197	5,115	3,389
1933	3,912	3,250	3,250	3,250	3,250	3,554	7,299	5,974	7,228	10,092	8,436	5,230	3,916
1934	4,451	3,122	3,000	3,000	3,000	3,000	5,314	6,812	10,524	10,478	7,947	4,500	3,942
1935	2,818	3,000	3,000	3,000	3,000	3,000	3,250	5,090	9,371	10,143	9,762	6,000	3,718
1936	4,625	3,250	3,250	3,250	3,250	3,250	5,500	8,000	9,000	12,380	10,909	6,685	4,450
1937	5,251	4,818	4,275	3,420	3,250	3,250	5,500	8,000	9,195	11,202	10,677	7,040	4,595
1938	4,875	3,250	8,777	4,008	30,136	33,840	12,321	8,000	9,000	11,000	11,544	10,998	8,837
1939	8,691	6,842	4,373	3,499	3,250	3,250	8,929	8,725	13,481	14,596	10,919	6,930	5,659
1940	5,002	5,276	4,242	3,393	27,848	20,737	5,500	8,000	10,882	13,263	11,193	6,890	7,350
1941	5,762	4,413	10,773	24,464	22,703	15,245	15,423	14,499	11,733	15,000	11,890	11,591	9,835
1942	8,331	5,478	19,187	20,279	29,172	3,600	5,500	10,749	9,678	14,054	11,666	11,252	8,924
1943	8,223	5,494	6,409	12,887	8,086	12,366	5,500	8,000	9,855	14,659	11,247	7,643	6,683
1944	5,782	4,787	4,275	3,420	3,250	3,250	6,338	7,000	9,635	13,821	10,532	7,073	4,801
1945	5,450	3,542	3,365	3,250	6,470	3,600	5,500	8,000	9,903	13,127	11,183	7,754	4,899
1946	5,723	5,269	22,448	7,259	8,826	3,250	6,566	8,554	11,260	12,548	11,545	7,821	6,717
1947	6,016	4,433	4,140	3,601	3,250	3,250	5,000	9,581	10,194	14,485	11,909	6,304	4,983
1948	6,244	3,900	3,705	3,250	8,325	3,600	5,500	8,000	9,000	11,000	10,549	6,612	4,818
1949	7,785	5,617	4,275	3,420	3,250	7,195	5,000	7,000	9,893	15,000	11,032	6,000	5,185
1950	6,109	4,509	4,140	3,312	3,250	3,250	5,500	8,355	10,184	11,463	10,828	6,644	4,697
1951	4,875	8,440	15,008	7,454	15,457	3,600	6,813	8,000	11,251	14,592	11,144	7,376	6,853
1952	5,849	4,043	15,282	7,927	18,376	10,783	17,283	10,355	9,264	14,299	11,231	11,068	8,194
1953	8,010	4,115	9,770	31,077	3,600	3,250	5,500	10,142	11,265	13,317	12,490	11,272	7,529
1954	8,314	8,079	6,750	12,050	20,278	11,141	12,449	11,611	9,694	14,622	10,209	7,436	7,962
1955	6,937	4,424	7,019	3,600	4,223	3,600	8,951	7,000	10,207	15,000	13,892	6,000	5,504
1956	4,937	3,912	22,407	30,353	21,846	3,250	5,500	10,845	9,000	12,814	12,534	11,247	8,997
1957	8,973	6,041	4,275	3,420	9,707	9,790	10,685	8,000	9,654	14,163	10,592	8,123	6,235
1958	7,398	7,811	10,843	13,862	53,770	22,074	12,873	10,037	12,643	14,016	13,135	11,647	11,283
1959	8,680	5,776	4,275	10,657	13,885	7,212	8,423	9,225	15,985	15,000	12,192	8,383	7,202
1960	8,113	5,538	4,275	3,420	3,250	3,250	5,000	7,000	10,328	15,000	12,041	6,000	5,052
1961	6,252	3,900	3,705	3,250	6,683	5,974	7,823	8,482	11,646	15,626	13,765	6,115	5,635
1962	7,032	8,011	4,275	3,469	8,543	3,600	5,500	8,138	10,586	13,021	10,888	8,197	5,498
1963	6,513	5,254	8,819	3,600	9,092	10,284	25,689	8,000	9,726	12,762	10,000	6,693	7,013
1964	8,533	10,364	6,362	3,600	3,447	3,250	8,934	7,723	9,737	13,296	10,497	7,349	5,640
1965	5,070	3,659	18,497	21,000	3,250	6,945	7,508	8,699	9,669	15,000	10,000	7,067	7,082
1966	5,957	8,231	4,275	5,959	6,056	12,866	8,204	8,603	14,500	15,251	10,804	8,154	6,582
1967	7,400	5,143	11,968	9,011	7,970	15,911	10,011	14,449	12,471	13,233	12,811	11,353	7,977
1968	8,766	5,818	4,275	3,420	19,325	3,410	7,582	8,000	14,559	15,000	10,058	8,790	6,555
1969	5,493	4,996	4,207	19,689	21,308	5,686	11,792	12,913	9,610	14,688	10,846	11,142	7,940
1970	8,727	4,416	18,147	52,774	14,145	3,600	8,860	8,121	10,392	17,672	10,704	8,380	10,058
1971	5,387	3,658	13,278	14,317	8,342	15,374	5,500	9,383	10,696	13,446	12,236	11,210	7,443
1972	8,858	6,979	4,275	3,420	4,972	14,623	8,741	8,241	14,421	15,000	11,928	6,500	6,547
1973	4,875	3,900	6,943	14,513	18,932	7,392	5,500	8,000	10,977	13,873	10,120	8,082	6,787
1974	5,584	30,557	23,124	38,498	5,479	37,496	6,809	8,000	10,816	13,860	13,133	11,867	12,470
1975	8,624	6,727	4,275	3,420	7,498	28,561	5,500	8,941	11,742	13,202	12,730	11,714	7,446
1976	9,869	5,636	4,275	3,420	3,321	3,311	5,655	7,582	11,967	13,548	8,500	6,000	5,039
1977	5,165	4,081	4,911	3,600	4,013	3,911	10,702	6,297	13,549	16,134	12,044	5,432	5,435
1978	6,742	3,884	3,000	3,304	8,662	14,247	6,418	9,104	10,382	15,000	10,198	6,500	5,888
1979	6,322	4,293	4,275	3,420	3,250	3,250	5,500	8,000	12,739	13,010	10,000	7,815	4,956
1980	5,294	3,900	3,705	15,861	30,104	3,600	5,500	8,000	10,766	13,753	10,246	6,500	7,038
1981	4,875	5,324	4,275	3,420	3,250	7,656	5,000	7,955	14,308	15,000	10,244	7,860	5,400
1982	5,102	7,819	22,223	7,064	25,429	13,536	25,133	8,000	9,000	11,882	10,000	8,962	9,228
1983	9,583	6,832	15,115	21,748	36,717	45,897	10,023	12,922	14,977	14,703	14,243	12,549	12,936
1984	9,319	13,793	26,961	7,553	4,223	10,301	7,672	8,351	10,944	15,000	10,000	7,532	8,001
1985	5,399	10,022	5,649	4,384	3,250	3,250	5,000	8,995	11,654	14,001	11,157	6,126	5,382
1986	7,572	4,996	4,275	3,420	43,866	19,820	5,500	8,311	11,728	12,516	11,052	6,500	8,265
1987	4,875	4,728	4,275	3,420	3,250	3,250	10,337	10,053	15,000	13,758	9,098	6,492	5,353
1988	6,948	4,058	3,864	3,250	5,997	4,547	5,914	7,000	15,000	14,106	11,193	6,319	5,339
1989	5,898	3,000	3,000	3,000	3,000	3,000	5,000	8,893	9,265	12,765	9,154	6,000	4,363
1990	4,625	3,290	3,270	3,250	5,616	3,600	7,353	7,000	9,465	12,214	9,472	4,943	4,474
1991	5,271	4,430	3,000	3,000	4,143	3,000	3,250	6,736	7,959	9,178	7,549	4,601	3,756
1992	4,407	3,554	3,000	3,000	3,000	3,000	3,750	8,928	11,995	12,898	10,852	4,673	4,434
1993	5,266	4,155	3,000	3,000	3,000	3,000	5,500	10,696	10,003	13,101	10,000	7,807	4,757
1994	6,840	4,923	4,275	3,420	3,250	4,428	6,199	8,505	13,172	15,000	12,945	7,324	5,471
Avg	6,204	5,425	7,119	7,860	10,109	8,153	7,624	8,537	10,863	13,467	10,852	7,539	6,263
Min	2,818	3,000	3,000	3,000	3,000	3,000	3,250	4,204	6,928	8,864	7,549	3,163	3,389
Max	9,869	30,557	26,961	52,774	53,770	45,897	25,689	14,499	15,985	17,672	14,243	12,549	12,936

Table I-5b. CALSIM Simulated Keswick Release Flow, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	7,333	4,498	4,273	3,418	3,250	3,250	5,500	8,000	10,899	12,514	11,695	7,950	5,002
1923	4,875	4,334	4,117	3,294	3,250	3,250	5,500	10,718	11,387	12,944	11,557	6,500	4,952
1924	4,908	4,745	4,046	3,250	3,250	5,341	8,327	8,341	10,126	10,744	8,371	4,509	4,604
1925	3,393	3,000	3,000	3,000	3,000	4,613	5,000	7,000	8,644	10,776	9,481	6,000	4,052
1926	4,625	3,730	3,250	3,250	3,250	3,250	5,000	7,031	10,067	11,080	9,695	5,687	4,232
1927	3,875	3,250	3,250	3,250	22,352	3,600	9,889	8,606	10,513	13,016	11,485	7,639	6,000
1928	5,845	4,085	3,881	3,250	3,250	18,263	5,500	8,816	11,008	15,000	11,412	7,281	5,934
1929	5,399	4,481	3,886	3,250	3,250	3,250	6,087	7,836	8,594	12,198	11,501	6,199	4,600
1930	5,453	4,547	3,000	3,000	3,000	3,000	5,000	7,000	10,336	10,773	9,924	6,000	4,300
1931	4,625	3,250	3,250	3,250	3,250	3,250	8,847	7,861	9,094	11,215	8,757	5,178	4,346
1932	3,557	2,905	3,000	3,000	3,000	3,000	4,434	4,147	6,996	9,022	8,343	5,200	3,431
1933	3,880	3,250	3,250	3,250	3,250	3,250	7,791	5,997	7,227	9,493	8,401	5,070	3,877
1934	3,884	3,000	3,000	3,000	3,000	3,000	4,991	6,782	10,297	10,183	8,075	5,264	3,901
1935	3,662	3,000	3,000	3,000	3,000	3,000	3,250	4,930	9,458	10,360	10,008	5,957	3,791
1936	3,875	3,250	3,250	3,250	3,250	3,250	5,500	8,000	9,000	11,629	10,969	6,766	4,366
1937	5,231	4,814	3,250	3,250	3,250	3,250	5,500	8,000	9,086	11,156	10,792	7,149	4,524
1938	4,875	3,250	4,590	3,958	30,086	33,790	12,271	8,000	9,000	11,227	11,120	8,525	8,408
1939	8,691	6,479	4,352	3,481	3,250	3,250	9,942	8,651	13,109	14,498	10,939	6,578	5,642
1940	5,296	4,571	4,248	3,398	27,610	20,737	5,500	8,000	11,364	13,375	11,726	7,074	7,393
1941	4,875	5,446	5,094	24,464	22,703	15,245	15,536	13,223	9,000	13,425	13,067	11,491	9,228
1942	8,331	6,684	18,328	20,279	29,172	3,600	5,500	10,749	9,000	11,641	11,361	10,577	8,695
1943	8,223	5,494	6,409	12,887	8,086	12,366	5,500	8,000	10,159	15,000	11,768	8,334	6,796
1944	4,992	5,400	4,275	3,420	3,250	3,250	5,893	7,000	9,537	12,545	10,410	6,126	4,614
1945	5,543	3,603	3,423	3,250	3,250	3,250	5,500	8,000	10,250	13,083	11,819	7,594	4,759
1946	5,455	3,546	21,939	7,259	7,005	3,250	6,039	8,534	11,356	12,511	11,727	7,695	6,440
1947	6,767	4,558	3,966	3,564	3,250	3,250	5,000	9,501	10,523	13,828	10,942	6,068	4,924
1948	5,741	3,791	3,602	3,250	8,318	3,600	5,500	8,000	9,000	11,441	11,095	6,500	4,828
1949	6,310	4,714	4,275	3,420	3,250	5,666	5,000	7,000	9,884	15,251	10,304	6,000	4,916
1950	6,113	4,776	4,275	3,420	3,250	3,250	5,500	8,299	10,134	11,542	10,906	6,690	4,734
1951	4,875	3,250	15,008	7,454	15,457	3,600	6,178	8,000	11,487	13,181	11,566	8,020	6,498
1952	6,394	3,900	12,085	7,927	18,376	10,783	18,192	9,021	9,000	12,572	10,939	11,068	7,855
1953	8,010	4,780	9,126	31,077	3,250	3,250	5,500	10,860	9,728	12,719	11,336	11,272	7,355
1954	8,314	8,079	4,938	13,861	20,278	11,141	12,529	11,468	10,126	14,929	10,160	6,725	7,957
1955	7,239	4,298	5,608	3,600	4,622	3,250	8,413	7,000	11,353	13,429	11,291	6,212	5,221
1956	4,783	3,788	21,803	30,918	22,497	3,715	5,500	10,841	9,057	11,111	10,607	9,824	8,739
1957	8,973	6,063	4,529	3,600	9,297	9,706	9,721	8,000	10,170	14,675	12,019	7,115	6,267
1958	4,875	6,813	10,680	13,862	53,770	22,074	12,986	9,118	9,343	13,530	13,135	11,647	10,782
1959	8,680	6,188	4,315	10,219	13,885	7,688	7,778	9,299	15,670	15,343	12,163	8,239	7,190
1960	7,685	4,619	4,275	3,420	3,250	3,250	5,000	7,000	9,899	14,466	11,422	6,022	4,876
1961	5,324	3,714	3,528	3,250	3,312	5,924	6,979	7,043	11,399	16,759	13,421	6,053	5,257
1962	7,015	5,228	4,865	3,931	9,360	3,600	5,500	8,383	10,893	13,464	11,431	8,326	5,543
1963	4,875	4,559	8,510	3,600	9,092	10,613	25,247	8,000	9,392	12,507	10,539	6,860	6,853
1964	6,078	8,381	6,349	3,600	3,922	3,535	13,323	7,997	9,491	10,919	10,372	6,277	5,460
1965	5,225	3,396	15,482	22,326	3,250	6,019	8,276	8,833	10,044	15,000	10,000	7,737	7,031
1966	5,007	5,646	4,275	5,959	5,906	11,756	7,544	8,516	14,620	15,332	10,697	8,394	6,268
1967	7,086	4,314	9,145	9,011	7,970	15,911	10,011	14,154	9,489	12,427	12,771	11,394	7,490
1968	8,766	5,967	4,275	3,420	19,172	3,410	6,984	8,000	15,000	15,000	10,962	9,205	6,626
1969	4,875	3,919	3,705	17,483	21,308	5,686	11,792	11,479	9,351	13,951	11,244	7,274	7,317
1970	8,727	5,060	17,524	52,774	14,145	3,600	8,254	8,121	10,360	17,190	10,858	8,385	10,000
1971	5,257	3,417	11,145	14,317	9,683	13,599	5,500	9,109	9,283	13,081	10,400	11,070	7,010
1972	8,858	6,284	4,275	3,484	5,622	14,623	7,414	8,142	14,007	16,578	11,189	6,500	6,489
1973	4,875	3,900	5,347	14,513	18,779	6,977	5,500	8,000	11,169	15,430	10,518	7,974	6,780
1974	5,864	26,645	23,124	38,498	5,479	37,496	6,922	8,000	9,432	11,000	11,541	11,867	11,905
1975	8,624	6,753	4,275	3,420	7,475	28,556	5,500	8,664	10,111	11,829	12,004	11,714	7,202
1976	9,869	5,636	4,275	3,420	3,250	3,250	5,037	7,610	11,670	12,837	8,500	6,000	4,934
1977	5,164	3,638	3,555	3,000	3,965	3,816	10,033	6,133	13,164	17,704	10,569	5,260	5,202
1978	6,930	3,408	3,000	3,304	11,950	14,247	6,418	9,054	10,885	15,000	10,753	6,500	6,114
1979	6,057	4,731	4,275	3,420	3,250	3,250	5,500	8,000	12,696	13,136	10,000	7,556	4,956
1980	5,098	3,465	3,292	12,400	30,104	3,600	5,500	8,000	11,068	13,217	10,685	6,500	6,773
1981	5,042	5,057	4,275	3,420	3,250	4,312	5,000	7,988	14,577	15,000	10,651	8,293	5,258
1982	5,495	3,572	22,223	7,443	26,183	13,536	25,246	8,000	9,000	11,000	10,000	6,500	8,871
1983	6,888	6,832	15,115	21,748	36,717	45,897	10,136	12,724	14,977	14,703	14,243	12,549	12,765
1984	9,319	13,793	26,961	7,553	4,223	10,301	8,270	8,533	11,084	15,000	10,163	7,098	8,040
1985	6,156	6,082	5,617	4,584	3,250	3,250	5,000	9,100	12,249	13,992	11,433	6,408	5,280
1986	6,886	3,900	3,705	3,250	42,370	19,820	5,500	8,256	11,721	12,053	11,212	6,500	8,007
1987	4,875	4,739	4,275	3,420	3,250	3,250	8,617	10,374	15,000	12,964	8,887	6,791	5,227
1988	6,838	4,018	3,250	3,250	6,167	4,402	5,658	7,000	13,128	12,874	11,103	6,488	5,095
1989	6,211	3,000	3,000	3,000	3,084	3,000	5,000	9,076	9,360	12,913	9,507	6,000	4,434
1990	4,672	3,282	3,250	3,250	5,501	3,600	7,103	7,000	8,952	11,693	9,731	5,358	4,432
1991	5,294	4,308	3,000	3,000	3,885	3,000	3,250	6,705	8,016	9,199	7,611	4,694	3,748
1992	4,132	3,521	3,000	3,000	3,000	3,000	3,250	8,457	11,444	12,887	11,882	5,015	4,406
1993	5,372	3,951	3,000	3,000	3,000	3,000	5,500	8,809	10,003	13,503	10,000	6,857	4,604
1994	7,153	4,615	4,275	3,420	3,250	4,312	5,765	8,322	11,195	15,000	12,693	8,683	5,375
Avg	6,019	4,972	6,644	7,828	10,016	8,040	7,550	8,414	10,618	13,049	10,820	7,422	6,120
Min	3,393	2,905	3,000	3,000	3,000	3,000	3,250	4,147	6,996	9,022	7,611	4,509	3,431
Max	9,869	26,645	26,961	52,774	53,770	45,897	25,247	14,154	15,670	17,704	14,243	12,549	12,765

Table I-5c. CALSIM Simulated Keswick Release Flow, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	-53	161	153	122	0	0	0	0	154	-2,239	236	227	-77
1923	0	914	210	44	0	0	0	85	50	-542	252	0	60
1924	-38	-11	-229	-170	0	965	-156	-4	-90	-1,510	18	1,172	-5
1925	-146	0	0	0	0	-530	0	0	-923	-517	142	0	-120
1926	0	-64	-613	0	0	0	0	-123	42	-247	153	-374	-75
1927	-750	0	0	0	-3,517	0	0	0	305	-826	478	-625	-282
1928	554	-664	-337	-125	0	461	0	311	-40	-1,090	-252	-258	-87
1929	-59	-904	-389	-170	0	0	-114	50	81	258	512	-388	-66
1930	387	355	0	0	0	0	0	0	21	129	130	0	62
1931	0	-121	0	0	0	0	-587	-545	-271	-3,785	-71	2,015	-209
1932	681	-95	0	0	0	0	-309	-57	68	158	146	85	42
1933	-32	0	0	0	0	-304	492	23	-1	-599	-35	-160	-39
1934	-567	-122	0	0	0	0	-323	-30	-227	-295	128	764	-42
1935	844	0	0	0	0	0	0	-160	87	217	246	-43	73
1936	-750	0	0	0	0	0	0	0	0	-751	60	81	-84
1937	-20	-4	-1,025	-170	0	0	0	0	-109	-46	115	109	-71
1938	0	0	-4,187	-50	-50	-50	-50	0	0	227	-424	-2,473	-429
1939	0	-363	-21	-18	0	0	1,013	-74	-372	-98	20	-352	-16
1940	294	-705	6	5	-238	0	0	0	482	112	533	184	42
1941	-887	1,033	-5,679	0	0	0	113	-1,276	-2,733	-1,575	1,177	-100	-607
1942	0	1,206	-859	0	0	0	0	0	-678	-2,413	-305	-675	-229
1943	0	0	0	0	0	0	0	0	304	341	521	691	112
1944	-790	613	0	0	0	0	-445	0	-98	-1,276	-122	-947	-187
1945	93	61	58	0	-3,220	-350	0	0	347	-44	636	-160	-140
1946	-268	-1,723	-509	0	-1,821	0	-527	-20	96	-37	182	-126	-277
1947	751	125	-174	-37	0	0	0	-80	329	-657	-967	-236	-59
1948	-503	-109	-103	0	-7	0	0	0	0	441	546	-112	10
1949	-1,475	-903	0	0	0	-1,529	0	0	-9	251	-728	0	-268
1950	4	267	135	108	0	0	0	-56	-50	79	78	46	37
1951	0	-5,190	0	0	0	0	-635	0	236	-1,411	422	644	-355
1952	545	-143	-3,197	0	0	0	909	-1,334	-264	-1,727	-292	0	-339
1953	0	665	-644	0	-350	0	0	718	-1,537	-598	-1,154	0	-175
1954	0	0	-1,812	1,811	0	0	80	-143	432	307	-49	-711	-5
1955	302	-126	-1,411	0	399	-350	-538	0	1,146	-1,571	-2,601	212	-283
1956	-154	-124	-604	565	651	465	0	-4	57	-1,703	-1,927	-1,423	-258
1957	0	22	254	180	-410	-84	-964	0	516	512	1,427	-1,008	33
1958	-2,523	-998	-163	0	0	0	113	-919	-3,300	-486	0	0	-501
1959	0	412	40	-438	0	476	-645	74	-315	343	-29	-144	-13
1960	-428	-919	0	0	0	0	0	0	-429	-534	-619	22	-176
1961	-928	-186	-177	0	-3,371	-50	-844	-1,439	-247	1,133	-344	-62	-378
1962	-17	-2,783	590	462	817	0	0	245	307	443	543	129	45
1963	-1,638	-695	-309	0	0	329	-442	0	-334	-255	539	167	-160
1964	-2,455	-1,983	-13	0	475	285	4,389	274	-246	-2,377	-125	-1,072	-179
1965	155	-263	-3,015	1,326	0	-926	768	134	375	0	0	670	-51
1966	-950	-2,585	0	0	-150	-1,110	-660	-87	120	81	-107	240	-314
1967	-314	-829	-2,823	0	0	0	0	-295	-2,982	-806	-40	41	-488
1968	0	149	0	0	-153	0	-598	0	441	0	904	415	71
1969	-618	-1,077	-502	-2,206	0	0	0	-1,434	-259	-737	398	-3,868	-623
1970	0	644	-623	0	0	0	-606	0	-32	-482	154	5	-58
1971	-130	-241	-2,133	0	1,341	-1,775	0	-274	-1,413	-365	-1,836	-140	-433
1972	0	-695	0	64	650	0	-1,327	-99	-414	1,578	-739	0	-58
1973	0	0	-1,596	0	-153	-415	0	0	192	1,557	398	-108	-7
1974	280	-3,912	0	0	0	0	113	0	-1,384	-2,860	-1,592	0	-565
1975	0	26	0	0	-23	-5	0	-277	-1,631	-1,373	-726	0	-243
1976	0	0	0	0	-71	-61	-618	28	-297	-711	0	0	-104
1977	-1	-443	-1,356	-600	-48	-95	-669	-164	-385	1,570	-1,475	-172	-232
1978	188	-476	0	0	3,288	0	0	-50	503	0	555	0	227
1979	-265	438	0	0	0	0	0	0	-43	126	0	-259	0
1980	-196	-435	-413	-3,461	0	0	0	0	302	-536	439	0	-264
1981	167	-267	0	0	0	-3,344	0	33	269	0	407	433	-142
1982	393	-4,247	0	379	754	0	113	0	0	-882	0	-2,462	-357
1983	-2,695	0	0	0	0	0	113	-198	0	0	0	0	-171
1984	0	0	0	0	0	0	598	182	140	0	163	-434	39
1985	757	-3,940	-32	200	0	0	0	105	595	-9	276	282	-103
1986	-686	-1,096	-570	-170	-1,496	0	0	-55	-7	-463	160	0	-258
1987	0	11	0	0	0	0	-1,720	321	0	-794	-211	299	-126
1988	-110	-40	-614	0	170	-145	-256	0	-1,872	-1,232	-90	169	-244
1989	313	0	0	0	84	0	0	183	95	148	353	0	72
1990	47	-8	-20	0	-115	0	-250	0	-513	-521	259	415	-42
1991	23	-122	0	0	-258	0	0	-31	57	21	62	93	-8
1992	-275	-33	0	0	0	0	-500	-471	-551	-11	1,030	342	-27
1993	106	-204	0	0	0	0	0	-1,887	0	402	0	-950	-154
1994	313	-308	0	0	0	-116	-434	-183	-1,977	0	-252	1,359	-96
Avg	-185	-453	-475	-32	-93	-113	-74	-123	-245	-418	-32	-117	-143
Min	-2,695	-5,190	-5,679	-3,461	-3,517	-3,344	-1,720	-1,887	-3,300	-3,785	-2,601	-3,868	-623
Max	844	1,206	590	1,811	3,288	965	4,389	718	1,146	1,578	1,427	2,015	227

Table I-5d. CALSIM Simulated Monthly Cumulative Distribution of Keswick Reservoir Release Flows for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	2,818	3,000	3,000	3,000	3,000	3,000	3,250	4,204	6,928	8,864	7,549	3,163	
10	4,625	3,250	3,000	3,000	3,000	3,000	5,000	7,000	9,000	11,000	8,828	5,115	
20	4,875	3,658	3,270	3,250	3,250	3,250	5,500	7,154	9,465	12,214	10,000	6,000	
30	5,070	3,900	3,907	3,304	3,250	3,250	5,500	8,000	9,694	12,814	10,120	6,319	
40	5,294	4,192	4,275	3,420	3,250	3,410	5,500	8,000	10,025	13,233	10,549	6,587	
50	5,762	4,509	4,275	3,420	4,223	3,600	5,914	8,121	10,382	13,758	10,888	7,067	
60	6,244	4,996	4,275	3,600	6,683	4,547	6,813	8,406	10,816	14,054	11,144	7,539	
70	6,948	5,385	6,362	5,959	8,662	7,392	8,204	8,699	11,265	14,622	11,305	7,860	
80	8,113	6,041	10,773	12,050	18,932	12,866	9,434	9,383	11,995	15,000	11,928	8,790	
90	8,691	8,011	18,147	20,279	25,869	17,802	11,792	10,696	14,308	15,000	12,730	11,252	
Max	9,869	30,557	26,961	52,774	53,770	45,897	25,689	14,499	15,985	17,672	14,243	12,549	
Avg	6,204	5,425	7,119	7,860	10,109	8,153	7,624	8,537	10,863	13,467	10,852	7,539	6,263
B: 2020 Baseline													
Min	3,393	2,905	3,000	3,000	3,000	3,000	3,250	4,147	6,996	9,022	7,611	4,509	
10	3,884	3,250	3,000	3,000	3,000	3,000	5,000	7,000	9,000	10,773	8,757	5,260	
20	4,875	3,417	3,250	3,250	3,250	3,250	5,037	7,031	9,086	11,215	10,000	6,000	
30	4,908	3,714	3,555	3,250	3,250	3,250	5,500	8,000	9,432	11,829	10,372	6,212	
40	5,231	3,919	4,046	3,418	3,250	3,250	5,500	8,000	9,899	12,545	10,651	6,500	
50	5,455	4,481	4,275	3,420	3,965	3,600	5,658	8,000	10,159	12,964	10,939	6,791	
60	6,078	4,619	4,275	3,600	6,167	4,402	6,922	8,341	10,523	13,375	11,189	7,274	
70	6,838	4,814	4,938	5,959	9,297	6,977	7,791	8,651	11,169	13,951	11,422	7,950	
80	7,333	5,646	9,126	12,400	18,779	12,366	9,721	9,100	11,487	15,000	11,695	8,394	
90	8,680	6,684	15,482	20,279	26,183	18,263	12,271	10,749	13,164	15,251	12,019	11,070	
Max	9,869	26,645	26,961	52,774	53,770	45,897	25,247	14,154	15,670	17,704	14,243	12,549	
Avg	6,019	4,972	6,644	7,828	10,016	8,040	7,550	8,414	10,618	13,049	10,820	7,422	6,120
Comparison: B – A													
Min	575	-95	0	0	0	0	0	-57	68	158	62	1,346	
10	-741	0	0	0	0	0	0	0	0	-227	-71	145	
20	0	-241	-20	0	0	0	-463	-123	-379	-999	0	0	
30	-162	-186	-352	-54	0	0	0	0	-262	-985	252	-107	
40	-63	-273	-229	-2	0	-160	0	0	-126	-688	102	-87	
50	-307	-28	0	0	-258	0	-256	-121	-223	-794	51	-276	
60	-166	-377	0	0	-516	-145	109	-65	-293	-679	45	-265	
70	-110	-571	-1,424	0	635	-415	-413	-48	-96	-671	117	90	
80	-780	-395	-1,647	350	-153	-500	287	-283	-508	0	-233	-396	
90	-11	-1,327	-2,665	0	314	461	479	53	-1,144	251	-711	-182	
Max	0	-3,912	0	0	0	0	-442	-345	-315	32	0	0	
Avg	-185	-453	-475	-32	-93	-113	-74	-123	-245	-418	-32	-117	-143

Table I-6a. CALSIM Simulated Sacramento River Flow at Wilkins Slough, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	6,328	5,000	10,262	7,331	17,424	10,540	8,268	7,209	5,000	7,552	5,000	5,000	5,688
1923	6,247	6,025	14,456	10,315	7,336	5,326	9,503	5,000	5,000	6,709	5,000	5,552	5,223
1924	5,000	5,000	5,250	5,674	8,287	4,736	4,000	3,500	4,355	6,269	3,500	3,500	3,567
1925	3,991	4,895	7,358	6,239	21,276	10,398	12,934	6,606	5,494	4,897	4,000	4,299	5,501
1926	4,164	4,000	5,822	7,993	19,606	5,704	9,280	4,000	4,000	4,975	4,000	4,000	4,610
1927	4,991	10,413	13,403	14,733	22,706	16,479	17,232	7,527	5,000	7,301	5,000	5,844	7,823
1928	5,711	9,811	8,853	9,353	16,689	21,065	12,473	5,716	5,000	9,565	5,650	5,322	6,955
1929	5,000	7,428	6,930	5,844	10,097	5,373	4,000	4,000	4,237	5,593	5,164	4,000	4,063
1930	4,366	4,757	11,529	9,271	13,158	14,664	4,990	4,703	4,000	4,000	4,000	4,304	5,036
1931	4,505	4,000	4,324	8,408	5,993	4,894	5,133	4,000	4,382	8,828	3,500	3,500	3,711
1932	3,417	4,194	12,922	7,775	6,493	7,967	3,500	3,500	3,500	3,500	3,500	3,500	3,867
1933	3,500	3,556	4,839	7,615	5,415	10,342	6,022	3,500	3,532	4,937	3,803	3,721	3,673
1934	3,985	3,797	8,725	8,916	10,500	7,191	3,500	3,500	5,645	4,994	3,500	3,500	4,072
1935	3,359	7,171	5,710	14,977	9,698	13,158	19,115	5,164	4,000	4,000	4,123	4,162	5,694
1936	5,066	3,598	5,439	18,124	19,317	8,359	6,903	5,459	5,124	5,985	5,000	5,000	5,625
1937	5,000	5,000	5,622	6,046	13,587	16,683	10,619	6,642	5,000	5,155	5,000	5,000	5,364
1938	5,991	16,452	20,545	12,166	22,750	22,751	18,737	15,460	5,732	5,387	5,992	9,532	9,697
1939	9,349	7,599	7,223	5,928	5,904	4,977	4,461	4,000	6,575	7,429	4,287	5,043	4,394
1940	4,871	5,162	6,651	18,321	20,993	21,331	17,813	6,691	5,000	6,484	5,000	5,000	7,436
1941	6,139	5,000	20,771	22,158	22,175	21,457	21,004	17,068	8,143	8,961	5,878	9,060	10,104
1942	8,184	6,514	21,319	21,116	22,564	8,715	15,279	12,923	7,115	8,044	5,754	8,852	8,794
1943	8,277	6,813	11,185	21,035	19,631	20,160	9,842	7,252	5,000	8,057	5,000	5,201	7,669
1944	5,990	5,361	5,655	6,960	11,536	9,338	4,000	4,314	4,000	6,668	4,000	4,970	4,395
1945	5,416	7,134	8,965	6,399	19,265	10,473	6,039	6,481	5,000	5,982	5,000	5,367	5,468
1946	6,278	8,445	21,704	19,558	12,404	7,173	5,000	5,000	5,000	5,225	5,000	5,783	6,433
1947	5,515	5,937	8,417	5,000	9,397	9,606	4,995	4,000	5,324	7,692	5,739	4,355	4,576
1948	7,812	5,928	5,203	9,908	9,969	9,370	16,744	14,123	8,315	5,163	5,000	5,770	6,241
1949	8,283	6,515	6,564	5,458	6,383	20,535	5,614	4,886	4,000	8,116	5,006	4,315	5,191
1950	5,638	5,082	5,246	10,290	15,731	8,654	6,597	5,000	5,000	5,000	5,000	5,000	4,921
1951	6,125	14,154	20,573	18,800	20,794	10,719	5,000	7,614	5,000	7,305	5,000	5,739	7,617
1952	6,678	6,972	20,709	20,620	21,103	20,340	17,918	12,381	7,359	9,376	6,079	10,368	9,666
1953	8,308	5,794	20,207	22,368	10,632	8,961	6,678	11,610	8,652	7,540	7,602	10,213	7,782
1954	9,006	10,232	8,864	18,154	21,398	19,648	17,576	9,665	5,000	8,578	5,715	6,028	8,398
1955	7,432	9,657	15,176	9,992	7,503	6,301	8,478	5,058	4,523	8,618	8,072	4,375	5,756
1956	5,174	6,796	21,910	22,446	21,200	13,261	7,951	12,578	5,292	7,218	7,379	9,865	8,533
1957	9,676	7,620	5,819	7,003	15,399	18,536	10,721	7,487	5,000	7,983	5,000	8,159	6,513
1958	12,752	11,479	17,038	20,398	23,462	21,436	20,168	12,430	11,800	8,801	8,541	10,647	10,759
1959	8,750	6,765	6,150	18,296	20,532	12,670	5,000	5,000	9,106	7,511	6,646	8,584	6,893
1960	7,875	6,122	5,269	7,395	18,463	12,257	4,108	5,975	4,422	9,029	6,245	4,026	5,498
1961	6,129	6,989	12,457	6,100	19,483	15,583	8,015	5,525	6,508	8,817	8,200	4,872	6,516
1962	6,976	9,776	12,671	7,002	20,330	14,535	5,160	5,000	5,000	6,427	5,000	7,053	6,279
1963	13,821	7,057	15,895	7,657	20,275	17,198	21,000	8,624	5,831	7,025	5,023	5,670	8,109
1964	10,785	14,994	8,896	9,272	7,098	5,130	4,023	4,000	4,133	6,527	4,957	5,892	5,186
1965	5,150	8,861	21,611	21,573	11,188	11,148	17,596	6,830	5,000	8,408	5,672	5,706	7,778
1966	6,581	13,271	6,259	17,914	15,300	18,092	7,176	5,000	7,543	7,972	5,210	6,628	7,033
1967	7,006	9,076	19,460	19,670	19,232	19,518	18,096	16,579	11,137	7,103	7,877	9,797	9,911
1968	9,259	7,747	7,760	13,517	21,296	14,204	6,216	5,166	8,447	7,358	6,000	6,980	6,866
1969	6,982	7,824	17,077	21,920	21,697	18,449	16,849	12,961	5,456	8,561	5,000	9,955	9,185
1970	10,155	6,131	21,146	23,472	20,629	14,880	6,987	5,000	5,000	11,207	5,000	6,784	8,216
1971	6,531	11,337	20,882	20,737	14,557	19,549	5,170	8,839	6,505	7,381	7,188	10,297	8,395
1972	9,754	8,250	8,211	8,146	9,430	18,069	5,996	5,000	8,219	8,151	6,559	5,397	6,130
1973	7,198	9,956	15,378	21,068	21,139	19,302	7,947	6,510	5,145	7,174	5,151	7,024	7,994
1974	7,838	21,751	21,236	22,834	15,962	22,304	18,797	7,118	6,874	10,235	8,369	11,556	10,543
1975	10,019	8,566	8,839	7,446	20,372	21,923	10,698	8,721	7,013	7,490	7,788	10,722	7,776
1976	11,608	6,619	6,567	5,798	5,000	7,277	4,326	4,000	6,574	7,377	5,419	4,889	4,576
1977	4,693	4,682	5,329	4,854	5,017	4,563	6,306	4,000	6,765	9,397	7,587	5,428	4,145
1978	6,293	5,336	10,685	21,070	20,509	21,137	17,342	8,906	5,000	8,761	5,000	7,188	8,249
1979	6,359	5,245	5,608	9,983	15,721	12,122	7,842	6,493	6,125	6,643	5,888	6,722	5,683
1980	7,252	7,974	11,646	21,252	21,914	17,699	6,655	5,929	5,000	7,132	5,000	5,250	7,410
1981	5,655	5,275	8,666	14,248	13,345	17,954	6,925	4,000	6,841	7,719	5,460	7,129	6,217
1982	6,887	18,870	21,332	19,117	21,482	20,048	20,623	8,765	6,580	7,075	5,924	10,193	10,025
1983	11,514	11,772	20,968	21,452	22,890	23,292	19,263	17,743	15,533	11,300	10,911	13,549	12,057
1984	10,934	19,842	22,304	17,912	10,994	16,267	7,963	5,000	5,000	8,427	5,975	6,727	8,325
1985	6,956	18,473	13,031	7,703	7,716	7,351	4,749	4,000	4,530	7,389	4,968	5,151	5,548
1986	7,816	5,748	8,878	11,420	23,514	21,643	7,453	5,000	5,000	5,576	5,000	6,214	6,778
1987	5,548	5,000	6,034	7,701	11,372	15,636	7,825	4,722	8,105	7,276	4,327	4,504	5,297
1988	6,664	4,000	12,453	17,632	9,323	5,780	4,000	4,126	9,064	8,334	6,138	3,500	5,520
1989	5,202	6,399	5,703	7,755	4,613	19,264	7,819	4,858	4,000	6,952	4,203	7,339	5,095
1990	7,285	4,511	5,145	10,247	8,878	7,777	4,000	5,790	5,057	5,870	4,293	3,500	4,363
1991	5,036	5,109	4,479	4,452	5,667	16,225	5,513	3,500	3,500	3,648	3,591	3,500	3,881
1992	4,416	4,149	4,463	6,341	17,935	12,618	5,556	4,000	6,909	6,448	6,054	4,054	4,989
1993	5,500	4,944	8,465	20,652	20,078	17,344	15,270	12,136	11,523	6,620	6,422	7,135	8,173
1994	8,539	6,016	8,673	7,354	12,982	9,151	4,000	4,000	6,748	6,949	7,318	7,303	5,351
Avg	6,883	7,777	11,381	12,927	15,119	13,761	9,594	6,916	6,018	7,167	5,550	6,302	6,586
Min	3,359	3,556	4,324	4,452	4,613	4,563	3,500	3,500	3,500	3,500	3,500	3,500	3,567
Max	13,821	21,751	22,304	23,472	23,514	23,292	21,004	17,743	15,533	11,300	10,911	13,549	12,057

Table I-6b. CALSIM Simulated Sacramento River Flow at Wilkins Slough, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	6,321	5,234	10,594	7,476	17,480	10,619	8,907	7,120	5,000	5,000	5,000	5,000	5,614
1923	6,384	7,099	14,814	10,398	7,381	5,431	10,038	5,000	5,000	5,861	5,000	5,558	5,311
1924	5,000	5,000	5,000	5,524	8,392	5,681	4,000	3,500	4,227	4,643	3,500	3,500	3,499
1925	3,971	5,014	7,470	6,259	21,281	10,003	13,442	6,691	4,624	4,334	4,000	4,187	5,433
1926	4,131	4,000	5,291	8,096	19,605	5,737	9,545	4,000	4,000	4,585	4,000	3,500	4,546
1927	4,333	10,684	13,445	14,754	22,570	16,599	17,459	7,467	5,000	5,997	5,000	5,000	7,681
1928	6,348	9,313	8,597	9,262	16,735	21,090	12,929	6,102	5,000	8,425	5,372	5,000	6,892
1929	5,000	6,728	6,615	5,700	10,137	5,437	4,198	4,000	4,318	5,656	5,395	3,500	4,004
1930	4,807	5,095	11,718	9,337	13,211	14,752	5,268	4,788	4,000	4,000	4,000	4,269	5,127
1931	4,490	3,958	4,374	8,523	6,035	4,946	4,756	3,500	4,149	4,918	3,500	3,510	3,416
1932	3,500	4,135	13,116	7,802	6,525	8,020	3,500	3,500	3,500	3,500	3,500	3,500	3,887
1933	3,500	3,575	4,961	7,729	5,442	10,157	6,728	3,500	3,500	4,233	3,708	3,500	3,656
1934	3,500	3,696	8,903	8,923	10,551	7,236	3,500	3,500	5,361	4,534	3,500	3,500	4,008
1935	3,561	7,427	5,764	15,035	9,768	13,259	19,228	5,048	4,000	4,000	4,168	4,000	5,732
1936	4,421	3,652	5,587	18,141	19,336	8,411	7,366	5,566	5,191	5,128	5,000	5,000	5,589
1937	5,000	5,000	4,742	5,976	13,596	16,763	10,912	6,712	5,000	5,000	5,000	5,000	5,323
1938	6,044	16,713	19,530	12,271	22,746	22,755	18,892	15,378	5,231	5,000	5,000	6,987	9,398
1939	9,566	7,188	7,278	5,964	6,060	5,069	5,847	4,000	6,257	7,283	4,224	4,683	4,432
1940	5,222	4,436	6,910	18,306	20,982	21,336	17,991	6,703	5,000	5,955	5,000	5,000	7,408
1941	5,388	6,176	19,378	22,198	22,170	21,459	21,072	16,796	5,082	7,000	6,593	8,757	9,754
1942	8,244	7,809	21,228	21,133	22,572	8,772	15,717	12,962	5,955	5,055	5,000	7,957	8,550
1943	8,314	6,899	11,270	21,027	19,639	20,176	10,404	7,151	5,000	7,930	5,000	5,697	7,731
1944	5,197	6,083	5,667	7,117	11,586	9,382	4,000	4,465	4,000	5,348	4,000	4,000	4,275
1945	5,630	7,389	9,017	6,419	18,476	10,259	6,519	6,536	5,000	5,308	5,000	5,000	5,412
1946	6,176	6,887	21,725	19,536	10,596	7,301	5,000	5,000	5,000	5,000	5,000	5,549	6,213
1947	6,328	6,120	8,374	5,000	9,458	9,687	5,460	4,000	5,764	6,923	4,640	4,000	4,561
1948	7,477	5,840	5,146	9,988	10,028	9,542	17,113	14,209	7,998	5,000	5,000	5,540	6,215
1949	6,885	5,748	6,748	5,368	6,414	20,151	6,031	5,014	4,000	8,269	4,170	4,293	5,032
1950	5,664	5,379	5,398	10,531	15,708	8,691	6,901	5,000	5,000	5,000	5,000	5,000	4,984
1951	6,289	9,074	20,691	18,750	20,769	10,780	5,000	7,603	5,000	5,434	5,000	6,156	7,240
1952	7,258	7,027	19,929	20,639	21,097	20,353	18,329	10,949	6,880	7,174	5,309	10,195	9,374
1953	8,301	6,529	20,043	22,373	10,138	8,956	7,194	12,151	6,753	6,506	5,941	10,065	7,564
1954	8,995	10,320	7,066	18,695	21,354	19,654	17,746	9,460	5,000	8,232	5,237	5,153	8,218
1955	7,794	9,719	13,772	10,055	7,734	5,868	8,229	5,045	5,662	6,863	5,447	4,612	5,483
1956	4,992	6,872	21,857	22,459	21,230	13,739	8,513	12,609	5,000	5,000	5,000	8,363	8,201
1957	9,766	7,572	6,029	7,298	15,069	18,552	10,332	7,494	5,000	7,836	5,841	7,137	6,489
1958	10,494	10,624	16,964	20,385	23,446	21,430	20,234	11,536	8,176	7,854	7,948	10,441	10,189
1959	8,740	7,169	6,206	18,223	20,540	13,198	5,000	5,000	8,633	7,627	6,292	8,503	6,901
1960	7,459	5,214	5,346	7,549	18,446	12,324	4,454	6,058	4,000	8,420	5,642	4,000	5,360
1961	5,206	7,071	12,272	6,160	18,655	15,706	7,706	4,090	6,267	9,706	7,549	4,753	6,304
1962	6,969	7,148	13,488	7,389	20,505	14,589	5,738	5,000	5,000	6,492	5,000	7,015	6,245
1963	12,387	6,468	15,698	7,691	20,268	17,588	21,021	8,705	5,000	6,162	5,000	5,602	7,897
1964	8,395	13,383	8,880	9,259	7,531	5,491	8,804	4,000	4,000	4,076	4,869	4,680	5,036
1965	5,409	8,757	21,429	21,644	11,166	10,308	17,984	6,823	5,000	7,915	5,298	6,198	7,727
1966	5,587	10,981	6,324	17,889	15,320	17,617	7,280	5,000	7,656	7,928	5,007	6,876	6,822
1967	6,690	8,494	18,778	19,680	19,212	19,530	18,200	16,515	7,807	5,788	7,272	9,610	9,490
1968	9,243	7,962	7,857	13,556	21,281	14,271	6,175	5,065	8,510	6,792	6,491	7,156	6,890
1969	6,432	6,908	16,753	21,779	21,685	18,445	17,055	11,401	5,000	7,473	5,000	5,915	8,649
1970	10,418	6,691	21,067	23,459	20,619	14,942	6,969	5,000	5,000	10,573	5,000	6,657	8,216
1971	6,465	11,334	20,751	20,734	15,876	19,116	5,828	8,482	5,000	6,766	5,000	10,101	8,172
1972	9,703	7,614	8,362	8,190	10,110	18,092	5,000	5,000	7,738	9,506	5,519	5,400	6,074
1973	7,267	10,207	13,790	21,095	21,112	19,206	8,443	6,385	5,000	8,305	5,000	6,809	7,971
1974	8,226	21,520	21,242	22,828	15,988	22,301	19,009	6,999	5,000	6,995	6,304	11,381	10,112
1975	10,014	8,570	9,026	7,445	20,368	21,920	11,175	8,314	5,000	5,736	6,560	10,522	7,475
1976	11,687	6,595	6,597	5,783	5,175	7,285	4,000	4,000	6,177	6,485	5,376	4,800	4,486
1977	4,677	4,238	4,000	4,446	5,094	4,550	5,855	4,000	6,368	10,809	5,896	5,411	3,945
1978	6,470	4,943	10,823	21,055	20,690	21,127	17,509	8,874	5,000	8,108	5,000	7,071	8,214
1979	6,041	5,721	5,510	10,167	15,903	12,337	8,535	6,397	5,758	6,424	5,509	6,434	5,680
1980	7,173	7,722	11,295	21,046	21,908	17,697	7,177	5,845	5,000	6,171	5,000	5,141	7,316
1981	5,851	5,000	8,827	14,280	13,383	14,702	7,500	4,000	6,578	7,079	5,292	7,425	6,013
1982	7,362	17,532	21,360	19,197	21,513	20,056	20,688	8,725	6,231	5,574	5,412	7,633	9,688
1983	9,029	12,045	20,911	21,424	22,869	23,278	19,415	17,726	15,424	10,669	10,391	13,450	11,838
1984	10,959	19,886	22,293	17,903	11,045	16,361	9,166	5,000	5,000	8,107	5,850	6,122	8,345
1985	7,822	15,960	13,120	7,882	7,716	7,416	5,286	4,000	4,991	7,081	4,907	5,418	5,525
1986	7,179	4,827	8,463	11,269	23,436	21,633	7,870	5,000	5,000	5,000	5,000	6,201	6,633
1987	5,561	5,000	6,080	7,855	11,400	15,693	6,409	5,178	8,053	6,376	4,058	4,724	5,197
1988	6,544	4,000	11,928	17,664	9,468	5,709	4,000	4,160	7,115	6,942	5,847	3,500	5,269
1989	5,470	6,589	5,708	7,769	4,739	19,273	8,221	4,987	4,000	6,824	4,293	7,476	5,169
1990	7,501	4,510	5,115	10,450	8,782	7,840	4,000	5,945	4,457	5,200	4,421	3,781	4,343
1991	5,035	4,995	4,496	4,454	5,517	16,417	5,660	3,500	3,500	3,500	3,500	3,500	3,873
1992	4,156	4,144	4,597	6,393	17,928	12,694	5,272	3,548	6,382	6,281	6,911	4,231	4,965
1993	5,714	4,737	8,672	20,636	20,082	17,407	15,866	10,405	11,216	6,358	5,861	5,997	7,982
1994	8,960	5,683	8,764	7,449	13,021	9,223	4,000	4,000	4,832	6,994	6,961	8,612	5,320
Avg	6,741	7,529	11,244	12,961	15,119	13,745	9,871	6,811	5,607	6,439	5,223	6,030	6,460
Min	3,500	3,575	4,000	4,446	4,739	4,550	3,500	3,500	3,500	3,500	3,500	3,500	3,416
Max	12,387	21,520	22,293	23,459	23,446	23,278	21,072	17,726	15,424	10,809	10,391	13,450	11,838

Table I-6c. CALSIM Simulated Sacramento River Flow at Wilkins Slough, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	-7	234	332	145	56	79	639	-89	0	-2,552	0	0	-74
1923	137	1,074	358	83	45	105	535	0	0	-848	0	6	88
1924	0	0	-250	-150	105	945	0	0	-128	-1,626	0	0	-68
1925	-20	119	112	20	5	-395	508	85	-870	-563	0	-112	-68
1926	-33	0	-531	103	-1	33	265	0	0	-390	0	-500	-64
1927	-658	271	42	21	-136	120	227	-60	0	-1,304	0	-844	-141
1928	637	-498	-256	-91	46	25	456	386	0	-1,140	-278	-322	-63
1929	0	-700	-315	-144	40	64	198	0	81	63	231	-500	-59
1930	441	338	189	66	53	88	278	85	0	0	0	-35	91
1931	-15	-42	50	115	42	52	-377	-500	-233	-3,910	0	10	-295
1932	83	-59	194	27	32	53	0	0	0	0	0	0	20
1933	0	19	122	114	27	-185	706	0	-32	-704	-95	-221	-16
1934	-485	-101	178	7	51	45	0	0	-284	-460	0	0	-64
1935	202	256	54	58	70	101	113	-116	0	0	45	-162	37
1936	-645	54	148	17	19	52	463	107	67	-857	0	0	-37
1937	0	0	-880	-70	9	80	293	70	0	-155	0	0	-41
1938	53	261	-1,015	105	-4	4	155	-82	-501	-387	-992	-2,545	-299
1939	217	-411	55	36	156	92	1,386	0	-318	-146	-63	-360	38
1940	351	-726	259	-15	-11	5	178	12	0	-529	0	0	-28
1941	-751	1,176	-1,393	40	-5	2	68	-272	-3,061	-1,961	715	-303	-349
1942	60	1,295	-91	17	8	57	438	39	-1,160	-2,989	-754	-895	-244
1943	37	86	85	-8	8	16	562	-101	0	-127	0	496	63
1944	-793	722	12	157	50	44	0	151	0	-1,320	0	-970	-119
1945	214	255	52	20	-789	-214	480	55	0	-674	0	-367	-56
1946	-102	-1,558	21	-22	-1,808	128	0	0	0	-225	0	-234	-219
1947	813	183	-43	0	61	81	465	0	440	-769	-1,099	-355	-16
1948	-335	-88	-57	80	59	172	369	86	-317	-163	0	-230	-26
1949	-1,398	-767	184	-90	31	-384	417	128	0	153	-836	-22	-158
1950	26	297	152	241	-23	37	304	0	0	0	0	0	63
1951	164	-5,080	118	-50	-25	61	0	-11	0	-1,871	0	417	-377
1952	580	55	-780	19	-6	13	411	-1,432	-479	-2,202	-770	-173	-293
1953	-7	735	-164	5	-494	-5	516	541	-1,899	-1,034	-1,661	-148	-218
1954	-11	88	-1,798	541	-44	6	170	-205	0	-346	-478	-875	-180
1955	362	62	-1,404	63	231	-433	-249	-13	1,139	-1,755	-2,625	237	-273
1956	-182	76	-53	13	30	478	562	31	-292	-2,218	-2,379	-1,502	-332
1957	90	-48	210	295	-330	16	-389	7	0	-147	841	-1,022	-24
1958	-2,258	-855	-74	-13	-16	-6	66	-894	-3,624	-947	-593	-206	-570
1959	-10	404	56	-73	8	528	0	0	-473	116	-354	-81	8
1960	-416	-908	77	154	-17	67	346	83	-422	-609	-603	-26	-138
1961	-923	82	-185	60	-828	123	-309	-1,435	-241	889	-651	-119	-211
1962	-7	-2,628	817	387	175	54	578	0	0	65	0	-38	-34
1963	-1,434	-589	-197	34	-7	390	21	81	-831	-863	-23	-68	-211
1964	-2,390	-1,611	-16	-13	433	361	4,781	0	-133	-2,451	-88	-1,212	-149
1965	259	-104	-182	71	-22	-840	388	-7	0	-493	-374	492	-51
1966	-994	-2,290	65	-25	20	-475	104	0	113	-44	-203	248	-211
1967	-316	-582	-682	10	-20	12	104	-64	-3,330	-1,315	-605	-187	-421
1968	-16	215	97	39	-15	67	-41	-101	63	-566	491	176	24
1969	-550	-916	-324	-141	-12	-4	206	-1,560	-456	-1,088	0	-4,040	-536
1970	263	560	-79	-13	-10	62	-18	0	0	-634	0	-127	-1
1971	-66	-3	-131	-3	1,319	-433	658	-357	-1,505	-615	-2,188	-196	-222
1972	-51	-636	151	44	680	23	-996	0	-481	1,355	-1,040	3	-57
1973	69	251	-1,588	27	-27	-96	496	-125	-145	1,131	-151	-215	-24
1974	388	-231	6	-6	26	-3	212	-119	-1,874	-3,240	-2,065	-175	-432
1975	-5	4	187	-1	-4	-3	477	-407	-2,013	-1,754	-1,228	-200	-301
1976	79	-24	30	-15	175	8	-326	0	-397	-892	-43	-89	-91
1977	-16	-444	-1,329	-408	77	-13	-451	0	-397	1,412	-1,691	-17	-199
1978	177	-393	138	-15	181	-10	167	-32	0	-653	0	-117	-35
1979	-318	476	-98	184	182	215	693	-96	-367	-219	-379	-288	-3
1980	-79	-252	-351	-206	-6	-2	522	-84	0	-961	0	-109	-94
1981	196	-275	161	32	38	-3,252	575	0	-263	-640	-168	296	-204
1982	475	-1,338	28	80	31	8	65	-40	-349	-1,501	-512	-2,560	-337
1983	-2,485	273	-57	-28	-21	-14	152	-17	-109	-631	-520	-99	-219
1984	25	44	-11	-9	51	94	1,203	0	0	-320	-125	-605	20
1985	866	-2,513	89	179	0	65	537	0	461	-308	-61	267	-23
1986	-637	-921	-415	-151	-78	-10	417	0	0	-576	0	-13	-145
1987	13	0	46	154	28	57	-1,416	456	-52	-900	-269	220	-100
1988	-120	0	-525	32	145	-71	0	34	-1,949	-1,392	-291	0	-251
1989	268	190	5	14	126	9	402	129	0	-128	90	137	74
1990	216	-1	-30	203	-96	63	0	155	-600	-670	128	281	-20
1991	-1	-114	17	2	-150	192	147	0	0	-148	-91	0	-8
1992	-260	-5	134	52	-7	76	-284	-452	-527	-167	857	177	-24
1993	214	-207	207	-16	4	63	596	-1,731	-307	-262	-561	-1,138	-191
1994	421	-333	91	95	39	72	0	0	-1,916	45	-357	1,309	-31
Avg	-142	-248	-137	34	0	-16	277	-105	-411	-728	-327	-272	-126
Min	-2,485	-5,080	-1,798	-408	-1,808	-3,252	-1,416	-1,731	-3,624	-3,910	-2,625	-4,040	-570
Max	866	1,295	817	541	1,319	945	4,781	541	1,139	1,412	857	1,309	91

Table I-6d. CALSIM Simulated Sacramento River Flow at Wilkins Slough, Percentiles for 2001 and 2020 Baseline (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	3,359	3,556	4,324	4,452	4,613	4,563	3,500	3,500	3,500	3,500	3,500	3,500	3,500
10	4,366	4,149	5,246	5,844	5,993	5,373	4,000	4,000	4,000	4,975	4,000	3,500	
20	5,000	5,000	5,703	7,002	8,878	7,777	4,995	4,000	4,523	5,593	4,327	4,304	
30	5,500	5,245	6,564	7,657	10,500	9,338	5,513	4,858	5,000	6,484	5,000	4,970	
40	5,991	5,937	8,211	8,408	12,982	10,719	6,306	5,000	5,000	6,952	5,000	5,151	
50	6,359	6,619	8,864	10,247	15,731	14,204	7,453	5,459	5,057	7,301	5,006	5,670	
60	6,976	7,134	11,529	14,733	19,265	16,267	8,015	6,493	5,645	7,490	5,650	6,028	
70	7,812	7,974	13,403	18,296	20,330	18,069	10,698	7,209	6,575	7,983	5,924	7,024	
80	8,539	9,811	20,207	20,652	21,139	19,648	17,232	8,839	7,115	8,561	6,422	8,584	
90	10,019	13,271	21,146	21,452	21,914	21,331	18,737	12,578	8,447	8,961	7,602	10,193	
Max	13,821	21,751	22,304	23,472	23,514	23,292	21,004	17,743	15,533	11,300	10,911	13,549	
Avg	6,883	7,777	11,381	12,927	15,119	13,761	9,594	6,916	6,018	7,167	5,550	6,302	6,586
B: 2020 Baseline													
Min	3,500	3,575	4,000	4,446	4,739	4,550	3,500	3,500	3,500	3,500	3,500	3,500	3,500
10	4,156	4,135	5,000	5,783	6,060	5,681	4,000	3,548	4,000	4,334	4,000	3,500	
20	5,000	4,995	5,667	7,298	8,782	7,840	5,000	4,000	4,457	5,000	4,293	4,187	
30	5,409	5,214	6,597	7,729	10,138	9,382	5,828	4,987	5,000	5,200	5,000	4,724	
40	5,851	6,083	7,857	8,523	13,021	10,619	6,728	5,000	5,000	5,788	5,000	5,000	
50	6,384	6,728	8,880	10,398	15,903	14,271	7,706	5,178	5,000	6,376	5,000	5,418	
60	6,969	7,099	11,295	14,754	18,655	16,361	8,804	6,397	5,000	6,824	5,007	5,997	
70	7,477	7,614	13,488	18,306	20,368	17,697	10,912	7,120	5,758	7,079	5,395	6,809	
80	8,395	9,313	19,378	20,639	21,112	19,654	17,459	8,725	6,382	7,915	5,850	7,476	
90	9,703	11,334	21,067	21,424	21,908	21,336	18,892	12,151	7,807	8,305	6,560	9,610	
Max	12,387	21,520	22,293	23,459	23,446	23,278	21,072	17,726	15,424	10,809	10,391	13,450	
Avg	6,741	7,529	11,244	12,961	15,119	13,745	9,871	6,811	5,607	6,439	5,223	6,030	6,460
Comparison: B – A													
Min	141	19	-324	-6	126	-13	0	0	0	0	0	0	0
10	-210	-14	-246	-61	67	308	0	-452	0	-641	0	0	0
20	0	-5	-36	296	-96	63	5	0	-66	-593	-34	-117	
30	-91	-31	33	72	-362	44	315	129	0	-1,284	0	-246	
40	-140	146	-354	115	39	-100	422	0	0	-1,164	0	-151	
50	25	109	16	151	172	67	253	-281	-57	-925	-6	-252	
60	-7	-35	-234	21	-610	94	789	-96	-645	-666	-643	-31	
70	-335	-360	85	10	38	-372	214	-89	-817	-904	-529	-215	
80	-144	-498	-829	-13	-27	6	227	-114	-733	-646	-572	-1,108	
90	-316	-1,937	-79	-28	-6	5	155	-427	-640	-656	-1,042	-583	
Max	-1,434	-231	-11	-13	-68	-14	68	-17	-109	-491	-520	-99	
Avg	-142	-248	-137	34	0	-16	277	-105	-411	-728	-327	-272	-126

Table I-7a. CALSIM Simulated Oroville Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	2,539	2,544	2,538	2,671	2,813	2,922	3,446	3,538	3,538	3,383	2,998	2,959	579
1923	2,998	3,035	2,922	2,976	3,089	3,163	3,459	3,538	3,172	2,775	2,377	2,311	1,227
1924	2,231	2,150	2,013	2,066	2,250	2,209	2,123	2,047	1,820	1,548	1,338	1,284	839
1925	1,291	1,336	1,395	1,533	2,149	2,296	2,585	2,714	2,446	2,285	1,834	1,770	944
1926	1,691	1,719	1,708	1,847	2,348	2,640	3,263	3,179	2,876	2,379	1,898	1,719	1,544
1927	1,601	1,916	1,904	2,206	2,788	2,999	3,396	3,538	3,392	3,089	2,658	2,569	969
1928	2,518	2,675	2,668	2,842	2,993	2,797	3,223	3,196	2,839	2,510	2,112	1,992	1,231
1929	1,825	1,759	1,751	1,802	1,917	2,054	2,093	2,095	1,942	1,685	1,405	1,335	760
1930	1,285	1,266	1,791	2,071	2,271	2,737	3,071	3,183	2,916	2,425	2,026	1,945	1,238
1931	1,884	1,909	1,836	1,970	2,096	2,296	2,199	2,161	1,925	1,518	1,283	1,220	979
1932	1,187	1,188	1,137	1,341	1,526	1,868	2,148	2,476	2,443	1,999	1,888	1,802	674
1933	1,602	1,511	1,534	1,635	1,723	1,692	1,757	1,893	1,838	1,668	1,539	1,475	418
1934	1,396	1,363	1,355	1,581	1,719	1,993	1,955	1,888	1,715	1,532	1,267	1,183	772
1935	1,092	1,140	1,205	1,438	1,631	1,906	2,915	3,282	2,893	2,333	1,869	1,739	1,543
1936	1,530	1,438	1,407	1,918	2,695	2,954	3,344	3,524	3,307	2,731	2,280	2,177	1,347
1937	2,074	1,970	1,940	1,981	2,152	2,504	2,884	3,221	2,988	2,498	2,016	2,011	1,210
1938	1,957	2,135	2,867	2,924	2,788	2,788	3,277	3,538	3,538	3,076	2,876	3,112	426
1939	3,163	3,163	3,163	3,134	3,163	3,133	3,092	2,977	2,602	2,005	1,460	1,195	1,897
1940	971	867	892	1,397	2,387	2,788	3,238	3,315	2,952	2,367	1,942	1,901	1,414
1941	1,871	1,842	2,354	2,788	2,788	2,918	3,334	3,538	3,538	3,430	3,097	3,073	465
1942	3,121	3,163	2,788	2,788	2,806	3,058	3,281	3,538	3,538	3,438	3,124	3,098	440
1943	3,119	3,085	2,966	2,788	2,890	2,937	3,350	3,491	3,228	2,933	2,548	2,504	987
1944	2,518	2,543	2,534	2,636	2,804	3,046	3,149	3,401	3,079	2,518	2,032	1,812	1,589
1945	1,626	1,700	1,868	1,945	2,549	2,843	3,077	3,333	3,005	2,472	2,021	1,938	1,395
1946	1,909	1,996	2,643	3,007	3,064	3,063	3,372	3,538	3,175	2,612	2,182	2,093	1,445
1947	2,010	2,027	2,117	2,182	2,459	2,788	2,895	2,726	2,449	1,866	1,356	1,139	1,756
1948	1,099	1,069	1,037	1,349	1,399	1,596	2,253	2,714	2,868	2,363	1,910	1,818	1,050
1949	1,741	1,720	1,735	1,787	1,869	2,156	2,462	2,660	2,260	1,933	1,724	1,629	1,031
1950	1,565	1,570	1,517	1,799	2,260	2,704	3,196	3,495	3,192	2,645	2,237	2,172	1,323
1951	2,202	2,770	2,866	2,846	2,925	3,105	3,353	3,538	3,361	2,769	2,369	2,340	1,198
1952	2,387	2,445	2,788	2,788	2,832	2,988	3,452	3,538	3,538	3,535	3,532	3,350	188
1953	3,163	3,163	2,918	2,809	3,059	3,059	3,284	3,538	3,538	3,253	3,097	3,062	476
1954	3,091	3,115	3,163	2,918	2,903	2,943	3,292	3,072	2,838	2,378	2,058	1,939	1,353
1955	1,850	1,873	1,966	2,094	2,182	2,309	2,415	2,594	2,251	1,990	1,867	1,786	808
1956	1,710	1,684	2,788	2,788	2,788	3,018	3,427	3,538	3,538	3,365	3,157	3,145	393
1957	3,080	3,163	3,163	3,116	2,847	2,990	2,975	3,258	3,040	2,632	2,318	2,308	950
1958	2,325	2,354	2,574	2,860	2,788	2,788	3,235	3,538	3,538	3,489	3,390	3,350	188
1959	3,163	3,163	3,163	2,978	2,839	3,054	3,155	3,210	2,775	2,144	1,658	1,616	1,594
1960	1,412	1,310	1,231	1,357	1,956	2,521	2,726	2,824	2,591	2,162	1,740	1,530	1,294
1961	1,467	1,503	1,576	1,689	1,988	2,253	2,299	2,333	2,154	1,660	1,171	1,110	1,223
1962	902	825	906	1,028	1,599	1,947	2,449	2,639	2,350	1,913	1,426	1,342	1,297
1963	2,013	2,140	2,506	2,796	3,057	2,927	3,180	3,538	3,406	3,075	2,671	2,640	898
1964	2,645	2,820	2,868	3,020	3,152	3,163	3,114	3,002	2,741	2,171	1,671	1,442	1,672
1965	1,266	1,280	2,788	2,788	2,997	3,096	3,354	3,425	3,448	3,105	2,826	2,797	651
1966	2,841	2,943	2,946	3,015	3,100	3,163	3,459	3,390	3,008	2,508	2,048	1,826	1,633
1967	1,632	1,725	2,094	2,730	2,951	2,847	3,236	3,538	3,538	3,538	3,505	3,350	188
1968	3,162	3,162	3,141	2,922	2,962	3,036	3,131	3,220	2,927	2,459	2,117	1,912	1,308
1969	1,835	1,876	2,099	2,788	2,788	3,027	3,470	3,538	3,538	3,442	3,098	3,101	437
1970	3,162	3,162	2,806	2,787	2,787	3,163	3,098	3,142	2,810	2,431	2,022	1,922	1,220
1971	1,882	2,147	2,563	2,937	3,144	3,162	3,433	3,538	3,538	3,100	2,957	2,932	606
1972	2,998	3,091	3,029	3,088	3,058	3,163	3,321	3,399	3,042	2,676	2,321	2,255	1,144
1973	2,209	2,370	2,647	2,788	2,788	2,951	3,286	3,538	3,093	2,605	2,212	2,213	1,325
1974	2,240	2,788	2,800	2,870	3,009	2,788	3,292	3,538	3,413	3,430	3,434	3,338	200
1975	3,163	3,163	3,163	3,163	2,884	2,833	3,270	3,538	3,538	3,409	3,326	3,293	245
1976	3,140	3,163	3,163	3,163	3,162	3,163	3,076	2,963	2,681	2,216	1,855	1,674	1,402
1977	1,554	1,468	1,353	1,334	1,298	1,269	1,100	1,032	762	439	224	216	884
1978	166	191	395	1,302	1,817	2,710	3,218	3,520	3,456	3,295	2,920	2,943	577
1979	2,941	2,999	3,057	3,111	2,843	3,001	3,224	3,506	3,056	2,694	2,333	2,246	1,260
1980	2,300	2,357	2,480	2,813	2,788	3,028	3,282	3,465	3,236	3,126	2,741	2,672	793
1981	2,648	2,672	2,801	2,947	3,075	3,024	3,187	3,169	2,829	2,312	1,856	1,821	1,366
1982	1,778	2,709	2,788	2,943	2,987	2,936	3,303	3,538	3,538	3,504	3,279	3,313	225
1983	3,149	2,981	2,930	2,854	2,788	2,788	3,208	3,538	3,538	3,538	3,538	3,351	187
1984	3,163	2,950	2,788	3,091	3,078	3,120	3,351	3,494	3,160	2,740	2,458	2,419	1,075
1985	2,438	2,645	2,807	2,857	3,048	3,117	3,354	3,177	2,778	2,198	1,695	1,469	1,885
1986	1,301	1,228	1,296	1,621	2,820	2,788	3,135	3,213	2,991	2,817	2,449	2,511	702
1987	2,542	2,632	2,650	2,666	2,826	3,053	2,906	2,777	2,367	1,767	1,277	1,183	1,723
1988	1,041	1,070	1,405	1,655	1,728	1,813	1,844	1,850	1,663	1,449	1,266	1,205	645
1989	1,164	1,327	1,422	1,488	1,628	2,788	3,170	3,008	2,624	2,036	1,547	1,507	1,663
1990	1,521	1,536	1,440	1,575	1,652	1,911	1,855	1,868	1,788	1,487	1,336	1,251	617
1991	1,214	1,184	1,176	1,174	1,157	1,545	1,742	1,871	1,804	1,663	1,556	1,518	353
1992	1,512	1,438	1,459	1,498	1,759	2,002	2,138	2,021	1,831	1,615	1,378	1,181	957
1993	1,178	1,132	1,297	1,877	2,388	2,964	3,456	3,538	3,538	2,995	2,644	2,869	669
1994	2,939	3,020	3,156	3,121	2,985	3,163	3,103	3,063	2,768	1,880	1,344	1,052	2,051
Avg	2,067	2,117	2,219	2,362	2,529	2,703	2,962	3,073	2,869	2,507	2,178	2,100	1,000
Min	166	191	395	1,028	1,157	1,269	1,100	1,032	762	439	224	216	187
Max	3,163	3,163	3,163	3,163	3,163	3,163	3,470	3,538	3,538	3,538	3,538	3,351	2,051

Table I-7b. CALSIM Simulated Oroville Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	2,522	2,528	2,528	2,661	2,813	2,922	3,446	3,538	3,538	2,984	2,604	2,701	837
1923	2,743	2,784	2,902	2,976	3,089	3,148	3,459	3,538	3,164	2,643	2,158	2,138	1,400
1924	2,061	1,950	1,757	1,809	1,993	1,960	1,901	1,827	1,637	1,268	1,053	983	918
1925	991	1,035	1,100	1,238	1,853	2,012	2,317	2,452	2,187	2,020	1,623	1,594	858
1926	1,540	1,567	1,558	1,697	2,197	2,490	3,119	2,968	2,785	2,289	1,890	1,783	1,336
1927	1,724	2,039	2,028	2,330	2,788	2,999	3,396	3,538	3,390	2,967	2,553	2,468	1,070
1928	2,407	2,564	2,560	2,734	2,887	2,797	3,224	3,181	2,847	2,592	2,128	1,997	1,227
1929	1,847	1,767	1,761	1,811	1,927	2,064	2,122	2,122	1,971	1,708	1,422	1,335	787
1930	1,285	1,268	1,844	2,124	2,326	2,791	3,130	3,251	2,979	2,482	2,082	1,954	1,297
1931	1,914	1,939	1,874	2,008	2,134	2,335	2,243	2,207	1,932	1,442	1,188	1,086	1,157
1932	1,028	1,042	997	1,201	1,386	1,730	2,011	2,341	2,303	2,161	1,738	1,651	690
1933	1,517	1,425	1,449	1,550	1,637	1,609	1,684	1,821	1,776	1,605	1,469	1,386	435
1934	1,331	1,306	1,294	1,520	1,658	1,932	1,908	1,849	1,682	1,494	1,266	1,234	674
1935	1,136	1,184	1,248	1,481	1,677	1,952	2,969	3,336	2,948	2,370	1,856	1,693	1,643
1936	1,476	1,384	1,343	1,854	2,631	2,954	3,353	3,534	3,324	2,744	2,283	2,184	1,350
1937	2,092	1,989	1,950	1,990	2,162	2,514	2,896	3,234	2,909	2,426	1,954	1,912	1,322
1938	1,859	2,038	2,867	2,924	2,788	2,788	3,277	3,538	3,538	3,061	2,766	3,047	491
1939	3,107	3,163	3,163	3,134	3,163	3,133	2,984	2,889	2,538	1,934	1,424	1,203	1,781
1940	996	894	919	1,424	2,415	2,788	3,238	3,308	2,912	2,312	1,835	1,734	1,574
1941	1,590	1,561	2,073	2,643	2,788	2,918	3,334	3,538	3,506	2,986	2,750	2,730	808
1942	2,783	2,873	2,788	2,788	2,806	3,058	3,281	3,538	3,538	3,097	2,718	2,898	640
1943	2,922	3,084	2,966	2,788	2,890	2,937	3,350	3,518	3,245	3,001	2,597	2,558	960
1944	2,539	2,582	2,580	2,682	2,851	3,069	3,212	3,466	3,148	2,584	2,097	1,899	1,567
1945	1,721	1,795	1,963	2,125	2,729	3,022	3,263	3,519	3,147	2,581	2,135	2,036	1,483
1946	2,012	2,099	2,746	3,007	2,960	3,063	3,373	3,538	3,173	2,604	2,105	1,968	1,570
1947	1,833	1,864	1,954	2,019	2,296	2,625	2,769	2,710	2,427	1,840	1,328	1,197	1,572
1948	1,171	1,173	1,141	1,454	1,512	1,709	2,372	2,838	2,985	2,465	2,009	1,920	1,065
1949	1,846	1,830	1,845	1,898	1,979	2,266	2,574	2,774	2,375	2,060	1,760	1,664	1,110
1950	1,615	1,623	1,594	1,876	2,337	2,780	3,273	3,538	3,208	2,656	2,264	2,196	1,342
1951	2,229	2,788	2,866	2,846	2,925	3,105	3,355	3,538	3,163	2,641	2,257	2,210	1,328
1952	2,258	2,315	2,788	2,788	2,832	2,988	3,452	3,538	3,538	3,517	3,514	3,350	188
1953	3,163	3,163	2,918	2,809	3,059	3,059	3,284	3,538	3,538	3,235	2,941	2,911	627
1954	2,942	3,074	3,163	2,918	2,903	2,943	3,292	3,069	2,846	2,332	1,971	1,836	1,456
1955	1,706	1,729	1,822	1,950	2,038	2,164	2,272	2,452	2,194	1,924	1,797	1,715	737
1956	1,641	1,617	2,788	2,788	2,788	3,018	3,427	3,538	3,538	3,032	2,676	2,763	775
1957	2,826	2,910	3,003	3,113	2,847	2,990	3,002	3,290	3,005	2,630	2,256	2,248	1,042
1958	2,265	2,291	2,511	2,813	2,788	2,788	3,235	3,538	3,538	3,476	3,327	3,309	229
1959	3,163	3,163	3,163	2,978	2,839	3,054	3,129	3,163	2,746	2,132	1,624	1,593	1,570
1960	1,450	1,348	1,121	1,247	1,846	2,411	2,629	2,728	2,480	2,085	1,766	1,661	1,067
1961	1,611	1,647	1,720	1,833	2,132	2,397	2,462	2,518	2,308	1,785	1,292	1,189	1,329
1962	975	929	1,014	1,137	1,708	2,056	2,559	2,738	2,596	2,092	1,593	1,459	1,279
1963	2,130	2,257	2,623	2,914	3,057	2,927	3,180	3,538	3,281	2,834	2,434	2,407	1,131
1964	2,412	2,587	2,634	2,787	2,919	3,046	2,835	2,931	2,664	2,094	1,592	1,460	1,471
1965	1,313	1,328	2,788	2,788	2,997	3,096	3,354	3,435	3,461	3,134	2,853	2,828	633
1966	2,868	2,943	2,946	3,015	3,100	3,163	3,459	3,323	2,921	2,416	1,980	1,750	1,709
1967	1,540	1,650	2,019	2,656	2,951	2,847	3,236	3,538	3,538	3,538	3,427	3,350	188
1968	3,162	3,162	3,141	2,922	2,962	3,036	3,137	3,227	2,883	2,439	2,121	1,931	1,296
1969	1,859	1,909	2,131	2,788	2,788	3,027	3,470	3,538	3,538	3,422	3,093	3,096	442
1970	3,162	3,162	2,806	2,787	2,787	3,163	3,096	3,141	2,801	2,363	1,954	1,769	1,372
1971	1,701	1,966	2,382	2,756	3,013	3,162	3,433	3,538	3,538	2,988	2,676	2,700	838
1972	2,767	2,810	2,933	3,088	3,058	3,163	3,322	3,401	3,035	2,631	2,240	2,155	1,246
1973	2,110	2,271	2,548	2,788	2,788	2,951	3,289	3,538	3,086	2,758	2,353	2,261	1,277
1974	2,289	2,788	2,800	2,870	3,009	2,788	3,292	3,538	3,377	3,372	3,202	3,171	367
1975	3,163	3,163	3,163	3,163	2,884	2,833	3,275	3,538	3,538	3,308	3,162	3,129	409
1976	3,140	3,163	3,163	3,163	3,162	3,163	3,092	2,966	2,686	2,006	1,644	1,659	1,433
1977	1,545	1,464	1,393	1,374	1,343	1,328	1,187	1,137	864	564	387	387	800
1978	356	380	585	1,492	2,007	2,900	3,218	3,527	3,442	3,262	2,889	2,914	613
1979	2,923	2,981	2,738	2,944	2,843	3,001	3,228	3,512	3,096	2,716	2,336	2,249	1,263
1980	2,304	2,362	2,485	2,813	2,788	3,028	3,287	3,470	3,240	3,120	2,744	2,674	796
1981	2,652	2,676	2,805	2,947	3,075	3,024	3,192	3,175	2,820	2,196	1,692	1,713	1,479
1982	1,678	2,608	2,788	2,943	2,987	2,936	3,303	3,538	3,538	3,096	2,923	3,124	414
1983	3,149	2,981	2,930	2,854	2,788	2,788	3,208	3,538	3,538	3,538	3,538	3,351	187
1984	3,163	2,950	2,788	3,091	3,078	3,120	3,286	3,430	3,094	2,598	2,383	2,269	1,161
1985	2,291	2,499	2,660	2,738	2,930	3,117	3,361	3,183	2,793	2,209	1,695	1,476	1,885
1986	1,312	1,240	1,308	1,633	2,832	2,788	3,140	3,220	2,999	2,429	2,006	2,446	774
1987	2,477	2,567	2,585	2,600	2,761	3,053	3,005	2,871	2,369	1,755	1,232	1,140	1,865
1988	998	1,027	1,362	1,612	1,685	1,769	1,801	1,826	1,657	1,373	1,224	1,193	633
1989	1,182	1,345	1,440	1,507	1,647	2,788	3,183	3,014	2,640	2,041	1,544	1,563	1,620
1990	1,584	1,598	1,508	1,642	1,719	1,979	1,933	1,948	1,868	1,570	1,415	1,324	624
1991	1,285	1,230	1,235	1,232	1,244	1,632	1,830	1,959	1,870	1,726	1,612	1,575	384
1992	1,571	1,507	1,531	1,570	1,831	2,075	2,214	2,100	1,897	1,680	1,444	1,247	967
1993	1,270	1,222	1,386	1,967	2,478	2,964	3,456	3,538	3,538	2,980	2,584	2,677	861
1994	2,749	2,761	2,837	2,877	2,985	3,152	3,115	3,077	2,698	1,833	1,297	1,128	1,987
Avg	2,027	2,081	2,193	2,346	2,519	2,701	2,959	3,073	2,862	2,455	2,106	2,048	1,000
Min	356	380	585	1,137	1,244	1,328	1,187	1,137	864	564	387	387	187
Max	3,163	3,163	3,163	3,163	3,163	3,163	3,470	3,538	3,538	3,538	3,538	3,351	2,051

Table I-7c. CALSIM Simulated Oroville Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-17	-16	-10	-10	0	0	0	0	0	-399	-394	-258
1923	-255	-251	-20	0	0	-15	0	0	-8	-132	-219	-173
1924	-170	-200	-256	-257	-257	-249	-222	-220	-183	-280	-285	-301
1925	-300	-301	-295	-295	-296	-284	-268	-262	-259	-265	-211	-176
1926	-151	-152	-150	-150	-151	-150	-144	-211	-91	-90	-8	64
1927	123	123	124	124	0	0	0	0	-2	-122	-105	-101
1928	-111	-111	-108	-108	-106	0	1	-15	8	82	16	5
1929	22	8	10	9	10	10	29	27	29	23	17	0
1930	0	2	53	53	55	54	59	68	63	57	56	9
1931	30	30	38	38	38	39	44	46	7	-76	-95	-134
1932	-159	-146	-140	-140	-140	-138	-137	-135	-140	162	-150	-151
1933	-85	-86	-85	-85	-86	-83	-73	-72	-62	-63	-70	-89
1934	-65	-57	-61	-61	-61	-61	-47	-39	-33	-38	-1	51
1935	44	44	43	43	46	46	54	54	55	37	-13	-46
1936	-54	-54	-64	-64	-64	0	9	10	17	13	3	7
1937	18	19	10	9	10	10	12	13	-79	-72	-62	-99
1938	-98	-97	0	0	0	0	0	0	0	-15	-110	-65
1939	-56	0	0	0	0	0	-108	-88	-64	-71	-36	8
1940	25	27	27	27	28	0	0	-7	-40	-55	-107	-167
1941	-281	-281	-281	-145	0	0	0	0	-32	-444	-347	-343
1942	-338	-290	0	0	0	0	0	0	0	-341	-406	-200
1943	-197	-1	0	0	0	0	0	27	17	68	49	54
1944	21	39	46	46	47	23	63	65	69	66	65	87
1945	95	95	95	180	180	179	186	186	142	109	114	98
1946	103	103	103	0	-104	0	1	0	-2	-8	-77	-125
1947	-177	-163	-163	-163	-163	-163	-126	-16	-22	-26	-28	58
1948	72	104	104	105	113	113	119	124	117	102	99	102
1949	105	110	110	111	110	110	112	114	115	127	36	35
1950	50	53	77	77	77	76	77	43	16	11	27	24
1951	27	18	0	0	0	0	2	0	-198	-128	-112	-130
1952	-129	-130	0	0	0	0	0	0	0	-18	-18	0
1953	0	0	0	0	0	0	0	0	0	-18	-156	-151
1954	-149	-41	0	0	0	0	0	-3	8	-46	-87	-103
1955	-144	-144	-144	-144	-144	-145	-143	-142	-57	-66	-70	-71
1956	-69	-67	0	0	0	0	0	0	0	-333	-481	-382
1957	-254	-253	-160	-3	0	0	27	32	-35	-2	-62	-60
1958	-60	-63	-63	-47	0	0	0	0	0	-13	-63	-41
1959	0	0	0	0	0	0	-26	-47	-29	-12	-34	-23
1960	38	38	-110	-110	-110	-110	-97	-96	-111	-77	26	131
1961	144	144	144	144	144	144	163	185	154	125	121	79
1962	73	104	108	109	109	109	110	99	246	179	167	117
1963	117	117	117	118	0	0	0	0	-125	-241	-237	-233
1964	-233	-233	-234	-233	-233	-117	-279	-71	-77	-77	-79	18
1965	47	48	0	0	0	0	0	10	13	29	27	31
1966	27	0	0	0	0	0	0	-67	-87	-92	-68	-76
1967	-92	-75	-75	-74	0	0	0	0	0	0	-78	0
1968	0	0	0	0	0	0	6	7	-44	-20	4	19
1969	24	33	32	0	0	0	0	0	0	-20	-5	-5
1970	0	0	0	0	0	0	-2	-1	-9	-68	-68	-153
1971	-181	-181	-181	-181	-131	0	0	0	0	-112	-281	-232
1972	-231	-281	-96	0	0	0	1	2	-7	-45	-81	-100
1973	-99	-99	-99	0	0	0	3	0	-7	153	141	48
1974	49	0	0	0	0	0	0	0	-36	-58	-232	-167
1975	0	0	0	0	0	0	5	0	0	-101	-164	-164
1976	0	0	0	0	0	0	16	3	5	-210	-211	-15
1977	-9	-4	40	40	45	59	87	105	102	125	163	171
1978	190	189	190	190	190	190	0	7	-14	-33	-31	-29
1979	-18	-18	-319	-167	0	0	4	6	40	22	3	3
1980	4	5	5	0	0	0	5	5	4	-6	3	2
1981	4	4	4	0	0	0	5	6	-9	-116	-164	-108
1982	-100	-101	0	0	0	0	0	0	0	-408	-356	-189
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	-65	-64	-66	-142	-75	-150
1985	-147	-146	-147	-119	-118	0	7	6	15	11	0	7
1986	11	12	12	12	12	0	5	7	8	-388	-443	-65
1987	-65	-65	-65	-66	-65	0	99	94	2	-12	-45	-43
1988	-43	-43	-43	-43	-43	-44	-43	-24	-6	-76	-42	-12
1989	18	18	18	19	19	0	13	6	16	5	-3	56
1990	63	62	68	67	67	68	78	80	80	83	79	73
1991	71	46	59	58	87	87	88	88	66	63	56	57
1992	59	69	72	72	72	73	76	79	66	65	66	66
1993	92	90	89	90	90	0	0	0	0	-15	-60	-192
1994	-190	-259	-319	-244	0	-11	12	14	-70	-47	-47	76
Avg	-40	-36	-26	-16	-10	-2	-3	0	-7	-52	-72	-52
Min	-338	-301	-319	-295	-296	-284	-279	-262	-259	-444	-481	-382
Max	190	189	190	190	190	190	186	186	246	179	167	171

Table I-7d. CALSIM Simulated Monthly Cumulative Distribution of Oroville Reservoir Storage for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	166	191	395	1,028	1,157	1,269	1,100	1,032	762	439	224	216
10	1,164	1,140	1,205	1,357	1,631	1,906	2,093	2,021	1,831	1,615	1,336	1,183
20	1,396	1,336	1,407	1,621	1,917	2,253	2,449	2,660	2,367	1,913	1,539	1,442
30	1,565	1,536	1,708	1,847	2,250	2,704	2,915	2,977	2,681	2,162	1,740	1,629
40	1,741	1,759	1,940	2,071	2,549	2,788	3,103	3,177	2,838	2,363	1,898	1,812
50	1,909	2,027	2,506	2,787	2,788	2,918	3,187	3,258	2,988	2,498	2,048	1,939
60	2,231	2,370	2,650	2,788	2,820	2,954	3,236	3,425	3,079	2,645	2,280	2,213
70	2,518	2,675	2,788	2,854	2,890	3,024	3,284	3,524	3,236	2,817	2,458	2,504
80	2,998	2,999	2,918	2,943	2,997	3,059	3,350	3,538	3,538	3,126	2,920	2,943
90	3,149	3,162	3,141	3,088	3,075	3,162	3,427	3,538	3,538	3,430	3,157	3,145
Max	3,163	3,163	3,163	3,163	3,163	3,163	3,470	3,538	3,538	3,538	3,538	3,351
Avg	2,067	2,117	2,219	2,362	2,529	2,703	2,962	3,073	2,869	2,507	2,178	2,100
B: 2020 Baseline												
Min	356	380	585	1,137	1,244	1,328	1,187	1,137	864	564	387	387
10	1,136	1,173	1,141	1,424	1,658	1,932	1,933	1,959	1,870	1,605	1,292	1,193
20	1,331	1,345	1,393	1,612	1,927	2,164	2,462	2,710	2,369	1,924	1,544	1,459
30	1,571	1,567	1,720	1,854	2,162	2,625	2,969	2,931	2,664	2,092	1,692	1,651
40	1,701	1,767	1,950	2,019	2,631	2,788	3,119	3,163	2,820	2,312	1,856	1,734
50	1,859	1,989	2,485	2,682	2,788	2,922	3,208	3,290	2,979	2,465	2,082	1,931
60	2,229	2,315	2,623	2,788	2,832	2,964	3,238	3,466	3,096	2,630	2,240	2,184
70	2,412	2,587	2,788	2,813	2,887	3,024	3,286	3,538	3,240	2,758	2,383	2,407
80	2,783	2,873	2,866	2,922	2,962	3,059	3,350	3,538	3,506	3,032	2,718	2,730
90	3,140	3,084	2,966	3,007	3,058	3,133	3,427	3,538	3,538	3,262	2,941	3,096
Max	3,163	3,163	3,163	3,163	3,163	3,163	3,470	3,538	3,538	3,538	3,538	3,351
Avg	2,027	2,081	2,193	2,346	2,519	2,701	2,959	3,073	2,862	2,455	2,106	2,048
Comparison: B – A												
Min	190	189	190	109	87	59	87	105	102	125	163	171
10	-28	33	-64	67	27	26	-160	-62	39	-10	-44	10
20	-65	9	-14	-9	10	-89	13	50	2	11	5	17
30	6	31	12	7	-88	-79	54	-46	-17	-70	-48	22
40	-40	8	10	-52	82	0	16	-14	-18	-51	-42	-78
50	-50	-38	-21	-105	0	4	21	32	-9	-33	34	-8
60	-2	-55	-27	0	12	10	2	41	17	-15	-40	-29
70	-106	-88	0	-41	-3	0	2	14	4	-59	-75	-97
80	-215	-126	-52	-21	-35	0	0	0	-32	-94	-202	-213
90	-9	-78	-175	-81	-17	-29	0	0	0	-168	-216	-49
Max	0	0	0	0	0	0	0	0	0	0	0	0
Avg	-40	-36	-26	-16	-10	-2	-3	0	-7	-52	-72	-52

Table I-8a. CALSIM Simulated Feather River Flow below Thermalito Release, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	2,055	2,500	3,562	1,708	5,217	4,801	1,204	16,669	6,460	3,408	6,847	1,008	3,357
1923	1,741	1,932	6,963	4,932	1,693	3,608	1,888	1,688	6,484	5,313	5,649	1,008	2,606
1924	1,708	2,054	3,076	1,708	1,634	3,168	2,550	1,875	4,076	4,178	3,695	1,559	1,897
1925	894	908	1,035	894	900	2,781	756	748	4,504	1,234	6,672	756	1,339
1926	1,640	908	2,016	894	900	748	756	2,955	4,307	6,837	7,117	2,177	1,901
1927	2,726	908	4,110	894	10,106	7,113	4,666	3,879	4,375	5,104	7,232	1,008	3,124
1928	1,708	1,697	2,763	1,708	3,720	23,128	1,008	3,264	5,901	5,018	6,110	1,233	3,487
1929	2,938	2,256	1,740	1,708	1,693	1,708	756	1,842	3,090	2,814	3,780	1,426	1,559
1930	1,258	1,035	3,686	894	3,232	748	756	1,130	4,387	6,848	5,856	756	1,848
1931	1,242	908	2,516	894	900	748	2,984	1,965	4,526	6,286	3,924	1,638	1,729
1932	1,256	1,154	4,617	894	869	1,676	756	748	2,054	6,190	1,319	756	1,358
1933	3,448	2,500	894	894	900	4,673	756	748	1,985	1,640	1,414	1,346	1,285
1934	1,892	1,464	2,815	894	2,812	748	3,055	2,404	3,215	2,595	4,386	2,498	1,733
1935	2,187	908	894	894	947	748	1,008	2,662	8,256	7,863	6,795	1,398	2,097
1936	3,931	2,500	2,030	1,708	1,634	4,046	1,008	992	5,086	8,138	6,627	1,008	2,355
1937	1,846	2,500	1,708	1,708	1,693	1,708	1,008	992	5,671	6,910	7,315	1,217	2,077
1938	1,708	1,697	4,386	5,326	14,537	19,405	13,027	17,147	8,059	8,767	3,911	1,008	5,954
1939	1,898	2,920	3,347	3,743	2,675	4,827	2,364	2,662	5,651	8,598	8,230	3,933	3,082
1940	4,000	2,500	1,203	1,203	1,165	14,601	3,765	2,492	6,644	9,470	7,014	1,008	3,354
1941	2,190	2,500	1,708	3,932	17,639	11,474	3,745	8,413	2,933	2,441	5,784	1,008	3,797
1942	1,820	2,500	18,971	14,374	17,643	2,809	10,495	5,682	5,811	2,511	5,665	1,008	5,347
1943	1,708	4,954	8,734	18,784	7,503	16,104	4,125	1,414	6,472	5,099	6,580	1,008	4,996
1944	1,708	1,995	1,820	1,708	1,634	1,708	2,147	992	6,355	8,144	7,471	2,928	2,342
1945	3,845	1,697	1,708	3,072	1,693	1,708	1,008	992	6,759	8,036	6,993	1,008	2,338
1946	2,043	1,697	1,708	2,328	4,372	6,480	1,008	1,508	6,837	9,212	7,114	1,008	2,740
1947	1,708	2,500	1,708	1,708	1,693	1,708	1,767	3,155	4,704	8,336	7,899	2,837	2,410
1948	2,213	2,017	1,950	1,203	1,985	992	1,008	992	1,008	8,506	7,084	1,008	1,825
1949	1,708	1,795	1,708	1,708	1,693	1,708	756	748	6,686	4,464	2,916	756	1,609
1950	1,108	951	2,096	894	900	748	1,008	992	7,089	9,031	6,882	1,008	1,986
1951	2,017	1,697	14,496	11,689	10,855	4,548	1,008	1,465	3,744	9,599	6,747	1,008	4,157
1952	1,708	1,697	3,899	8,931	12,157	7,114	17,416	20,073	8,835	2,222	992	3,518	5,336
1953	4,882	2,843	9,108	21,023	1,693	6,197	4,477	3,162	5,480	6,015	3,440	1,008	4,226
1954	1,708	3,494	3,036	9,809	8,589	10,162	6,136	7,394	4,829	7,368	5,509	2,246	4,238
1955	3,192	1,697	1,708	1,708	1,693	1,708	1,008	992	6,275	3,416	1,637	1,008	1,572
1956	1,708	1,811	8,758	21,006	11,356	6,456	3,155	10,718	4,313	4,423	3,986	1,008	4,775
1957	3,974	1,725	3,257	4,266	15,935	6,947	4,099	992	4,989	6,411	4,698	1,008	3,467
1958	1,708	1,974	1,708	1,960	23,682	11,941	7,656	10,426	6,632	2,030	2,171	1,321	4,327
1959	4,898	2,832	3,368	9,998	9,584	2,278	1,449	1,150	6,874	9,415	7,424	1,184	3,637
1960	3,442	2,500	2,678	1,203	1,165	992	1,814	992	3,932	6,148	6,248	2,805	2,060
1961	1,400	1,193	1,661	1,203	1,206	996	2,389	1,794	3,490	7,115	7,521	2,620	1,978
1962	3,657	2,500	1,001	894	900	748	756	1,285	7,003	6,556	7,553	831	2,044
1963	1,203	1,193	1,203	2,100	13,814	8,333	13,084	3,028	4,054	5,471	6,508	1,008	3,631
1964	1,708	1,697	1,708	1,708	1,634	3,596	3,613	4,351	4,858	8,168	7,585	3,371	2,673
1965	3,637	1,697	3,675	19,181	4,873	5,289	7,641	5,051	1,572	5,851	5,460	1,008	3,941
1966	1,862	2,720	3,646	3,528	1,802	4,332	1,041	3,274	5,674	8,028	7,421	2,972	2,812
1967	3,306	1,991	1,708	1,708	5,690	14,438	2,135	9,064	8,415	1,399	992	3,112	3,254
1968	5,202	2,786	3,654	8,143	11,793	6,663	2,775	992	5,043	7,264	6,042	3,601	3,859
1969	3,041	2,009	1,708	13,342	12,487	6,492	7,440	12,633	3,593	1,736	6,297	1,008	4,313
1970	2,391	3,827	16,400	35,878	10,669	4,152	3,765	992	5,010	5,293	6,948	2,119	5,900
1971	2,616	1,697	1,708	1,708	3,337	13,445	3,625	8,387	5,417	8,229	3,380	1,008	3,312
1972	1,708	1,697	4,719	3,975	6,576	6,852	1,008	992	5,013	4,731	5,455	1,008	2,646
1973	1,708	1,697	1,708	9,292	10,124	6,138	1,008	2,315	7,136	6,528	5,818	1,008	3,269
1974	1,708	5,568	10,226	20,570	5,792	26,293	8,328	5,576	6,298	1,538	992	2,032	5,759
1975	4,890	3,505	2,863	2,965	13,236	12,932	1,008	8,077	5,996	2,558	2,278	1,008	3,670
1976	4,856	3,926	4,004	3,626	3,988	3,512	1,008	992	2,529	4,964	4,566	3,785	2,530
1977	2,380	2,500	2,566	1,203	1,580	1,385	1,863	1,115	3,369	4,048	3,674	1,392	1,638
1978	1,582	908	894	894	900	748	1,086	992	2,430	1,263	6,290	1,008	1,152
1979	1,736	1,193	1,203	3,678	11,707	4,447	1,008	992	7,310	5,355	5,852	1,008	2,707
1980	1,708	1,697	1,708	15,318	18,152	5,342	1,008	992	4,189	1,505	5,819	1,008	3,507
1981	1,708	1,697	1,708	1,728	3,715	6,986	1,008	992	4,853	6,819	6,481	1,149	2,350
1982	2,984	1,193	17,828	8,343	17,997	13,436	18,983	7,930	3,609	1,254	4,255	1,008	5,922
1983	6,243	8,703	11,001	12,697	21,736	31,845	8,745	11,832	11,636	2,756	1,416	5,080	8,025
1984	5,077	14,569	24,345	5,612	8,609	9,047	1,008	992	6,809	7,120	4,892	1,149	5,407
1985	2,212	1,697	1,708	2,396	1,693	4,422	1,008	3,727	5,130	8,585	7,179	3,961	2,655
1986	4,000	2,500	1,708	1,708	21,192	22,410	1,008	992	4,343	2,455	6,034	1,008	4,122
1987	1,708	1,697	1,708	1,708	1,693	3,278	3,707	992	4,586	7,469	6,373	3,774	2,342
1988	4,000	2,500	1,203	1,203	1,165	1,374	756	1,044	2,711	2,867	2,787	1,310	1,391
1989	2,206	908	894	894	900	1,313	756	3,210	5,509	8,204	7,416	1,621	2,058
1990	2,282	2,500	4,138	894	900	748	1,545	748	767	3,349	1,759	973	1,250
1991	1,843	2,015	1,709	894	1,480	748	756	748	1,509	2,429	1,967	1,519	1,063
1992	1,026	2,500	945	894	869	748	756	909	1,427	1,811	2,803	2,834	1,059
1993	1,768	2,208	894	894	900	10,626	3,466	7,620	4,283	9,199	6,091	1,049	2,986
1994	1,203	1,415	1,444	2,424	5,625	1,143	1,381	992	3,031	12,878	7,713	4,458	2,634
Avg	2,465	2,332	3,927	5,041	6,019	6,151	3,148	3,627	4,985	5,546	5,271	1,688	3,030
Min	894	908	894	894	869	748	756	748	767	1,234	992	756	1,059
Max	6,243	14,569	24,345	35,878	23,682	31,845	18,983	20,073	11,636	12,878	8,230	5,080	8,025

Table I-8b. CALSIM Simulated Feather River Flow below Thermalito Release, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	2,346	2,500	3,456	1,708	5,039	4,802	1,227	16,682	6,466	9,901	6,776	1,008	3,756
1923	1,708	1,863	3,195	4,614	1,693	3,873	1,817	1,711	6,636	7,338	7,083	1,008	2,584
1924	1,708	2,500	3,996	1,708	1,634	3,023	2,134	1,847	3,468	5,740	3,804	1,823	2,027
1925	894	908	930	894	900	2,582	756	748	4,483	1,345	5,782	756	1,271
1926	1,299	908	1,992	894	900	748	756	4,078	2,294	6,833	5,782	1,050	1,678
1927	1,777	908	4,099	894	12,343	7,113	4,783	3,894	4,413	7,072	6,942	1,008	3,302
1928	1,872	1,697	2,711	1,708	3,686	21,410	1,008	3,549	5,513	3,817	7,170	1,442	3,385
1929	2,694	2,500	1,708	1,708	1,693	1,708	756	1,884	3,048	2,923	3,858	1,792	1,590
1930	1,266	1,003	2,859	894	3,203	748	756	993	4,481	6,932	5,872	1,598	1,848
1931	940	908	2,379	894	900	748	2,901	1,934	5,191	7,635	4,231	2,288	1,876
1932	1,644	950	4,506	894	869	1,658	756	748	2,146	1,281	6,398	756	1,378
1933	2,440	2,500	894	894	900	4,636	756	748	1,830	1,657	1,535	1,700	1,241
1934	1,538	1,314	2,884	894	2,822	748	2,829	2,282	3,131	2,652	3,795	2,392	1,642
1935	2,305	908	894	894	904	748	1,008	2,701	8,243	8,144	7,615	2,100	2,213
1936	4,000	2,500	2,186	1,708	1,634	3,006	1,008	992	4,971	8,210	6,790	1,008	2,313
1937	1,708	2,500	1,855	1,708	1,693	1,708	1,008	992	7,252	6,810	7,176	1,008	2,145
1938	1,708	1,697	2,807	5,329	14,537	19,405	13,218	17,199	8,066	8,997	5,478	1,008	5,982
1939	1,753	2,009	3,347	3,746	2,692	4,833	4,211	2,372	5,261	8,729	7,674	3,197	3,019
1940	3,794	2,500	1,203	1,203	1,165	15,044	3,839	2,623	7,221	9,702	7,873	2,076	3,547
1941	4,000	2,500	1,708	1,708	15,034	11,474	3,911	8,509	3,476	9,152	4,201	1,008	3,990
1942	1,740	1,697	14,256	14,374	17,643	2,809	10,637	5,774	5,787	8,052	6,666	1,008	5,420
1943	1,708	1,697	8,711	18,785	7,503	16,105	4,221	992	6,664	4,265	6,889	1,008	4,759
1944	2,295	1,697	1,708	1,708	1,634	2,097	1,506	992	6,300	8,187	7,485	2,583	2,318
1945	3,729	1,697	1,708	1,708	1,693	1,709	1,008	992	7,511	8,563	6,917	1,048	2,322
1946	1,971	1,697	1,708	4,007	6,237	4,801	1,008	1,555	6,885	9,313	8,245	1,809	2,968
1947	2,617	2,297	1,708	1,708	1,693	1,708	1,215	1,382	4,830	8,401	7,938	3,016	2,336
1948	1,997	1,472	1,954	1,203	1,835	992	1,008	992	1,008	8,636	7,006	1,008	1,774
1949	1,708	1,697	1,708	1,708	1,693	1,708	756	748	6,662	4,268	4,383	756	1,680
1950	894	908	1,719	894	900	748	1,008	1,557	7,556	9,102	6,633	1,008	1,999
1951	1,982	1,840	14,787	11,690	10,855	4,555	1,008	1,503	7,078	8,466	6,490	1,008	4,297
1952	1,708	1,697	1,788	8,931	12,157	7,114	17,538	20,089	8,842	2,519	992	3,269	5,219
1953	4,934	2,843	9,108	21,023	1,693	6,203	4,559	3,178	5,489	6,313	5,675	1,008	4,392
1954	1,708	1,697	2,370	9,810	8,590	10,162	6,252	7,469	4,643	8,254	6,159	2,594	4,206
1955	3,891	1,697	1,708	1,708	1,693	1,708	1,008	992	4,862	3,570	1,704	1,008	1,544
1956	1,708	1,771	7,681	21,007	11,356	6,468	3,182	10,731	4,320	9,835	6,405	1,008	5,191
1957	1,916	1,697	1,751	1,708	15,881	6,949	3,938	992	6,097	5,888	5,667	1,008	3,170
1958	1,708	2,021	1,708	1,708	22,835	11,942	7,820	10,523	6,541	2,127	2,891	1,008	4,309
1959	4,276	2,829	3,368	9,999	9,585	2,282	1,915	1,497	6,576	9,141	7,776	1,008	3,624
1960	2,502	2,500	5,073	1,203	1,165	992	1,623	992	4,194	5,597	4,575	1,008	1,910
1961	1,203	1,193	1,671	1,203	1,206	992	2,102	1,440	4,018	7,573	7,576	2,366	1,975
1962	3,763	2,017	942	894	900	748	756	1,475	4,530	7,634	7,739	1,625	2,008
1963	1,203	1,193	1,203	2,082	15,939	8,335	13,214	3,130	6,137	7,365	6,414	1,008	3,997
1964	1,708	1,697	1,708	1,708	1,634	1,708	6,369	992	4,981	8,184	7,605	2,341	2,462
1965	3,190	1,697	4,465	19,180	4,876	5,295	7,740	4,902	1,546	5,585	5,497	1,008	3,944
1966	1,913	3,184	3,647	3,528	1,802	4,336	1,069	4,377	6,033	8,119	7,027	3,096	2,923
1967	3,626	1,697	1,708	1,708	4,344	14,438	2,262	9,158	8,426	1,401	2,264	2,262	3,223
1968	5,248	2,786	3,654	8,143	11,793	6,664	2,698	992	5,903	6,867	5,652	3,318	3,843
1969	2,970	1,862	1,708	13,875	12,487	6,492	7,505	12,648	3,601	2,061	6,045	1,008	4,342
1970	2,323	3,826	16,400	35,878	10,669	4,153	3,820	992	5,152	6,259	6,939	3,514	6,050
1971	3,088	1,697	1,708	1,708	2,423	11,327	3,650	8,399	5,423	10,057	6,126	1,008	3,444
1972	1,708	2,500	1,708	2,415	6,578	6,869	1,008	992	5,192	5,363	6,027	1,322	2,518
1973	1,708	1,697	1,708	7,681	10,126	6,139	1,008	2,392	7,266	3,921	6,020	1,008	3,035
1974	1,708	6,388	10,228	20,570	5,792	26,293	8,538	5,591	6,916	1,887	3,835	1,008	5,994
1975	2,226	3,505	2,863	2,966	13,238	12,933	1,008	8,184	6,002	4,201	3,311	1,008	3,677
1976	2,241	3,925	4,004	3,626	3,993	3,588	1,008	1,217	2,490	8,476	4,587	2,412	2,521
1977	2,346	2,488	1,844	1,203	1,484	1,150	1,426	808	3,408	3,674	3,046	1,226	1,457
1978	1,270	908	894	894	900	748	4,465	992	2,785	1,579	6,258	1,008	1,373
1979	1,591	1,193	6,090	1,203	8,711	4,450	1,008	992	6,751	5,659	6,152	1,008	2,684
1980	1,708	1,697	1,708	15,395	18,152	5,342	1,008	992	4,213	1,669	5,670	1,008	3,514
1981	1,708	1,697	1,708	1,794	3,716	6,986	1,008	992	5,118	8,562	7,261	2,893	2,629
1982	2,859	1,193	16,184	8,343	17,997	13,436	19,191	8,048	3,592	7,908	3,373	1,008	6,186
1983	3,214	8,703	11,001	12,697	21,736	31,845	8,910	11,942	11,532	2,635	1,320	5,125	7,839
1984	5,085	14,569	24,345	5,612	8,609	9,048	2,128	992	6,857	8,358	3,786	2,388	5,559
1985	2,165	1,697	1,708	1,936	1,693	2,494	1,008	3,768	4,998	8,645	7,359	3,899	2,511
1986	4,000	2,500	1,708	1,708	21,198	22,605	1,008	992	4,318	8,914	6,932	1,008	4,585
1987	1,708	1,697	1,708	1,708	1,693	2,212	2,077	1,063	6,139	7,687	6,915	3,583	2,312
1988	4,000	2,500	1,203	1,203	1,165	1,382	756	748	2,417	4,012	2,234	1,215	1,386
1989	1,700	907	894	894	900	1,614	756	3,329	5,348	8,367	7,535	756	2,009
1990	2,177	2,500	4,061	894	900	748	1,437	748	756	3,292	1,814	1,088	1,239
1991	1,854	2,446	1,506	894	963	748	756	748	1,903	2,453	2,085	1,477	1,078
1992	996	2,340	894	894	869	748	756	881	1,641	1,823	2,778	2,837	1,055
1993	1,353	2,242	894	894	900	12,092	3,730	7,708	4,294	9,424	6,770	2,014	3,188
1994	1,203	2,500	2,415	1,203	1,235	1,341	1,008	992	4,447	12,523	7,730	3,110	2,413
Avg	2,290	2,263	3,756	4,881	5,911	6,032	3,244	3,603	5,117	6,267	5,589	1,687	3,058
Min	894	907	894	894	869	748	756	748	756	1,281	992	756	1,055
Max	5,248	14,569	24,345	35,878	22,835	31,845	19,191	20,089	11,532	12,523	8,245	5,125	7,839

Table I-8c. CALSIM Simulated Feather River Flow below Thermalito Release, 2020 Baseline minus 2001 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	291	0	-106	0	-178	1	23	13	6	6,493	-71	0	399
1923	-33	-69	-3,768	-318	0	265	-71	23	152	2,025	1,434	0	-22
1924	0	446	920	0	0	-145	-416	-28	-608	1,562	109	264	130
1925	0	0	-105	0	0	-199	0	0	-21	111	-890	0	-68
1926	-341	0	-24	0	0	0	0	1,123	-2,013	-4	-1,335	-1,127	-223
1927	-949	0	-11	0	2,237	0	117	15	38	1,968	-290	0	179
1928	164	0	-52	0	-34	-1,718	0	285	-388	-1,201	1,060	209	-103
1929	-244	244	-32	0	0	0	0	42	-42	109	78	366	31
1930	8	-32	-827	0	-29	0	0	-137	94	84	16	842	0
1931	-302	0	-137	0	0	0	-83	-31	665	1,349	307	650	146
1932	388	-204	-111	0	0	-18	0	0	92	-4,909	5,079	0	20
1933	-1,008	0	0	0	0	-37	0	0	-155	17	121	354	-44
1934	-354	-150	69	0	10	0	-226	-122	-84	57	-591	-106	-91
1935	118	0	0	0	-43	0	0	39	-13	281	820	702	116
1936	69	0	156	0	0	-1,040	0	0	-115	72	163	0	-43
1937	-138	0	147	0	0	0	0	0	1,581	-100	-139	-209	68
1938	0	0	-1,579	3	0	0	191	52	7	230	1,567	0	29
1939	-145	-911	0	3	17	6	1,847	-290	-390	131	-556	-736	-63
1940	-206	0	0	0	0	443	74	131	577	232	859	1,068	192
1941	1,810	0	0	-2,224	-2,605	0	166	96	543	6,711	-1,583	0	193
1942	-80	-803	-4,715	0	0	0	142	92	-24	5,541	1,001	0	72
1943	0	-3,257	-23	1	0	1	96	-422	192	-834	309	0	-236
1944	587	-298	-112	0	0	389	-641	0	-55	43	14	-345	-23
1945	-116	0	0	-1,364	0	1	0	0	752	527	-76	40	-16
1946	-72	0	0	1,679	1,865	-1,679	0	47	48	101	1,131	801	228
1947	909	-203	0	0	0	0	-552	-1,773	126	65	39	179	-74
1948	-216	-545	4	0	-150	0	0	0	0	130	-78	0	-51
1949	0	-98	0	0	0	0	0	0	-24	-196	1,467	0	71
1950	-214	-43	-377	0	0	0	0	565	467	71	-249	0	13
1951	-35	143	291	1	0	7	0	38	3,334	-1,133	-257	0	140
1952	0	0	-2,111	0	0	0	122	16	7	297	0	-249	-118
1953	52	0	0	0	0	6	82	16	9	298	2,235	0	166
1954	0	-1,797	-666	1	1	0	116	75	-186	886	650	348	-32
1955	699	0	0	0	0	0	0	0	-1,413	154	67	0	-28
1956	0	-40	-1,077	1	0	12	27	13	7	5,412	2,419	0	417
1957	-2,058	-28	-1,506	-2,558	-54	2	-161	0	1,108	-523	969	0	-297
1958	0	47	0	-252	-847	1	164	97	-91	97	720	-313	-18
1959	-622	-3	0	1	1	4	466	347	-298	-274	352	-176	-12
1960	-940	0	2,395	0	0	0	-191	0	262	-551	-1,673	-1,797	-150
1961	-197	0	10	0	0	-4	-287	-354	528	458	55	-254	-3
1962	106	-483	-59	0	0	0	0	190	-2,473	1,078	186	794	-36
1963	0	0	0	-18	2,125	2	130	102	2,083	1,894	-94	0	366
1964	0	0	0	0	0	-1,888	2,756	-3,359	123	16	20	-1,030	-210
1965	-447	0	790	-1	3	6	99	-149	-26	-266	37	0	3
1966	51	464	1	0	0	4	28	1,103	359	91	-394	124	111
1967	320	-294	0	0	-1,346	0	127	94	11	2	1,272	-850	-31
1968	46	0	0	0	0	1	-77	0	860	-397	-390	-283	-16
1969	-71	-147	0	533	0	0	65	15	8	325	-252	0	29
1970	-68	-1	0	0	0	1	55	0	142	966	-9	1,395	149
1971	472	0	0	0	-914	-2,118	25	12	6	1,828	2,746	0	132
1972	0	803	-3,011	-1,560	2	17	0	0	179	632	572	314	-129
1973	0	0	0	-1,611	2	1	0	77	130	-2,607	202	0	-234
1974	0	820	2	0	0	0	210	15	618	349	2,843	-1,024	235
1975	-2,664	0	0	1	2	1	0	107	6	1,643	1,033	0	8
1976	-2,615	-1	0	0	5	76	0	225	-39	3,512	21	-1,373	-9
1977	-34	-12	-722	0	-96	-235	-437	-307	39	-374	-628	-166	-181
1978	-312	0	0	0	0	0	3,379	0	355	316	-32	0	221
1979	-145	0	4,887	-2,475	-2,996	3	0	0	-559	304	300	0	-23
1980	0	0	0	77	0	0	0	0	24	164	-149	0	7
1981	0	0	0	66	1	0	0	0	265	1,743	780	1,744	279
1982	-125	0	-1,644	0	0	0	208	118	-17	6,654	-882	0	265
1983	-3,029	0	0	0	0	0	165	110	-104	-121	-96	45	-187
1984	8	0	0	0	0	1	1,120	0	48	1,238	-1,106	1,239	152
1985	-47	0	0	-460	0	-1,928	0	41	-132	60	180	-62	-144
1986	0	0	0	0	6	195	0	0	-25	6,459	898	0	463
1987	0	0	0	0	0	-1,066	-1,630	71	1,553	218	542	-191	-30
1988	0	0	0	0	0	8	0	-296	-294	1,145	-553	-95	-4
1989	-506	-1	0	0	0	301	0	119	-161	163	119	-865	-49
1990	-105	0	-77	0	0	0	-108	0	-11	-57	55	115	-12
1991	11	431	-203	0	-517	0	0	0	394	24	118	-42	15
1992	-30	-160	-51	0	0	0	0	-28	214	12	-25	3	-4
1993	-415	34	0	0	0	1,466	264	88	11	225	679	965	201
1994	0	1,085	971	-1,221	-4,390	198	-373	0	1,416	-355	17	-1,348	-221
Avg	-175	-69	-171	-160	-108	-119	96	-24	132	721	318	-1	28
Min	-3,029	-3,257	-4,715	-2,558	-4,390	-2,118	-1,630	-3,359	-2,473	-4,909	-1,673	-1,797	-297
Max	1,810	1,085	4,887	1,679	2,237	1,466	3,379	1,123	3,334	6,711	5,079	1,744	463

Table I-8d. CALSIM Simulated Monthly Cumulative Distribution of Feather River Flows below Thermalito Reservoir for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	894	908	894	894	869	748	756	748	767	1,234	992	756	
10	1,256	908	1,001	894	900	748	756	909	2,054	1,640	1,637	1,008	
20	1,708	1,415	1,708	894	1,165	1,143	1,008	992	3,369	2,511	3,380	1,008	
30	1,708	1,697	1,708	1,203	1,634	1,708	1,008	992	4,076	3,408	3,986	1,008	
40	1,708	1,697	1,708	1,708	1,693	2,809	1,008	1,044	4,387	4,964	5,460	1,008	
50	1,892	1,974	2,016	1,708	2,812	4,332	1,449	1,688	4,989	5,851	5,856	1,049	
60	2,206	2,208	2,815	2,424	4,873	5,289	2,147	2,492	5,480	6,556	6,297	1,321	
70	2,726	2,500	3,562	3,932	8,589	6,663	3,155	3,210	5,996	7,264	6,747	1,621	
80	3,637	2,500	4,138	8,931	11,707	10,162	4,099	5,682	6,644	8,168	7,114	2,805	
90	4,000	3,494	9,108	14,374	15,935	14,438	7,656	9,064	7,089	8,767	7,424	3,518	
Max	6,243	14,569	24,345	35,878	23,682	31,845	18,983	20,073	11,636	12,878	8,230	5,080	
Avg	2,465	2,332	3,927	5,041	6,019	6,151	3,148	3,627	4,985	5,546	5,271	1,688	3,030
B: 2020 Baseline													
Min	894	907	894	894	869	748	756	748	756	1,281	992	756	
10	1,203	908	930	894	900	748	756	748	2,146	1,823	2,234	1,008	
20	1,700	1,314	1,708	894	1,165	1,150	1,008	992	3,468	2,923	3,795	1,008	
30	1,708	1,697	1,708	1,203	1,634	1,708	1,008	992	4,294	4,201	4,575	1,008	
40	1,708	1,697	1,708	1,708	1,693	2,282	1,008	992	4,530	5,740	5,675	1,008	
50	1,872	1,697	1,844	1,708	2,423	4,153	1,437	1,503	5,152	7,072	6,152	1,050	
60	2,177	2,021	2,415	1,708	4,344	4,833	2,128	2,282	5,513	7,908	6,633	1,598	
70	2,346	2,500	3,347	3,626	8,590	6,664	3,650	3,329	6,139	8,254	6,917	2,076	
80	3,190	2,500	4,099	8,343	11,793	10,162	4,465	5,774	6,751	8,636	7,176	2,412	
90	4,000	2,843	9,108	14,374	15,881	14,438	7,820	9,158	7,266	9,152	7,615	3,110	
Max	5,248	14,569	24,345	35,878	22,835	31,845	19,191	20,089	11,532	12,523	8,245	5,125	
Avg	2,290	2,263	3,756	4,881	5,911	6,032	3,244	3,603	5,117	6,267	5,589	1,687	3,058
Comparison: B – A													
Min	0	-1	0	0	0	0	0	0	-11	47	0	0	
10	-53	0	-71	0	0	0	0	-161	92	183	597	0	
20	-8	-101	0	0	0	7	0	0	99	412	415	0	
30	0	0	0	0	0	0	0	0	218	793	589	0	
40	0	0	0	0	0	-527	0	-52	143	776	215	0	
50	-20	-277	-172	0	-389	-179	-12	-185	163	1,221	296	1	
60	-29	-187	-400	-716	-529	-456	-19	-210	33	1,352	336	277	
70	-380	0	-215	-306	1	1	495	119	143	990	170	455	
80	-447	0	-39	-588	86	0	366	92	107	468	62	-393	
90	0	-651	0	0	-54	0	164	94	177	385	191	-408	
Max	-995	0	0	0	-847	0	208	16	-104	-355	15	45	
Avg	-175	-69	-171	-160	-108	-119	96	-24	132	721	318	-1	28

Table I-9a. CALSIM Simulated Folsom Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	464	437	518	553	575	674	800	975	975	825	774	587	388
1923	532	532	575	575	575	572	800	975	975	818	752	573	402
1924	547	503	466	441	471	383	394	390	340	273	248	177	217
1925	181	217	262	283	561	483	745	975	857	671	539	493	482
1926	437	364	331	297	474	511	764	719	595	453	447	455	309
1927	433	569	575	575	562	661	800	975	975	802	759	586	389
1928	565	575	575	575	575	638	800	901	827	594	503	448	453
1929	413	408	409	390	441	527	552	639	583	486	408	407	232
1930	361	332	457	533	572	672	780	782	694	531	544	498	284
1931	427	361	292	257	259	312	340	363	353	301	273	210	153
1932	90	90	197	308	575	627	683	904	915	740	577	465	450
1933	450	363	285	245	229	305	349	483	457	360	328	322	161
1934	300	279	346	444	528	595	464	442	364	297	166	168	296
1935	90	90	93	186	283	399	800	949	975	799	690	619	356
1936	553	512	477	575	570	667	800	975	975	817	772	631	344
1937	541	477	423	400	575	675	800	975	941	753	689	607	368
1938	589	575	575	575	575	674	800	975	975	940	800	650	325
1939	636	561	492	448	442	530	580	597	528	430	360	367	230
1940	352	340	343	572	559	618	800	975	853	653	656	594	381
1941	482	429	575	575	574	672	800	975	975	808	770	650	325
1942	634	575	575	572	563	633	800	975	975	858	800	650	325
1943	629	575	575	565	537	618	800	957	971	807	771	593	378
1944	583	573	565	553	575	675	654	718	625	529	494	434	284
1945	409	495	575	523	565	659	756	975	927	748	749	570	405
1946	565	575	575	571	512	615	800	975	843	647	638	528	447
1947	505	507	511	481	572	674	670	641	600	475	411	338	332
1948	384	424	413	493	428	483	800	975	975	836	782	650	325
1949	596	548	526	502	520	675	800	956	792	600	551	512	444
1950	484	477	465	575	572	672	800	975	975	811	768	597	378
1951	605	382	305	320	341	587	800	975	912	685	646	521	454
1952	516	559	575	575	574	674	800	975	975	924	788	650	325
1953	648	575	575	574	568	626	768	943	975	876	800	650	325
1954	614	575	537	569	575	672	800	844	733	600	555	500	344
1955	468	469	550	575	520	520	582	641	583	443	414	455	186
1956	416	400	975	393	391	534	714	975	975	845	800	650	325
1957	649	566	499	462	571	667	674	962	926	730	600	552	410
1958	551	562	575	575	565	671	800	975	975	847	800	650	325
1959	625	568	497	558	575	597	641	602	560	338	311	327	314
1960	340	344	325	351	575	669	700	724	600	495	434	383	341
1961	390	420	431	410	450	480	502	512	499	335	257	255	257
1962	264	275	307	312	575	624	800	885	862	646	590	535	350
1963	720	575	575	554	475	589	887	975	968	781	727	647	328
1964	638	575	537	575	542	536	601	665	600	493	450	392	273
1965	402	447	364	360	377	516	805	955	975	755	732	600	375
1966	585	575	563	575	575	570	712	697	600	512	462	377	335
1967	390	461	575	571	560	642	800	975	975	950	769	650	325
1968	643	568	526	543	640	650	707	690	600	409	393	410	297
1969	390	446	543	550	535	645	800	975	975	831	794	650	325
1970	647	575	575	387	380	594	618	727	673	472	468	416	311
1971	388	525	575	575	537	663	783	975	975	887	800	650	325
1972	630	564	575	575	575	660	768	866	658	432	433	472	394
1973	453	521	575	567	563	669	776	975	806	600	600	568	407
1974	575	575	575	495	480	606	800	975	975	930	800	650	325
1975	632	566	540	542	575	674	756	975	975	837	800	650	325
1976	679	575	506	435	411	423	452	477	433	372	350	329	148
1977	330	312	243	205	181	170	171	166	119	90	90	90	81
1978	90	102	253	569	557	623	800	975	975	815	760	650	325
1979	600	575	541	575	575	672	745	975	782	600	595	518	457
1980	520	557	575	433	390	602	780	962	975	837	800	650	325
1981	617	550	475	467	493	606	654	616	560	413	363	278	376
1982	321	549	370	392	338	581	800	975	975	851	800	650	325
1983	720	573	573	564	551	622	800	975	975	950	800	650	325
1984	720	377	329	338	360	589	761	975	900	706	707	595	380
1985	600	575	569	535	574	651	745	743	600	477	428	415	330
1986	390	389	464	559	357	570	800	975	975	788	747	650	325
1987	578	493	414	373	414	521	528	515	460	381	334	347	181
1988	346	357	408	494	455	452	500	420	372	277	182	90	410
1989	111	206	253	298	333	611	800	824	627	481	411	443	381
1990	408	395	372	394	418	503	526	551	503	419	382	382	169
1991	356	348	306	262	239	450	539	682	716	514	479	372	344
1992	334	315	294	275	453	534	512	416	348	250	152	107	405
1993	105	104	190	571	555	621	800	975	975	869	800	650	325
1994	641	546	473	393	398	408	425	479	471	261	237	222	257
Avg	478	457	464	470	493	581	700	811	766	626	571	489	329
Min	90	90	93	186	181	170	171	166	119	90	90	90	81
Max	720	575	975	575	640	675	887	975	975	950	800	650	482

Table I-9b. CALSIM Simulated Folsom Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	465	442	529	559	575	674	800	975	975	823	747	629	346
1923	539	487	575	575	575	560	800	975	955	770	699	565	410
1924	518	452	398	366	397	379	389	382	329	253	220	169	220
1925	192	226	271	290	561	480	713	942	795	574	553	487	455
1926	410	357	322	287	460	490	799	741	592	424	399	393	406
1927	364	495	575	575	562	661	800	975	975	773	705	624	351
1928	553	575	575	575	575	638	800	896	816	549	481	402	494
1929	362	352	346	332	386	472	519	594	561	464	385	374	220
1930	350	341	465	537	572	672	771	761	701	534	530	470	301
1931	376	314	233	198	197	252	277	327	297	228	197	171	156
1932	91	90	191	294	568	611	654	839	836	626	513	400	439
1933	325	252	189	155	144	223	323	445	462	356	312	300	162
1934	240	207	271	358	453	519	408	394	335	244	90	134	274
1935	96	117	134	241	344	455	800	942	975	764	643	569	406
1936	514	488	462	575	570	667	800	975	975	792	730	625	350
1937	536	473	424	407	575	675	800	975	918	705	645	537	438
1938	524	554	575	575	575	674	800	975	975	915	800	650	325
1939	627	565	509	478	479	564	601	610	538	427	357	357	253
1940	347	341	340	572	559	618	800	971	817	588	581	501	470
1941	414	380	553	575	574	672	800	975	956	879	800	650	325
1942	623	562	575	572	563	626	800	975	975	828	772	650	325
1943	615	575	575	565	537	618	800	934	921	717	692	548	386
1944	528	510	498	502	570	675	641	696	608	508	508	422	274
1945	396	486	564	575	565	654	731	965	933	725	715	628	337
1946	525	569	575	571	523	619	785	975	841	627	620	499	476
1947	455	461	470	444	529	674	655	621	572	454	393	306	349
1948	360	388	372	462	412	461	796	975	975	832	761	606	369
1949	553	524	519	490	516	675	800	936	767	600	526	460	476
1950	420	413	400	575	572	672	800	975	975	818	752	593	382
1951	615	382	305	320	341	587	784	975	886	630	567	503	472
1952	471	530	575	575	574	674	800	975	975	896	751	650	325
1953	634	575	575	574	568	645	772	923	975	845	796	650	325
1954	617	575	533	562	575	672	800	832	704	564	493	425	407
1955	389	386	460	540	508	524	578	623	547	464	428	447	176
1956	403	399	975	393	391	523	685	975	975	837	784	650	325
1957	641	566	510	485	571	667	662	928	886	661	590	525	403
1958	515	518	575	575	565	671	800	975	975	839	789	650	325
1959	612	564	507	575	575	585	617	565	520	255	207	216	401
1960	220	217	212	254	546	669	735	741	610	485	421	433	308
1961	392	400	405	381	429	457	470	467	438	336	239	227	243
1962	227	234	263	283	575	620	784	837	789	600	563	485	352
1963	720	575	575	554	475	583	869	975	934	716	644	586	389
1964	584	575	530	564	536	533	582	639	652	523	447	370	282
1965	381	439	364	360	377	508	800	953	975	706	660	564	411
1966	551	575	575	575	575	563	688	660	582	496	421	395	293
1967	397	468	575	571	560	642	800	975	975	950	800	650	325
1968	630	567	519	532	621	650	692	662	600	367	354	364	328
1969	376	433	525	550	535	645	800	975	975	803	741	650	325
1970	637	575	575	387	380	594	593	679	604	382	380	397	282
1971	396	564	575	575	527	663	764	960	975	803	740	650	325
1972	617	572	575	574	575	660	752	832	603	453	427	454	378
1973	429	495	575	567	563	669	758	975	797	600	589	536	439
1974	535	575	575	495	480	606	800	975	975	857	800	650	325
1975	622	565	549	538	575	674	741	975	975	799	742	650	325
1976	673	575	499	424	395	408	434	456	407	332	304	274	182
1977	265	245	190	167	151	153	148	145	93	90	90	90	58
1978	90	98	228	569	557	623	800	975	975	776	684	618	357
1979	565	539	506	575	575	672	726	965	745	595	577	445	520
1980	444	480	537	433	390	602	763	921	921	756	700	572	349
1981	510	485	466	503	539	657	693	643	575	403	334	322	371
1982	361	549	370	392	338	581	800	975	975	950	800	650	325
1983	720	573	573	564	551	622	800	975	975	950	800	650	325
1984	708	377	329	338	360	589	754	975	928	667	638	554	421
1985	539	575	563	525	560	633	711	698	600	468	407	380	331
1986	371	438	534	559	357	570	800	975	975	762	698	650	325
1987	539	454	391	358	406	521	522	514	450	342	280	284	238
1988	283	291	361	451	448	449	499	417	357	252	155	90	409
1989	101	198	254	297	341	611	800	814	616	455	382	407	407
1990	373	368	338	365	405	487	541	564	515	422	375	371	193
1991	349	339	293	249	226	450	545	598	635	543	487	364	271
1992	323	298	283	268	448	531	448	347	269	159	90	90	358
1993	90	90	171	571	555	621	800	975	975	840	755	650	325
1994	600	546	468	385	385	396	409	459	454	253	216	196	263
Avg	450	436	450	461	486	577	690	797	749	598	538	468	329
Min	90	90	134	155	144	153	148	145	93	90	90	90	81
Max	720	575	975	575	621	675	869	975	975	950	800	650	482

Table I-9c. CALSIM Simulated Folsom Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	1	5	11	6	0	0	0	0	0	-2	-27	42
1923	7	-45	0	0	0	-12	0	0	-20	-48	-53	-8
1924	-29	-51	-68	-75	-74	-4	-5	-8	-11	-20	-28	-8
1925	11	9	9	7	0	-3	-32	-33	-62	-97	14	-6
1926	-27	-7	-9	-10	-14	-21	35	22	-3	-29	-48	-62
1927	-69	-74	0	0	0	0	0	0	0	-29	-54	38
1928	-12	0	0	0	0	0	0	-5	-11	-45	-22	-46
1929	-51	-56	-63	-58	-55	-55	-33	-45	-22	-22	-23	-33
1930	-11	9	8	4	0	0	-9	-21	7	3	-14	-28
1931	-51	-47	-59	-59	-62	-60	-63	-36	-56	-73	-76	-39
1932	1	0	-6	-14	-7	-16	-29	-65	-79	-114	-64	-65
1933	-125	-111	-96	-90	-85	-82	-26	-38	5	-4	-16	-22
1934	-60	-72	-75	-86	-75	-76	-56	-48	-29	-53	-76	-34
1935	6	27	41	55	61	56	0	-7	0	-35	-47	-50
1936	-39	-24	-15	0	0	0	0	0	0	-25	-42	-6
1937	-5	-4	1	7	0	0	0	0	-23	-48	-44	-70
1938	-65	-21	0	0	0	0	0	0	0	-25	0	0
1939	-9	4	17	30	37	34	21	13	10	-3	-3	-10
1940	-5	1	-3	0	0	0	0	-4	-36	-65	-75	-93
1941	-68	-49	-22	0	0	0	0	0	-19	71	30	0
1942	-11	-13	0	0	0	-7	0	0	0	-30	-28	0
1943	-14	0	0	0	0	0	0	-23	-50	-90	-79	-45
1944	-55	-63	-67	-51	-5	0	-13	-22	-17	-21	14	-12
1945	-13	-9	-11	52	0	-5	-25	-10	6	-23	-34	58
1946	-40	-6	0	0	11	4	-15	0	-2	-20	-18	-29
1947	-50	-46	-41	-37	-43	0	-15	-20	-28	-21	-18	-32
1948	-24	-36	-41	-31	-16	-22	-4	0	0	-4	-21	-44
1949	-43	-24	-7	-12	-4	0	0	-20	-25	0	-25	-52
1950	-64	-64	-65	0	0	0	0	0	0	7	-16	-4
1951	10	0	0	0	0	0	-16	0	-26	-55	-79	-18
1952	-45	-29	0	0	0	0	0	0	0	-28	-37	0
1953	-14	0	0	0	0	19	4	-20	0	-31	-4	0
1954	3	0	-4	-7	0	0	0	-12	-29	-36	-62	-75
1955	-79	-83	-90	-35	-12	4	-4	-18	-36	21	14	-8
1956	-13	-1	0	0	0	-11	-29	0	0	-8	-16	0
1957	-8	0	11	23	0	0	-12	-34	-40	-69	-10	-27
1958	-36	-44	0	0	0	0	0	0	0	-8	-11	0
1959	-13	-4	10	17	0	-12	-24	-37	-40	-83	-104	-111
1960	-120	-127	-113	-97	-29	0	35	17	10	-10	-13	50
1961	2	-20	-26	-29	-21	-23	-32	-45	-61	1	-18	-28
1962	-37	-41	-44	-29	0	-4	-16	-48	-73	-46	-27	-50
1963	0	0	0	0	0	-6	-18	0	-34	-65	-83	-61
1964	-54	0	-7	-11	-6	-3	-19	-26	52	30	-3	-22
1965	-21	-8	0	0	0	-8	-5	-2	0	-49	-72	-36
1966	-34	0	12	0	0	-7	-24	-37	-18	-16	-41	18
1967	7	7	0	0	0	0	0	0	0	0	31	0
1968	-13	-1	-7	-11	-19	0	-15	-28	0	-42	-39	-46
1969	-14	-13	-18	0	0	0	0	0	0	-28	-53	0
1970	-10	0	0	0	0	0	-25	-48	-69	-90	-88	-19
1971	8	39	0	0	-10	0	-19	-15	0	-84	-60	0
1972	-13	8	0	-1	0	0	-16	-34	-55	21	-6	-18
1973	-24	-26	0	0	0	0	-18	0	-9	0	-11	-32
1974	-40	0	0	0	0	0	0	0	0	-73	0	0
1975	-10	-1	9	-4	0	0	-15	0	0	-38	-58	0
1976	-6	0	-7	-11	-16	-15	-18	-21	-26	-40	-46	-55
1977	-65	-67	-53	-38	-30	-17	-23	-21	-26	0	0	0
1978	0	-4	-25	0	0	0	0	0	0	-39	-76	-32
1979	-35	-36	-35	0	0	0	-19	-10	-37	-5	-18	-73
1980	-76	-77	-38	0	0	0	-17	-41	-54	-81	-100	-78
1981	-107	-65	-9	36	46	51	39	27	15	-10	-29	44
1982	40	0	0	0	0	0	0	0	0	99	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	-12	0	0	0	0	0	-7	0	28	-39	-69	-41
1985	-61	0	-6	-10	-14	-18	-34	-45	0	-9	-21	-35
1986	-19	49	70	0	0	0	0	0	0	-26	-49	0
1987	-39	-39	-23	-15	-8	0	-6	-1	-10	-39	-54	-63
1988	-63	-66	-47	-43	-7	-3	-1	-3	-15	-25	-27	0
1989	-10	-8	1	-1	8	0	0	-10	-11	-26	-29	-36
1990	-35	-27	-34	-29	-13	-16	15	13	12	3	-7	-11
1991	-7	-9	-13	-13	-13	0	6	-84	-81	29	8	-8
1992	-11	-17	-11	-7	-5	-3	-64	-69	-79	-91	-62	-17
1993	-15	-14	-19	0	0	0	0	0	0	-29	-45	0
1994	-41	0	-5	-8	-13	-12	-16	-20	-17	-8	-21	-26
Avg	-28	-21	-14	-9	-7	-4	-10	-14	-17	-28	-33	-21
Min	-125	-127	-113	-97	-85	-82	-64	-84	-81	-114	-104	-111
Max	40	49	70	55	61	56	39	27	52	99	31	58

Table I-9d. CALSIM Simulated Monthly Cumulative Distribution of Folsom Reservoir Storage for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	90	90	93	186	181	170	171	166	119	90	90	90
10	264	275	262	283	338	423	464	477	433	301	257	222
20	356	357	329	360	398	516	580	616	560	419	382	367
30	390	395	408	394	450	536	670	697	600	477	433	410
40	433	446	464	448	493	589	745	824	694	529	494	455
50	505	503	499	523	542	615	768	955	853	647	595	521
60	553	548	537	553	562	626	800	975	927	748	690	586
70	589	564	569	569	571	651	800	975	975	807	759	607
80	629	575	575	575	575	669	800	975	975	836	782	650
90	643	575	575	575	575	674	800	975	975	869	800	650
Max	720	575	975	575	640	675	887	975	975	950	800	650
Avg	478	457	464	470	493	581	700	811	766	626	571	489
B: 2020 Baseline												
Min	90	90	134	155	144	153	148	145	93	90	90	90
10	220	217	228	268	341	449	434	445	407	253	216	196
20	349	339	305	338	390	490	578	598	547	403	357	357
30	373	380	364	385	429	533	655	662	600	464	407	393
40	396	433	424	444	480	585	713	814	652	534	487	425
50	455	473	499	503	537	618	763	928	816	600	567	487
60	524	495	525	554	560	626	796	965	921	705	643	548
70	539	549	553	567	565	654	800	975	975	764	699	593
80	615	567	575	574	574	669	800	975	975	818	747	650
90	630	575	575	575	575	674	800	975	975	845	789	650
Max	720	575	975	575	621	675	869	975	975	950	800	650
Avg	450	436	450	461	486	577	690	797	749	598	538	468
Comparison: B – A												
Min	0	0	41	-31	-37	-17	-23	-21	-26	0	0	0
10	-44	-58	-34	-15	3	26	-30	-32	-26	-48	-41	-26
20	-7	-18	-24	-22	-8	-26	-2	-18	-13	-16	-25	-10
30	-17	-15	-44	-9	-21	-3	-15	-35	0	-13	-26	-17
40	-37	-13	-40	-4	-13	-4	-32	-10	-42	5	-7	-30
50	-50	-30	0	-20	-5	3	-5	-27	-37	-47	-28	-34
60	-29	-53	-12	1	-2	0	-4	-10	-6	-43	-47	-38
70	-50	-15	-16	-2	-6	3	0	0	0	-43	-60	-14
80	-14	-8	0	-1	-1	0	0	0	0	-18	-35	0
90	-13	0	0	0	0	0	0	0	0	-24	-11	0
Max	0	0	0	0	-19	0	-18	0	0	0	0	0
Avg	-28	-21	-14	-9	-7	-4	-10	-14	-17	-28	-33	-21

Table I-10a. CALSIM Simulated American River Flow below Nimbus Dam, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	2,254	1,803	1,623	1,500	5,919	3,417	4,552	9,586	9,613	5,000	2,500	4,715	3,152
1923	2,346	1,951	6,225	4,597	3,106	3,000	3,455	4,666	3,096	5,000	2,822	4,790	2,726
1924	1,792	1,733	1,560	1,200	1,100	2,021	750	1,000	1,500	1,750	1,000	1,861	1,046
1925	979	800	1,000	750	4,078	5,000	3,000	3,762	5,000	5,000	3,883	2,500	2,152
1926	2,358	2,661	2,160	1,620	1,215	1,500	1,750	2,250	2,796	3,052	1,000	1,000	1,413
1927	1,500	1,565	2,845	3,652	13,472	4,624	7,865	4,876	5,568	5,000	2,500	4,720	3,459
1928	1,820	2,520	2,386	1,925	2,334	12,820	4,848	2,783	2,352	4,747	2,961	2,500	2,672
1929	1,500	1,200	1,300	1,200	900	750	2,014	1,000	2,756	2,492	2,287	1,123	1,120
1930	1,686	1,360	1,300	1,200	1,635	2,865	1,750	2,250	2,942	3,732	1,500	2,500	1,494
1931	2,186	2,400	2,160	1,620	1,215	911	750	1,000	1,500	1,750	1,000	1,786	1,104
1932	2,853	1,272	1,161	871	885	3,000	3,000	3,000	5,000	5,327	4,447	3,545	2,084
1933	1,500	2,622	2,364	1,773	1,330	997	1,890	1,000	3,476	2,656	2,231	1,293	1,396
1934	1,516	1,554	1,399	1,049	1,100	1,500	3,934	1,213	2,002	1,750	2,304	1,123	1,234
1935	2,330	1,856	1,596	1,197	898	1,500	4,194	4,760	4,152	5,000	3,549	2,917	2,057
1936	2,621	2,097	1,887	5,132	13,556	4,210	5,629	4,140	5,002	5,000	2,583	4,142	3,357
1937	2,812	2,250	2,025	1,518	2,772	4,469	4,415	4,103	3,000	5,000	2,835	3,083	2,313
1938	1,750	1,995	6,745	2,868	9,817	11,086	8,033	9,751	9,091	3,773	4,305	4,410	4,423
1939	1,750	2,814	2,533	1,899	1,425	1,500	1,750	1,000	1,980	2,279	1,511	1,000	1,295
1940	1,480	1,265	1,300	3,456	10,592	10,912	6,083	3,309	4,200	5,000	1,720	2,802	3,135
1941	3,173	2,400	2,459	5,806	8,078	4,894	3,802	5,134	3,547	5,000	2,500	3,838	3,039
1942	1,750	2,746	5,630	9,287	10,054	3,000	5,540	6,772	7,534	5,000	2,973	4,379	3,877
1943	1,750	4,470	4,778	10,841	7,258	12,601	5,046	3,000	3,000	5,000	2,500	4,792	3,922
1944	1,570	1,374	1,341	1,500	2,250	1,969	3,000	2,250	3,436	3,015	2,385	2,500	1,606
1945	1,500	1,342	1,343	2,626	8,384	2,250	3,000	2,853	3,724	5,000	1,739	4,704	2,291
1946	1,830	3,029	8,925	5,201	3,553	3,000	3,059	3,791	4,439	5,000	1,927	3,616	2,864
1947	1,798	2,232	1,984	1,500	1,125	2,378	3,000	2,250	1,914	2,848	2,384	2,500	1,568
1948	780	800	1,300	1,200	2,259	1,574	2,055	3,780	5,416	4,517	2,660	3,930	1,829
1949	2,249	2,301	1,999	1,500	1,350	2,848	3,464	3,000	4,509	4,292	2,527	2,500	1,968
1950	1,500	1,307	1,311	3,329	5,642	3,151	4,814	4,189	4,246	4,945	2,500	4,640	2,494
1951	1,784	16,816	16,253	10,362	8,371	3,827	3,254	3,818	3,000	5,000	2,500	3,472	4,723
1952	1,500	1,772	5,648	9,069	9,639	6,228	8,829	11,546	10,697	5,000	4,690	4,429	4,772
1953	1,750	2,876	2,650	7,269	2,385	2,112	3,000	3,000	5,955	4,961	3,322	4,347	2,637
1954	1,994	2,719	2,447	1,835	3,267	4,439	4,490	3,000	3,169	3,145	2,500	2,500	2,139
1955	1,500	1,200	1,300	2,217	2,738	2,116	1,750	3,000	3,000	3,618	2,154	1,000	1,544
1956	1,650	1,552	4,700	23,807	6,358	3,000	3,000	5,567	6,102	5,000	2,767	4,337	4,117
1957	1,750	2,860	2,614	1,961	2,427	4,502	3,000	2,250	3,731	5,000	3,895	2,500	2,206
1958	1,500	1,200	2,177	2,936	10,140	6,739	10,416	10,164	7,967	4,941	2,878	4,410	3,919
1959	1,750	2,445	2,275	1,706	2,934	2,135	1,750	2,250	1,645	4,400	1,000	1,000	1,524
1960	750	800	1,300	1,000	1,829	4,011	3,127	2,250	3,368	2,532	2,257	2,500	1,555
1961	750	800	1,300	1,200	1,100	1,500	1,750	2,250	1,500	3,199	1,500	1,000	1,081
1962	750	800	1,000	1,000	2,212	3,000	3,062	3,000	3,000	5,000	2,448	2,508	1,677
1963	3,202	4,375	3,445	3,985	11,887	2,250	4,700	8,655	3,548	5,000	2,624	3,180	3,394
1964	1,750	4,867	2,700	2,069	2,345	1,814	1,750	2,366	3,115	2,860	2,461	2,500	1,848
1965	750	1,150	21,250	13,120	5,554	2,250	4,700	4,201	3,493	6,142	2,500	4,092	4,196
1966	1,750	2,427	2,185	1,997	1,958	3,000	1,750	2,250	2,154	2,119	2,000	2,500	1,575
1967	750	800	3,031	6,887	4,489	6,142	4,009	8,548	10,703	4,224	5,000	4,069	3,542
1968	1,750	3,383	2,700	2,025	4,700	3,582	1,750	2,250	2,418	3,803	1,814	1,000	1,882
1969	1,500	1,200	1,300	16,020	9,315	3,799	6,570	9,322	6,830	5,000	2,500	4,265	4,066
1970	1,750	2,916	5,654	21,102	6,318	2,416	3,000	2,250	3,000	5,000	1,710	2,500	3,483
1971	1,500	1,200	5,370	4,814	3,993	3,546	3,000	3,445	5,204	4,088	3,277	4,175	2,632
1972	1,750	2,964	2,689	2,043	3,162	4,165	1,750	2,250	5,000	4,906	1,500	1,000	2,007
1973	1,500	1,200	2,967	9,337	7,203	3,505	3,000	4,061	5,000	4,905	1,731	2,500	2,819
1974	1,500	6,730	7,367	11,740	4,589	9,385	6,278	4,944	4,406	3,789	4,194	4,485	4,198
1975	1,750	2,483	2,235	1,676	3,710	4,664	3,000	4,642	6,516	4,854	2,561	4,269	2,551
1976	1,750	3,898	2,700	2,025	1,519	1,139	750	1,000	1,500	1,750	1,000	1,000	1,212
1977	750	800	1,300	975	731	548	318	500	1,000	750	400	500	518
1978	500	510	500	2,585	4,902	6,085	4,064	4,411	4,702	5,000	2,500	3,699	2,372
1979	1,922	1,877	1,820	2,382	3,698	3,432	3,000	3,498	5,000	4,525	1,712	2,925	2,154
1980	1,500	1,281	2,004	18,252	13,496	3,607	3,000	3,000	3,226	5,000	2,588	4,273	3,689
1981	1,958	2,639	2,674	2,005	1,504	1,500	1,750	2,250	1,500	3,155	1,500	2,500	1,508
1982	750	3,478	14,422	8,229	15,420	7,697	14,459	9,528	6,360	5,000	2,876	4,784	5,571
1983	2,136	8,058	9,229	7,652	12,469	16,480	6,594	10,629	14,668	6,194	5,168	5,273	6,287
1984	1,751	15,897	15,134	6,758	5,884	2,586	2,516	2,461	3,794	5,199	1,771	3,693	4,073
1985	1,514	4,132	2,700	2,025	1,519	1,500	3,000	2,250	3,348	2,746	2,337	1,568	1,728
1986	1,500	1,947	1,742	3,180	32,947	11,117	2,733	2,961	3,527	5,000	2,500	3,674	4,260
1987	2,764	2,543	2,446	1,835	1,376	1,032	1,750	1,254	1,538	1,750	1,000	1,000	1,226
1988	767	800	1,300	1,200	1,973	1,562	750	2,250	1,500	1,750	1,681	2,500	1,090
1989	522	500	1,000	750	988	6,643	3,829	3,831	5,000	3,453	2,772	1,360	1,858
1990	2,234	1,787	1,608	1,206	1,207	1,500	2,049	1,000	2,189	2,054	1,839	1,477	1,217
1991	1,076	861	1,300	1,000	750	750	2,048	1,000	1,836	4,890	1,917	2,500	1,207
1992	1,591	1,287	1,300	975	731	1,500	2,370	2,250	1,500	1,750	1,692	1,000	1,089
1993	600	500	500	1,859	6,144	7,738	4,106	5,483	5,636	5,000	2,652	4,110	2,661
1994	1,750	4,090	2,700	2,025	1,519	1,500	1,750	1,000	1,727	4,485	1,000	1,000	1,484
Avg	1,656	2,550	3,391	4,245	4,914	3,915	3,561	3,758	4,121	4,053	2,407	2,912	2,498
Min	500	500	500	750	731	548	318	500	1,000	750	400	500	518
Max	3,202	16,816	21,250	23,807	32,947	16,480	14,459	11,546	14,668	6,194	5,168	5,273	6,287

Table I-10b. CALSIM Simulated American River Flow below Nimbus Dam, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	2,034	1,628	1,465	1,500	5,889	3,308	4,230	9,200	9,154	4,558	2,500	3,244	2,925
1923	2,750	2,785	5,380	4,474	2,978	3,000	3,110	4,284	3,000	5,000	2,500	3,768	2,604
1924	1,956	1,946	1,751	1,314	985	1,012	750	1,000	1,500	1,750	1,000	1,389	991
1925	600	800	1,000	750	4,165	5,000	3,000	3,000	5,000	5,000	1,500	2,500	1,940
1926	2,520	2,400	2,160	1,620	1,215	1,500	750	2,250	2,882	3,129	1,000	1,000	1,358
1927	1,547	1,637	1,570	3,568	13,388	4,492	7,635	4,497	5,132	5,000	2,500	2,853	3,196
1928	2,457	2,247	2,304	1,821	2,227	12,709	4,542	2,505	2,038	4,871	2,204	2,500	2,578
1929	1,500	1,203	1,300	1,000	750	750	1,426	1,000	2,091	2,177	1,845	1,119	978
1930	1,134	918	1,300	1,200	1,614	2,798	1,750	2,250	2,127	3,446	1,500	2,500	1,362
1931	2,313	2,400	2,160	1,620	1,215	911	750	500	1,500	1,750	1,030	1,000	1,036
1932	2,131	1,342	1,247	935	701	3,000	3,000	3,000	4,573	5,369	3,178	3,301	1,927
1933	2,292	2,425	2,186	1,639	1,230	922	750	1,000	2,442	2,500	1,972	1,150	1,241
1934	2,062	1,650	1,485	1,113	835	1,500	3,458	1,000	1,500	1,750	2,491	1,004	1,201
1935	1,589	1,436	1,292	969	727	1,500	5,041	4,275	3,470	5,000	3,374	2,670	1,898
1936	2,322	1,858	1,672	4,830	13,450	4,102	5,335	3,816	4,624	5,000	2,500	3,265	3,163
1937	2,612	2,090	1,881	1,410	2,776	4,381	4,160	3,689	3,000	5,000	2,423	3,232	2,213
1938	1,500	1,200	6,326	2,775	9,705	10,958	7,757	9,363	8,632	3,713	3,488	4,099	4,175
1939	1,750	2,460	2,214	1,660	1,245	1,500	1,750	1,000	1,728	1,965	1,230	1,000	1,178
1940	1,222	1,058	1,300	3,393	10,515	10,737	5,707	3,000	4,291	5,000	1,500	2,805	3,038
1941	2,588	2,071	1,864	5,324	7,950	4,768	3,664	4,793	3,371	3,046	2,715	4,002	2,765
1942	1,750	2,679	5,353	9,162	9,909	3,000	5,286	6,488	7,047	5,000	2,500	3,573	3,702
1943	1,750	4,197	4,657	10,704	7,130	12,490	4,818	3,000	3,000	5,179	1,921	4,095	3,797
1944	1,500	1,411	1,313	1,200	1,350	1,818	3,000	2,250	3,053	2,752	1,500	2,577	1,434
1945	1,500	1,200	1,300	1,527	9,199	2,250	3,000	2,250	3,000	5,000	1,500	2,833	2,051
1946	3,338	2,400	8,722	5,063	3,257	3,000	3,000	3,194	4,040	4,826	1,500	3,507	2,775
1947	1,972	2,090	1,804	1,358	1,100	1,618	3,000	2,250	1,628	2,500	1,837	2,500	1,430
1948	750	800	1,300	1,000	1,993	1,500	1,750	3,327	4,920	4,078	2,500	3,989	1,686
1949	2,017	1,875	1,687	1,500	1,125	2,687	3,136	3,000	4,066	3,456	2,574	2,500	1,792
1950	1,500	1,200	1,300	2,146	5,523	3,046	4,565	3,850	3,831	4,398	2,500	4,171	2,279
1951	1,500	16,927	16,144	10,253	8,260	3,695	3,000	3,044	3,000	5,000	2,500	2,501	4,564
1952	1,811	1,449	5,073	8,945	9,516	6,118	8,515	11,162	10,262	5,000	4,420	3,507	4,576
1953	1,750	2,535	2,599	7,144	2,250	1,688	3,000	3,000	5,202	5,000	2,500	3,952	2,456
1954	1,750	2,673	2,406	1,804	3,017	4,362	4,300	3,000	3,000	3,000	2,500	2,500	2,068
1955	1,500	1,200	1,300	1,200	2,249	1,743	1,750	3,000	3,000	2,242	2,100	1,000	1,343
1956	1,602	1,364	4,700	23,726	6,281	3,000	3,000	4,769	5,653	4,673	2,500	3,767	3,948
1957	1,750	2,572	2,314	1,736	2,740	4,377	3,000	2,250	3,342	5,000	2,500	2,500	2,057
1958	1,500	1,200	1,397	2,828	10,013	6,628	10,269	9,795	7,508	4,584	2,500	3,902	3,716
1959	1,750	2,141	1,926	1,500	3,154	2,250	1,750	2,250	1,500	4,700	1,000	1,000	1,501
1960	750	800	1,000	750	562	3,475	2,359	2,250	3,176	2,431	2,158	1,000	1,257
1961	1,500	1,200	1,300	1,200	900	1,500	1,750	2,250	1,500	1,750	1,500	1,000	1,051
1962	750	800	1,000	750	1,598	3,000	3,000	3,000	3,000	4,165	1,844	2,653	1,544
1963	2,398	4,322	3,355	3,893	11,796	2,250	4,700	7,972	3,639	5,000	2,500	2,500	3,241
1964	1,500	3,910	2,700	2,025	2,156	1,686	1,750	2,250	1,500	2,890	2,710	2,500	1,668
1965	750	800	21,022	13,034	5,466	2,250	4,350	3,865	3,038	6,483	2,500	3,174	4,049
1966	1,500	1,808	1,871	2,097	1,868	3,000	1,750	2,250	1,500	1,750	2,000	1,257	1,369
1967	750	800	3,052	6,794	4,386	6,006	3,874	8,149	10,265	3,735	4,068	4,253	3,388
1968	1,750	3,100	2,700	2,025	4,700	3,186	1,750	2,250	1,504	4,132	1,466	1,000	1,785
1969	750	1,162	1,300	15,625	9,224	3,684	6,309	8,934	6,387	5,000	2,500	3,061	3,844
1970	1,750	2,639	5,602	20,963	6,189	2,341	3,000	2,250	3,000	5,000	1,500	1,073	3,345
1971	967	800	5,912	4,722	4,063	3,257	3,000	3,000	4,519	5,000	2,500	2,862	2,451
1972	1,750	2,520	2,748	2,073	2,895	4,034	1,750	2,250	5,000	3,333	1,631	1,000	1,874
1973	1,500	1,200	2,478	9,247	7,115	3,380	3,000	3,349	4,689	4,304	1,500	2,560	2,661
1974	1,500	6,024	7,245	11,602	4,460	9,274	5,968	4,596	3,958	4,582	2,581	4,154	3,989
1975	1,750	2,204	1,984	1,812	3,555	4,554	3,000	3,940	6,059	5,000	2,500	2,965	2,369
1976	1,750	3,684	2,700	2,025	1,519	1,139	750	1,000	1,500	1,750	1,000	1,000	1,199
1977	750	800	1,000	750	562	422	368	500	1,000	471	571	500	465
1978	500	500	520	2,140	4,858	5,978	3,606	3,249	3,872	5,000	2,500	2,500	2,117
1979	1,750	2,061	1,855	1,739	3,579	3,336	3,000	3,000	5,000	3,546	1,527	3,530	2,038
1980	1,500	1,200	1,300	17,502	13,375	3,496	3,000	3,000	3,000	5,000	2,500	3,593	3,521
1981	2,219	1,786	1,661	1,246	1,100	1,500	1,750	2,250	1,500	3,028	1,500	1,000	1,245
1982	750	4,148	14,242	8,143	15,311	7,585	14,328	9,096	5,863	2,871	4,030	4,546	5,443
1983	2,063	7,993	9,094	7,528	12,340	16,369	6,454	10,243	14,191	5,704	4,743	4,961	6,114
1984	1,750	15,642	15,011	6,629	5,762	2,467	2,019	2,262	3,000	5,923	1,968	2,988	3,954
1985	1,899	3,094	2,700	2,025	1,519	1,500	3,000	2,250	2,185	2,534	2,188	1,514	1,596
1986	1,042	833	1,300	4,239	32,839	11,017	2,456	2,606	3,102	5,000	2,500	2,617	4,064
1987	3,209	2,400	2,160	1,620	1,215	911	1,750	1,047	1,527	1,750	1,000	1,000	1,184
1988	750	800	1,000	1,000	1,266	1,500	750	2,250	1,500	1,750	1,500	1,973	971
1989	564	500	800	750	781	6,700	3,115	3,315	4,511	3,087	2,461	1,327	1,693
1990	2,119	1,695	1,526	1,144	870	1,500	1,365	1,000	1,912	1,895	1,560	1,037	1,067
1991	855	800	1,300	975	731	548	1,750	2,250	1,500	2,780	1,816	2,500	1,078
1992	1,592	1,289	1,160	870	652	1,500	3,350	2,250	1,500	1,750	1,500	681	1,097
1993	506	500	520	1,496	6,086	7,475	3,397	5,132	5,221	5,000	2,500	3,028	2,453
1994	2,228	3,296	2,700	2,025	1,519	1,500	1,750	1,000	1,500	3,890	1,000	1,000	1,416
Avg	1,634	2,364	3,219	4,085	4,773	3,801	3,397	3,528	3,770	3,818	2,152	2,481	2,350
Min	500	500	520	750	562	422	368	500	1,000	471	571	500	465
Max	3,338	16,927	21,022	23,726	32,839	16,369	14,328	11,162	14,191	6,483	4,743	4,961	6,114

Table I-10c. CALSIM Simulated American River Flow below Nimbus Dam, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	-220	-175	-158	0	-30	-109	-322	-386	-459	-442	0	-1,471	-227
1923	404	834	-845	-123	-128	0	-345	-382	-96	0	-322	-1,022	-123
1924	164	213	191	114	-115	-1,009	0	0	0	0	0	-472	-55
1925	-379	0	0	0	87	0	0	-762	0	0	-2,383	0	-212
1926	162	-261	0	0	0	0	-1,000	0	86	77	0	0	-55
1927	47	72	-1,275	-84	-84	-132	-230	-379	-436	0	0	-1,867	-263
1928	637	-273	-82	-104	-107	-111	-306	-278	-314	124	-757	0	-94
1929	0	3	0	-200	-150	0	-588	0	-665	-315	-442	-4	-142
1930	-552	-442	0	0	-21	-67	0	0	-815	-286	0	0	-132
1931	127	0	0	0	0	0	0	-500	0	0	30	-786	-68
1932	-722	70	86	64	-184	0	0	0	-427	42	-1,269	-244	-157
1933	792	-197	-178	-134	-100	-75	-1,140	0	-1,034	-156	-259	-143	-156
1934	546	96	86	64	-265	0	-476	-213	-502	0	187	-119	-33
1935	-741	-420	-304	-228	-171	0	847	-485	-682	0	-175	-247	-158
1936	-299	-239	-215	-302	-106	-108	-294	-324	-378	0	-83	-877	-194
1937	-200	-160	-144	-108	4	-88	-255	-414	0	0	-412	149	-100
1938	-250	-795	-419	-93	-112	-128	-276	-388	-459	-60	-817	-311	-248
1939	0	-354	-319	-239	-180	0	0	0	-252	-314	-281	0	-117
1940	-258	-207	0	-63	-77	-175	-376	-309	91	0	-220	3	-97
1941	-585	-329	-595	-482	-128	-126	-138	-341	-176	-1,954	215	164	-274
1942	0	-67	-277	-125	-145	0	-254	-284	-487	0	-473	-806	-175
1943	0	-273	-121	-137	-128	-111	-228	0	0	179	-579	-697	-126
1944	-70	37	-28	-300	-900	-151	0	0	-383	-263	-885	77	-172
1945	0	-142	-43	-1,099	815	0	0	-603	-724	0	-239	-1,871	-240
1946	1,508	-629	-203	-138	-296	0	-59	-597	-399	-174	-427	-109	-90
1947	174	-142	-180	-142	-25	-760	0	0	-286	-348	-547	0	-138
1948	-30	0	0	-200	-266	-74	-305	-453	-496	-439	-160	59	-143
1949	-232	-426	-312	0	-225	-161	-328	0	-443	-836	47	0	-176
1950	0	-107	-11	-1,183	-119	-105	-249	-339	-415	-547	0	-469	-215
1951	-284	111	-109	-109	-111	-132	-254	-774	0	0	0	-971	-159
1952	311	-323	-575	-124	-123	-110	-314	-384	-435	0	-270	-922	-197
1953	0	-341	-51	-125	-135	-424	0	0	-753	39	-822	-395	-181
1954	-244	-46	-41	-31	-250	-77	-190	0	-169	-145	0	0	-71
1955	0	0	0	-1,017	-489	-373	0	0	0	-1,376	-54	0	-201
1956	-48	-188	0	-81	-77	0	0	-798	-449	-327	-267	-570	-170
1957	0	-288	-300	-225	313	-125	0	0	-389	0	-1,395	0	-149
1958	0	0	-780	-108	-127	-111	-147	-369	-459	-357	-378	-508	-203
1959	0	-304	-349	-206	220	115	0	0	-145	300	0	0	-23
1960	0	0	-300	-250	-1,267	-536	-768	0	-192	-101	-99	-1,500	-298
1961	750	400	0	0	-200	0	0	0	0	-1,449	0	0	-30
1962	0	0	0	-250	-614	0	-62	0	0	-835	-604	145	-133
1963	-804	-53	-90	-92	-91	0	0	-683	91	0	-124	-680	-154
1964	-250	-957	0	-44	-189	-128	0	-116	-1,615	30	249	0	-180
1965	0	-350	-228	-86	-88	0	-350	-336	-455	341	0	-918	-147
1966	-250	-619	-314	100	-90	0	0	0	-654	-369	0	-1,243	-206
1967	0	0	21	-93	-103	-136	-135	-399	-438	-489	-932	184	-154
1968	0	-283	0	0	0	-396	0	0	-914	329	-348	0	-97
1969	-750	-38	0	-395	-91	-115	-261	-388	-443	0	0	-1,204	-222
1970	0	-277	-52	-139	-129	-75	0	0	0	0	-210	-1,427	-138
1971	-533	-400	542	-92	70	-289	0	-445	-685	912	-777	-1,313	-181
1972	0	-444	59	30	-267	-131	0	0	0	-1,573	131	0	-133
1973	0	0	-489	-90	-88	-125	0	-712	-311	-601	-231	60	-158
1974	0	-706	-122	-138	-129	-111	-310	-348	-448	793	-1,613	-331	-209
1975	0	-279	-251	136	-155	-110	0	-702	-457	146	-61	-1,304	-182
1976	0	-214	0	0	0	0	0	0	0	0	0	0	-13
1977	0	0	-300	-225	-169	-126	50	0	0	-279	171	0	-53
1978	0	-10	20	-445	-44	-107	-458	-1,162	-830	0	0	-1,199	-255
1979	-172	184	35	-643	-119	-96	0	-498	0	-979	-185	605	-116
1980	0	-81	-704	-750	-121	-111	0	0	-226	0	-88	-680	-167
1981	261	-853	-1,013	-759	-404	0	0	0	0	-127	0	-1,500	-263
1982	0	670	-180	-86	-109	-112	-131	-432	-497	-2,129	1,154	-238	-128
1983	-73	-65	-135	-124	-129	-111	-140	-386	-477	-490	-425	-312	-174
1984	-1	-255	-123	-129	-122	-119	-497	-199	-794	724	197	-705	-119
1985	385	-1,038	0	0	0	0	0	0	-1,163	-212	-149	-54	-133
1986	-458	-1,114	-442	1,059	-108	-100	-277	-355	-425	0	0	-1,057	-195
1987	445	-143	-286	-215	-161	-121	0	-207	-11	0	0	0	-42
1988	-17	0	-300	-200	-707	-62	0	0	0	0	-181	-527	-119
1989	42	0	-200	0	-207	57	-714	-516	-489	-366	-311	-33	-165
1990	-115	-92	-82	-62	-337	0	-684	0	-277	-159	-279	-440	-150
1991	-221	-61	0	-25	-19	-202	-298	1,250	-336	-2,110	-101	0	-129
1992	1	2	-140	-105	-79	0	980	0	0	0	-192	-319	8
1993	-94	0	20	-363	-58	-263	-709	-351	-415	0	-152	-1,082	-209
1994	478	-794	0	0	0	0	0	0	-227	-595	0	0	-68
Avg	-22	-186	-172	-160	-141	-114	-164	-230	-351	-235	-255	-431	-149
Min	-804	-1,114	-1,275	-1,183	-1,267	-1,009	-1,140	-1,162	-1,615	-2,129	-2,383	-1,871	-298
Max	1,508	834	542	1,059	815	115	980	1,250	91	912	1,154	605	8

Table I-10d. CALSIM Simulated Monthly Cumulative Distribution of Nimbus Reservoir Release Flows for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	500	500	500	750	731	548	318	500	1,000	750	400	500	
10	750	800	1,300	1,000	988	1,139	1,750	1,000	1,500	1,750	1,000	1,000	
20	1,480	1,200	1,300	1,200	1,330	1,500	1,750	2,250	2,002	2,746	1,692	1,293	
30	1,500	1,281	1,399	1,518	1,519	2,021	2,049	2,250	2,942	3,199	1,814	2,500	
40	1,500	1,554	1,887	1,835	2,259	2,378	3,000	2,366	3,096	4,088	2,257	2,500	
50	1,750	1,947	2,185	2,025	3,106	3,000	3,000	3,000	3,493	4,854	2,500	2,508	
60	1,750	2,400	2,459	2,585	4,078	3,505	3,127	3,498	4,152	5,000	2,500	3,545	
70	1,751	2,622	2,700	3,652	5,884	4,165	4,009	4,103	5,000	5,000	2,588	4,069	
80	1,994	2,916	4,700	6,887	8,371	5,000	4,700	4,876	5,416	5,000	2,876	4,337	
90	2,346	4,132	6,745	10,362	10,592	7,738	6,278	8,655	6,830	5,000	3,883	4,640	
Max	3,202	16,816	21,250	23,807	32,947	16,480	14,459	11,546	14,668	6,194	5,168	5,273	
Avg	1,656	2,550	3,391	4,245	4,914	3,915	3,561	3,758	4,121	4,053	2,407	2,912	2,498
B: 2020 Baseline													
Min	500	500	520	750	562	422	368	500	1,000	471	571	500	
10	750	800	1,000	935	750	1,012	750	1,000	1,500	1,750	1,000	1,000	
20	967	918	1,300	1,200	1,125	1,500	1,750	2,250	1,504	2,431	1,500	1,000	
30	1,500	1,200	1,300	1,410	1,350	1,686	1,750	2,250	2,127	2,890	1,500	1,327	
40	1,500	1,364	1,570	1,620	1,993	2,250	3,000	2,250	3,000	3,446	1,845	2,500	
50	1,750	1,786	1,871	1,821	2,978	3,000	3,000	3,000	3,038	4,165	2,204	2,501	
60	1,750	2,090	2,186	2,097	4,165	3,308	3,000	3,000	3,639	4,700	2,500	2,833	
70	1,811	2,400	2,700	3,893	5,762	4,034	3,606	3,349	4,511	5,000	2,500	3,174	
80	2,119	2,673	4,657	6,794	8,260	5,000	4,565	4,497	5,000	5,000	2,500	3,573	
90	2,398	3,910	6,326	10,253	10,515	7,585	5,968	8,149	6,387	5,000	2,715	4,002	
Max	3,338	16,927	21,022	23,726	32,839	16,369	14,328	11,162	14,191	6,483	4,743	4,961	
Avg	1,634	2,364	3,219	4,085	4,773	3,801	3,397	3,528	3,770	3,818	2,152	2,481	2,350
Comparison: B – A													
Min	0	0	20	0	-169	-126	50	0	0	-279	171	0	
10	0	0	-300	-65	-238	-127	-1,000	0	0	0	0	0	
20	-513	-282	0	0	-205	0	0	0	-498	-315	-192	-293	
30	0	-81	-99	-108	-169	-335	-299	0	-815	-309	-314	-1,173	
40	0	-190	-317	-215	-266	-128	0	-116	-96	-642	-412	0	
50	0	-161	-314	-204	-128	0	0	0	-455	-689	-296	-7	
60	0	-310	-273	-488	87	-197	-127	-498	-513	-300	0	-712	
70	60	-222	0	241	-122	-131	-403	-754	-489	0	-88	-895	
80	125	-243	-43	-93	-111	0	-135	-379	-416	0	-376	-764	
90	52	-222	-419	-109	-77	-153	-310	-506	-443	0	-1,168	-638	
Max	136	111	-228	-81	-108	-111	-131	-384	-477	289	-425	-312	
Avg	-22	-186	-172	-160	-141	-114	-164	-230	-351	-235	-255	-431	-149

Table I-11a. CALSIM Simulated Sacramento River Flow at Freeport, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	12,329	10,531	17,039	14,546	33,740	28,587	23,692	51,000	34,412	18,562	15,833	14,664	16,544
1923	11,119	12,199	30,410	27,578	14,158	13,923	24,747	17,356	17,361	18,523	14,669	14,821	13,117
1924	9,481	9,612	10,256	11,674	15,011	10,193	7,550	7,164	9,799	13,645	9,084	7,023	7,284
1925	7,609	7,734	12,405	11,794	63,393	25,684	22,722	15,651	15,001	13,398	16,074	10,998	13,193
1926	9,140	8,513	9,789	16,404	39,164	13,130	20,097	12,033	11,779	16,063	13,319	10,459	10,730
1927	10,382	22,287	19,559	30,553	74,914	43,247	45,162	25,188	20,592	19,202	16,957	15,124	20,456
1928	10,161	16,524	15,121	21,679	24,133	74,287	25,911	15,652	13,581	20,176	17,004	12,580	16,178
1929	10,652	12,645	11,775	12,137	15,166	11,218	7,241	8,595	10,955	13,027	12,128	8,034	8,048
1930	7,771	7,234	17,548	20,754	17,630	31,059	12,746	12,119	12,736	16,419	13,706	11,356	10,945
1931	9,150	8,547	10,165	13,055	10,546	7,775	8,671	8,347	10,802	16,249	10,591	7,022	7,305
1932	7,758	7,095	18,804	20,082	12,860	13,011	10,033	13,634	14,474	17,244	11,496	11,321	9,570
1933	9,216	8,518	9,689	13,692	11,451	13,272	10,785	7,146	10,031	11,723	8,408	7,035	7,300
1934	7,772	7,237	14,133	18,439	14,329	12,655	11,676	7,896	11,141	11,159	10,408	7,084	8,078
1935	7,763	11,713	10,127	28,764	12,529	25,317	45,314	23,362	20,830	18,409	16,209	12,085	14,042
1936	12,845	9,385	10,245	37,959	61,289	30,410	21,541	16,229	18,317	20,568	15,834	13,442	16,119
1937	10,298	10,363	10,969	12,669	32,474	38,555	23,336	17,963	16,299	18,628	16,679	12,613	13,265
1938	10,223	23,707	56,803	30,620	74,245	74,678	60,036	54,695	34,686	20,741	16,184	18,126	28,486
1939	13,624	14,536	14,785	12,811	11,363	13,459	8,546	10,211	14,745	18,228	14,858	13,011	9,683
1940	11,035	9,403	9,906	31,755	57,985	73,810	63,597	18,693	17,380	22,424	15,370	12,604	20,721
1941	11,813	12,114	42,517	72,993	73,809	70,880	62,014	41,508	18,437	19,064	16,207	17,648	27,573
1942	12,262	13,327	65,954	71,485	74,462	21,264	43,169	33,463	26,675	18,008	16,025	17,736	24,809
1943	12,660	17,087	28,935	72,104	50,912	68,891	25,074	17,141	16,347	19,388	16,482	14,465	21,662
1944	10,358	9,901	10,449	13,168	23,880	19,566	10,507	11,153	15,100	19,244	15,772	13,988	10,453
1945	11,276	13,859	16,317	14,642	48,001	21,002	12,356	14,937	17,489	20,348	15,647	14,647	13,161
1946	10,569	15,435	65,266	45,994	24,532	20,027	12,262	15,027	17,102	20,639	15,714	14,105	16,754
1947	10,062	11,939	15,761	10,557	17,444	20,241	13,848	12,687	13,885	19,790	17,977	13,133	10,698
1948	11,974	10,844	9,510	15,213	16,371	15,671	27,362	29,212	21,620	21,179	17,087	15,246	12,781
1949	13,434	11,439	13,358	10,393	11,334	43,918	13,044	13,306	16,461	19,369	12,541	11,521	11,521
1950	9,212	8,693	9,940	19,721	33,378	20,341	20,487	17,335	20,467	21,520	17,204	15,107	12,798
1951	10,789	47,315	74,460	57,857	63,922	26,828	13,907	19,757	13,142	23,773	16,480	14,764	22,998
1952	10,776	13,430	44,035	73,256	72,691	55,061	60,271	60,999	38,305	19,477	16,209	22,180	29,379
1953	15,882	12,397	42,771	73,224	21,693	20,093	17,048	25,141	26,865	20,361	16,674	19,187	18,870
1954	13,343	17,078	15,223	30,840	63,492	48,684	39,740	24,240	13,608	20,640	15,294	15,170	18,971
1955	13,566	13,879	23,771	18,788	13,638	11,222	12,675	13,183	15,543	18,092	13,557	10,646	10,796
1956	9,192	10,880	70,489	76,025	68,833	33,215	18,499	38,798	20,312	18,749	16,177	19,196	24,214
1957	15,832	12,770	12,436	15,003	32,270	46,310	20,313	17,680	15,839	20,946	15,631	15,268	14,460
1958	17,222	14,803	23,662	37,976	75,272	73,291	73,572	43,925	34,127	18,694	15,951	20,162	26,863
1959	16,695	12,667	12,648	34,498	52,050	21,032	9,166	12,230	18,902	21,520	17,140	14,501	14,529
1960	12,566	9,401	9,612	12,165	29,376	21,569	11,226	12,170	12,930	20,188	16,808	12,675	10,905
1961	9,322	11,249	16,169	11,129	32,162	18,506	13,404	11,955	12,612	19,867	18,411	12,193	11,210
1962	11,698	13,177	15,930	9,868	47,841	25,128	11,855	12,885	17,208	19,581	16,928	14,029	12,896
1963	33,847	15,431	27,144	15,197	72,874	31,388	70,195	31,456	16,428	19,183	16,851	14,088	21,728
1964	15,727	27,262	14,881	20,697	14,059	12,359	11,190	13,964	14,471	19,762	17,447	14,469	11,883
1965	9,959	14,421	73,775	74,106	30,387	22,393	41,246	22,569	13,712	22,019	16,601	14,110	21,506
1966	10,573	20,657	15,208	28,325	24,460	28,010	13,977	13,353	16,181	19,345	16,403	15,112	13,353
1967	11,721	15,203	39,273	39,990	54,174	55,019	36,207	45,771	41,741	16,188	16,766	21,014	23,626
1968	17,293	14,365	15,550	27,749	61,852	35,097	11,999	11,420	17,046	20,197	16,295	14,914	15,862
1969	12,543	13,243	23,714	74,275	73,863	44,933	41,108	47,403	22,407	17,823	16,440	19,194	24,399
1970	15,076	13,860	58,767	76,567	69,784	32,308	15,189	11,717	14,743	23,109	16,411	14,874	21,758
1971	11,436	17,109	56,436	46,337	28,064	47,840	21,585	28,446	22,603	22,531	16,850	19,428	20,502
1972	13,781	13,331	19,406	16,877	23,615	35,981	11,819	11,784	19,596	19,921	15,921	11,079	12,903
1973	10,936	18,053	25,902	73,339	72,795	51,218	15,884	18,836	19,638	20,937	15,902	14,790	21,464
1974	12,267	64,173	68,340	74,538	38,010	73,787	61,869	23,108	23,246	19,812	16,852	22,163	30,073
1975	16,799	14,638	16,260	14,672	61,267	71,093	21,963	28,847	26,337	17,882	15,853	20,161	19,507
1976	20,184	16,368	15,909	12,850	12,124	14,818	9,105	7,266	11,046	15,425	12,801	11,284	9,647
1977	7,801	8,472	9,410	8,539	7,625	7,728	9,053	6,451	10,925	15,784	11,383	7,121	6,667
1978	7,764	7,147	14,578	63,340	48,038	61,958	30,847	20,641	16,805	17,836	16,423	16,191	19,351
1979	10,847	10,064	9,856	22,845	40,767	29,676	16,372	16,662	19,664	18,956	16,311	14,333	13,559
1980	11,505	13,214	19,053	74,226	74,156	43,812	16,640	15,244	15,596	16,688	16,079	14,437	19,923
1981	9,806	10,304	14,606	20,444	26,315	30,790	14,019	10,237	14,398	18,595	16,597	14,507	12,077
1982	11,471	34,213	73,932	68,252	73,804	68,939	74,356	37,596	22,406	16,918	15,929	20,145	31,118
1983	21,689	35,967	66,074	71,586	74,988	77,376	55,099	58,379	54,134	23,329	21,353	27,541	35,345
1984	18,916	65,605	75,128	48,173	32,994	34,905	15,276	12,963	16,887	21,528	16,356	14,156	22,581
1985	10,983	30,384	21,465	14,186	14,932	15,893	11,802	12,243	14,148	19,598	16,713	15,318	11,926
1986	14,112	12,537	18,055	23,098	78,624	74,083	18,032	12,887	14,183	14,944	16,271	15,351	18,613
1987	11,471	10,298	11,364	13,474	19,186	25,141	14,258	9,902	14,264	16,717	13,316	12,001	10,326
1988	11,330	8,457	18,071	27,817	14,286	8,781	9,467	9,828	13,393	13,626	10,789	8,810	9,376
1989	7,788	8,964	9,531	11,873	8,016	49,203	20,745	14,268	14,991	19,497	16,835	13,555	11,846
1990	12,645	9,189	11,084	18,182	15,419	13,323	11,064	9,522	8,622	13,198	9,669	8,021	8,442
1991	7,744	7,335	6,715	6,357	9,110	30,133	11,716	7,214	7,979	14,420	9,322	9,419	7,713
1992	7,637	7,209	6,688	9,764	32,070	18,935	11,353	8,661	11,029	11,546	9,939	8,006	8,583
1993	7,737	7,228	12,222	56,244	55,477	44,792	37,148	32,752	26,770	22,137	16,478	14,726	20,024
1994	12,059	11,755	14,352	14,211	26,400	13,995	10,281	7,894	12,221	23,030	17,011	14,738	10,690
Avg	11,976	15,177	25,089	32,219	38,812	34,010	24,193	20,013	18,158	18,593	15,273	14,137	16,106
Min	7,609	7,095	6,688	6,357	7,625	7,728	7,241	6,451	7,979	11,159	8,408	7,022	6,667
Max	33,847	65,605	75,128	76,567	78,624	77,376	74,356	60,999	54,134	23,773	21,353	27,541	35,345

Table I-11b. CALSIM Simulated Sacramento River Flow at Freeport, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	12,629	10,889	17,841	14,963	33,954	28,931	24,524	50,890	34,222	22,222	16,071	13,334	16,883
1923	11,997	14,588	26,612	27,491	14,363	14,468	25,711	17,229	17,693	19,861	16,110	13,981	13,309
1924	9,905	10,560	11,326	12,002	15,440	10,311	7,510	7,273	9,240	14,201	8,764	6,954	7,466
1925	7,612	8,179	13,141	12,125	64,861	25,613	23,893	15,283	14,431	13,184	13,080	11,071	13,183
1926	9,139	8,513	9,601	16,933	39,709	13,353	20,284	13,415	10,190	16,054	12,315	9,015	10,648
1927	9,186	23,164	18,615	30,755	75,099	43,534	46,205	24,936	20,461	20,085	16,924	12,554	20,355
1928	11,961	16,075	15,111	21,768	24,348	74,468	26,575	16,228	13,129	18,192	17,250	12,605	16,233
1929	10,599	12,607	11,908	12,049	15,353	11,604	7,163	8,716	10,536	12,934	12,097	8,011	8,048
1930	7,771	7,237	18,257	21,202	17,975	31,488	13,346	12,309	12,314	16,469	14,000	12,323	11,163
1931	9,171	8,779	10,290	13,653	11,003	8,099	8,478	7,420	11,383	13,656	10,930	6,992	7,235
1932	7,760	7,221	19,715	20,445	14,361	13,316	10,451	13,965	14,429	12,972	15,246	11,204	9,764
1933	9,210	8,524	10,008	14,258	11,693	13,414	10,676	7,683	9,665	11,152	8,213	7,005	7,332
1934	7,776	7,241	15,016	18,552	14,434	12,939	11,585	8,057	10,761	11,168	10,377	7,259	8,154
1935	7,769	12,108	10,320	29,000	12,730	25,930	46,339	23,033	20,450	18,943	17,183	12,529	14,278
1936	12,422	9,460	10,659	38,202	61,781	29,676	22,340	16,295	18,195	20,013	16,128	12,709	16,106
1937	10,189	10,363	10,516	13,037	32,880	38,906	24,132	17,867	18,205	18,599	16,466	12,700	13,443
1938	10,317	23,642	51,209	31,008	74,467	74,887	60,916	54,465	33,984	20,743	16,201	15,445	28,031
1939	14,018	13,036	14,795	12,896	11,578	13,816	12,001	10,061	13,925	17,940	14,255	12,508	9,721
1940	11,062	8,636	10,434	33,223	58,037	74,025	64,236	18,753	18,321	22,341	16,213	13,808	21,032
1941	12,644	13,303	37,206	72,312	73,962	71,056	63,248	40,301	15,963	22,031	15,877	17,660	27,360
1942	12,593	14,010	60,925	71,544	74,671	21,689	44,085	33,539	25,170	20,214	16,541	16,177	24,646
1943	12,907	13,926	29,404	72,240	51,140	69,173	25,976	16,717	16,755	18,817	16,476	14,389	21,568
1944	10,268	10,585	10,635	13,406	23,569	20,011	10,210	11,569	14,964	17,943	15,554	13,289	10,388
1945	11,644	14,476	16,756	12,500	46,093	21,183	13,188	14,643	17,792	20,428	15,538	12,587	12,946
1946	12,356	13,566	65,449	47,789	24,579	18,761	12,398	14,709	17,024	20,562	16,622	14,697	16,869
1947	12,190	12,104	16,046	10,631	17,917	20,024	13,943	11,224	14,587	19,036	17,285	13,334	10,754
1948	11,761	10,539	9,706	15,085	16,339	16,170	28,127	29,215	21,043	20,945	17,130	15,233	12,782
1949	12,034	10,374	13,744	10,568	11,423	42,765	13,267	13,692	13,692	18,717	13,494	11,626	11,391
1950	9,219	9,075	10,028	19,319	33,647	20,649	20,834	17,827	20,821	21,289	17,247	14,789	12,877
1951	11,000	43,069	74,687	57,940	64,096	26,929	13,900	19,284	16,735	20,971	16,495	14,327	22,780
1952	11,992	13,579	38,916	73,450	72,805	55,394	61,696	59,359	37,666	17,785	15,428	20,985	28,909
1953	16,104	13,127	42,865	73,411	21,278	19,951	18,032	25,917	24,520	19,888	16,701	18,773	18,827
1954	13,311	15,638	12,904	33,276	63,722	49,123	40,584	24,271	13,499	21,256	15,729	14,775	19,017
1955	14,819	14,415	22,945	18,121	13,679	10,535	12,904	13,370	15,568	15,355	11,230	11,052	10,513
1956	9,191	11,045	70,783	76,238	69,387	33,839	19,485	38,328	19,845	21,790	16,257	17,267	24,405
1957	14,120	12,549	11,037	12,892	32,843	46,502	20,098	18,014	16,770	19,932	16,821	14,442	14,194
1958	15,340	14,140	23,244	38,290	75,465	73,494	73,857	42,913	30,161	17,675	15,971	19,286	26,330
1959	16,263	12,902	12,546	34,559	52,712	21,842	9,908	12,619	18,111	21,687	17,219	14,482	14,636
1960	11,268	8,621	12,023	12,658	28,130	22,761	10,927	12,549	12,874	19,160	14,713	9,537	10,582
1961	9,165	12,287	16,222	11,682	29,010	19,030	13,093	10,424	13,194	20,196	18,098	12,469	11,096
1962	11,902	10,423	17,089	10,305	48,697	25,583	12,648	13,324	15,015	19,631	17,256	15,045	12,946
1963	32,455	15,025	27,167	15,417	73,594	32,173	70,595	31,163	17,986	20,425	16,870	13,476	21,861
1964	13,421	25,247	15,055	21,060	14,418	10,906	19,019	10,749	13,160	17,595	17,852	12,587	11,555
1965	10,076	14,357	73,722	74,338	30,592	21,803	42,753	22,241	13,497	21,822	16,551	13,810	21,519
1966	9,553	18,656	15,411	28,702	24,728	27,291	14,399	14,707	16,373	19,137	16,067	14,365	13,220
1967	11,900	15,053	36,801	40,157	53,029	55,495	37,249	45,279	38,292	14,617	16,774	20,295	23,140
1968	17,520	14,560	15,827	28,332	62,083	35,104	12,056	11,589	17,416	19,661	16,317	14,912	15,958
1969	11,368	12,570	23,914	74,399	74,090	45,177	41,766	45,638	21,773	17,303	16,446	14,079	23,891
1970	15,539	14,362	58,891	76,764	69,873	32,584	15,486	12,164	15,516	22,970	16,449	14,827	21,940
1971	11,588	17,466	55,104	46,550	28,754	44,081	22,547	27,944	20,684	24,875	16,871	18,046	20,246
1972	13,936	13,371	17,120	15,657	24,364	36,224	11,198	12,033	19,601	20,560	15,863	11,568	12,801
1973	11,314	18,963	24,209	73,497	72,954	51,166	16,771	18,260	19,597	19,148	15,931	14,762	21,357
1974	12,948	61,498	68,454	74,726	38,227	73,989	62,857	22,783	21,781	18,042	16,277	20,767	29,723
1975	14,374	14,638	16,599	14,939	61,749	71,243	22,756	28,004	24,123	18,162	15,860	18,782	19,230
1976	17,966	16,333	16,170	12,988	12,504	15,299	9,113	7,481	10,627	16,622	13,142	11,259	9,667
1977	7,812	8,121	7,239	8,203	7,710	7,729	8,748	6,339	10,918	14,660	11,506	7,090	6,409
1978	7,755	7,145	15,327	63,328	52,874	63,554	34,942	19,645	16,595	17,719	16,647	15,026	19,870
1979	10,381	11,175	14,900	20,418	38,202	30,242	17,613	16,318	19,027	18,289	16,322	14,752	13,649
1980	11,746	13,202	18,580	74,267	74,373	44,165	17,626	15,374	15,648	16,133	16,100	13,764	19,942
1981	10,433	9,291	14,146	20,357	26,201	27,950	15,006	10,461	14,638	19,718	17,471	15,203	12,091
1982	12,140	31,825	74,082	68,792	74,042	69,289	74,632	37,334	21,736	20,063	16,013	17,610	31,102
1983	16,443	36,887	66,139	71,570	75,192	77,571	56,283	58,027	53,267	22,225	20,556	27,352	34,973
1984	19,088	66,390	75,313	48,243	33,067	35,044	17,305	12,937	16,384	23,674	15,359	14,223	22,831
1985	12,466	26,348	21,840	14,135	15,223	14,378	12,544	12,658	13,781	19,545	17,260	15,325	11,799
1986	13,207	11,129	17,217	24,308	78,800	74,294	18,605	12,666	13,970	20,989	17,475	14,465	18,920
1987	12,068	10,330	11,380	13,723	19,471	24,460	11,449	10,320	15,915	16,314	13,682	12,161	10,319
1988	11,332	8,826	17,958	28,582	13,939	8,800	10,597	10,047	11,730	13,665	10,171	8,558	9,350
1989	7,779	9,542	9,837	12,131	7,942	49,720	21,070	14,243	14,663	19,408	17,022	13,103	11,920
1990	12,943	9,361	11,042	18,868	15,495	13,558	10,870	10,298	8,212	12,740	9,990	7,996	8,530
1991	7,743	7,801	6,792	6,536	8,831	30,919	11,860	9,733	8,631	11,706	9,118	9,283	7,804
1992	7,637	7,213	6,980	10,075	32,125	19,452	13,068	8,433	11,059	11,618	10,848	7,983	8,804
1993	7,745	7,238	13,238	56,053	55,793	46,516	37,779	31,056	26,338	22,310	16,693	13,578	20,062
1994	13,128	12,071	15,647	13,377	22,397	14,380	10,388	8,189	11,738	22,636	16,818	14,849	10,571
Avg	11,896	14,939	24,831	32,360	38,930	34,107	24,900	19,888	17,816	18,498	15,313	13,618	16,072
Min	7,612	7,145	6,792	6,536	7,710	7,729	7,163	6,339	8,212	11,152	8,213	6,954	6,409
Max	32,455	66,390	75,313	76,764	78,800	77,571	74,632	59,359	53,267	24,875	20,556	27,352	34,973

Table I-11c. CALSIM Simulated Sacramento River Flow at Freeport, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	300	358	802	417	214	344	832	-110	-190	3,660	238	-1,330	340
1923	878	2,389	-3,798	-87	205	545	964	-127	332	1,338	1,441	-840	192
1924	424	948	1,070	328	429	118	-40	109	-559	556	-320	-69	182
1925	3	445	736	331	1,468	-71	1,171	-368	-570	-214	-2,994	73	-10
1926	-1	0	-188	529	545	223	187	1,382	-1,589	-9	-1,004	-1,444	-82
1927	-1,196	877	-944	202	185	287	1,043	-252	-131	883	-33	-2,570	-101
1928	1,800	-449	-10	89	215	181	664	576	-452	-1,984	246	25	55
1929	-53	-38	133	-88	187	386	-78	121	-419	-93	-31	-23	0
1930	0	3	709	448	345	429	600	190	-422	50	294	967	218
1931	21	232	125	598	457	324	-193	-927	581	-2,593	339	-30	-69
1932	2	126	911	363	1,501	305	418	331	-45	-4,272	3,750	-117	195
1933	-6	6	319	566	242	142	-109	537	-366	-571	-195	-30	32
1934	4	4	883	113	105	284	-91	161	-380	9	-31	175	76
1935	6	395	193	236	201	613	1,025	-329	-380	534	974	444	236
1936	-423	75	414	243	492	-734	799	66	-122	-555	294	-733	-13
1937	-109	0	-453	368	406	351	796	-96	1,906	-29	-213	87	177
1938	94	-65	-5,594	388	222	209	880	-230	-702	2	17	-2,681	-455
1939	394	-1,500	10	85	215	357	3,455	-150	-820	-288	-603	-503	38
1940	27	-767	528	1,468	52	215	639	60	941	-83	843	1,204	311
1941	831	1,189	-5,311	-681	153	176	1,234	-1,207	-2,474	2,967	-330	12	-212
1942	331	683	-5,029	59	209	425	916	76	-1,505	2,206	516	-1,559	-163
1943	247	-3,161	469	136	228	282	902	-424	408	-571	-6	-76	-94
1944	-90	684	186	238	-311	445	-297	416	-136	-1,301	-218	-699	-64
1945	368	617	439	-2,142	-1,908	181	832	-294	303	80	-109	-2,060	-215
1946	1,787	-1,869	183	1,795	47	-1,266	136	-318	-78	-77	908	592	115
1947	2,128	165	285	74	473	-217	95	-1,463	702	-754	-692	201	56
1948	-213	-305	196	-128	-32	499	765	3	-577	-234	43	-13	1
1949	-1,400	-1,065	386	175	89	-1,153	223	386	-186	-652	953	105	-130
1950	7	382	88	-402	269	308	347	492	354	-231	43	-318	79
1951	211	-4,246	227	83	174	101	-7	-473	3,593	-2,802	15	-437	-218
1952	1,216	149	-5,119	194	114	333	1,425	-1,640	-639	-1,692	-781	-1,195	-470
1953	222	730	94	187	-415	-142	984	776	-2,345	-473	27	-414	-43
1954	-32	-1,440	-2,319	2,436	230	439	844	31	-109	616	435	-395	46
1955	1,253	536	-826	-667	41	-687	229	187	25	-2,737	-2,327	406	-284
1956	-1	165	294	213	554	624	986	-470	-467	3,041	80	-1,929	190
1957	-1,712	-221	-1,399	-2,111	573	192	-215	334	931	-1,014	1,190	-826	-266
1958	-1,882	-663	-418	314	193	203	285	-1,012	-3,966	-1,019	20	-876	-533
1959	-432	235	-102	61	662	810	742	389	-791	167	79	-19	106
1960	-1,298	-780	2,411	493	-1,246	1,192	-299	379	-56	-1,028	-2,095	-3,138	-323
1961	-157	1,038	53	553	-3,152	524	-311	-1,531	582	329	-313	276	-114
1962	204	-2,754	1,159	437	856	455	793	439	-2,193	50	328	1,016	50
1963	-1,392	-406	23	220	720	785	400	-293	1,558	1,242	19	-612	133
1964	-2,306	-2,015	174	363	359	-1,453	7,829	-3,215	-1,311	-2,167	405	-1,882	-328
1965	117	-64	-53	232	205	-590	1,507	-328	-215	-197	-50	-300	13
1966	-1,020	-2,001	203	377	268	-719	422	1,354	192	-208	-336	-747	-134
1967	179	-150	-2,472	167	-1,145	476	1,042	-492	-3,449	-1,571	8	-719	-486
1968	227	195	277	583	231	7	57	169	370	-536	22	-2	96
1969	-1,175	-673	200	124	227	244	658	-1,765	-634	-520	6	-5,115	-508
1970	463	502	124	197	89	276	297	447	773	-139	38	-47	182
1971	152	357	-1,332	213	690	-3,759	962	-502	-1,919	2,344	21	-1,382	-256
1972	155	40	-2,286	-1,220	749	243	-621	249	5	639	-58	489	-102
1973	378	910	-1,693	158	159	-52	887	-576	-41	-1,789	29	-28	-106
1974	681	-2,675	114	188	217	202	988	-325	-1,465	-1,770	-575	-1,396	-350
1975	-2,425	0	339	267	482	150	793	-843	-2,214	280	7	-1,379	-277
1976	-2,218	-35	261	138	380	481	8	215	-419	1,197	341	-25	19
1977	11	-351	-2,171	-336	85	1	-305	-112	-7	-1,124	123	-31	-258
1978	-9	-2	749	-12	4,836	1,596	4,095	-996	-210	-117	224	-1,165	519
1979	-466	1,111	5,044	-2,427	-2,565	566	1,241	-344	-637	-667	11	419	90
1980	241	-12	-473	41	217	353	986	130	52	-555	21	-673	19
1981	627	-1,013	-460	-87	-114	-2,840	987	224	240	1,123	874	696	15
1982	669	-2,388	150	540	238	350	276	-262	-670	3,145	84	-2,535	-16
1983	-5,246	920	65	-16	204	195	1,184	-352	-867	-1,104	-797	-189	-373
1984	172	785	185	70	73	139	2,029	-26	-503	2,146	-997	67	250
1985	1,483	-4,036	375	-51	291	-1,515	742	415	-367	-53	547	7	-127
1986	-905	-1,408	-838	1,210	176	211	573	-221	-213	6,045	1,204	-886	307
1987	597	32	16	249	285	-681	-2,809	418	1,651	-403	366	160	-7
1988	2	369	-113	765	-347	19	1,130	219	-1,663	39	-618	-252	-25
1989	-9	578	306	258	-74	517	325	-25	-328	-89	187	-452	74
1990	298	172	-42	686	76	235	-194	776	-410	-458	321	-25	89
1991	-1	466	77	179	-279	786	144	2,519	652	-2,714	-204	-136	91
1992	0	4	292	311	55	517	1,715	-228	30	72	909	-23	221
1993	8	10	1,016	-191	316	1,724	631	-1,696	-432	173	215	-1,148	38
1994	1,069	316	1,295	-834	-4,003	385	107	295	-483	-394	-193	111	-120
Avg	-80	-238	-258	141	118	97	707	-125	-342	-95	40	-519	-34
Min	-5,246	-4,246	-5,594	-2,427	-4,003	-3,759	-2,809	-3,215	-3,966	-4,272	-2,994	-5,115	-533
Max	2,128	2,389	5,044	2,436	4,836	1,724	7,829	2,519	3,593	6,045	3,750	1,204	519

Table I-11d. CALSIM Simulated Monthly Cumulative Distribution of Sacramento River Flows at Freeport for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	7,609	7,095	6,688	6,357	7,625	7,728	7,241	6,451	7,979	11,159	8,408	7,022	
10	7,764	7,335	9,689	11,129	11,451	12,359	9,166	7,896	10,955	13,626	10,591	8,021	
20	9,212	8,964	10,256	12,850	14,329	13,995	11,226	10,237	12,930	16,249	13,319	11,284	
30	10,161	10,064	12,405	14,546	17,630	20,027	11,999	12,119	14,148	17,836	15,631	12,580	
40	10,652	11,249	14,606	16,877	24,532	21,569	13,848	12,963	14,745	18,562	15,902	13,555	
50	11,276	12,537	15,909	20,754	32,270	28,587	16,372	15,027	16,299	19,202	16,184	14,437	
60	11,721	13,327	18,055	28,325	40,767	32,308	20,487	17,335	17,102	19,581	16,356	14,726	
70	12,543	14,421	23,662	37,959	55,477	43,812	23,692	20,641	18,902	20,176	16,482	15,107	
80	13,624	16,524	42,517	63,340	68,833	51,218	39,740	28,847	21,620	20,741	16,835	16,191	
90	16,695	23,707	65,954	73,256	73,863	71,093	60,036	41,508	26,770	22,019	17,011	19,428	
Max	33,847	65,605	75,128	76,567	78,624	77,376	74,356	60,999	54,134	23,773	21,353	27,541	
Avg	11,976	15,177	25,089	32,219	38,812	34,010	24,193	20,013	18,158	18,593	15,273	14,137	16,106
B: 2020 Baseline													
Min	7,612	7,145	6,792	6,536	7,710	7,729	7,163	6,339	8,212	11,152	8,213	6,954	
10	7,769	7,801	10,008	11,682	11,693	11,604	10,210	8,189	10,627	12,972	10,848	7,996	
20	9,186	8,826	11,037	12,896	14,434	14,380	11,449	10,424	12,874	16,054	13,494	11,204	
30	10,189	10,363	12,904	14,135	17,975	19,951	12,648	12,164	13,925	17,675	15,428	12,508	
40	11,062	11,045	15,016	16,933	24,579	21,842	13,900	13,324	14,964	18,192	15,931	12,709	
50	11,761	12,570	16,170	21,060	32,843	27,950	17,626	14,709	16,373	19,148	16,201	13,808	
60	12,068	13,371	17,841	28,702	39,709	32,584	20,834	17,229	17,416	19,861	16,449	14,389	
70	12,629	14,362	22,945	38,202	55,793	43,534	24,524	19,645	18,321	20,214	16,647	14,775	
80	13,421	15,638	37,206	63,328	69,387	51,166	40,584	28,004	20,821	20,989	16,924	15,233	
90	15,539	23,642	65,449	73,450	74,090	71,243	60,916	40,301	25,170	22,222	17,256	18,046	
Max	32,455	66,390	75,313	76,764	78,800	77,571	74,632	59,359	53,267	24,875	20,556	27,352	
Avg	11,896	14,939	24,831	32,360	38,930	34,107	24,900	19,888	17,816	18,498	15,313	13,618	16,072
Comparison: B – A													
Min	3	50	104	179	85	1	-78	-112	233	-7	-195	-68	
10	5	466	319	553	242	-755	1,044	293	-328	-654	257	-25	
20	-26	-138	781	46	105	385	223	187	-56	-195	175	-80	
30	28	299	499	-411	345	-76	649	45	-223	-161	-203	-72	
40	410	-204	410	56	47	273	52	361	219	-370	29	-846	
50	485	33	261	306	573	-637	1,254	-318	74	-54	17	-629	
60	347	44	-214	377	-1,058	276	347	-106	314	280	93	-337	
70	86	-59	-717	243	316	-278	832	-996	-581	38	165	-332	
80	-203	-886	-5,311	-12	554	-52	844	-843	-799	248	89	-958	
90	-1,156	-65	-505	194	227	150	880	-1,207	-1,600	203	245	-1,382	
Max	-1,392	785	185	197	176	195	276	-1,640	-867	1,102	-797	-189	
Avg	-80	-238	-258	141	118	97	707	-125	-342	-95	40	-519	-34

Table I-12a. CALSIM Simulated Yolo Bypass Inflow, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	49	0	330	317	1,253	454	88	66	66	47	54	57	163
1923	13	101	1,451	317	77	77	140	68	66	47	54	49	150
1924	50	4	0	0	174	38	137	75	66	47	54	668	78
1925	4	0	288	0	2,688	0	288	178	62	47	54	53	208
1926	56	0	0	236	2,613	29	3,182	47	65	47	54	57	371
1927	7	859	150	428	54,443	1,145	618	54	61	47	54	57	3,235
1928	12	47	318	376	647	29,455	39	58	66	47	54	57	1,914
1929	55	69	236	0	205	2	85	72	55	47	54	57	56
1930	57	8	734	189	367	990	78	55	66	47	54	52	163
1931	34	17	0	218	0	50	137	66	61	47	54	687	83
1932	42	42	1,339	0	5	5	93	70	66	47	54	57	111
1933	58	32	77	376	0	1	101	65	66	47	54	695	95
1934	24	8	521	363	367	56	118	73	62	47	54	683	142
1935	33	108	152	1,558	122	1,129	1,462	50	66	47	54	57	293
1936	26	5	13	862	2,328	135	456	60	59	47	54	54	242
1937	49	8	93	146	1,385	761	145	66	64	47	54	57	168
1938	40	387	2,320	49	47,429	66,293	597	54	403	47	54	54	6,956
1939	35	42	80	106	25	122	148	74	66	47	54	55	52
1940	46	7	0	1,457	3,534	28,189	1,970	49	66	47	54	56	2,164
1941	34	0	2,245	24,691	41,059	17,946	7,785	384	61	47	54	57	5,544
1942	18	17	1,986	6,449	62,995	2,454	4,435	329	64	47	54	57	4,469
1943	39	22	417	5,039	1,070	1,893	570	61	66	47	54	57	566
1944	48	0	23	3	582	777	106	56	63	47	54	57	109
1945	22	0	108	5	1,284	184	323	57	66	47	54	57	127
1946	0	0	2,964	803	0	6	94	67	66	47	54	56	255
1947	48	0	0	16	0	39	70	63	61	47	54	57	28
1948	0	0	10	93	20	48	42	37	55	47	54	53	28
1949	27	4	0	423	86	1,005	61	65	66	47	54	57	116
1950	57	0	0	109	803	3	79	69	66	47	54	52	77
1951	3	543	14,906	1,509	1,736	766	83	60	66	47	54	57	1,208
1952	17	0	521	8,612	4,582	2,641	38	59	64	47	54	57	1,008
1953	67	0	1,536	30,002	466	104	51	52	61	47	53	57	1,996
1954	71	0	0	446	409	1,604	1,079	52	66	47	53	57	234
1955	58	0	376	115	92	113	61	61	66	47	54	103	69
1956	49	0	8,010	76,609	9,677	3,630	78	67	66	47	54	51	6,009
1957	15	7	0	0	0	534	96	49	66	47	54	43	56
1958	3	4	0	0	103,509	17,804	9,027	42	64	47	54	56	7,399
1959	52	8	0	0	0	313	118	76	66	47	54	19	46
1960	150	8	0	0	416	234	62	51	66	47	54	57	68
1961	116	0	60	0	216	243	75	68	66	47	54	54	60
1962	56	0	76	0	479	1,278	79	71	66	47	54	57	136
1963	1,134	0	253	503	3,011	659	12,750	43	65	47	54	53	1,099
1964	14	100	37	753	52	45	130	76	60	47	54	167	93
1965	11	0	7,351	32,589	1,358	241	1,292	66	66	47	50	98	2,644
1966	59	45	224	1,065	722	589	110	75	65	46	360	277	218
1967	58	253	1,063	5,409	2,136	3,294	5,280	49	52	47	54	56	1,068
1968	50	0	0	1,010	1,450	1,386	73	68	66	47	53	219	266
1969	42	120	636	34,496	35,549	3,638	235	69	65	47	54	300	4,415
1970	66	48	0	117,294	4,581	2,308	97	74	62	47	539	182	7,678
1971	36	114	2,469	2,230	355	1,117	303	60	66	47	54	121	425
1972	80	0	0	49	0	74	110	75	64	47	431	173	67
1973	0	430	76	9,930	12,604	3,708	122	67	66	47	480	181	1,628
1974	21	0	1,597	54,504	1,750	34,577	35	59	63	41	54	87	5,696
1975	27	1	138	20	675	14,617	1,334	62	66	46	53	57	1,045
1976	1	5	0	0	28	172	116	79	65	47	49	188	45
1977	53	3	0	0	23	119	157	61	66	47	54	762	81
1978	49	0	0	820	1,435	1,607	899	53	66	47	54	52	302
1979	58	0	0	403	603	0	52	60	66	47	54	57	82
1980	4	0	218	25,168	38,468	4,538	46	56	65	47	54	57	4,074
1981	56	7	0	442	182	0	53	62	66	47	116	50	65
1982	8	341	21,439	2,222	19,209	0	39,468	50	65	47	58	22	4,907
1983	0	494	3,011	8,892	69,291	130,101	6,554	957	317	47	54	47	13,089
1984	41	2,119	59,084	6,214	275	204	109	77	65	47	52	51	4,197
1985	1,187	570	0	0	0	0	52	65	66	47	54	50	127
1986	42	0	107	0	114,884	46,539	607	61	66	47	54	48	9,306
1987	57	7	0	47	72	301	82	74	66	47	54	57	52
1988	35	0	0	265	0	62	84	60	54	47	54	57	44
1989	56	0	0	0	0	0	68	70	64	47	53	22	23
1990	10	0	0	0	0	6	114	44	66	47	54	56	24
1991	56	6	0	0	186	661	51	61	63	47	54	57	75
1992	40	6	26	0	414	0	47	64	64	47	54	57	48
1993	5	6	0	1,314	61	0	317	58	55	47	54	57	120
1994	41	0	68	0	1,649	27	108	59	66	47	54	57	124
Avg	69	96	1,906	6,405	9,016	5,933	1,440	84	72	47	77	117	1,498
Min	0	0	0	0	0	0	35	37	52	41	49	19	23
Max	1,187	2,119	59,084	117,294	114,884	130,101	39,468	957	403	47	539	762	13,089

Table I-12b. CALSIM Simulated Yolo Bypass Inflow, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	52	5	412	342	1,277	475	87	67	67	48	54	58	173
1923	14	151	1,498	327	85	75	181	70	67	48	54	49	160
1924	53	5	0	0	219	35	133	77	67	48	54	703	83
1925	4	0	330	0	2,730	0	308	164	64	48	54	54	214
1926	60	0	0	309	2,650	29	3,239	50	67	48	54	58	381
1927	8	933	158	452	53,272	1,154	654	57	62	48	54	58	3,180
1928	13	98	350	397	671	28,496	40	60	67	48	54	58	1,864
1929	58	121	295	2	229	2	84	74	57	48	54	58	65
1930	60	11	801	218	389	1,028	86	58	67	48	54	53	174
1931	36	36	0	281	0	47	133	68	62	48	54	704	88
1932	45	66	1,427	0	26	15	91	72	67	48	54	58	120
1933	62	34	108	444	0	19	99	67	67	48	54	705	103
1934	26	11	605	374	389	56	115	75	63	48	54	533	141
1935	35	157	196	1,584	137	1,169	1,496	52	67	48	54	58	306
1936	28	20	38	925	2,359	148	478	62	60	48	54	55	252
1937	52	11	135	197	1,406	799	146	68	65	48	54	58	178
1938	43	436	2,383	62	47,528	66,575	606	56	367	48	54	54	6,985
1939	37	49	93	128	31	116	144	76	67	48	54	56	54
1940	49	10	5	1,539	3,555	28,869	1,974	52	67	48	54	57	2,213
1941	36	0	2,333	23,117	38,657	18,238	7,818	369	63	48	54	58	5,338
1942	20	37	2,064	6,614	63,045	2,485	4,463	297	66	48	54	57	4,490
1943	41	51	471	5,187	1,089	1,921	587	63	67	48	54	58	585
1944	51	7	43	59	629	780	136	58	65	48	54	58	119
1945	23	12	139	21	1,318	220	322	59	67	48	54	58	135
1946	0	0	3,026	813	0	6	91	69	67	48	54	57	260
1947	51	0	0	23	0	80	70	65	62	48	54	58	31
1948	0	0	20	102	18	46	42	39	57	48	54	54	29
1949	29	5	64	447	110	1,043	62	67	67	48	53	58	125
1950	61	0	0	187	830	4	78	71	67	48	54	53	84
1951	3	604	15,716	1,519	1,756	781	81	62	67	48	54	58	1,264
1952	18	0	584	8,653	4,740	2,679	39	61	65	48	54	58	1,026
1953	62	0	1,629	29,952	468	131	51	55	62	48	53	58	2,000
1954	60	0	0	507	457	1,643	1,092	54	67	48	53	58	243
1955	61	0	443	132	112	117	60	63	67	48	54	104	76
1956	52	0	6,876	77,220	10,142	3,629	77	69	67	48	54	52	6,004
1957	16	9	0	0	2	552	125	51	67	48	54	44	59
1958	3	5	0	0	102,708	18,090	9,958	44	66	48	54	57	7,428
1959	55	10	12	62	0	316	114	78	67	48	54	20	51
1960	136	11	22	0	461	257	63	53	67	48	54	58	73
1961	104	36	81	31	232	268	75	70	67	48	54	55	67
1962	59	0	121	0	529	1,306	78	73	67	48	54	58	144
1963	1,217	0	284	517	4,707	696	13,085	46	66	48	54	54	1,223
1964	15	164	42	792	52	44	125	78	61	48	54	164	100
1965	12	24	5,614	33,946	1,365	251	1,333	69	67	48	49	94	2,626
1966	61	109	265	1,088	744	591	107	77	66	47	362	274	228
1967	62	352	1,080	5,419	2,143	3,342	5,315	52	53	48	54	57	1,081
1968	53	0	10	1,085	1,478	1,415	73	70	67	48	53	215	274
1969	42	159	694	32,639	35,736	3,656	256	71	67	48	54	297	4,320
1970	79	49	0	117,292	4,771	2,327	95	75	63	48	540	180	7,691
1971	38	213	2,480	2,239	355	1,138	344	62	67	48	54	117	436
1972	68	0	57	63	0	71	107	77	65	48	434	173	71
1973	0	489	102	8,432	12,655	3,738	125	69	67	48	481	176	1,546
1974	22	0	1,738	54,454	1,759	34,786	36	61	64	42	54	82	5,715
1975	28	2	192	26	738	14,843	1,339	65	67	48	53	58	1,066
1976	2	7	0	0	25	165	114	81	66	48	48	188	45
1977	56	3	0	6	24	165	153	63	67	48	54	769	84
1978	52	0	41	829	1,457	1,644	911	56	67	48	54	52	310
1979	62	0	0	490	625	0	53	63	67	48	54	58	89
1980	5	0	280	21,362	38,616	4,569	47	58	67	48	54	58	3,854
1981	59	9	0	498	196	0	53	64	67	48	116	51	70
1982	8	415	19,904	2,231	19,980	20	40,318	53	66	48	58	23	4,913
1983	0	556	3,030	8,960	69,266	130,267	6,574	917	278	48	54	48	13,104
1984	44	2,222	58,988	6,219	294	214	106	78	66	48	52	52	4,200
1985	1,197	661	0	0	0	0	53	67	67	48	54	50	133
1986	44	0	151	0	113,384	47,039	610	63	67	48	54	49	9,257
1987	60	10	0	75	135	345	82	76	67	48	54	58	61
1988	37	0	0	285	0	60	83	62	55	48	54	58	45
1989	59	0	0	0	0	0	68	72	65	48	53	23	24
1990	10	0	0	0	0	6	110	46	67	48	54	57	24
1991	59	7	0	0	228	752	52	63	64	48	54	58	83
1992	42	8	55	0	473	0	48	66	65	48	54	58	54
1993	6	7	0	1,324	83	0	331	60	56	48	54	58	123
1994	43	0	98	0	1,694	27	105	61	67	48	54	57	128
Avg	72	115	1,885	6,336	9,003	5,971	1,476	84	72	48	77	116	1,498
Min	0	0	0	0	0	0	36	39	53	42	48	20	24
Max	1,217	2,222	58,988	117,292	113,384	130,267	40,318	917	367	48	540	769	13,104

Table I-12c. CALSIM Simulated Yolo Bypass Inflow, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	3	5	82	25	24	21	-1	1	1	1	0	1	10
1923	1	50	47	10	8	-2	41	2	1	1	0	0	10
1924	3	1	0	0	45	-3	-4	2	1	1	0	35	5
1925	0	0	42	0	42	0	20	-14	2	1	0	1	5
1926	4	0	0	73	37	0	57	3	2	1	0	1	11
1927	1	74	8	24	-1,171	9	36	3	1	1	0	1	-56
1928	1	51	32	21	24	-959	1	2	1	1	0	1	-51
1929	3	52	59	2	24	0	-1	2	2	1	0	1	9
1930	3	3	67	29	22	38	8	3	1	1	0	1	11
1931	2	19	0	63	0	-3	-4	2	1	1	0	17	6
1932	3	24	88	0	21	10	-2	2	1	1	0	1	9
1933	4	2	31	68	0	18	-2	2	1	1	0	10	8
1934	2	3	84	11	22	0	-3	2	1	1	0	-150	-1
1935	2	49	44	26	15	40	34	2	1	1	0	1	13
1936	2	15	25	63	31	13	22	2	1	1	0	1	11
1937	3	3	42	51	21	38	1	2	1	1	0	1	10
1938	3	49	63	13	99	282	9	2	-36	1	0	0	29
1939	2	7	13	22	6	-6	-4	2	1	1	0	1	3
1940	3	3	5	82	21	680	4	3	1	1	0	1	49
1941	2	0	88	-1,574	-2,402	292	33	-15	2	1	0	1	-205
1942	2	20	78	165	50	31	28	-32	2	1	0	0	21
1943	2	29	54	148	19	28	17	2	1	1	0	1	18
1944	3	7	20	56	47	3	30	2	2	1	0	1	10
1945	1	12	31	16	34	36	-1	2	1	1	0	1	8
1946	0	0	62	10	0	0	-3	2	1	1	0	1	5
1947	3	0	0	7	0	41	0	2	1	1	0	1	3
1948	0	0	10	9	-2	-2	0	2	2	1	0	1	1
1949	2	1	64	24	24	38	1	2	1	1	-1	1	10
1950	4	0	0	78	27	1	-1	2	1	1	0	1	7
1951	0	61	810	10	20	15	-2	2	1	1	0	1	56
1952	1	0	63	41	158	38	1	2	1	1	0	1	18
1953	-5	0	93	-50	2	27	0	3	1	1	0	1	4
1954	-11	0	0	61	48	39	13	2	1	1	0	1	9
1955	3	0	67	17	20	4	-1	2	1	1	0	1	7
1956	3	0	-1,134	611	465	-1	-1	2	1	1	0	1	-5
1957	1	2	0	0	2	18	29	2	1	1	0	1	3
1958	0	1	0	0	-801	286	931	2	2	1	0	1	29
1959	3	2	12	62	0	3	-4	2	1	1	0	1	5
1960	-14	3	22	0	45	23	1	2	1	1	0	1	5
1961	-12	36	21	31	16	25	0	2	1	1	0	1	7
1962	3	0	45	0	50	28	-1	2	1	1	0	1	8
1963	83	0	31	14	1,696	37	335	3	1	1	0	1	125
1964	1	64	5	39	0	-1	-5	2	1	1	0	-3	6
1965	1	24	-1,737	1,357	7	10	41	3	1	1	-1	-4	-18
1966	2	64	41	23	22	2	-3	2	1	1	2	-3	9
1967	4	99	17	10	7	48	35	3	1	1	0	1	14
1968	3	0	10	75	28	29	0	2	1	1	0	-4	9
1969	0	39	58	-1,857	187	18	21	2	2	1	0	-3	-95
1970	13	1	0	-2	190	19	-2	1	1	1	1	-2	12
1971	2	99	11	9	0	21	41	2	1	1	0	-4	11
1972	-12	0	57	14	0	-3	-3	2	1	1	3	0	4
1973	0	59	26	-1,498	51	30	3	2	1	1	1	-5	-82
1974	1	0	141	-50	9	209	1	2	1	1	0	-5	19
1975	1	1	54	6	63	226	5	3	1	2	0	1	22
1976	1	2	0	0	-3	-7	-2	2	1	1	-1	0	0
1977	3	0	0	6	1	46	-4	2	1	1	0	7	4
1978	3	0	41	9	22	37	12	3	1	1	0	0	8
1979	4	0	0	87	22	0	1	3	1	1	0	1	7
1980	1	0	62	-3,806	148	31	1	2	2	1	0	1	-219
1981	3	2	0	56	14	0	0	2	1	1	0	1	5
1982	0	74	-1,535	9	771	20	850	3	1	1	0	1	6
1983	0	62	19	68	-25	166	20	-40	-39	1	0	1	14
1984	3	103	-96	5	19	10	-3	1	1	1	0	1	2
1985	10	91	0	0	0	0	1	2	1	1	0	0	6
1986	2	0	44	0	-1,500	500	3	2	1	1	0	1	-49
1987	3	3	0	28	63	44	0	2	1	1	0	1	9
1988	2	0	0	20	0	-2	-1	2	1	1	0	1	1
1989	3	0	0	0	0	0	0	2	1	1	0	1	0
1990	0	0	0	0	0	0	-4	2	1	1	0	1	0
1991	3	1	0	0	42	91	1	2	1	1	0	1	9
1992	2	2	29	0	59	0	1	2	1	1	0	1	6
1993	1	1	0	10	22	0	14	2	1	1	0	1	3
1994	2	0	30	0	45	0	-3	2	1	1	0	0	5
Avg	3	19	-21	-69	-13	38	36	0	0	1	0	-1	0
Min	-14	0	-1,737	-3,806	-2,402	-959	-5	-40	-39	1	-1	-150	-219
Max	83	103	810	1,357	1,696	680	931	3	2	2	3	35	125

Table I-12d. CALSIM Simulated Yolo Bypass Inflow, Percentiles for 2001 and 2020 Baselines
(thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	0	0	0	0	0	0	35	37	52	41	49	19	
10	3	0	0	0	0	0	51	49	60	47	53	49	
20	12	0	0	0	25	27	68	54	62	47	54	53	
30	22	0	0	16	92	56	79	58	64	47	54	56	
40	34	0	13	109	275	122	94	60	65	47	54	57	
50	41	5	77	317	479	301	110	62	66	47	54	57	
60	49	7	152	442	1,070	761	137	66	66	47	54	57	
70	53	17	330	1,010	1,649	1,145	288	68	66	47	54	57	
80	57	69	1,339	5,039	3,534	2,641	618	73	66	47	54	103	
90	66	341	2,469	24,691	38,468	17,804	3,182	76	66	47	54	219	
Max	1,187	2,119	59,084	117,294	114,884	130,101	39,468	957	403	47	539	762	
Avg	69	96	1,906	6,405	9,016	5,933	1,440	84	72	47	77	117	1,498
B: 2020 Baseline													
Min	0	0	0	0	0	0	36	39	53	42	48	20	
10	3	0	0	0	0	0	51	52	61	48	53	49	
20	13	0	0	0	26	27	68	56	64	48	54	54	
30	23	0	10	59	135	60	81	60	65	48	54	57	
40	36	5	43	132	294	148	91	62	66	48	54	58	
50	43	9	108	342	529	316	114	65	67	48	54	58	
60	52	11	196	498	1,089	780	133	68	67	48	54	58	
70	56	36	412	1,085	1,694	1,169	308	70	67	48	54	58	
80	60	121	1,427	5,187	4,707	2,679	654	75	67	48	54	104	
90	62	415	2,480	21,362	38,616	18,090	3,239	78	67	48	54	215	
Max	1,217	2,222	58,988	117,292	113,384	130,267	40,318	917	367	48	540	769	
Avg	72	115	1,885	6,336	9,003	5,971	1,476	84	72	48	77	116	1,498
Comparison: B – A													
Min	0	0	0	0	0	0	1	2	1	1	-1	1	
10	0	0	0	0	0	0	0	3	1	1	0	0	
20	1	0	0	0	1	0	0	2	2	1	0	1	
30	1	0	10	43	43	4	2	2	1	1	0	1	
40	2	5	30	23	19	26	-3	2	1	1	0	1	
50	2	4	31	25	50	15	4	3	1	1	0	1	
60	3	4	44	56	19	19	-4	2	1	1	0	1	
70	3	19	82	75	45	24	20	2	1	1	0	1	
80	3	52	88	148	1,173	38	36	2	1	1	0	1	
90	-4	74	11	-3,329	148	286	57	2	1	1	0	-4	
Max	30	103	-96	-2	-1,500	166	850	-40	-36	1	1	7	
Avg	3	19	-21	-69	-13	38	36	0	0	1	0	-1	0

Table I-13a. CALSIM Simulated New Melones Reservoir Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	992	1,012	1,049	1,088	1,197	1,265	1,237	1,404	1,687	1,626	1,517	1,408	279
1923	1,377	1,398	1,470	1,536	1,589	1,622	1,608	1,692	1,756	1,690	1,578	1,478	278
1924	1,461	1,465	1,482	1,498	1,511	1,511	1,454	1,362	1,307	1,214	1,129	1,057	397
1925	1,038	1,052	1,074	1,097	1,234	1,318	1,320	1,435	1,514	1,459	1,362	1,270	244
1926	1,258	1,266	1,277	1,291	1,365	1,408	1,422	1,363	1,309	1,184	1,088	995	427
1927	990	1,011	1,070	1,123	1,262	1,336	1,391	1,479	1,601	1,523	1,427	1,340	261
1928	1,330	1,368	1,398	1,418	1,469	1,637	1,620	1,665	1,644	1,536	1,427	1,333	332
1929	1,324	1,335	1,347	1,359	1,377	1,384	1,346	1,299	1,263	1,157	1,072	985	361
1930	976	986	1,001	1,028	1,069	1,129	1,133	1,076	1,089	979	889	794	339
1931	800	820	834	853	872	887	857	783	759	685	606	560	297
1932	547	560	610	650	761	800	787	932	1,098	1,056	978	884	214
1933	878	888	911	930	948	961	934	893	932	842	758	701	233
1934	707	726	749	780	800	829	796	719	688	601	521	469	327
1935	449	456	470	509	534	583	641	831	977	913	832	739	238
1936	764	794	800	863	1,039	1,123	1,214	1,362	1,464	1,388	1,295	1,200	264
1937	1,191	1,208	1,229	1,261	1,358	1,453	1,439	1,588	1,661	1,570	1,474	1,370	291
1938	1,354	1,368	1,457	1,539	1,721	1,926	2,024	2,297	2,420	2,410	2,303	2,195	225
1939	1,970	1,970	1,970	1,970	1,970	1,993	1,923	1,773	1,702	1,566	1,430	1,314	609
1940	1,295	1,296	1,304	1,407	1,545	1,701	1,745	1,855	1,895	1,790	1,682	1,576	319
1941	1,550	1,560	1,599	1,653	1,739	1,837	1,799	1,933	2,031	1,970	1,864	1,750	281
1942	1,715	1,721	1,767	1,857	1,935	1,988	2,004	2,123	2,304	2,251	2,136	2,024	280
1943	1,947	1,970	1,970	1,970	1,970	2,030	2,105	2,150	2,201	2,107	1,996	1,877	324
1944	1,838	1,840	1,844	1,849	1,863	1,899	1,805	1,721	1,721	1,605	1,475	1,363	442
1945	1,350	1,388	1,416	1,456	1,588	1,661	1,625	1,698	1,820	1,736	1,615	1,511	309
1946	1,486	1,517	1,604	1,669	1,727	1,775	1,784	1,854	1,878	1,770	1,658	1,561	317
1947	1,543	1,566	1,586	1,602	1,630	1,679	1,633	1,553	1,493	1,358	1,259	1,166	467
1948	1,164	1,172	1,183	1,198	1,213	1,239	1,247	1,273	1,414	1,341	1,251	1,161	253
1949	1,153	1,171	1,188	1,207	1,230	1,275	1,266	1,294	1,315	1,223	1,130	1,038	277
1950	1,024	1,026	1,038	1,096	1,169	1,235	1,259	1,375	1,477	1,398	1,306	1,211	266
1951	1,201	1,482	1,874	1,970	1,970	2,030	1,997	1,982	1,968	1,869	1,768	1,664	333
1952	1,642	1,657	1,710	1,849	1,941	2,030	2,063	2,366	2,420	2,420	2,326	2,209	211
1953	1,970	1,970	1,970	1,970	1,970	2,007	1,940	1,857	1,955	1,889	1,778	1,674	281
1954	1,649	1,660	1,673	1,689	1,715	1,780	1,770	1,809	1,799	1,688	1,575	1,470	339
1955	1,447	1,459	1,479	1,511	1,535	1,565	1,524	1,472	1,480	1,358	1,259	1,156	368
1956	1,150	1,168	1,418	1,678	1,809	1,896	1,883	2,007	2,148	2,082	1,974	1,876	272
1957	1,846	1,856	1,868	1,884	1,922	1,982	1,878	1,860	1,929	1,831	1,728	1,615	314
1958	1,564	1,578	1,584	1,635	1,714	1,855	1,935	2,209	2,392	2,320	2,206	2,082	310
1959	1,970	1,970	1,970	1,970	1,970	2,003	1,913	1,755	1,690	1,560	1,428	1,321	592
1960	1,300	1,306	1,313	1,322	1,366	1,420	1,400	1,329	1,286	1,164	1,077	969	431
1961	936	959	982	997	1,016	1,038	1,014	953	904	822	763	713	301
1962	691	704	719	735	800	834	857	893	984	922	835	739	245
1963	768	800	800	858	989	1,044	1,051	1,255	1,385	1,322	1,234	1,146	239
1964	1,138	1,174	1,199	1,243	1,276	1,306	1,278	1,221	1,205	1,092	1,003	901	377
1965	887	915	1,154	1,359	1,473	1,541	1,587	1,665	1,799	1,754	1,665	1,565	234
1966	1,533	1,568	1,603	1,641	1,677	1,717	1,665	1,656	1,608	1,496	1,388	1,282	383
1967	1,270	1,286	1,371	1,478	1,550	1,657	1,682	1,876	2,194	2,228	2,124	2,011	183
1968	1,944	1,952	1,962	1,970	1,970	2,011	1,915	1,819	1,764	1,627	1,488	1,365	550
1969	1,351	1,379	1,392	1,673	1,872	2,019	2,149	2,420	2,420	2,410	2,295	2,163	257
1970	1,970	1,957	1,970	1,970	1,970	2,030	1,957	1,950	1,990	1,879	1,762	1,663	327
1971	1,641	1,670	1,736	1,793	1,839	1,894	1,824	1,808	1,898	1,810	1,694	1,593	305
1972	1,565	1,584	1,632	1,670	1,697	1,753	1,680	1,668	1,616	1,482	1,349	1,235	445
1973	1,225	1,240	1,275	1,391	1,535	1,641	1,607	1,713	1,784	1,684	1,575	1,477	307
1974	1,456	1,507	1,586	1,702	1,785	1,924	1,978	2,099	2,159	2,070	1,960	1,846	313
1975	1,814	1,828	1,850	1,876	1,942	2,030	1,979	2,004	2,173	2,090	1,982	1,866	307
1976	1,837	1,858	1,875	1,882	1,899	1,911	1,832	1,715	1,633	1,515	1,397	1,294	538
1977	1,282	1,289	1,291	1,286	1,282	1,275	1,220	1,137	1,114	1,033	964	890	330
1978	858	855	878	958	1,050	1,196	1,255	1,384	1,531	1,498	1,407	1,332	199
1979	1,316	1,336	1,362	1,437	1,559	1,684	1,658	1,769	1,794	1,687	1,581	1,481	313
1980	1,462	1,483	1,501	1,810	1,970	2,030	2,043	2,088	2,198	2,153	2,039	1,926	272
1981	1,906	1,912	1,929	1,970	1,970	2,003	1,925	1,791	1,704	1,563	1,434	1,332	593
1982	1,321	1,381	1,513	1,704	1,970	2,030	2,220	2,353	2,420	2,403	2,300	2,214	206
1983	1,970	1,970	1,970	1,970	1,970	2,030	2,040	2,174	2,420	2,420	2,390	2,270	150
1984	1,970	1,970	1,970	1,970	1,970	2,030	1,955	1,949	1,959	1,866	1,764	1,678	281
1985	1,664	1,702	1,740	1,756	1,794	1,837	1,795	1,735	1,620	1,489	1,362	1,261	534
1986	1,250	1,268	1,290	1,372	1,842	2,030	2,039	2,065	2,136	2,026	1,923	1,829	307
1987	1,804	1,816	1,829	1,824	1,829	1,850	1,777	1,640	1,562	1,453	1,350	1,271	506
1988	1,247	1,239	1,236	1,244	1,257	1,273	1,228	1,151	1,119	1,045	997	912	316
1989	890	883	885	892	911	1,000	993	953	940	851	783	736	257
1990	779	796	800	810	836	870	826	734	705	624	558	515	311
1991	508	513	535	539	547	590	537	509	507	432	361	326	211
1992	334	343	367	385	439	486	462	383	314	240	166	132	330
1993	123	124	148	297	404	572	595	742	836	849	784	736	100
1994	777	800	821	861	892	916	861	789	760	663	588	547	314
Avg	1,297	1,316	1,352	1,405	1,471	1,536	1,523	1,555	1,598	1,515	1,417	1,323	321
Min	123	124	148	297	404	486	462	383	314	240	166	132	100
Max	1,970	1,970	1,970	1,970	1,970	2,030	2,220	2,420	2,420	2,420	2,390	2,270	609

Table I-13b. CALSIM Simulated New Melones Reservoir Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	992	1,012	1,049	1,088	1,197	1,265	1,237	1,404	1,687	1,626	1,519	1,410	277
1923	1,379	1,400	1,472	1,538	1,591	1,623	1,609	1,691	1,755	1,689	1,577	1,478	277
1924	1,464	1,467	1,484	1,500	1,513	1,514	1,455	1,362	1,306	1,214	1,129	1,056	399
1925	1,037	1,051	1,073	1,096	1,234	1,318	1,318	1,432	1,511	1,456	1,359	1,267	244
1926	1,256	1,264	1,275	1,289	1,364	1,407	1,418	1,361	1,307	1,181	1,085	992	426
1927	987	1,008	1,067	1,120	1,260	1,334	1,389	1,477	1,600	1,521	1,426	1,339	261
1928	1,329	1,367	1,397	1,417	1,468	1,636	1,614	1,665	1,644	1,536	1,430	1,335	330
1929	1,326	1,337	1,350	1,361	1,379	1,386	1,345	1,295	1,258	1,152	1,069	983	362
1930	975	985	999	1,026	1,068	1,128	1,130	1,069	1,082	973	885	791	339
1931	800	820	834	853	872	887	856	782	758	685	606	560	296
1932	544	557	607	647	758	800	784	929	1,095	1,054	976	881	214
1933	876	886	908	928	945	958	931	890	929	839	756	699	232
1934	704	723	747	778	800	827	794	714	683	596	517	466	328
1935	445	452	466	505	537	586	644	832	978	914	833	740	238
1936	766	795	800	865	1,041	1,125	1,216	1,370	1,472	1,396	1,303	1,205	267
1937	1,196	1,212	1,234	1,265	1,363	1,457	1,443	1,590	1,663	1,572	1,476	1,371	292
1938	1,356	1,370	1,459	1,540	1,722	1,927	2,025	2,298	2,420	2,410	2,303	2,195	225
1939	1,970	1,970	1,970	1,970	1,970	1,993	1,923	1,773	1,702	1,568	1,433	1,316	607
1940	1,297	1,298	1,306	1,409	1,547	1,703	1,746	1,856	1,896	1,792	1,685	1,579	317
1941	1,553	1,562	1,601	1,655	1,742	1,839	1,801	1,936	2,033	1,972	1,866	1,752	281
1942	1,717	1,722	1,769	1,858	1,936	1,990	2,005	2,124	2,306	2,253	2,138	2,025	281
1943	1,948	1,970	1,970	1,970	1,970	2,030	2,105	2,150	2,201	2,107	1,996	1,877	324
1944	1,838	1,840	1,844	1,849	1,863	1,899	1,804	1,721	1,722	1,607	1,479	1,368	436
1945	1,355	1,393	1,421	1,461	1,593	1,667	1,630	1,709	1,829	1,748	1,629	1,523	306
1946	1,494	1,524	1,611	1,676	1,734	1,782	1,791	1,861	1,884	1,776	1,664	1,568	316
1947	1,549	1,572	1,593	1,608	1,636	1,684	1,638	1,555	1,496	1,363	1,263	1,170	468
1948	1,168	1,176	1,187	1,202	1,217	1,243	1,250	1,277	1,418	1,345	1,256	1,165	253
1949	1,157	1,175	1,193	1,211	1,234	1,279	1,268	1,298	1,318	1,226	1,134	1,042	276
1950	1,028	1,029	1,042	1,100	1,173	1,239	1,262	1,378	1,480	1,402	1,312	1,217	263
1951	1,207	1,488	1,880	1,970	1,970	2,030	1,997	1,982	1,968	1,869	1,768	1,664	333
1952	1,642	1,657	1,710	1,849	1,941	2,030	2,063	2,366	2,420	2,420	2,326	2,209	211
1953	1,970	1,970	1,970	1,970	1,970	2,007	1,940	1,857	1,955	1,889	1,780	1,676	279
1954	1,651	1,662	1,675	1,691	1,717	1,782	1,770	1,808	1,797	1,687	1,575	1,471	337
1955	1,450	1,462	1,482	1,514	1,538	1,568	1,525	1,470	1,479	1,359	1,261	1,159	366
1956	1,153	1,171	1,421	1,681	1,811	1,899	1,886	2,013	2,155	2,088	1,979	1,880	275
1957	1,849	1,858	1,870	1,886	1,924	1,984	1,880	1,860	1,929	1,831	1,730	1,618	311
1958	1,568	1,582	1,589	1,639	1,717	1,859	1,939	2,213	2,396	2,324	2,210	2,086	310
1959	1,970	1,970	1,970	1,970	1,970	2,003	1,913	1,755	1,689	1,558	1,425	1,318	595
1960	1,299	1,305	1,312	1,321	1,365	1,420	1,398	1,326	1,283	1,162	1,075	968	430
1961	935	958	981	996	1,015	1,037	1,012	952	902	821	761	712	300
1962	690	703	717	733	800	833	854	891	983	921	834	738	245
1963	767	799	800	858	989	1,043	1,050	1,251	1,380	1,318	1,230	1,144	236
1964	1,136	1,171	1,196	1,241	1,274	1,304	1,274	1,219	1,201	1,090	1,004	901	373
1965	887	915	1,154	1,359	1,474	1,541	1,587	1,661	1,795	1,750	1,661	1,563	232
1966	1,533	1,568	1,603	1,642	1,677	1,717	1,665	1,656	1,609	1,497	1,391	1,285	380
1967	1,273	1,289	1,374	1,481	1,553	1,659	1,685	1,879	2,196	2,230	2,127	2,014	182
1968	1,944	1,952	1,962	1,970	1,970	2,011	1,915	1,819	1,763	1,626	1,487	1,364	551
1969	1,353	1,381	1,394	1,675	1,874	2,021	2,151	2,420	2,420	2,410	2,295	2,163	257
1970	1,970	1,970	1,970	1,970	1,970	2,030	1,957	1,950	1,990	1,879	1,763	1,664	326
1971	1,643	1,671	1,737	1,794	1,840	1,895	1,825	1,809	1,899	1,811	1,696	1,594	305
1972	1,567	1,586	1,634	1,672	1,699	1,755	1,680	1,668	1,616	1,482	1,349	1,235	445
1973	1,225	1,240	1,275	1,391	1,535	1,641	1,607	1,711	1,782	1,682	1,575	1,477	305
1974	1,457	1,508	1,587	1,704	1,786	1,926	1,980	2,100	2,166	2,077	1,967	1,853	313
1975	1,821	1,835	1,857	1,883	1,949	2,030	1,979	2,004	2,173	2,089	1,981	1,865	308
1976	1,836	1,857	1,874	1,880	1,897	1,910	1,830	1,711	1,629	1,512	1,393	1,292	538
1977	1,280	1,287	1,290	1,284	1,281	1,273	1,219	1,135	1,112	1,032	963	888	331
1978	857	853	877	957	1,049	1,195	1,254	1,383	1,530	1,497	1,407	1,332	198
1979	1,317	1,336	1,362	1,438	1,560	1,685	1,659	1,771	1,797	1,689	1,585	1,484	313
1980	1,464	1,485	1,503	1,812	1,970	2,030	2,043	2,088	2,198	2,153	2,039	1,926	272
1981	1,906	1,912	1,929	1,970	1,970	2,003	1,921	1,791	1,704	1,564	1,436	1,335	586
1982	1,325	1,385	1,517	1,708	1,970	2,030	2,220	2,353	2,420	2,403	2,300	2,214	206
1983	1,970	1,970	1,970	1,970	1,970	2,030	2,040	2,174	2,420	2,420	2,391	2,270	150
1984	1,970	1,970	1,970	1,970	1,970	2,030	1,955	1,949	1,959	1,867	1,765	1,679	280
1985	1,666	1,703	1,741	1,757	1,796	1,838	1,795	1,735	1,619	1,487	1,361	1,260	535
1986	1,250	1,267	1,290	1,372	1,842	2,030	2,039	2,065	2,136	2,026	1,923	1,829	307
1987	1,804	1,816	1,829	1,824	1,829	1,850	1,776	1,637	1,560	1,451	1,349	1,270	506
1988	1,246	1,238	1,235	1,243	1,256	1,271	1,226	1,147	1,115	1,043	995	910	316
1989	888	882	883	890	909	998	991	951	938	849	781	736	255
1990	777	794	800	808	834	868	824	731	702	616	556	512	312
1991	506	511	532	537	544	588	534	507	506	431	359	324	210
1992	332	341	365	383	437	484	460	381	312	238	164	130	330
1993	115	116	141	289	397	564	587	734	824	837	779	736	88
1994	766	800	810	850	880	904	849	776	747	652	577	535	314
Avg	1,298	1,317	1,353	1,405	1,471	1,536	1,523	1,554	1,597	1,515	1,418	1,324	321
Min	115	116	141	289	397	484	460	381	312	238	164	130	100
Max	1,970	1,970	1,970	1,970	1,970	2,030	2,220	2,420	2,420	2,420	2,391	2,270	609

Table I-13c. CALSIM Simulated New Melones Reservoir Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	0	0	0	0	0	2	2
1923	2	2	2	2	2	1	1	-1	-1	-1	-1	0
1924	3	2	2	2	2	3	1	0	-1	0	0	-1
1925	-1	-1	-1	-1	0	0	-2	-3	-3	-3	-3	-3
1926	-2	-2	-2	-2	-1	-1	-4	-2	-2	-3	-3	-3
1927	-3	-3	-3	-3	-2	-2	-2	-2	-1	-2	-1	-1
1928	-1	-1	-1	-1	-1	-1	-6	0	0	0	3	2
1929	2	2	3	2	2	2	-1	-4	-5	-5	-3	-2
1930	-1	-1	-2	-2	-1	-1	-3	-7	-7	-6	-4	-3
1931	0	0	0	0	0	0	-1	-1	-1	0	0	0
1932	-3	-3	-3	-3	-3	0	-3	-3	-3	-2	-2	-3
1933	-2	-2	-3	-2	-3	-3	-3	-3	-3	-3	-2	-2
1934	-3	-3	-2	-2	0	-2	-2	-5	-5	-5	-4	-3
1935	-4	-4	-4	-4	3	3	3	1	1	1	1	1
1936	2	1	0	2	2	2	2	8	8	8	8	5
1937	5	4	5	4	5	4	4	2	2	2	2	1
1938	2	2	2	1	1	1	1	1	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	2	3	2
1940	2	2	2	2	2	2	1	1	1	2	3	3
1941	3	2	2	2	3	2	2	3	2	2	2	2
1942	2	1	2	1	1	2	1	1	2	2	2	1
1943	1	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	-1	0	1	2	4	5
1945	5	5	5	5	5	6	5	11	9	12	14	12
1946	8	7	7	7	7	7	7	7	6	6	6	7
1947	6	6	7	6	6	5	5	2	3	5	4	4
1948	4	4	4	4	4	4	3	4	4	4	5	4
1949	4	4	5	4	4	4	2	4	3	3	4	4
1950	4	3	4	4	4	4	3	3	3	4	6	6
1951	6	6	6	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	2	2
1954	2	2	2	2	2	2	0	-1	-2	-1	0	1
1955	3	3	3	3	3	3	1	-2	-1	1	2	3
1956	3	3	3	3	2	3	3	6	7	6	5	4
1957	3	2	2	2	2	2	2	0	0	0	2	3
1958	4	4	5	4	3	4	4	4	4	4	4	4
1959	0	0	0	0	0	0	0	0	-1	-2	-3	-3
1960	-1	-1	-1	-1	-1	0	-2	-3	-3	-2	-2	-1
1961	-1	-1	-1	-1	-1	-1	-2	-1	-2	-1	-2	-1
1962	-1	-1	-2	-2	0	-1	-3	-2	-1	-1	-1	-1
1963	-1	-1	0	0	0	-1	-1	-4	-5	-4	-4	-2
1964	-2	-3	-3	-2	-2	-2	-4	-2	-4	-2	1	0
1965	0	0	0	0	1	0	0	-4	-4	-4	-4	-2
1966	0	0	0	1	0	0	0	0	1	1	3	3
1967	3	3	3	3	3	2	3	3	2	2	3	3
1968	0	0	0	0	0	0	0	0	-1	-1	-1	-1
1969	2	2	2	2	2	2	2	0	0	0	0	0
1970	0	13	0	0	0	0	0	0	0	0	1	1
1971	2	1	1	1	1	1	1	1	1	1	2	1
1972	2	2	2	2	2	2	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	-2	-2	-2	0	0
1974	1	1	1	2	1	2	2	1	7	7	7	7
1975	7	7	7	7	7	0	0	0	0	-1	-1	-1
1976	-1	-1	-1	-2	-2	-1	-2	-4	-4	-3	-4	-2
1977	-2	-2	-1	-2	-1	-2	-1	-2	-2	-1	-1	-2
1978	-1	-2	-1	-1	-1	-1	-1	-1	-1	-1	0	0
1979	1	0	0	1	1	1	1	2	3	2	4	3
1980	2	2	2	2	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	-4	0	0	1	2	3
1982	4	4	4	4	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	1	0
1984	0	0	0	0	0	0	0	0	0	1	1	1
1985	2	1	1	1	2	1	0	0	-1	-2	-1	-1
1986	0	-1	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	-1	-3	-2	-2	-1	-1
1988	-1	-1	-1	-1	-1	-2	-2	-4	-4	-2	-2	-2
1989	-2	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	0
1990	-2	-2	0	-2	-2	-2	-2	-3	-3	-8	-2	-3
1991	-2	-2	-3	-2	-3	-2	-3	-2	-1	-1	-2	-2
1992	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
1993	-8	-8	-7	-8	-7	-8	-8	-8	-12	-12	-5	0
1994	-11	0	-11	-11	-12	-12	-12	-13	-13	-11	-11	-12
Avg	1	1	1	0	0	0	0	-1	-1	0	1	1
Min	-11	-8	-11	-11	-12	-12	-12	-13	-13	-12	-11	-12
Max	8	13	7	7	7	7	7	11	9	12	14	12

Table I-13d. CALSIM Simulated Monthly Cumulative Distribution of New Melones Reservoir Storage for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	123	124	148	297	404	486	462	383	314	240	166	132
10	707	726	749	780	800	834	826	789	836	822	758	701
20	887	888	911	958	1,039	1,123	1,133	1,137	1,114	1,045	978	890
30	1,038	1,052	1,154	1,198	1,234	1,275	1,259	1,329	1,315	1,223	1,130	1,057
40	1,225	1,240	1,277	1,322	1,366	1,420	1,422	1,435	1,514	1,453	1,349	1,235
50	1,316	1,336	1,392	1,456	1,550	1,657	1,625	1,665	1,644	1,536	1,427	1,332
60	1,377	1,459	1,482	1,635	1,714	1,775	1,770	1,735	1,756	1,627	1,517	1,408
70	1,543	1,566	1,603	1,689	1,809	1,896	1,832	1,819	1,878	1,770	1,665	1,565
80	1,715	1,721	1,829	1,849	1,935	2,003	1,940	1,950	2,031	1,970	1,864	1,750
90	1,944	1,952	1,962	1,970	1,970	2,030	2,024	2,123	2,201	2,228	2,124	2,011
Max	1,970	1,970	1,970	1,970	1,970	2,030	2,220	2,420	2,420	2,420	2,390	2,270
Avg	1,297	1,316	1,352	1,405	1,471	1,536	1,523	1,555	1,598	1,515	1,417	1,323
B: 2020 Baseline												
Min	115	116	141	289	397	484	460	381	312	238	164	130
10	704	723	747	778	800	833	824	782	824	821	756	699
20	887	886	908	957	1,041	1,125	1,130	1,135	1,112	1,043	976	888
30	1,037	1,051	1,154	1,202	1,234	1,273	1,262	1,326	1,318	1,226	1,134	1,056
40	1,225	1,240	1,275	1,321	1,365	1,420	1,418	1,432	1,511	1,451	1,349	1,235
50	1,317	1,337	1,394	1,461	1,553	1,659	1,630	1,665	1,644	1,536	1,426	1,332
60	1,379	1,462	1,484	1,639	1,717	1,782	1,770	1,735	1,755	1,626	1,519	1,410
70	1,549	1,568	1,603	1,691	1,811	1,899	1,830	1,819	1,884	1,776	1,664	1,568
80	1,717	1,722	1,829	1,849	1,936	2,003	1,940	1,950	2,033	1,972	1,866	1,752
90	1,944	1,952	1,962	1,970	1,970	2,030	2,025	2,124	2,201	2,230	2,127	2,014
Max	1,970	1,970	1,970	1,970	1,970	2,030	2,220	2,420	2,420	2,420	2,391	2,270
Avg	1,298	1,317	1,353	1,405	1,471	1,536	1,523	1,554	1,597	1,515	1,418	1,324
Comparison: B – A												
Min	-8	-8	-7	-8	-7	-2	-2	-2	-2	-2	-2	-2
10	-3	-3	-2	-2	0	-1	-2	-7	-12	-1	-2	-2
20	0	-2	-3	-1	2	2	-3	-2	-2	-2	-2	-2
30	-1	-1	0	4	0	-2	3	-3	3	3	4	-1
40	0	0	-2	-1	-1	0	-4	-3	-3	-2	0	0
50	1	1	2	5	3	2	5	0	0	0	-1	0
60	2	3	2	4	3	7	0	0	-1	-1	2	2
70	6	2	0	2	2	3	-2	0	6	6	-1	3
80	2	1	0	0	1	0	0	0	2	2	2	2
90	0	0	0	0	0	0	1	1	0	2	3	3
Max	0	0	0	0	0	0	0	0	0	0	1	0
Avg	1	1	1	0	0	0	0	-1	-1	0	1	1

Table I-14a. CALSIM Simulated Stanislaus River Flow below Goodwin Dam, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	572	365	349	232	493	465	1,486	2,067	897	1,027	1,087	674	588
1923	845	432	417	374	383	483	1,693	1,838	919	1,017	1,063	660	613
1924	776	450	435	393	392	220	657	688	780	811	610	364	398
1925	462	303	301	216	390	341	1,272	1,304	897	930	896	647	481
1926	567	379	364	251	255	234	805	841	702	928	523	395	378
1927	462	309	306	219	383	438	1,295	1,536	897	930	896	648	503
1928	671	405	390	348	353	439	1,445	1,562	897	993	977	634	552
1929	643	406	391	349	351	225	692	801	813	878	547	376	391
1930	460	303	301	216	224	225	664	788	856	908	525	393	355
1931	343	300	298	213	221	215	594	609	678	646	621	373	309
1932	263	295	293	209	216	316	931	1,187	897	930	896	656	430
1933	564	358	343	226	230	225	591	773	668	650	644	399	343
1934	214	300	296	210	216	217	565	631	688	729	550	382	302
1935	339	295	293	209	352	312	898	1,071	897	930	896	665	433
1936	325	354	339	222	784	322	990	1,240	897	930	896	656	480
1937	566	364	349	232	456	442	1,333	1,550	897	930	896	674	525
1938	674	409	394	352	682	587	2,005	2,113	2,959	1,295	1,156	835	812
1939	4,096	578	682	740	757	387	1,278	1,593	1,094	1,213	1,185	686	867
1940	601	388	385	373	379	508	1,846	1,937	1,162	1,014	1,052	687	626
1941	847	474	459	417	426	533	1,986	2,092	1,437	963	1,058	730	691
1942	984	500	484	442	451	587	2,005	2,113	1,500	1,295	1,156	835	747
1943	1,718	553	1,011	2,883	2,369	3,599	2,005	2,113	1,500	1,295	1,156	835	1,270
1944	991	553	538	496	501	473	1,576	1,968	1,187	1,334	1,340	770	711
1945	699	440	425	383	391	500	1,801	1,887	1,074	1,194	1,237	686	649
1946	864	466	451	409	418	510	1,860	1,953	1,190	1,154	1,159	675	672
1947	782	477	462	420	425	250	861	1,082	1,050	1,143	586	401	480
1948	464	325	321	234	240	321	981	1,233	897	945	969	656	460
1949	566	363	348	231	240	319	1,018	1,231	897	1,031	1,015	648	479
1950	563	361	346	229	250	323	993	1,244	897	956	950	656	471
1951	566	364	409	560	2,142	1,113	1,955	2,058	1,377	958	920	685	785
1952	781	494	479	451	442	1,124	2,005	2,113	3,633	1,295	1,156	835	895
1953	4,121	660	894	1,423	1,172	527	1,955	2,058	1,377	1,127	1,121	692	1,037
1954	816	494	479	437	465	484	1,704	1,827	949	1,128	1,117	662	639
1955	803	451	436	394	399	239	740	851	878	1,031	605	403	437
1956	465	314	529	453	229	569	2,005	2,113	1,491	1,183	1,079	763	678
1957	812	536	521	479	488	516	1,890	1,986	1,249	1,004	1,040	687	678
1958	822	482	467	425	434	587	2,005	2,113	1,500	1,295	1,156	835	733
1959	2,193	706	694	865	1,431	392	1,323	1,559	1,042	1,134	1,093	670	790
1960	625	392	388	376	379	228	665	849	897	992	476	388	403
1961	452	304	302	217	225	215	650	699	932	670	444	375	332
1962	461	295	293	209	219	312	921	1,266	897	976	956	642	451
1963	317	354	339	222	389	321	976	1,245	897	930	896	654	456
1964	565	363	348	230	232	232	658	817	819	922	575	401	374
1965	464	307	434	347	226	504	1,824	1,913	1,120	934	897	691	585
1966	876	471	456	414	422	428	1,445	1,453	1,011	1,130	1,100	634	596
1967	642	401	386	338	347	587	2,005	2,113	1,500	1,295	1,156	835	702
1968	1,428	553	538	677	1,564	399	1,410	1,463	1,009	1,122	1,083	652	718
1969	643	400	396	384	497	587	2,005	2,424	4,073	1,295	1,156	835	886
1970	4,023	553	1,152	4,949	2,662	1,256	1,972	2,077	1,411	1,067	1,056	695	1,382
1971	822	497	482	440	449	515	1,888	1,983	1,245	1,167	1,163	680	686
1972	792	482	467	425	426	362	1,158	1,316	1,033	1,099	1,056	633	561
1973	578	362	359	346	423	479	1,642	1,895	910	950	980	664	580
1974	840	446	430	388	397	556	2,005	2,113	1,616	1,097	1,019	774	706
1975	991	523	508	466	475	868	2,005	2,113	1,489	1,152	1,057	791	753
1976	974	531	516	474	473	339	1,027	1,196	960	1,018	999	453	543
1977	530	346	344	332	340	289	689	846	834	547	406	338	353
1978	460	298	295	297	270	399	1,219	1,289	897	930	918	674	481
1979	628	394	378	308	357	478	1,636	1,901	909	934	946	671	577
1980	869	445	430	416	2,043	1,150	2,005	2,113	1,500	1,295	1,156	835	859
1981	991	553	538	539	660	393	1,339	1,541	1,014	1,127	1,081	647	630
1982	616	393	390	377	1,199	3,246	2,005	2,113	1,500	1,295	1,164	835	914
1983	5,235	2,676	3,057	4,246	4,849	5,646	2,005	2,113	4,757	3,073	1,356	1,424	2,437
1984	5,716	3,451	4,824	2,725	2,477	1,520	2,004	2,112	1,472	1,183	1,204	694	1,782
1985	799	503	488	446	450	373	1,154	1,658	985	1,122	1,104	636	589
1986	695	373	370	357	367	3,004	2,005	2,113	1,500	1,295	1,156	835	854
1987	977	553	538	496	499	329	981	1,186	991	1,039	1,013	376	543
1988	525	343	341	320	325	239	652	677	852	841	432	365	358
1989	462	300	297	213	220	223	597	660	835	853	544	400	339
1990	212	298	296	211	219	217	585	623	740	615	632	382	304
1991	212	295	293	209	216	217	566	582	563	577	607	384	285
1992	210	295	293	209	213	216	558	573	660	643	447	377	284
1993	217	295	293	209	219	310	885	980	897	930	896	674	412
1994	314	351	336	220	222	217	745	657	661	720	516	373	322
Avg	938	485	524	551	622	633	1,337	1,485	1,192	1,041	924	625	626
Min	210	295	293	209	213	215	558	573	563	547	406	338	284
Max	5,716	3,451	4,824	4,949	4,849	5,646	2,005	2,424	4,757	3,073	1,356	1,424	2,437

Table I-14b. CALSIM Simulated Stanislaus River Flow below Goodwin Dam, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	572	365	349	232	493	465	1,486	2,067	897	1,016	1,066	674	586
1923	845	432	417	374	383	484	1,698	1,833	920	1,019	1,052	655	612
1924	747	450	435	393	392	220	675	709	787	807	610	364	399
1925	462	303	301	216	390	340	1,291	1,331	897	930	896	642	483
1926	565	379	364	250	255	234	835	812	720	934	523	395	379
1927	462	309	306	219	383	437	1,290	1,522	897	930	896	648	502
1928	671	404	389	347	352	439	1,445	1,547	897	974	952	634	549
1929	642	405	390	348	351	225	742	857	826	881	517	374	397
1930	459	303	301	216	224	225	679	858	855	903	492	389	357
1931	312	300	298	213	221	215	602	619	682	634	611	373	307
1932	308	295	293	209	216	316	931	1,186	897	930	896	656	432
1933	564	358	343	226	230	225	591	773	678	648	634	399	343
1934	214	300	296	210	216	217	565	673	695	732	529	381	304
1935	354	295	293	209	219	312	899	1,108	897	930	896	661	428
1936	324	354	339	222	784	322	990	1,140	897	930	896	667	475
1937	569	364	349	232	456	443	1,340	1,580	897	930	896	674	528
1938	676	410	395	353	682	587	2,005	2,113	2,986	1,295	1,156	835	813
1939	4,096	578	682	740	757	387	1,278	1,593	1,090	1,193	1,162	705	865
1940	601	388	385	373	379	508	1,847	1,938	1,164	1,010	1,037	687	625
1941	847	475	460	418	426	533	1,987	2,094	1,440	964	1,060	730	692
1942	984	500	485	443	451	587	2,005	2,113	1,500	1,295	1,156	835	748
1943	1,718	578	1,013	2,883	2,369	3,599	2,005	2,113	1,500	1,295	1,156	835	1,272
1944	991	553	538	496	501	473	1,576	1,968	1,178	1,305	1,308	750	706
1945	699	440	425	383	391	501	1,808	1,895	1,087	1,160	1,198	698	647
1946	920	468	453	411	419	511	1,865	1,958	1,200	1,154	1,147	676	677
1947	784	478	463	421	425	251	886	1,109	1,039	1,118	588	401	482
1948	464	326	323	235	241	321	982	1,233	897	942	954	656	459
1949	566	363	348	231	240	319	1,048	1,203	910	1,031	1,004	648	479
1950	563	361	346	229	250	323	994	1,244	897	937	924	656	468
1951	566	365	409	658	2,142	1,113	1,955	2,058	1,377	958	920	685	791
1952	781	494	479	451	442	1,124	2,005	2,113	3,633	1,295	1,156	835	895
1953	4,121	660	894	1,423	1,172	527	1,955	2,058	1,377	1,112	1,099	692	1,035
1954	816	494	479	437	472	485	1,708	1,822	956	1,120	1,099	657	638
1955	776	451	436	394	399	240	760	903	866	1,001	588	401	436
1956	464	315	529	453	230	570	2,005	2,113	1,492	1,187	1,081	771	679
1957	843	537	522	480	488	516	1,891	1,987	1,252	985	1,014	683	677
1958	803	483	468	426	440	587	2,005	2,113	1,500	1,295	1,156	835	733
1959	2,256	706	694	865	1,431	392	1,323	1,559	1,063	1,147	1,097	667	796
1960	600	392	388	376	379	228	680	872	893	982	476	387	403
1961	451	304	302	217	225	215	658	705	924	669	444	375	332
1962	461	295	293	209	219	312	951	1,236	897	978	947	642	451
1963	317	354	339	222	387	321	976	1,303	897	930	896	648	459
1964	563	363	348	230	232	232	691	787	846	894	538	401	371
1965	464	307	434	347	226	504	1,825	1,913	1,120	934	897	683	585
1966	839	471	456	414	422	428	1,445	1,454	1,009	1,113	1,077	634	591
1967	642	401	386	338	347	587	2,005	2,113	1,500	1,295	1,156	835	702
1968	1,471	553	538	677	1,564	399	1,410	1,463	1,024	1,126	1,078	645	721
1969	601	400	396	384	497	587	2,005	2,457	4,073	1,295	1,156	835	886
1970	3,600	764	1,368	4,949	2,662	1,256	1,972	2,077	1,411	1,064	1,042	695	1,381
1971	822	497	482	440	449	515	1,889	1,984	1,246	1,165	1,151	680	685
1972	792	482	467	425	426	362	1,178	1,327	1,038	1,096	1,049	626	562
1973	578	363	359	347	423	479	1,643	1,894	910	949	966	660	579
1974	821	446	431	388	397	556	2,005	2,113	1,511	1,099	1,020	774	699
1975	991	523	508	466	475	983	2,005	2,113	1,490	1,162	1,064	794	761
1976	974	533	518	476	475	338	1,042	1,218	967	1,015	991	431	544
1977	528	346	343	331	338	289	691	848	837	541	406	338	353
1978	460	298	295	297	270	397	1,217	1,286	897	930	896	674	479
1979	627	393	378	307	357	478	1,638	1,900	909	930	929	674	576
1980	883	445	430	416	2,077	1,150	2,005	2,113	1,500	1,295	1,156	835	862
1981	991	553	538	539	660	393	1,339	1,541	1,015	1,113	1,062	633	627
1982	601	393	390	377	1,266	3,246	2,005	2,113	1,500	1,295	1,156	835	917
1983	5,665	2,242	3,057	4,246	4,849	5,646	2,005	2,113	4,757	3,073	1,345	1,436	2,437
1984	5,716	3,451	4,824	2,725	2,477	1,520	2,004	2,112	1,472	1,171	1,197	694	1,781
1985	799	503	488	446	450	373	1,154	1,664	1,002	1,127	1,103	629	590
1986	689	373	370	358	367	3,000	2,005	2,113	1,500	1,295	1,156	835	853
1987	977	553	538	496	499	329	998	1,206	989	1,025	1,014	376	545
1988	525	343	341	320	325	246	662	699	864	806	432	365	359
1989	462	300	297	213	220	223	600	669	832	845	549	400	339
1990	212	298	296	211	219	217	594	634	744	690	544	382	305
1991	212	295	293	209	216	217	566	582	540	577	624	384	285
1992	210	295	293	209	213	216	558	573	663	643	447	377	284
1993	322	295	293	209	219	310	885	980	897	930	896	674	418
1994	314	351	336	220	222	217	763	671	659	693	516	373	323
Avg	940	482	527	553	621	635	1,343	1,490	1,193	1,037	915	624	627
Min	210	295	293	209	213	215	558	573	540	541	406	338	284
Max	5,716	3,451	4,824	4,949	4,849	5,646	2,005	2,457	4,757	3,073	1,345	1,436	2,437

Table I-14c. CALSIM Simulated Stanislaus River Flow below Goodwin Dam, 2020 Baseline minus 2001 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	0	0	0	0	0	0	0	-11	-21	0	-2
1923	0	0	0	0	0	1	5	-5	1	2	-11	-5	-1
1924	-29	0	0	0	0	0	18	21	7	-4	0	0	1
1925	0	0	0	0	0	-1	19	27	0	0	0	-5	2
1926	-2	0	0	-1	0	0	30	-29	18	6	0	0	1
1927	0	0	0	0	0	-1	-5	-14	0	0	0	0	-1
1928	0	-1	-1	-1	-1	0	0	-15	0	-19	-25	0	-4
1929	-1	-1	-1	-1	0	0	50	56	13	3	-30	-2	5
1930	-1	0	0	0	0	0	15	70	-1	-5	-33	-4	3
1931	-31	0	0	0	0	0	8	10	4	-12	-10	0	-2
1932	45	0	0	0	0	0	0	-1	0	0	0	0	3
1933	0	0	0	0	0	0	0	0	10	-2	-10	0	0
1934	0	0	0	0	0	0	0	42	7	3	-21	-1	2
1935	15	0	0	0	-133	0	1	37	0	0	0	-4	-4
1936	-1	0	0	0	0	0	0	-100	0	0	0	11	-6
1937	3	0	0	0	0	1	7	30	0	0	0	0	3
1938	2	1	1	1	0	0	0	0	27	0	0	0	2
1939	0	0	0	0	0	0	0	0	-4	-20	-23	19	-2
1940	0	0	0	0	0	0	1	1	2	-4	-15	0	-1
1941	0	1	1	1	0	0	1	2	3	1	2	0	1
1942	0	0	1	1	0	0	0	0	0	0	0	0	0
1943	0	25	2	0	0	0	0	0	0	0	0	0	2
1944	0	0	0	0	0	0	0	0	-9	-29	-32	-20	-5
1945	0	0	0	0	0	1	7	8	13	-34	-39	12	-2
1946	56	2	2	2	1	1	5	5	10	0	-12	1	4
1947	2	1	1	1	0	1	25	27	-11	-25	2	0	1
1948	0	1	2	1	1	0	1	0	0	-3	-15	0	-1
1949	0	0	0	0	0	0	30	-28	13	0	-11	0	0
1950	0	0	0	0	0	0	1	0	0	-19	-26	0	-3
1951	0	1	0	98	0	0	0	0	0	0	0	0	6
1952	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	-15	-22	0	-2
1954	0	0	0	0	7	1	4	-5	7	-8	-18	-5	-1
1955	-27	0	0	0	0	1	20	52	-12	-30	-17	-2	-1
1956	-1	1	0	0	1	1	0	0	1	4	2	8	1
1957	31	1	1	1	0	0	1	1	3	-19	-26	-4	-1
1958	-19	1	1	1	6	0	0	0	0	0	0	0	-1
1959	63	0	0	0	0	0	0	0	21	13	4	-3	6
1960	-25	0	0	0	0	0	15	23	-4	-10	0	-1	0
1961	-1	0	0	0	0	0	8	6	-8	-1	0	0	0
1962	0	0	0	0	0	0	30	-30	0	2	-9	0	0
1963	0	0	0	0	-2	0	0	58	0	0	0	-6	3
1964	-2	0	0	0	0	0	33	-30	27	-28	-37	0	-2
1965	0	0	0	0	0	0	1	0	0	0	0	-8	0
1966	-37	0	0	0	0	0	0	1	-2	-17	-23	0	-5
1967	0	0	0	0	0	0	0	0	0	0	0	0	0
1968	43	0	0	0	0	0	0	0	15	4	-5	-7	3
1969	-42	0	0	0	0	0	0	33	0	0	0	0	-1
1970	-423	211	216	0	0	0	0	0	0	-3	-14	0	-1
1971	0	0	0	0	0	0	1	1	1	-2	-12	0	-1
1972	0	0	0	0	0	0	20	11	5	-3	-7	-7	1
1973	0	1	0	1	0	0	1	-1	0	-1	-14	-4	-1
1974	-19	0	1	0	0	0	0	0	-105	2	1	0	-7
1975	0	0	0	0	0	115	0	0	1	10	7	3	8
1976	0	2	2	2	2	-1	15	22	7	-3	-8	-22	1
1977	-2	0	-1	-1	-2	0	2	2	3	-6	0	0	0
1978	0	0	0	0	0	-2	-2	-3	0	0	-22	0	-2
1979	-1	-1	0	-1	0	0	2	-1	0	-4	-17	3	-1
1980	14	0	0	0	34	0	0	0	0	0	0	0	3
1981	0	0	0	0	0	0	0	0	1	-14	-19	-14	-3
1982	-15	0	0	0	67	0	0	0	0	0	-8	0	2
1983	430	-434	0	0	0	0	0	0	0	0	-11	12	1
1984	0	0	0	0	0	0	0	0	0	-12	-7	0	-1
1985	0	0	0	0	0	0	0	6	17	5	-1	-7	1
1986	-6	0	0	1	0	-4	0	0	0	0	0	0	-1
1987	0	0	0	0	0	0	17	20	-2	-14	1	0	1
1988	0	0	0	0	0	7	10	22	12	-35	0	0	1
1989	0	0	0	0	0	0	3	9	-3	-8	5	0	0
1990	0	0	0	0	0	0	9	11	4	75	-88	0	1
1991	0	0	0	0	0	0	0	0	-23	0	17	0	0
1992	0	0	0	0	0	0	0	0	3	0	0	0	0
1993	105	0	0	0	0	0	0	0	0	0	0	0	6
1994	0	0	0	0	0	0	18	14	-2	-27	0	0	0
Avg	2	-3	3	2	-1	2	6	5	1	-4	-9	-1	0
Min	-423	-434	-1	-1	-133	-4	-5	-100	-105	-35	-88	-22	-7
Max	430	211	216	98	67	115	50	70	27	75	17	19	8

Table I-14d. CALSIM Simulated Monthly Cumulative Distribution of Stanislaus River Flows below Goodwin Dam for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	210	295	293	209	213	215	558	573	563	547	406	338	
10	314	298	295	210	219	217	597	660	702	670	523	376	
20	461	307	306	220	230	234	692	841	856	922	607	395	
30	525	354	344	232	325	312	921	1,186	897	930	896	633	
40	566	364	364	332	367	329	1,018	1,245	897	950	918	648	
50	642	394	391	373	392	399	1,323	1,541	949	1,014	999	660	
60	776	440	430	393	426	473	1,576	1,838	1,033	1,067	1,056	674	
70	816	474	462	425	456	508	1,846	1,968	1,187	1,128	1,087	686	
80	876	503	508	466	501	587	2,004	2,112	1,472	1,183	1,156	763	
90	1,428	553	538	677	1,431	1,124	2,005	2,113	1,500	1,295	1,159	835	
Max	5,716	3,451	4,824	4,949	4,849	5,646	2,005	2,424	4,757	3,073	1,356	1,424	
Avg	938	485	524	551	622	633	1,337	1,485	1,192	1,041	924	625	626
B: 2020 Baseline													
Min	210	295	293	209	213	215	558	573	540	541	406	338	
10	314	298	295	210	219	217	602	673	720	690	516	375	
20	461	307	306	220	230	234	742	857	864	903	588	395	
30	525	354	343	232	270	312	931	1,140	897	930	896	626	
40	566	364	364	331	367	329	1,042	1,244	897	942	897	645	
50	627	393	390	373	392	397	1,323	1,541	956	1,001	991	657	
60	747	440	431	393	426	473	1,576	1,833	1,038	1,064	1,049	674	
70	816	475	463	425	456	508	1,847	1,968	1,178	1,120	1,078	685	
80	920	503	508	466	501	587	2,004	2,112	1,472	1,171	1,156	750	
90	1,471	553	538	677	1,431	1,124	2,005	2,113	1,500	1,295	1,156	835	
Max	5,716	3,451	4,824	4,949	4,849	5,646	2,005	2,457	4,757	3,073	1,345	1,436	
Avg	940	482	527	553	621	635	1,343	1,490	1,193	1,037	915	624	627
Comparison: B – A													
Min	0	0	0	0	0	0	0	0	-23	-6	0	0	
10	0	0	0	0	0	0	5	13	18	20	-7	-1	
20	0	0	0	0	0	0	50	16	8	-19	-19	0	
30	0	0	-1	0	-55	0	10	-46	0	0	0	-7	
40	0	0	0	-1	0	0	24	-1	0	-8	-21	-3	
50	-15	-1	-1	0	0	-2	0	0	7	-13	-8	-3	
60	-29	0	1	0	0	0	0	-5	5	-3	-7	0	
70	0	1	1	0	0	0	1	0	-9	-8	-9	-1	
80	44	0	0	0	0	0	0	0	0	-12	0	-13	
90	43	0	0	0	0	0	0	0	0	0	-3	0	
Max	0	0	0	0	0	0	0	33	0	0	-11	12	
Avg	2	-3	3	2	-1	2	6	5	1	-4	-9	-1	0

Table I-15a. CALSIM Simulated New Don Pedro Reservoir Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	1,345	1,294	1,295	1,382	1,641	1,690	1,703	1,880	2,030	1,984	1,845	1,753	277
1923	1,690	1,657	1,690	1,690	1,690	1,690	1,697	1,740	1,756	1,694	1,559	1,488	268
1924	1,441	1,393	1,357	1,345	1,351	1,342	1,316	1,251	1,145	1,041	942	888	428
1925	866	858	960	1,035	1,215	1,342	1,439	1,489	1,602	1,522	1,384	1,312	290
1926	1,268	1,225	1,197	1,203	1,273	1,342	1,445	1,511	1,428	1,298	1,175	1,111	400
1927	1,072	1,083	1,144	1,178	1,429	1,562	1,662	1,675	1,868	1,802	1,663	1,586	282
1928	1,536	1,529	1,537	1,557	1,613	1,690	1,703	1,778	1,755	1,615	1,471	1,393	385
1929	1,339	1,292	1,259	1,253	1,271	1,299	1,340	1,378	1,405	1,307	1,211	1,153	252
1930	1,117	1,086	1,121	1,159	1,210	1,298	1,355	1,361	1,375	1,283	1,192	1,143	232
1931	1,113	1,093	1,152	1,183	1,207	1,193	1,136	1,068	966	853	757	710	426
1932	678	650	772	933	1,194	1,301	1,291	1,345	1,477	1,438	1,309	1,232	245
1933	1,175	1,119	1,074	1,071	1,129	1,178	1,183	1,169	1,215	1,113	1,001	941	274
1934	893	859	903	942	1,003	1,087	1,065	988	909	799	705	658	407
1935	632	623	699	844	983	1,095	1,263	1,349	1,515	1,409	1,271	1,186	329
1936	1,134	1,090	1,056	1,117	1,497	1,648	1,699	1,814	1,980	1,889	1,746	1,659	321
1937	1,600	1,548	1,516	1,520	1,690	1,690	1,690	1,712	1,818	1,993	1,868	1,728	349
1938	1,591	1,546	1,690	1,690	1,690	1,690	1,690	1,730	2,025	2,030	1,903	1,773	252
1939	1,690	1,656	1,645	1,656	1,690	1,690	1,706	1,663	1,557	1,428	1,309	1,254	452
1940	1,237	1,209	1,263	1,432	1,690	1,690	1,709	1,784	1,932	1,780	1,637	1,549	383
1941	1,496	1,449	1,538	1,690	1,690	1,690	1,690	1,780	2,007	1,991	1,851	1,755	252
1942	1,688	1,645	1,690	1,690	1,690	1,690	1,713	1,750	1,957	1,971	1,831	1,733	224
1943	1,665	1,664	1,690	1,690	1,690	1,690	1,712	1,769	1,922	1,846	1,707	1,620	302
1944	1,566	1,519	1,484	1,484	1,584	1,690	1,674	1,720	1,687	1,575	1,432	1,352	368
1945	1,306	1,316	1,432	1,453	1,690	1,690	1,691	1,734	1,914	1,860	1,713	1,620	294
1946	1,598	1,592	1,690	1,690	1,690	1,690	1,690	1,694	1,749	1,597	1,448	1,361	388
1947	1,308	1,289	1,403	1,408	1,448	1,487	1,516	1,498	1,421	1,290	1,166	1,102	414
1948	1,082	1,055	1,090	1,106	1,101	1,119	1,156	1,243	1,401	1,294	1,153	1,079	322
1949	1,033	988	988	984	1,002	1,158	1,217	1,240	1,257	1,115	971	896	361
1950	848	805	801	827	1,002	1,123	1,186	1,228	1,317	1,191	1,053	975	342
1951	945	1,329	1,690	1,690	1,690	1,690	1,658	1,615	1,635	1,481	1,337	1,248	410
1952	1,195	1,157	1,290	1,579	1,690	1,690	1,690	1,873	2,030	2,030	1,901	1,773	257
1953	1,690	1,642	1,638	1,690	1,690	1,690	1,691	1,696	1,725	1,695	1,561	1,487	238
1954	1,441	1,405	1,380	1,395	1,466	1,642	1,702	1,789	1,798	1,658	1,510	1,431	367
1955	1,382	1,343	1,333	1,383	1,467	1,530	1,539	1,576	1,536	1,409	1,284	1,220	356
1956	1,181	1,151	1,682	1,690	1,690	1,690	1,686	1,780	2,030	2,030	1,892	1,773	257
1957	1,690	1,644	1,614	1,616	1,690	1,690	1,675	1,717	1,848	1,722	1,580	1,500	348
1958	1,456	1,415	1,412	1,449	1,671	1,690	1,690	1,882	2,030	2,018	1,888	1,773	257
1959	1,690	1,637	1,588	1,619	1,690	1,690	1,695	1,657	1,570	1,440	1,317	1,275	420
1960	1,233	1,202	1,220	1,248	1,342	1,437	1,491	1,500	1,414	1,306	1,213	1,168	332
1961	1,139	1,116	1,147	1,189	1,211	1,203	1,173	1,112	1,026	922	832	785	388
1962	754	726	736	762	988	1,140	1,221	1,249	1,413	1,339	1,203	1,130	283
1963	1,092	1,052	1,081	1,120	1,326	1,368	1,457	1,577	1,841	1,803	1,671	1,594	247
1964	1,547	1,557	1,601	1,616	1,642	1,646	1,652	1,650	1,660	1,541	1,427	1,370	290
1965	1,335	1,331	1,690	1,690	1,690	1,690	1,713	1,769	1,921	1,931	1,826	1,743	178
1966	1,677	1,690	1,690	1,690	1,690	1,690	1,686	1,644	1,523	1,378	1,233	1,162	524
1967	1,116	1,111	1,304	1,505	1,664	1,690	1,690	1,830	2,030	2,030	1,914	1,773	257
1968	1,690	1,639	1,613	1,626	1,690	1,690	1,700	1,673	1,611	1,479	1,362	1,297	403
1969	1,258	1,259	1,396	1,690	1,690	1,690	1,690	1,930	2,030	2,030	1,905	1,773	257
1970	1,690	1,657	1,690	1,690	1,690	1,690	1,671	1,646	1,667	1,547	1,417	1,340	331
1971	1,291	1,295	1,446	1,615	1,690	1,690	1,679	1,668	1,673	1,585	1,454	1,384	295
1972	1,337	1,309	1,426	1,513	1,613	1,690	1,659	1,644	1,578	1,455	1,345	1,286	373
1973	1,250	1,235	1,364	1,574	1,690	1,690	1,673	1,731	1,834	1,687	1,550	1,468	366
1974	1,423	1,474	1,629	1,690	1,690	1,690	1,690	1,749	1,953	1,863	1,727	1,649	304
1975	1,603	1,557	1,536	1,552	1,690	1,690	1,691	1,798	2,030	1,945	1,815	1,729	301
1976	1,690	1,662	1,656	1,635	1,635	1,640	1,602	1,535	1,439	1,333	1,249	1,210	392
1977	1,183	1,156	1,161	1,174	1,170	1,135	1,056	972	873	762	668	620	436
1978	588	563	601	777	992	1,222	1,330	1,461	1,820	1,913	1,785	1,740	80
1979	1,686	1,650	1,625	1,690	1,690	1,690	1,692	1,816	1,931	1,790	1,652	1,576	355
1980	1,536	1,500	1,507	1,690	1,690	1,690	1,689	1,778	2,030	2,030	1,905	1,773	257
1981	1,690	1,637	1,602	1,620	1,684	1,690	1,703	1,709	1,629	1,504	1,397	1,341	368
1982	1,317	1,396	1,598	1,690	1,690	1,690	1,690	1,900	2,030	2,030	1,916	1,773	257
1983	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,863	2,030	2,030	2,017	1,773	257
1984	1,690	1,690	1,690	1,690	1,690	1,690	1,647	1,668	1,767	1,644	1,504	1,421	346
1985	1,379	1,376	1,431	1,490	1,521	1,610	1,678	1,667	1,576	1,451	1,341	1,289	389
1986	1,260	1,252	1,372	1,492	1,690	1,690	1,696	1,853	2,030	1,941	1,803	1,722	308
1987	1,663	1,610	1,564	1,540	1,549	1,570	1,565	1,515	1,425	1,317	1,225	1,177	388
1988	1,151	1,130	1,153	1,218	1,310	1,322	1,277	1,212	1,118	1,013	920	872	405
1989	840	825	850	888	932	1,083	1,183	1,230	1,297	1,192	1,097	1,061	236
1990	1,067	1,046	1,085	1,117	1,166	1,192	1,182	1,147	1,125	1,020	914	853	329
1991	821	796	802	812	804	864	932	987	1,045	982	898	858	187
1992	839	818	841	871	944	1,008	1,008	1,066	999	932	837	777	289
1993	750	720	761	1,049	1,258	1,470	1,532	1,622	1,879	1,875	1,745	1,669	210
1994	1,619	1,565	1,523	1,520	1,539	1,595	1,632	1,631	1,550	1,451	1,367	1,323	309
Avg	1,309	1,290	1,340	1,394	1,472	1,513	1,530	1,573	1,638	1,554	1,432	1,355	320
Min	588	563	601	762	804	864	932	972	873	762	668	620	80
Max	1,690	1,690	1,690	1,690	1,690	1,690	1,713	1,930	2,030	2,030	2,017	1,773	524

Table I-15b. CALSIM Simulated New Don Pedro Reservoir Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	320	270	270	351	601	762	796	963	1,388	1,365	1,227	1,147	241
1923	1,096	1,064	1,167	1,352	1,448	1,459	1,492	1,524	1,517	1,457	1,320	1,249	275
1924	1,201	1,153	1,118	1,107	1,112	1,103	1,074	1,007	899	794	695	641	433
1925	619	612	634	708	915	1,047	1,147	1,201	1,311	1,230	1,092	1,020	291
1926	976	934	906	913	982	1,028	1,107	1,138	1,052	919	797	733	405
1927	694	706	772	806	1,031	1,152	1,243	1,244	1,402	1,335	1,196	1,120	282
1928	1,070	1,063	1,071	1,086	1,137	1,380	1,456	1,497	1,464	1,322	1,178	1,099	398
1929	1,045	999	984	979	997	1,020	1,033	1,061	1,045	946	850	792	269
1930	756	726	761	800	850	915	964	962	966	873	784	735	231
1931	706	687	705	738	775	766	713	646	543	430	336	290	423
1932	259	231	354	509	766	889	888	954	1,091	1,051	922	845	246
1933	789	732	688	683	744	751	733	722	768	665	554	495	273
1934	447	413	454	518	589	614	590	505	418	309	217	172	418
1935	147	138	187	317	446	568	740	831	1,011	906	768	683	328
1936	633	589	555	608	967	1,110	1,186	1,268	1,456	1,363	1,220	1,133	323
1937	1,074	1,023	987	992	1,264	1,443	1,498	1,578	1,760	1,631	1,490	1,405	355
1938	1,351	1,307	1,502	1,611	1,690	1,690	1,690	1,730	2,025	2,030	1,901	1,773	252
1939	1,690	1,657	1,646	1,656	1,690	1,690	1,703	1,656	1,546	1,413	1,293	1,236	467
1940	1,219	1,191	1,227	1,418	1,690	1,690	1,703	1,733	1,875	1,720	1,575	1,485	390
1941	1,432	1,386	1,468	1,646	1,690	1,690	1,690	1,768	1,985	1,965	1,822	1,727	258
1942	1,661	1,619	1,690	1,690	1,690	1,690	1,713	1,745	1,947	1,956	1,815	1,715	232
1943	1,648	1,648	1,690	1,690	1,690	1,690	1,706	1,736	1,885	1,806	1,666	1,577	308
1944	1,523	1,476	1,441	1,439	1,524	1,642	1,622	1,654	1,595	1,484	1,340	1,259	395
1945	1,213	1,223	1,327	1,386	1,649	1,690	1,685	1,716	1,836	1,778	1,630	1,535	301
1946	1,512	1,507	1,690	1,690	1,690	1,690	1,684	1,671	1,711	1,555	1,405	1,317	394
1947	1,265	1,246	1,342	1,348	1,388	1,425	1,423	1,400	1,304	1,170	1,045	980	443
1948	960	933	936	953	957	976	1,013	1,095	1,228	1,119	978	904	324
1949	857	812	835	871	906	970	1,002	1,016	1,012	868	724	649	367
1950	601	559	577	625	714	831	888	925	998	870	732	655	343
1951	624	1,015	1,446	1,646	1,690	1,690	1,652	1,600	1,592	1,435	1,290	1,199	453
1952	1,146	1,108	1,253	1,535	1,690	1,690	1,690	1,863	2,030	2,030	1,899	1,773	257
1953	1,690	1,642	1,637	1,690	1,690	1,690	1,683	1,673	1,682	1,651	1,516	1,440	243
1954	1,394	1,358	1,349	1,363	1,414	1,583	1,650	1,715	1,697	1,552	1,404	1,324	391
1955	1,275	1,236	1,223	1,269	1,353	1,383	1,376	1,404	1,351	1,222	1,096	1,031	373
1956	992	963	1,466	1,690	1,690	1,690	1,681	1,774	2,030	2,026	1,887	1,773	257
1957	1,690	1,644	1,614	1,617	1,685	1,690	1,664	1,685	1,790	1,659	1,517	1,436	354
1958	1,392	1,351	1,338	1,373	1,583	1,690	1,690	1,863	2,030	2,014	1,880	1,773	257
1959	1,690	1,637	1,589	1,620	1,690	1,690	1,683	1,633	1,529	1,395	1,270	1,227	456
1960	1,184	1,152	1,172	1,200	1,294	1,346	1,388	1,393	1,301	1,186	1,092	1,046	347
1961	1,016	993	1,015	1,045	1,070	1,071	1,039	988	948	840	740	683	356
1962	652	624	634	662	882	1,039	1,122	1,155	1,316	1,240	1,103	1,029	287
1963	991	951	983	1,050	1,212	1,245	1,320	1,417	1,624	1,585	1,452	1,373	251
1964	1,325	1,336	1,372	1,388	1,414	1,416	1,395	1,390	1,378	1,257	1,143	1,085	310
1965	1,050	1,046	1,433	1,690	1,690	1,690	1,713	1,759	1,891	1,898	1,788	1,714	177
1966	1,649	1,690	1,690	1,690	1,690	1,690	1,674	1,617	1,492	1,344	1,197	1,124	550
1967	1,078	1,073	1,250	1,439	1,586	1,690	1,690	1,819	2,030	2,030	1,908	1,773	257
1968	1,690	1,639	1,609	1,622	1,690	1,690	1,692	1,660	1,560	1,425	1,307	1,240	452
1969	1,201	1,202	1,327	1,690	1,690	1,690	1,690	1,930	2,030	2,030	1,901	1,773	257
1970	1,690	1,657	1,690	1,690	1,690	1,690	1,666	1,632	1,619	1,495	1,364	1,286	380
1971	1,236	1,241	1,380	1,540	1,629	1,690	1,667	1,651	1,645	1,553	1,419	1,348	319
1972	1,300	1,273	1,382	1,477	1,574	1,604	1,576	1,543	1,464	1,339	1,227	1,167	409
1973	1,130	1,116	1,212	1,396	1,637	1,690	1,674	1,747	1,875	1,724	1,584	1,501	374
1974	1,455	1,506	1,653	1,690	1,690	1,690	1,690	1,739	1,921	1,825	1,687	1,606	315
1975	1,558	1,513	1,488	1,503	1,659	1,690	1,685	1,778	2,003	1,937	1,804	1,716	287
1976	1,690	1,662	1,656	1,637	1,637	1,637	1,597	1,519	1,419	1,310	1,225	1,184	413
1977	1,156	1,129	1,135	1,148	1,144	1,109	1,026	942	840	726	631	582	444
1978	550	525	563	732	932	1,157	1,262	1,394	1,748	1,837	1,706	1,667	81
1979	1,611	1,576	1,547	1,682	1,690	1,690	1,687	1,783	1,888	1,743	1,603	1,524	364
1980	1,483	1,447	1,452	1,690	1,690	1,690	1,683	1,775	2,030	2,030	1,902	1,773	257
1981	1,690	1,637	1,602	1,621	1,675	1,690	1,700	1,692	1,589	1,460	1,351	1,294	406
1982	1,269	1,348	1,529	1,690	1,690	1,690	1,690	1,891	2,030	2,030	1,911	1,773	257
1983	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,857	2,030	2,030	2,012	1,773	257
1984	1,690	1,690	1,690	1,690	1,690	1,690	1,641	1,637	1,731	1,604	1,461	1,374	357
1985	1,333	1,330	1,376	1,433	1,464	1,551	1,608	1,576	1,460	1,333	1,222	1,169	439
1986	1,140	1,132	1,244	1,356	1,690	1,690	1,691	1,841	2,030	1,937	1,798	1,716	314
1987	1,658	1,605	1,559	1,536	1,546	1,564	1,552	1,485	1,392	1,283	1,190	1,140	412
1988	1,112	1,092	1,115	1,182	1,233	1,244	1,202	1,139	1,048	945	852	803	399
1989	772	757	791	835	879	1,033	1,139	1,206	1,275	1,168	1,073	1,037	238
1990	1,043	1,023	1,060	1,093	1,142	1,167	1,152	1,118	1,074	966	859	805	347
1991	773	748	755	765	757	848	897	954	984	919	835	794	190
1992	774	754	783	814	887	955	975	993	923	853	757	696	297
1993	664	635	662	924	1,123	1,342	1,405	1,512	1,787	1,779	1,646	1,569	218
1994	1,518	1,465	1,423	1,421	1,440	1,463	1,473	1,457	1,370	1,268	1,184	1,139	334
Avg	1,157	1,139	1,189	1,260	1,345	1,393	1,407	1,440	1,500	1,414	1,291	1,214	320
Min	147	138	187	317	446	568	590	505	418	309	217	172	80
Max	1,690	1,690	1,690	1,690	1,690	1,690	1,713	1,930	2,030	2,030	2,012	1,773	524

Table I-15c. CALSIM Simulated New Don Pedro Reservoir Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-1,025	-1,024	-1,025	-1,031	-1,040	-928	-907	-917	-642	-619	-618	-606
1923	-594	-593	-523	-338	-242	-231	-205	-216	-239	-237	-239	-239
1924	-240	-240	-239	-238	-239	-239	-242	-244	-246	-247	-247	-247
1925	-247	-246	-326	-327	-300	-295	-292	-288	-291	-292	-292	-292
1926	-292	-291	-291	-290	-291	-314	-338	-373	-376	-379	-378	-378
1927	-378	-377	-372	-372	-398	-410	-419	-431	-466	-467	-467	-466
1928	-466	-466	-466	-471	-476	-310	-247	-281	-291	-293	-293	-294
1929	-294	-293	-275	-274	-274	-279	-307	-317	-360	-361	-361	-361
1930	-361	-360	-360	-359	-360	-383	-391	-399	-409	-410	-408	-408
1931	-407	-406	-447	-445	-432	-427	-423	-422	-423	-423	-421	-420
1932	-419	-419	-418	-424	-428	-412	-403	-391	-386	-387	-387	-387
1933	-386	-387	-386	-388	-385	-427	-450	-447	-447	-448	-447	-446
1934	-446	-446	-449	-424	-414	-473	-475	-483	-491	-490	-488	-486
1935	-485	-485	-512	-527	-537	-527	-523	-518	-504	-503	-503	-503
1936	-501	-501	-501	-509	-530	-538	-513	-546	-524	-526	-526	-526
1937	-526	-525	-529	-528	-426	-247	-214	-240	-233	-237	-238	-239
1938	-240	-239	-188	-79	0	0	0	0	0	0	-2	0
1939	0	1	1	0	0	0	-3	-7	-11	-15	-16	-18
1940	-18	-18	-36	-14	0	0	-6	-51	-57	-60	-62	-64
1941	-64	-63	-70	-44	0	0	0	-12	-22	-26	-29	-28
1942	-27	-26	0	0	0	0	0	-5	-10	-15	-16	-18
1943	-17	-16	0	0	0	0	-6	-33	-37	-40	-41	-43
1944	-43	-43	-43	-45	-60	-48	-52	-66	-92	-91	-92	-93
1945	-93	-93	-105	-67	-41	0	-6	-18	-78	-82	-83	-85
1946	-86	-85	0	0	0	0	-6	-23	-38	-42	-43	-44
1947	-43	-43	-61	-60	-60	-62	-93	-98	-117	-120	-121	-122
1948	-122	-122	-154	-153	-144	-143	-143	-148	-173	-175	-175	-175
1949	-176	-176	-153	-113	-96	-188	-215	-224	-245	-247	-247	-247
1950	-247	-246	-224	-202	-288	-292	-298	-303	-319	-321	-321	-320
1951	-321	-314	-244	-44	0	0	-6	-15	-43	-46	-47	-49
1952	-49	-49	-37	-44	0	0	0	-10	0	0	-2	0
1953	0	0	-1	0	0	0	-8	-23	-43	-44	-45	-47
1954	-47	-47	-31	-32	-52	-59	-52	-74	-101	-106	-106	-107
1955	-107	-107	-110	-114	-114	-147	-163	-172	-185	-187	-188	-189
1956	-189	-188	-216	0	0	0	-5	-6	0	-4	-5	0
1957	0	0	0	1	-5	0	-11	-32	-58	-63	-63	-64
1958	-64	-64	-74	-76	-88	0	0	-19	0	-4	-8	0
1959	0	0	1	1	0	0	-12	-24	-41	-45	-47	-48
1960	-49	-50	-48	-48	-48	-91	-103	-107	-113	-120	-121	-122
1961	-123	-123	-132	-144	-141	-132	-134	-124	-78	-82	-92	-102
1962	-102	-102	-102	-100	-106	-101	-99	-94	-97	-99	-100	-101
1963	-101	-101	-98	-70	-114	-123	-137	-160	-217	-218	-219	-221
1964	-222	-221	-229	-228	-228	-230	-257	-260	-282	-284	-284	-285
1965	-285	-285	-257	0	0	0	0	-10	-30	-33	-38	-29
1966	-28	0	0	0	0	0	-12	-27	-31	-34	-36	-38
1967	-38	-38	-54	-66	-78	0	0	-11	0	0	-6	0
1968	0	0	-4	-4	0	0	-8	-13	-51	-54	-55	-57
1969	-57	-57	-69	0	0	0	0	0	0	0	-4	0
1970	0	0	0	0	0	0	-5	-14	-48	-52	-53	-54
1971	-55	-54	-66	-75	-61	0	-12	-17	-28	-32	-35	-36
1972	-37	-36	-44	-36	-39	-86	-83	-101	-114	-116	-118	-119
1973	-120	-119	-152	-178	-53	0	1	16	41	37	34	33
1974	32	32	24	0	0	0	0	-10	-32	-38	-40	-43
1975	-45	-44	-48	-49	-31	0	-6	-20	-27	-8	-11	-13
1976	0	0	0	2	2	-3	-5	-16	-20	-23	-24	-26
1977	-27	-27	-26	-26	-26	-26	-30	-30	-33	-36	-37	-38
1978	-38	-38	-38	-45	-60	-65	-68	-67	-72	-76	-79	-73
1979	-75	-74	-78	-8	0	0	-5	-33	-43	-47	-49	-52
1980	-53	-53	-55	0	0	0	-6	-3	0	0	-3	0
1981	0	0	0	1	-9	0	-3	-17	-40	-44	-46	-47
1982	-48	-48	-69	0	0	0	0	-9	0	0	-5	0
1983	0	0	0	0	0	0	0	-6	0	0	-5	0
1984	0	0	0	0	0	0	-6	-31	-36	-40	-43	-47
1985	-46	-46	-55	-57	-57	-59	-70	-91	-116	-118	-119	-120
1986	-120	-120	-128	-136	0	0	-5	-12	0	-4	-5	-6
1987	-5	-5	-5	-4	-3	-6	-13	-30	-33	-34	-35	-37
1988	-39	-38	-38	-36	-77	-78	-75	-73	-70	-68	-68	-69
1989	-68	-68	-59	-53	-53	-50	-44	-24	-22	-24	-24	-24
1990	-24	-23	-25	-24	-24	-25	-30	-29	-51	-54	-55	-48
1991	-48	-48	-47	-47	-47	-16	-35	-33	-61	-63	-63	-64
1992	-65	-64	-58	-57	-57	-53	-33	-73	-76	-79	-80	-81
1993	-86	-85	-99	-125	-135	-128	-127	-110	-92	-96	-99	-100
1994	-101	-100	-100	-99	-99	-132	-159	-174	-180	-183	-183	-184
Avg	-152	-151	-151	-134	-127	-120	-123	-133	-138	-140	-141	-141
Min	-1,025	-1,024	-1,025	-1,031	-1,040	-928	-907	-917	-642	-619	-618	-606
Max	32	32	24	2	2	0	1	16	41	37	34	33

Table I-15d. CALSIM Simulated New Don Pedro Reservoir Storage, Percentiles for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	588	563	601	762	804	864	932	972	873	762	668	620
10	839	805	802	888	1,002	1,123	1,173	1,147	1,118	1,013	914	858
20	1,072	1,055	1,081	1,117	1,207	1,222	1,277	1,251	1,401	1,290	1,166	1,102
30	1,139	1,119	1,153	1,189	1,310	1,342	1,445	1,498	1,439	1,339	1,233	1,177
40	1,237	1,225	1,295	1,383	1,467	1,570	1,602	1,615	1,570	1,451	1,337	1,275
50	1,317	1,309	1,403	1,492	1,635	1,690	1,673	1,663	1,667	1,547	1,427	1,352
60	1,423	1,396	1,507	1,557	1,690	1,690	1,689	1,696	1,767	1,687	1,550	1,468
70	1,547	1,529	1,588	1,620	1,690	1,690	1,690	1,740	1,879	1,803	1,671	1,594
80	1,665	1,637	1,638	1,690	1,690	1,690	1,695	1,780	1,980	1,931	1,803	1,729
90	1,690	1,656	1,690	1,690	1,690	1,690	1,703	1,830	2,030	2,030	1,892	1,773
Max	1,690	1,690	1,690	1,690	1,690	1,690	1,713	1,930	2,030	2,030	2,017	1,773
Avg	1,309	1,290	1,340	1,394	1,472	1,513	1,530	1,573	1,638	1,554	1,432	1,355
B: 2020 Baseline												
Min	147	138	187	317	446	568	590	505	418	309	217	172
10	619	589	577	662	766	848	888	954	948	853	732	655
20	772	748	772	814	932	1,033	1,039	1,061	1,052	946	852	803
30	991	963	984	992	1,112	1,152	1,186	1,206	1,311	1,222	1,092	1,031
40	1,074	1,063	1,135	1,182	1,264	1,380	1,395	1,404	1,402	1,322	1,196	1,133
50	1,184	1,152	1,253	1,386	1,464	1,564	1,576	1,543	1,529	1,413	1,290	1,227
60	1,269	1,246	1,376	1,439	1,637	1,690	1,664	1,637	1,624	1,552	1,404	1,317
70	1,394	1,358	1,452	1,617	1,690	1,690	1,683	1,685	1,760	1,659	1,517	1,440
80	1,611	1,576	1,589	1,682	1,690	1,690	1,690	1,745	1,891	1,837	1,706	1,667
90	1,690	1,644	1,656	1,690	1,690	1,690	1,691	1,783	2,030	2,026	1,887	1,773
Max	1,690	1,690	1,690	1,690	1,690	1,690	1,713	1,930	2,030	2,030	2,012	1,773
Avg	1,157	1,139	1,189	1,260	1,345	1,393	1,407	1,440	1,500	1,414	1,291	1,214
Comparison: B – A												
Min	-441	-425	-414	-445	-358	-296	-342	-467	-455	-453	-451	-448
10	-220	-216	-225	-226	-236	-275	-285	-193	-170	-160	-182	-203
20	-300	-307	-309	-303	-275	-189	-238	-190	-349	-344	-314	-299
30	-148	-156	-169	-197	-198	-190	-259	-292	-128	-117	-141	-146
40	-163	-162	-160	-201	-203	-190	-207	-211	-168	-129	-141	-142
50	-133	-157	-150	-106	-171	-126	-97	-120	-138	-134	-137	-125
60	-154	-150	-131	-118	-53	0	-25	-59	-143	-135	-146	-151
70	-153	-171	-136	-3	0	0	-7	-55	-119	-144	-154	-154
80	-54	-61	-49	-8	0	0	-5	-35	-89	-94	-97	-62
90	0	-12	-34	0	0	0	-12	-47	0	-4	-5	0
Max	0	0	0	0	0	0	0	0	0	0	-5	0
Avg	-152	-151	-151	-134	-127	-120	-123	-133	-138	-140	-141	-141

Table I-16a. CALSIM Simulated Tuolumne River Flow below La Grange Dam, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	652	580	663	631	955	2,770	2,014	1,339	4,938	521	531	521	969
1923	614	514	1,746	3,689	2,424	707	1,900	1,585	495	466	459	447	904
1924	517	440	439	423	438	427	350	328	144	129	122	146	236
1925	276	312	305	301	444	352	975	1,114	280	276	269	257	311
1926	348	329	327	311	369	316	718	812	187	188	182	188	258
1927	316	396	370	357	641	440	1,416	1,515	470	466	459	447	439
1928	550	516	496	496	527	3,341	1,971	921	255	243	253	241	595
1929	327	320	319	303	331	315	545	668	144	129	122	146	221
1930	251	270	265	285	308	301	545	677	144	129	138	146	209
1931	251	270	265	269	281	260	366	345	144	145	138	146	174
1932	290	335	523	462	806	416	1,340	1,414	470	466	459	447	449
1933	530	454	444	460	476	466	629	766	187	172	182	188	299
1934	310	302	304	307	356	298	358	328	144	129	122	146	187
1935	290	344	344	511	443	497	1,592	1,300	495	482	459	447	435
1936	581	506	502	527	1,151	623	1,908	1,275	479	466	459	447	538
1937	652	580	582	590	3,392	4,052	2,195	1,347	553	537	531	521	927
1938	652	580	1,580	2,455	7,045	7,931	4,148	5,262	3,731	1,457	531	1,211	2,189
1939	1,132	462	452	444	543	1,830	1,507	978	162	147	157	163	483
1940	324	337	338	593	1,139	4,904	1,995	1,556	470	449	459	447	789
1941	652	580	688	1,144	5,506	4,397	2,896	1,364	578	545	531	521	1,151
1942	669	588	1,635	3,992	4,270	2,762	2,512	1,890	578	561	547	538	1,230
1943	652	597	1,155	5,283	4,386	5,716	2,150	1,339	553	537	531	521	1,407
1944	550	482	472	463	536	655	1,283	1,242	263	260	253	241	405
1945	399	406	386	369	1,351	3,239	1,746	1,343	479	449	443	447	666
1946	581	514	2,348	2,444	2,930	2,479	1,994	1,606	470	466	459	447	1,005
1947	530	479	485	444	485	441	570	523	162	147	141	163	275
1948	285	305	299	293	313	344	812	692	280	276	269	257	268
1949	360	354	343	335	370	448	703	822	255	243	237	241	284
1950	360	354	343	368	460	366	933	1,007	255	260	253	241	314
1951	399	608	2,052	4,044	3,857	2,088	1,687	1,619	462	466	459	447	1,089
1952	652	580	672	899	2,082	4,362	3,900	1,731	3,613	1,321	531	1,186	1,297
1953	851	482	504	2,780	1,933	1,302	1,335	1,173	263	260	253	241	684
1954	368	349	347	338	392	410	1,229	1,167	255	260	253	241	339
1955	348	329	327	343	333	316	634	599	204	188	182	188	241
1956	388	411	1,068	7,688	4,285	2,823	2,078	1,729	2,093	539	531	931	1,483
1957	983	474	472	455	639	2,454	1,118	1,147	280	260	253	241	532
1958	487	455	449	465	604	4,676	5,149	1,644	3,986	561	547	979	1,206
1959	793	454	444	444	1,355	1,446	1,302	812	187	172	166	188	465
1960	253	272	266	269	338	285	453	595	144	129	138	146	199
1961	227	278	273	269	281	260	358	345	144	145	138	146	173
1962	259	303	297	301	733	434	907	1,129	238	243	237	241	320
1963	399	381	369	418	534	425	1,525	1,471	495	490	475	447	448
1964	530	487	452	452	452	441	578	694	162	147	141	163	284
1965	388	436	1,320	5,839	3,920	2,570	2,639	1,442	553	537	531	521	1,241
1966	550	993	2,744	2,182	2,358	1,559	949	854	255	243	237	241	791
1967	462	460	576	527	537	3,911	4,064	1,469	2,920	4,275	531	1,372	1,277
1968	834	454	460	444	962	1,668	1,326	842	187	172	166	188	466
1969	388	411	442	5,287	7,252	4,660	4,668	4,211	7,075	1,716	531	1,210	2,258
1970	1,255	514	813	6,459	3,802	3,315	1,551	1,666	462	449	443	447	1,274
1971	550	482	528	496	859	1,669	1,219	1,177	263	260	253	241	482
1972	348	329	343	319	336	360	562	531	162	147	141	163	226
1973	316	337	338	397	2,950	3,254	1,477	1,329	470	449	443	447	728
1974	652	588	607	3,093	2,196	2,887	2,561	1,331	544	537	531	521	966
1975	652	580	574	566	1,084	4,216	1,875	1,355	984	521	514	521	812
1976	769	449	439	423	438	427	436	441	144	129	138	146	265
1977	381	270	265	269	272	252	366	353	144	145	138	146	181
1978	362	409	416	591	846	740	1,767	1,412	561	537	531	521	523
1979	581	514	502	1,732	4,431	3,954	1,769	1,288	462	449	443	447	987
1980	652	588	574	4,943	7,601	3,923	2,104	1,331	1,448	2,187	531	1,386	1,636
1981	868	454	452	468	467	1,841	1,367	977	187	172	166	188	461
1982	445	449	455	3,891	7,040	5,630	7,638	2,412	4,041	1,813	531	2,539	2,198
1983	3,516	2,188	4,750	6,025	7,658	9,586	3,917	1,569	9,551	6,814	531	3,465	3,580
1984	1,613	4,471	6,614	4,136	3,896	2,864	1,668	1,625	462	466	459	447	1,737
1985	530	470	460	436	485	466	654	920	195	188	182	188	312
1986	445	449	447	442	7,868	7,073	1,879	1,307	2,139	521	514	521	1,395
1987	517	440	431	423	451	443	436	416	144	129	138	146	248
1988	227	270	265	269	268	260	366	345	144	129	138	146	171
1989	227	270	273	269	281	293	453	416	144	145	138	146	184
1990	227	270	265	269	281	268	436	400	144	129	122	146	178
1991	227	270	265	260	274	384	453	406	154	132	122	148	187
1992	229	270	266	267	376	285	443	403	146	142	122	148	187
1993	365	411	414	783	607	567	1,455	1,326	559	537	532	528	488
1994	519	442	436	421	448	412	548	703	158	147	135	148	273
Avg	547	511	728	1,365	1,791	1,953	1,580	1,171	892	550	328	459	714
Min	227	270	265	260	268	252	350	328	144	129	122	146	171
Max	3,516	4,471	6,614	7,688	7,868	9,586	7,638	5,262	9,551	6,814	547	3,465	3,580

Table I-16b. CALSIM Simulated Tuolumne River Flow below La Grange Dam, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	652	580	663	631	955	768	1,473	1,339	553	521	531	521	553
1923	581	514	608	608	596	525	1,449	1,640	495	466	459	447	507
1924	517	440	439	423	438	427	350	328	144	129	122	146	236
1925	276	312	305	301	444	352	975	1,114	280	276	269	257	311
1926	348	329	327	311	369	316	718	853	187	188	182	188	260
1927	316	396	370	357	641	440	1,416	1,556	470	466	459	447	442
1928	550	516	496	496	527	576	1,084	780	255	243	253	241	364
1929	327	320	319	303	331	315	545	668	144	129	122	146	221
1930	251	270	265	285	308	301	545	677	144	129	138	146	209
1931	251	270	265	269	281	260	366	345	144	145	138	146	174
1932	290	335	523	462	806	416	1,340	1,414	470	466	459	447	449
1933	530	454	444	460	476	466	629	766	187	172	182	188	299
1934	310	302	304	307	356	298	358	328	144	129	122	146	187
1935	290	344	344	511	443	497	1,592	1,300	495	482	459	447	435
1936	581	506	502	527	1,151	623	1,433	1,259	479	466	459	447	508
1937	652	580	582	590	1,189	857	1,523	1,347	553	537	531	521	569
1938	652	580	647	672	5,597	7,785	3,933	4,537	3,650	1,385	531	1,142	1,862
1939	1,128	462	452	444	518	1,184	1,351	929	162	147	157	163	429
1940	324	337	338	593	652	4,745	1,905	1,585	470	449	459	447	748
1941	652	580	688	680	4,592	4,232	2,638	1,364	578	545	531	521	1,047
1942	669	588	1,103	3,970	4,192	2,627	2,347	1,802	578	561	547	538	1,168
1943	652	597	816	5,277	4,247	5,559	2,061	1,339	553	537	531	521	1,363
1944	550	482	472	463	536	568	1,277	1,226	263	260	253	241	399
1945	399	406	386	369	678	2,426	1,664	1,243	479	449	443	447	567
1946	581	514	819	2,505	2,816	2,368	1,957	1,570	470	466	459	447	897
1947	530	479	485	444	485	441	570	529	162	147	141	163	276
1948	285	305	299	293	313	344	812	692	280	276	269	257	268
1949	360	354	343	335	370	448	703	864	255	243	237	241	287
1950	360	354	343	368	460	366	933	1,007	255	260	253	241	314
1951	399	608	613	483	2,794	2,037	1,660	1,642	462	466	459	447	719
1952	652	580	672	899	1,183	4,177	3,666	1,562	3,194	1,243	531	1,115	1,176
1953	834	482	504	2,754	1,847	1,273	1,279	1,182	263	260	253	241	672
1954	368	349	347	338	392	410	966	1,188	255	260	253	241	324
1955	348	329	327	343	333	316	634	599	204	188	182	188	241
1956	388	411	1,068	4,158	4,235	2,754	2,061	1,585	1,910	537	531	803	1,230
1957	984	474	472	455	499	2,339	1,149	1,155	280	260	253	241	519
1958	487	455	449	465	604	3,073	4,925	1,380	3,606	561	547	809	1,045
1959	770	454	444	444	1,350	1,427	1,144	799	187	172	166	188	452
1960	253	272	266	269	338	285	453	595	144	129	138	146	199
1961	227	278	273	269	281	260	358	345	144	145	138	146	173
1962	259	303	297	301	733	434	907	1,129	238	243	237	241	320
1963	399	381	369	418	534	425	1,525	1,471	495	490	475	447	448
1964	530	487	452	452	452	441	578	694	162	147	141	163	284
1965	388	436	604	1,638	3,873	2,500	2,417	1,532	553	537	531	521	924
1966	550	533	2,506	2,107	2,283	1,513	936	842	255	243	237	241	736
1967	462	460	576	527	537	2,385	3,851	1,469	2,598	4,191	531	1,235	1,138
1968	818	454	460	444	942	1,644	1,258	812	187	172	166	188	456
1969	388	411	442	3,981	7,134	4,527	4,465	3,865	7,014	1,635	531	1,102	2,115
1970	1,256	514	804	6,436	3,751	3,197	1,507	1,652	462	449	443	447	1,258
1971	550	482	528	496	490	642	1,208	1,147	263	260	253	241	396
1972	348	329	343	319	336	300	562	531	162	147	141	163	223
1973	316	337	338	397	695	2,463	1,495	1,365	470	449	443	447	557
1974	652	588	607	3,454	2,165	2,837	2,373	1,331	544	537	531	521	972
1975	652	580	574	566	774	3,545	1,792	1,355	553	521	514	521	723
1976	549	449	439	423	438	427	436	510	144	129	138	146	256
1977	381	270	265	269	272	252	366	353	144	145	138	146	181
1978	362	409	416	591	846	740	1,767	1,412	561	537	531	521	523
1979	581	514	502	608	4,142	3,809	1,697	1,259	462	449	443	447	886
1980	652	588	574	4,034	7,551	3,844	2,004	1,331	711	2,110	531	1,310	1,513
1981	841	454	452	468	467	1,661	1,277	909	187	172	166	188	438
1982	445	449	455	2,725	6,890	5,479	7,436	1,970	3,846	1,741	531	2,247	2,036
1983	3,347	2,705	4,668	6,002	7,568	9,425	3,737	1,466	9,070	6,753	531	3,270	3,518
1984	1,350	4,871	6,579	4,078	3,885	2,768	1,668	1,625	462	466	459	447	1,732
1985	530	470	460	436	485	466	674	914	195	188	182	188	313
1986	445	449	447	442	4,791	6,768	1,801	1,307	1,873	521	514	521	1,185
1987	517	440	431	423	451	443	436	448	144	129	138	146	250
1988	227	270	265	269	268	260	366	345	144	129	138	146	171
1989	227	270	273	269	281	293	453	416	144	145	138	146	184
1990	227	270	265	269	281	268	436	400	144	129	122	146	178
1991	227	270	265	260	274	384	453	406	154	132	122	148	187
1992	229	270	266	267	376	285	443	403	146	142	122	148	187
1993	365	411	414	783	607	567	1,455	1,326	559	537	532	528	488
1994	519	442	436	421	448	412	548	763	158	147	135	148	276
Avg	536	517	632	1,078	1,557	1,703	1,487	1,140	783	543	328	442	646
Min	227	270	265	260	268	252	350	328	144	129	122	146	171
Max	3,347	4,871	6,579	6,436	7,568	9,425	7,436	4,537	9,070	6,753	547	3,270	3,518

Table I-16c. CALSIM Simulated Tuolumne River Flow below La Grange Dam, 2020 Baseline minus 2001 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	0	0	0	-2,002	-541	0	-4,385	0	0	0	-416
1923	-33	0	-1,138	-3,081	-1,828	-182	-451	55	0	0	0	0	-398
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1925	0	0	0	0	0	0	0	0	0	0	0	0	0
1926	0	0	0	0	0	0	0	41	0	0	0	0	3
1927	0	0	0	0	0	0	0	41	0	0	0	0	3
1928	0	0	0	0	0	-2,765	-887	-141	0	0	0	0	-232
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	-475	-16	0	0	0	0	-29
1937	0	0	0	0	-2,203	-3,195	-672	0	0	0	0	0	-359
1938	0	0	-933	-1,783	-1,448	-146	-215	-725	-81	-72	0	-69	-327
1939	-4	0	0	0	-25	-646	-156	-49	0	0	0	0	-54
1940	0	0	0	0	-487	-159	-90	29	0	0	0	0	-41
1941	0	0	0	-464	-914	-165	-258	0	0	0	0	0	-105
1942	0	0	-532	-22	-78	-135	-165	-88	0	0	0	0	-62
1943	0	0	-339	-6	-139	-157	-89	0	0	0	0	0	-44
1944	0	0	0	0	0	-87	-6	-16	0	0	0	0	-7
1945	0	0	0	0	-673	-813	-82	-100	0	0	0	0	-98
1946	0	0	-1,529	61	-114	-111	-37	-36	0	0	0	0	-108
1947	0	0	0	0	0	0	0	6	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	42	0	0	0	0	3
1950	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	-1,439	-3,561	-1,063	-51	-27	23	0	0	0	0	-370
1952	0	0	0	0	-899	-185	-234	-169	-419	-78	0	-71	-121
1953	-17	0	0	-26	-86	-29	-56	9	0	0	0	0	-12
1954	0	0	0	0	0	0	-263	21	0	0	0	0	-14
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	-3,530	-50	-69	-17	-144	-183	-2	0	-128	-253
1957	1	0	0	0	-140	-115	31	8	0	0	0	0	-12
1958	0	0	0	0	0	-1,603	-224	-264	-380	0	0	-170	-161
1959	-23	0	0	0	-5	-19	-158	-13	0	0	0	0	-13
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	-716	-4,201	-47	-70	-222	90	0	0	0	0	-317
1966	0	-460	-238	-75	-75	-46	-13	-12	0	0	0	0	-55
1967	0	0	0	0	0	-1,526	-213	0	-322	-84	0	-137	-139
1968	-16	0	0	0	-20	-24	-68	-30	0	0	0	0	-10
1969	0	0	0	-1,306	-118	-133	-203	-346	-61	-81	0	-108	-143
1970	1	0	-9	-23	-51	-118	-44	-14	0	0	0	0	-15
1971	0	0	0	0	-369	-1,027	-11	-30	0	0	0	0	-86
1972	0	0	0	0	0	-60	0	0	0	0	0	0	-4
1973	0	0	0	0	-2,255	-791	18	36	0	0	0	0	-171
1974	0	0	0	361	-31	-50	-188	0	0	0	0	0	6
1975	0	0	0	0	-310	-671	-83	0	-431	0	0	0	-89
1976	-220	0	0	0	0	0	0	69	0	0	0	0	-9
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	-1,124	-289	-145	-72	-29	0	0	0	0	-100
1980	0	0	0	-909	-50	-79	-100	0	-737	-77	0	-76	-123
1981	-27	0	0	0	0	-180	-90	-68	0	0	0	0	-22
1982	0	0	0	-1,166	-150	-151	-202	-442	-195	-72	0	-292	-162
1983	-169	517	-82	-23	-90	-161	-180	-103	-481	-61	0	-195	-62
1984	-263	400	-35	-58	-11	-96	0	0	0	0	0	0	-5
1985	0	0	0	0	0	0	20	-6	0	0	0	0	1
1986	0	0	0	0	-3,077	-305	-78	0	-266	0	0	0	-210
1987	0	0	0	0	0	0	0	32	0	0	0	0	2
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	60	0	0	0	0	4
Avg	-11	6	-96	-287	-234	-250	-93	-31	-109	-7	0	-17	-68
Min	-263	-460	-1,529	-4,201	-3,077	-3,195	-887	-725	-4,385	-84	0	-292	-416
Max	1	517	0	361	0	0	31	90	0	0	0	0	6

Table I-16d. CALSIM Simulated Tuolumne River Flow below La Grange Dam, Percentiles for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	227	270	265	260	268	252	350	328	144	129	122	146	
10	251	270	266	269	281	285	436	400	144	129	135	146	
20	310	320	319	307	369	352	545	595	154	145	138	148	
30	348	344	343	368	444	425	654	766	187	172	166	188	
40	388	409	416	423	485	443	975	921	255	243	237	241	
50	462	449	447	455	607	707	1,340	1,173	280	260	253	241	
60	530	455	460	496	955	1,830	1,551	1,326	470	449	459	447	
70	581	482	504	593	1,933	2,770	1,875	1,347	495	466	459	447	
80	652	516	663	2,455	3,802	3,911	2,078	1,515	561	537	531	521	
90	834	588	1,580	4,136	4,431	4,660	2,896	1,644	2,920	561	531	979	
Max	3,516	4,471	6,614	7,688	7,868	9,586	7,638	5,262	9,551	6,814	547	3,465	
Avg	547	511	728	1,365	1,791	1,953	1,580	1,171	892	550	328	459	714
B: 2020 Baseline													
Min	227	270	265	260	268	252	350	328	144	129	122	146	
10	251	270	266	269	281	285	436	400	144	129	135	146	
20	310	320	319	307	369	344	545	595	154	145	138	148	
30	348	344	343	368	444	425	674	766	187	172	166	188	
40	388	409	416	423	485	443	966	909	255	243	237	241	
50	462	449	447	455	537	576	1,277	1,182	280	260	253	241	
60	530	455	460	496	695	1,273	1,455	1,307	470	449	459	447	
70	581	482	504	591	1,151	2,368	1,660	1,355	495	466	459	447	
80	652	516	607	899	2,816	2,837	1,957	1,471	553	537	531	521	
90	818	580	804	3,970	4,247	4,232	2,638	1,625	1,910	561	531	809	
Max	3,347	4,871	6,579	6,436	7,568	9,425	7,436	4,537	9,070	6,753	547	3,270	
Avg	536	517	632	1,078	1,557	1,703	1,487	1,140	783	543	328	442	646
Comparison: B – A													
Min	0	0	0	0	0	0	0	0	0	0	0	0	
10	0	0	0	0	0	0	0	0	0	0	0	0	
20	0	0	0	0	0	-8	0	0	0	0	0	0	
30	0	0	0	0	0	0	20	0	0	0	0	0	
40	0	0	0	0	0	0	-9	-12	0	0	0	0	
50	0	0	0	0	-70	-131	-63	9	0	0	0	0	
60	0	0	0	0	-260	-557	-96	-19	0	0	0	0	
70	0	0	0	-2	-782	-402	-215	8	0	0	0	0	
80	0	0	-56	-1,556	-986	-1,074	-121	-44	-8	0	0	0	
90	-16	-8	-776	-166	-184	-428	-258	-19	-1,010	0	0	-170	
Max	-169	400	-35	-1,252	-300	-161	-202	-725	-481	-61	0	-195	
Avg	-11	6	-96	-287	-234	-250	-93	-31	-109	-7	0	-17	-68

Table I-17a. CALSIM Simulated Lake McClure Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	474	466	501	533	676	737	776	969	1,024	968	870	803	221
1923	664	670	676	676	676	691	740	885	910	837	738	670	240
1924	658	656	656	655	658	641	622	589	491	385	307	255	367
1925	240	254	270	283	385	421	488	602	618	529	433	368	250
1926	350	346	346	352	409	423	484	420	377	315	247	192	292
1927	173	176	190	192	228	252	253	403	469	432	405	399	70
1928	398	394	414	430	448	445	407	453	431	390	364	347	106
1929	336	328	324	317	320	317	279	259	225	203	197	154	125
1930	147	142	139	136	134	117	127	136	159	175	198	194	-35
1931	179	173	171	171	174	168	184	201	142	115	115	115	86
1932	115	115	186	228	386	422	457	585	705	630	529	463	242
1933	440	430	425	433	441	442	419	426	476	366	271	216	260
1934	194	189	199	220	254	291	320	283	238	168	118	115	205
1935	115	128	143	214	262	306	497	665	790	697	596	530	260
1936	509	509	511	539	676	735	851	944	973	883	781	714	259
1937	664	660	668	676	676	737	814	969	1,024	924	821	754	270
1938	664	661	676	676	676	737	851	969	1,024	1,019	935	851	173
1939	664	669	675	676	676	702	734	676	573	444	347	283	451
1940	276	279	282	398	529	636	721	877	884	769	668	602	282
1941	575	572	650	676	676	737	810	969	1,024	990	898	830	194
1942	664	669	676	676	676	726	824	951	1,024	970	905	838	186
1943	664	676	676	676	676	737	851	969	996	909	808	742	254
1944	664	661	664	673	676	710	662	765	769	678	584	519	250
1945	498	524	546	559	676	737	805	916	990	909	810	743	247
1946	664	676	676	676	676	717	796	904	887	779	678	612	292
1947	598	620	653	673	676	696	695	730	652	530	434	379	351
1948	361	361	363	366	367	357	363	462	551	456	364	300	251
1949	276	271	271	272	282	314	339	437	420	305	214	150	287
1950	139	135	131	156	204	210	274	374	372	261	169	115	259
1951	115	362	623	676	676	720	737	757	730	617	515	451	306
1952	424	426	474	624	676	737	851	969	1,024	995	909	840	184
1953	664	660	676	676	676	671	674	649	678	594	501	436	242
1954	413	408	407	413	448	501	554	638	582	466	374	310	328
1955	287	279	284	304	320	314	275	335	344	230	135	115	229
1956	115	115	478	676	676	721	764	927	1,024	989	898	831	193
1957	664	663	666	667	676	693	662	718	764	660	566	501	263
1958	476	475	489	513	586	710	851	969	1,024	983	894	826	198
1959	664	658	656	664	676	688	674	635	549	421	324	277	397
1960	259	253	251	250	296	328	372	431	414	343	291	258	173
1961	242	241	246	245	251	252	282	300	264	194	143	115	185
1962	115	115	118	121	276	309	392	447	521	434	335	269	252
1963	252	249	249	279	447	465	489	615	694	623	524	458	236
1964	437	460	468	483	495	482	445	455	407	286	192	137	318
1965	115	126	341	511	563	592	672	779	893	845	767	700	193
1966	664	676	676	676	676	696	728	764	679	558	462	406	358
1967	381	384	485	538	580	709	837	969	1,024	1,024	946	851	173
1968	664	659	661	664	676	681	643	613	525	396	300	236	407
1969	210	223	253	594	676	737	851	969	1,024	1,022	934	851	173
1970	664	674	676	676	676	737	709	775	767	659	560	494	281
1971	470	476	514	550	576	589	567	602	652	558	465	400	252
1972	378	374	400	415	441	480	463	490	457	336	241	189	301
1973	174	175	199	256	374	448	489	717	784	679	583	516	268
1974	495	543	596	676	676	737	808	965	1,024	925	825	756	268
1975	664	661	664	676	676	737	749	910	1,024	944	839	772	252
1976	664	671	675	671	676	669	623	593	498	395	318	270	353
1977	250	243	240	237	233	228	214	212	217	192	176	165	52
1978	161	155	177	277	415	566	718	969	1,024	1,024	947	851	173
1979	664	669	673	676	676	737	777	944	963	858	756	689	274
1980	664	665	673	676	676	737	817	962	1,024	1,016	930	851	173
1981	664	654	653	667	676	685	677	691	628	506	410	355	336
1982	334	370	428	555	676	737	851	969	1,024	1,004	921	851	173
1983	664	676	676	676	676	737	827	969	1,024	1,024	997	851	173
1984	664	676	676	676	676	731	738	841	815	707	605	539	302
1985	522	534	545	550	571	586	614	645	570	452	360	297	348
1986	282	289	315	351	676	737	838	969	1,024	934	835	768	256
1987	664	654	651	645	652	648	651	626	542	439	362	314	337
1988	295	295	299	315	328	349	371	380	346	275	225	192	188
1989	177	169	173	172	183	250	350	406	388	317	267	234	172
1990	230	229	230	234	243	269	321	327	289	222	171	138	189
1991	136	130	126	121	117	183	207	298	356	298	247	214	142
1992	200	198	200	200	249	270	345	370	318	262	211	177	193
1993	166	161	172	345	437	558	650	900	1,024	973	879	814	210
1994	664	657	657	656	670	669	643	636	563	457	379	326	317
Avg	417	423	446	476	514	551	592	670	681	605	525	468	240
Min	115	115	118	121	117	117	127	136	142	115	115	115	-35
Max	664	676	676	676	676	737	851	969	1,024	1,024	997	851	451

Table I-17b. CALSIM Simulated Lake McClure Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Seasonal Drawdown
1922	175	167	200	232	385	468	531	834	1,024	963	850	773	251
1923	664	669	676	676	676	696	767	943	972	894	780	702	270
1924	662	658	657	656	659	646	644	632	537	428	337	278	366
1925	240	253	268	281	383	424	516	661	682	588	478	402	280
1926	357	351	350	356	413	432	517	484	446	380	297	232	285
1927	184	186	199	201	237	266	289	472	542	501	458	443	99
1928	417	412	430	447	464	466	439	530	513	467	426	399	131
1929	363	354	348	341	345	346	326	330	300	275	256	205	125
1930	173	166	163	160	158	143	154	170	195	209	225	215	-20
1931	186	179	177	177	180	177	204	236	179	115	115	115	121
1932	115	115	185	227	384	426	484	640	764	684	568	492	272
1933	441	430	423	432	439	446	446	482	537	422	312	247	290
1934	198	191	200	221	255	294	334	313	270	198	140	115	219
1935	115	127	142	213	261	310	525	723	853	754	638	562	291
1936	513	512	513	541	676	737	851	944	977	882	765	688	289
1937	633	628	635	650	676	737	837	969	1,024	919	801	724	300
1938	664	660	676	676	676	737	851	969	1,024	1,015	915	838	186
1939	664	668	672	676	676	707	758	737	638	505	393	319	439
1940	284	286	288	404	535	646	753	939	950	830	714	637	313
1941	582	578	655	676	676	737	834	969	1,024	986	878	800	224
1942	664	668	676	676	676	731	843	969	1,024	966	885	808	216
1943	664	676	676	676	676	737	851	969	1,000	909	793	717	283
1944	664	660	661	670	676	716	691	826	834	739	630	555	279
1945	506	530	551	564	676	737	829	948	1,024	938	824	747	277
1946	664	676	676	676	676	722	825	949	936	823	707	630	319
1947	588	609	641	661	676	707	724	791	717	591	480	414	377
1948	369	367	368	371	372	362	396	529	622	523	416	342	280
1949	290	284	283	284	294	331	381	511	498	378	272	198	313
1950	160	154	150	174	222	234	321	450	452	337	231	157	295
1951	120	365	625	676	676	725	764	816	793	675	559	484	332
1952	430	430	477	626	676	737	851	969	1,024	991	889	810	214
1953	664	659	676	676	676	677	704	709	742	654	546	471	271
1954	419	413	411	417	452	510	588	702	651	530	423	349	353
1955	299	289	293	313	328	328	313	406	419	301	192	128	291
1956	115	115	477	676	676	726	793	949	1,024	984	878	801	223
1957	664	662	663	665	676	699	691	777	827	718	610	535	292
1958	481	480	492	516	589	717	851	969	1,024	978	874	796	228
1959	664	657	654	661	676	693	703	696	614	482	370	313	390
1960	267	260	256	256	301	336	392	465	449	376	316	277	188
1961	248	246	251	249	255	259	300	334	299	227	168	131	203
1962	115	115	118	120	275	314	422	504	583	491	377	302	281
1963	257	252	251	282	449	473	519	677	760	685	570	494	266
1964	445	466	473	488	500	493	481	517	474	349	240	175	342
1965	124	134	348	517	570	603	699	845	962	910	816	739	223
1966	664	676	676	676	676	702	758	825	744	618	507	441	384
1967	388	390	490	542	584	718	851	969	1,024	1,024	930	851	173
1968	664	658	659	662	676	686	673	674	590	458	346	273	401
1969	219	231	259	600	676	737	851	969	1,024	1,018	914	835	189
1970	664	673	676	676	676	737	733	825	821	708	594	518	307
1971	467	471	508	544	570	588	590	653	707	609	501	426	281
1972	375	371	395	411	437	480	487	543	514	389	279	217	326
1973	175	175	197	254	372	451	517	774	845	735	624	548	297
1974	498	545	597	676	676	737	832	969	1,024	921	805	726	298
1975	664	660	662	676	676	737	773	953	1,024	939	820	742	282
1976	664	670	672	669	675	672	642	637	545	440	350	294	348
1977	252	244	240	237	233	228	217	217	222	196	178	166	56
1978	157	150	172	272	410	566	742	969	1,024	1,024	931	851	173
1979	664	668	670	676	676	737	799	965	987	878	761	683	304
1980	634	635	641	676	676	737	840	969	1,024	1,011	910	832	192
1981	664	653	651	665	676	691	705	752	693	566	455	390	362
1982	341	376	432	560	676	737	851	969	1,024	999	901	843	181
1983	664	676	676	676	676	737	850	969	1,024	1,024	982	851	173
1984	664	676	676	676	676	736	765	899	877	764	647	571	328
1985	526	537	546	551	572	592	644	703	632	510	403	330	373
1986	288	293	318	353	676	737	851	969	1,024	930	815	739	285
1987	664	653	649	642	649	650	669	669	588	482	393	337	332
1988	295	295	297	313	326	349	382	406	374	301	243	205	201
1989	176	168	170	169	181	250	362	432	416	344	285	248	184
1990	229	228	229	232	241	269	334	354	317	249	190	152	202
1991	136	129	125	119	115	184	220	326	386	326	267	229	157
1992	200	198	200	200	249	273	359	399	348	291	232	194	205
1993	160	159	206	351	406	532	669	969	1,024	993	893	820	204
1994	664	659	664	660	664	660	658	656	590	481	393	333	325
Avg	415	420	443	473	512	552	611	707	721	641	547	482	240
Min	115	115	118	119	115	143	154	170	179	115	115	115	-35
Max	664	676	676	676	676	737	851	969	1,024	1,024	982	851	451

Table I-17c. CALSIM Simulated Lake McClure Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-299	-299	-301	-301	-291	-269	-245	-135	0	-5	-20	-30
1923	0	-1	0	0	0	5	27	58	62	57	42	32
1924	4	2	1	1	1	5	22	43	46	43	30	23
1925	0	-1	-2	-2	-2	3	28	59	64	59	45	34
1926	7	5	4	4	4	9	33	64	69	65	50	40
1927	11	10	9	9	9	14	36	69	73	69	53	44
1928	19	18	16	17	16	21	32	77	82	77	62	52
1929	27	26	24	24	25	29	47	71	75	72	59	51
1930	26	24	24	24	24	26	27	34	36	34	27	21
1931	7	6	6	6	6	9	20	35	37	0	0	0
1932	0	0	-1	-1	-2	4	27	55	59	54	39	29
1933	1	0	-2	-1	-2	4	27	56	61	56	41	31
1934	4	2	1	1	1	3	14	30	32	30	22	0
1935	0	-1	-1	-1	-1	4	28	58	63	57	42	32
1936	4	3	2	2	0	2	0	0	4	-1	-16	-26
1937	-31	-32	-33	-26	0	0	23	0	0	-5	-20	-30
1938	0	-1	0	0	0	0	0	0	0	-4	-20	-13
1939	0	-1	-3	0	0	5	24	61	65	61	46	36
1940	8	7	6	6	6	10	32	62	66	61	46	35
1941	7	6	5	0	0	0	24	0	0	-4	-20	-30
1942	0	-1	0	0	0	5	19	18	0	-4	-20	-30
1943	0	0	0	0	0	0	0	0	4	0	-15	-25
1944	0	-1	-3	-3	0	6	29	61	65	61	46	36
1945	8	6	5	5	0	0	24	32	34	29	14	4
1946	0	0	0	0	0	5	29	45	49	44	29	18
1947	-10	-11	-12	-12	0	6	29	61	65	61	46	35
1948	8	6	5	5	5	10	33	67	71	67	52	42
1949	14	13	12	12	12	17	42	74	78	73	58	48
1950	21	19	19	18	18	24	47	76	80	76	62	42
1951	5	3	2	0	0	5	27	59	63	58	44	33
1952	6	4	3	2	0	0	0	0	0	-4	-20	-30
1953	0	-1	0	0	0	6	30	60	64	60	45	35
1954	6	5	4	4	4	9	34	64	69	64	49	39
1955	12	10	9	9	8	14	38	71	75	71	57	13
1956	0	0	-1	0	0	5	29	22	0	-5	-20	-30
1957	0	-1	-3	-2	0	6	29	59	63	58	44	34
1958	5	5	3	3	3	7	0	0	0	-5	-20	-30
1959	0	-1	-2	-3	0	5	29	61	65	61	46	36
1960	8	7	5	6	5	8	20	34	35	33	25	19
1961	6	5	5	4	4	7	18	34	35	33	25	16
1962	0	0	0	-1	-1	5	30	57	62	57	42	33
1963	5	3	2	3	2	8	30	62	66	62	46	36
1964	8	6	5	5	5	11	36	62	67	63	48	38
1965	9	8	7	6	7	11	27	66	69	65	49	39
1966	0	0	0	0	0	6	30	61	65	60	45	35
1967	7	6	5	4	4	9	14	0	0	0	-16	0
1968	0	-1	-2	-2	0	5	30	61	65	62	46	37
1969	9	8	6	6	0	0	0	0	0	-4	-20	-16
1970	0	-1	0	0	0	0	24	50	54	49	34	24
1971	-3	-5	-6	-6	-6	-1	23	51	55	51	36	26
1972	-3	-3	-5	-4	-4	0	24	53	57	53	38	28
1973	1	0	-2	-2	-2	3	28	57	61	56	41	32
1974	3	2	1	0	0	0	24	4	0	-4	-20	-30
1975	0	-1	-2	0	0	0	24	43	0	-5	-19	-30
1976	0	-1	-3	-2	-1	3	19	44	47	45	32	24
1977	2	1	0	0	0	0	3	5	5	4	2	1
1978	-4	-5	-5	-5	-5	0	24	0	0	0	-16	0
1979	0	-1	-3	0	0	0	22	21	24	20	5	-6
1980	-30	-30	-32	0	0	0	23	7	0	-5	-20	-19
1981	0	-1	-2	-2	0	6	28	61	65	60	45	35
1982	7	6	4	5	0	0	0	0	0	-5	-20	-8
1983	0	0	0	0	0	0	23	0	0	0	-15	0
1984	0	0	0	0	0	5	27	58	62	57	42	32
1985	4	3	1	1	1	6	30	58	62	58	43	33
1986	6	4	3	2	0	0	13	0	0	-4	-20	-29
1987	0	-1	-2	-3	-3	2	18	43	46	43	31	23
1988	0	0	-2	-2	-2	0	11	26	28	26	18	13
1989	-1	-1	-3	-3	-2	0	12	26	28	27	18	14
1990	-1	-1	-1	-2	-2	0	13	27	28	27	19	14
1991	0	-1	-1	-2	-2	1	13	28	30	28	20	15
1992	0	0	0	0	0	3	14	29	30	29	21	17
1993	-6	-2	34	6	-31	-26	19	69	0	20	14	6
1994	0	2	7	4	-6	-9	15	20	27	24	14	7
Avg	-2	-3	-3	-3	-2	1	19	37	40	36	22	14
Min	-299	-299	-301	-301	-291	-269	-245	-135	0	-5	-20	-30
Max	27	26	34	24	25	29	47	77	82	77	62	52

Table I-17d. CALSIM Simulated Lake McClure Storage, Percentiles for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	115	115	118	121	117	117	127	136	142	115	115	115
10	136	135	172	192	233	252	275	300	289	222	176	138
20	179	189	230	250	296	314	363	420	407	315	247	194
30	250	253	271	315	386	423	457	462	491	395	318	269
40	295	328	346	413	448	501	554	613	563	452	364	314
50	413	408	474	538	586	648	651	665	678	558	465	406
60	495	509	545	624	676	691	695	764	769	678	583	516
70	664	654	653	667	676	710	738	900	910	845	756	689
80	664	661	668	676	676	737	808	962	1,024	944	839	772
90	664	670	676	676	676	737	838	969	1,024	995	909	840
Max	664	676	676	676	676	737	851	969	1,024	1,024	997	851
Avg	417	423	446	476	514	551	592	670	681	605	525	468
B: 2020 Baseline												
Min	115	115	118	119	115	143	154	170	179	115	115	115
10	136	150	172	200	237	259	313	334	317	275	225	166
20	184	186	206	249	301	331	382	472	452	376	279	229
30	248	252	268	313	384	432	484	530	542	458	350	294
40	295	295	348	404	449	493	531	661	622	505	416	342
50	417	412	473	541	584	646	669	723	742	618	507	443
60	498	512	546	626	676	693	705	825	834	735	624	548
70	634	635	649	662	676	717	764	943	972	882	765	688
80	664	660	663	676	676	737	832	969	1,024	939	824	747
90	664	669	676	676	676	737	851	969	1,024	993	893	820
Max	664	676	676	676	676	737	851	969	1,024	1,024	982	851
Avg	415	420	443	473	512	552	611	707	721	641	547	482
Comparison: B – A												
Min	0	0	0	-2	-2	26	27	34	37	0	0	0
10	0	15	0	8	4	7	38	34	28	53	49	28
20	5	-3	-24	-1	5	17	19	52	45	61	32	35
30	-2	-1	-3	-2	-2	9	27	68	51	63	32	25
40	0	-33	2	-9	1	-8	-23	48	59	53	52	28
50	4	4	-1	3	-2	-2	18	58	64	60	42	37
60	3	3	1	2	0	2	10	61	65	57	41	32
70	-30	-19	-4	-5	0	7	26	43	62	37	9	-1
80	0	-1	-5	0	0	0	24	7	0	-5	-15	-25
90	0	-1	0	0	0	0	13	0	0	-2	-16	-20
Max	0	0	0	0	0	0	0	0	0	0	-15	0
Avg	-2	-3	-3	-3	-2	1	19	37	40	36	22	14

Table I-18a. CALSIM Simulated Merced River Flow below Merced Falls Dam, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	341	276	357	343	745	691	201	1,852	3,872	261	172	151	556
1923	2,225	263	1,040	1,245	1,118	316	591	508	271	277	221	151	497
1924	339	218	228	228	279	272	290	466	261	267	210	144	194
1925	338	247	239	238	343	340	618	585	271	277	221	151	233
1926	341	218	258	228	316	272	631	577	261	267	212	145	225
1927	323	185	263	179	467	373	484	607	271	261	156	83	220
1928	252	218	308	312	309	397	692	675	271	261	156	83	238
1929	252	218	228	228	294	278	609	438	261	251	145	77	198
1930	135	185	179	179	180	196	379	251	204	192	99	45	134
1931	333	185	179	191	245	243	147	196	221	126	38	47	130
1932	128	185	382	337	592	345	322	645	271	277	221	151	233
1933	343	218	228	305	302	290	567	312	261	267	212	145	208
1934	338	185	239	244	281	250	279	475	221	208	164	53	178
1935	126	247	245	374	316	381	331	666	271	277	221	151	218
1936	326	218	228	317	2,534	373	460	1,497	271	277	221	151	410
1937	706	218	295	429	4,493	959	230	2,176	375	277	221	151	619
1938	1,373	218	2,191	1,297	4,752	4,632	685	3,421	4,505	261	172	426	1,432
1939	3,140	263	288	367	598	303	609	739	278	267	212	145	437
1940	345	185	179	438	402	405	325	541	271	277	221	151	227
1941	341	218	347	966	2,986	1,343	289	2,046	2,123	261	172	151	668
1942	2,567	263	1,320	1,589	1,630	358	249	758	2,147	261	172	151	690
1943	2,695	481	758	2,516	1,797	2,732	489	917	271	277	221	151	805
1944	1,221	218	241	292	882	391	794	576	271	277	221	151	334
1945	343	295	295	292	1,541	648	208	666	271	277	221	151	309
1946	1,536	572	1,831	997	757	342	616	654	271	277	221	151	498
1947	341	291	310	281	797	272	439	416	278	267	212	145	242
1948	338	240	185	231	237	334	430	472	271	277	221	151	205
1949	341	218	228	239	295	391	616	447	271	277	221	151	223
1950	138	218	228	310	365	329	508	370	271	277	221	138	203
1951	116	449	344	788	1,428	366	637	727	271	277	221	151	344
1952	341	218	363	538	355	1,428	295	3,485	2,262	261	172	151	600
1953	2,771	218	392	1,093	576	322	616	585	271	277	221	151	455
1954	341	218	228	292	317	366	616	431	271	277	221	151	225
1955	341	218	288	310	289	272	469	387	261	267	212	104	206
1956	98	185	722	682	1,523	301	616	748	1,245	261	172	151	402
1957	2,621	244	228	286	687	340	616	555	271	277	221	151	393
1958	341	218	288	310	392	485	852	2,942	2,066	261	172	134	512
1959	2,573	218	228	292	879	266	802	552	278	267	212	145	405
1960	338	185	179	191	284	263	568	377	221	208	164	112	187
1961	332	196	239	179	245	243	147	196	221	208	164	110	150
1962	128	185	218	222	564	404	616	629	271	277	221	151	233
1963	341	218	228	330	399	337	632	532	271	277	221	151	237
1964	341	283	288	299	274	272	609	329	261	267	212	145	217
1965	282	260	369	321	255	311	277	666	271	261	172	151	218
1966	513	1,014	841	861	753	329	810	560	288	277	221	151	398
1967	341	276	383	354	336	370	487	1,989	4,285	1,655	172	632	680
1968	2,972	218	295	292	699	279	802	552	278	267	212	145	426
1969	340	240	263	619	2,903	1,500	1,299	5,414	4,030	261	172	390	1,043
1970	3,156	261	664	2,716	1,333	474	616	597	271	277	221	151	650
1971	341	281	332	317	295	322	616	593	271	277	221	151	243
1972	343	243	301	292	284	259	303	463	261	267	212	145	204
1973	338	240	239	288	505	467	196	666	271	277	221	151	233
1974	330	238	298	439	782	849	280	871	427	277	221	151	311
1975	1,435	218	288	328	2,278	879	227	602	1,650	277	221	151	508
1976	2,062	263	272	228	305	272	481	375	278	267	210	144	314
1977	457	185	179	179	180	179	363	235	125	176	87	59	145
1978	120	185	245	381	564	514	410	365	4,005	544	172	1,204	521
1979	3,034	263	258	1,682	2,139	1,030	210	1,005	271	277	221	151	634
1980	403	218	288	4,455	4,600	1,362	196	503	1,787	261	172	327	873
1981	2,952	218	228	310	480	297	778	576	278	267	212	145	409
1982	338	247	252	378	1,596	1,801	4,317	2,995	1,551	261	172	514	864
1983	3,598	1,487	2,540	3,413	4,347	5,370	220	2,603	7,730	3,516	156	1,740	2,210
1984	3,240	1,774	3,482	1,705	1,476	339	666	699	271	277	120	83	858
1985	341	288	295	286	309	290	599	397	244	186	114	196	214
1986	387	247	246	244	1,091	3,445	196	1,061	1,028	277	221	151	519
1987	1,694	218	228	228	294	283	438	417	278	251	162	144	281
1988	338	257	232	238	232	260	302	432	187	174	63	17	166
1989	333	185	239	191	245	268	147	196	221	322	148	146	160
1990	348	225	179	238	245	250	147	196	221	338	131	112	159
1991	98	185	179	179	180	338	147	196	237	387	197	129	148
1992	350	225	179	236	313	261	147	196	221	338	180	129	168
1993	155	185	244	529	364	357	314	431	613	266	186	109	226
1994	2,419	218	228	228	293	260	609	438	271	255	137	112	332
Avg	899	288	436	591	928	648	518	859	820	332	188	192	403
Min	98	185	179	179	180	179	147	196	125	126	38	17	130
Max	3,598	1,774	3,482	4,455	4,752	5,370	4,317	5,414	7,730	3,516	221	1,740	2,210

Table I-18b. CALSIM Simulated Merced River Flow below Merced Falls Dam, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	392	279	359	343	565	407	144	494	1,661	264	194	163	316
1923	1,331	265	1,001	1,243	1,115	300	563	414	252	281	243	163	432
1924	390	218	228	228	279	256	263	428	243	271	234	157	194
1925	380	249	241	238	343	324	561	511	252	281	243	163	228
1926	392	218	260	228	316	256	573	502	243	271	235	158	220
1927	392	187	266	179	467	357	462	499	252	264	178	96	217
1928	252	218	310	312	309	381	883	359	252	264	178	96	230
1929	262	218	228	228	294	262	552	364	243	255	169	90	191
1930	229	185	179	179	180	189	540	347	195	194	110	51	156
1931	359	185	179	191	245	236	120	160	211	203	36	46	131
1932	123	185	383	337	592	329	295	607	252	281	243	163	229
1933	394	218	228	305	302	274	540	274	243	271	235	158	208
1934	392	185	241	244	281	242	266	426	211	210	175	97	179
1935	122	248	246	374	316	365	273	592	252	281	243	163	210
1936	377	218	228	317	2,561	398	836	1,907	252	281	243	163	465
1937	379	218	297	310	4,019	1,023	172	2,967	423	281	243	163	620
1938	479	218	2,154	1,295	4,749	4,697	1,022	3,833	4,552	264	194	146	1,412
1939	2,526	265	291	323	594	287	644	576	259	271	235	158	389
1940	399	185	180	438	402	389	299	474	252	281	243	163	224
1941	392	218	349	1,039	2,982	1,407	231	2,846	2,173	264	194	163	731
1942	1,674	265	1,280	1,587	1,626	342	342	1,202	2,494	264	194	163	687
1943	1,803	461	740	2,515	1,794	2,797	826	1,328	252	281	243	163	798
1944	401	218	244	292	834	375	752	486	252	281	243	163	273
1945	394	297	297	292	1,624	714	151	946	284	281	243	163	338
1946	1,189	552	1,813	996	753	326	559	802	252	281	243	163	480
1947	392	294	312	281	572	256	404	320	259	271	235	158	225
1948	392	243	188	231	237	318	403	369	252	281	243	163	201
1949	392	218	228	239	295	375	559	373	252	281	243	163	218
1950	189	218	228	310	365	313	482	333	252	281	243	163	203
1951	189	452	346	820	1,425	350	610	624	252	281	243	163	343
1952	392	218	366	538	401	1,494	632	3,896	2,316	264	194	163	661
1953	1,874	218	355	1,091	573	306	559	539	252	281	243	163	391
1954	392	218	228	292	317	350	559	373	252	281	243	163	221
1955	392	218	291	310	289	256	440	285	243	271	235	158	205
1956	131	185	724	660	1,519	285	559	1,275	1,657	264	194	163	457
1957	1,729	247	228	286	637	324	559	511	252	281	243	163	330
1958	392	218	291	310	392	469	1,320	3,353	2,116	264	194	146	572
1959	1,675	218	228	292	832	250	762	462	259	271	235	158	339
1960	392	185	179	191	284	255	540	347	211	210	175	118	187
1961	357	197	240	179	245	236	120	160	211	210	175	118	148
1962	162	185	219	222	564	388	559	620	252	281	243	163	232
1963	392	218	228	330	399	321	606	428	252	281	243	163	233
1964	392	285	291	299	274	256	552	326	243	271	235	158	217
1965	359	263	372	321	255	295	360	456	252	264	194	163	215
1966	740	994	824	859	749	313	752	486	269	281	243	163	402
1967	392	279	385	354	336	354	745	2,631	4,335	1,583	194	209	713
1968	2,565	218	297	292	651	263	745	478	259	271	235	158	390
1969	394	243	266	619	3,007	1,565	1,636	5,823	4,080	264	194	163	1,093
1970	2,488	264	623	2,715	1,329	538	559	588	252	281	243	163	607
1971	392	284	335	317	295	306	559	584	252	281	243	163	242
1972	394	245	304	292	284	243	274	423	243	271	235	158	204
1973	392	243	241	288	505	451	139	592	252	281	243	163	229
1974	381	240	301	451	778	913	223	1,609	532	281	243	163	369
1975	538	218	291	292	2,267	944	169	694	2,427	281	243	163	505
1976	1,170	265	275	228	279	256	457	269	259	271	234	157	250
1977	499	185	179	179	180	179	361	225	124	176	89	61	147
1978	161	185	245	381	564	498	352	1,166	4,052	472	194	782	543
1979	2,625	265	260	1,638	2,136	1,094	184	1,430	252	281	243	163	636
1980	382	220	291	3,937	4,597	1,426	139	1,172	1,963	264	194	146	883
1981	2,240	218	228	310	433	281	745	478	259	271	235	158	355
1982	392	249	254	378	1,673	1,865	4,652	3,403	1,602	264	194	146	904
1983	3,068	1,467	2,522	3,411	4,343	5,434	162	3,396	7,778	3,446	178	1,318	2,199
1984	2,832	1,754	3,463	1,703	1,473	323	639	595	252	281	120	96	821
1985	392	291	297	286	309	274	552	364	226	190	138	209	213
1986	441	249	248	244	1,137	3,508	321	1,676	1,077	281	243	163	579
1987	807	218	228	228	294	267	413	312	259	255	185	157	219
1988	380	259	234	238	232	252	288	404	178	174	63	17	165
1989	359	185	240	191	245	260	120	160	211	324	159	152	157
1990	374	226	179	238	245	242	120	160	211	340	142	118	157
1991	123	185	179	179	180	330	120	160	228	389	208	135	146
1992	375	226	179	236	313	254	120	160	211	340	191	135	166
1993	330	185	245	529	364	341	288	1,001	2,352	269	208	121	375
1994	2,054	218	228	228	293	244	552	372	253	260	161	125	303
Avg	735	287	433	582	917	647	532	948	834	333	208	172	399
Min	122	185	179	179	180	179	120	160	124	174	36	17	131
Max	3,068	1,754	3,463	3,937	4,749	5,434	4,652	5,823	7,778	3,446	243	1,318	2,199

Table I-18c. CALSIM Simulated Merced River Flow below Merced Falls Dam, 2020 Baseline minus 2001 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	51	3	2	0	-180	-284	-57	-1,358	-2,211	3	22	12	-240
1923	-894	2	-39	-2	-3	-16	-28	-94	-19	4	22	12	-65
1924	51	0	0	0	0	-16	-27	-38	-18	4	24	13	0
1925	42	2	2	0	0	-16	-57	-74	-19	4	22	12	-5
1926	51	0	2	0	0	-16	-58	-75	-18	4	23	13	-4
1927	69	2	3	0	0	-16	-22	-108	-19	3	22	13	-3
1928	0	0	2	0	0	-16	191	-316	-19	3	22	13	-8
1929	10	0	0	0	0	-16	-57	-74	-18	4	24	13	-7
1930	94	0	0	0	0	-7	161	96	-9	2	11	6	21
1931	26	0	0	0	0	-7	-27	-36	-10	77	-2	-1	1
1932	-5	0	1	0	0	-16	-27	-38	-19	4	22	12	-4
1933	51	0	0	0	0	-16	-27	-38	-18	4	23	13	0
1934	54	0	2	0	0	-8	-13	-49	-10	2	11	44	2
1935	-4	1	1	0	0	-16	-58	-74	-19	4	22	12	-8
1936	51	0	0	0	27	25	376	410	-19	4	22	12	55
1937	-327	0	2	-119	-474	64	-58	791	48	4	22	12	1
1938	-894	0	-37	-2	-3	65	337	412	47	3	22	-280	-20
1939	-614	2	3	-44	-4	-16	35	-163	-19	4	23	13	-48
1940	54	0	1	0	0	-16	-26	-67	-19	4	22	12	-2
1941	51	0	2	73	-4	64	-58	800	50	3	22	12	62
1942	-893	2	-40	-2	-4	-16	93	444	347	3	22	12	-3
1943	-892	-20	-18	-1	-3	65	337	411	-19	4	22	12	-7
1944	-820	0	3	0	-48	-16	-42	-90	-19	4	22	12	-61
1945	51	2	2	0	83	66	-57	280	13	4	22	12	29
1946	-347	-20	-18	-1	-4	-16	-57	148	-19	4	22	12	-18
1947	51	3	2	0	-225	-16	-35	-96	-19	4	23	13	-17
1948	54	3	3	0	0	-16	-27	-103	-19	4	22	12	-4
1949	51	0	0	0	0	-16	-57	-74	-19	4	22	12	-5
1950	51	0	0	0	0	-16	-26	-37	-19	4	22	25	0
1951	73	3	2	32	-3	-16	-27	-103	-19	4	22	12	-1
1952	51	0	3	0	46	66	337	411	54	3	22	12	61
1953	-897	0	-37	-2	-3	-16	-57	-46	-19	4	22	12	-64
1954	51	0	0	0	0	-16	-57	-58	-19	4	22	12	-4
1955	51	0	3	0	0	-16	-29	-102	-18	4	23	54	-2
1956	33	0	2	-22	-4	-16	-57	527	412	3	22	12	55
1957	-892	3	0	0	-50	-16	-57	-44	-19	4	22	12	-63
1958	51	0	3	0	0	-16	468	411	50	3	22	12	61
1959	-898	0	0	0	-47	-16	-40	-90	-19	4	23	13	-65
1960	54	0	0	0	0	-8	-28	-30	-10	2	11	6	0
1961	25	1	1	0	0	-7	-27	-36	-10	2	11	8	-2
1962	34	0	1	0	0	-16	-57	-9	-19	4	22	12	-2
1963	51	0	0	0	0	-16	-26	-104	-19	4	22	12	-5
1964	51	2	3	0	0	-16	-57	-3	-18	4	23	13	0
1965	77	3	3	0	0	-16	83	-210	-19	3	22	12	-3
1966	227	-20	-17	-2	-4	-16	-58	-74	-19	4	22	12	4
1967	51	3	2	0	0	-16	258	642	50	-72	22	-423	32
1968	-407	0	2	0	-48	-16	-57	-74	-19	4	23	13	-35
1969	54	3	3	0	104	65	337	409	50	3	22	-227	50
1970	-668	3	-41	-1	-4	64	-57	-9	-19	4	22	12	-43
1971	51	3	3	0	0	-16	-57	-9	-19	4	22	12	0
1972	51	2	3	0	0	-16	-29	-40	-18	4	23	13	0
1973	54	3	2	0	0	-16	-57	-74	-19	4	22	12	-4
1974	51	2	3	12	-4	64	-57	738	105	4	22	12	58
1975	-897	0	3	-36	-11	65	-58	92	777	4	22	12	-3
1976	-892	2	3	0	-26	-16	-24	-106	-19	4	24	13	-64
1977	42	0	0	0	0	0	-2	-10	-1	0	2	2	2
1978	41	0	0	0	0	-16	-58	801	47	-72	22	-422	22
1979	-409	2	2	-44	-3	64	-26	425	-19	4	22	12	2
1980	-21	2	3	-518	-3	64	-57	669	176	3	22	-181	10
1981	-712	0	0	0	-47	-16	-33	-98	-19	4	23	13	-54
1982	54	2	2	0	77	64	335	408	51	3	22	-368	39
1983	-530	-20	-18	-2	-4	64	-58	793	48	-70	22	-422	-11
1984	-408	-20	-19	-2	-3	-16	-27	-104	-19	4	0	13	-37
1985	51	3	2	0	0	-16	-47	-33	-18	4	24	13	-1
1986	54	2	2	0	46	63	125	615	49	4	22	12	60
1987	-887	0	0	0	0	-16	-25	-105	-19	4	23	13	-62
1988	42	2	2	0	0	-8	-14	-28	-9	0	0	0	-1
1989	26	0	1	0	0	-8	-27	-36	-10	2	11	6	-2
1990	26	1	0	0	0	-8	-27	-36	-10	2	11	6	-2
1991	25	0	0	0	0	-8	-27	-36	-9	2	11	6	-2
1992	25	1	0	0	0	-7	-27	-36	-10	2	11	6	-2
1993	175	0	1	0	0	-16	-26	570	1,739	3	22	12	149
1994	-365	0	0	0	0	-16	-57	-66	-18	5	24	13	-29
Avg	-164	-1	-3	-9	-11	-1	14	89	14	1	20	-20	-4
Min	-898	-20	-41	-518	-474	-284	-58	-1,358	-2,211	-72	-2	-423	-240
Max	227	3	3	73	104	66	468	801	1,739	77	24	54	149

Table I-18d. CALSIM Simulated Merced River Flow below Merced Falls Dam, 2020 Baseline minus 2001 Baseline (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	98	185	179	179	180	179	147	196	125	126	38	17	
10	128	185	179	191	245	259	196	235	221	208	131	83	
20	326	196	228	228	284	272	230	387	261	261	164	112	
30	338	218	228	244	302	283	295	438	271	261	172	144	
40	341	218	239	292	317	316	363	503	271	267	172	145	
50	341	218	258	310	402	339	481	576	271	267	212	151	
60	343	240	288	328	592	366	591	602	271	277	212	151	
70	457	247	298	378	782	391	616	666	278	277	221	151	
80	2,062	263	363	682	1,476	648	618	871	1,028	277	221	151	
90	2,771	291	758	1,297	2,278	1,362	778	2,046	2,147	277	221	196	
Max	3,598	1,774	3,482	4,455	4,752	5,370	4,317	5,414	7,730	3,516	221	1,740	
Avg	899	288	436	591	928	648	518	859	820	332	188	192	403
B: 2020 Baseline													
Min	122	185	179	179	180	179	120	160	124	174	36	17	
10	189	185	179	191	245	243	139	225	211	210	142	96	
20	359	197	228	228	284	256	223	347	243	264	178	135	
30	380	218	228	244	295	267	288	373	252	264	194	157	
40	392	218	241	292	317	300	361	428	252	271	194	158	
50	392	218	260	310	402	324	540	494	252	271	235	163	
60	392	243	291	317	572	350	559	584	252	281	235	163	
70	401	249	301	374	753	381	559	624	259	281	243	163	
80	1,189	265	359	660	1,473	538	639	1,275	1,602	281	243	163	
90	2,054	294	740	1,295	2,267	1,426	762	2,846	2,352	281	243	163	
Max	3,068	1,754	3,463	3,937	4,749	5,434	4,652	5,823	7,778	3,446	243	1,318	
Avg	735	287	433	582	917	647	532	948	834	333	208	172	399
Comparison: B – A													
Min	24	0	0	0	0	0	-27	-36	-1	48	-2	0	
10	61	0	0	0	0	-16	-57	-10	-10	2	11	13	
20	33	1	0	0	0	-16	-7	-40	-18	3	14	23	
30	42	0	0	0	-7	-16	-7	-65	-19	3	22	13	
40	51	0	2	0	0	-16	-2	-75	-19	4	22	13	
50	51	0	2	0	0	-15	59	-82	-19	4	23	12	
60	49	3	3	-11	-20	-16	-32	-18	-19	4	23	12	
70	-56	2	3	-4	-29	-10	-57	-42	-19	4	22	12	
80	-873	2	-4	-22	-3	-110	21	404	574	4	22	12	
90	-717	3	-18	-2	-11	64	-16	800	205	4	22	-33	
Max	-530	-20	-19	-518	-3	64	335	409	48	-70	22	-422	
Avg	-164	-1	-3	-9	-11	-1	14	89	14	1	20	-20	-4

Table I-19a. CALSIM Simulated San Joaquin River Flow at Vernalis, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-	VAMP	VAMP	Post-	Jun	Jul	Aug	Sep	taf/yr
							VAMP	4/16-	5/1-	VAMP					
							4/1-4/15	4/30	5/15	5/16-5/31					
1922	2,221	1,748	2,654	2,797	6,645	7,825	6,155	7,569	8,022	6,472	11,891	2,152	2,040	1,966	3,362
1923	4,161	1,735	4,614	7,254	6,254	2,991	5,184	7,000	6,999	3,653	2,609	2,093	2,002	1,897	2,827
1924	2,217	1,534	1,644	1,611	1,845	1,659	1,407	2,000	2,000	1,182	1,225	1,166	948	1,059	1,097
1925	1,602	1,394	1,394	1,278	2,783	2,501	3,061	5,700	5,699	2,507	2,102	1,758	1,622	1,649	1,595
1926	1,845	1,402	1,478	1,303	1,916	1,760	2,448	4,450	4,449	1,747	1,534	1,370	952	1,205	1,282
1927	1,643	1,803	1,980	1,766	4,614	3,758	4,143	7,000	6,999	2,972	2,301	1,846	1,675	1,613	2,010
1928	1,773	1,889	2,101	2,164	2,460	5,906	4,349	6,999	5,771	2,520	1,809	1,626	1,544	1,533	1,967
1929	1,831	1,411	1,466	1,428	1,798	1,672	1,455	3,200	3,199	1,268	1,321	1,252	850	1,081	1,124
1930	1,377	1,194	1,174	1,261	1,591	1,808	1,499	2,846	2,822	1,227	1,270	1,205	796	1,065	1,019
1931	1,459	1,196	1,170	1,154	1,359	1,253	1,218	1,561	1,361	1,011	1,068	864	791	945	833
1932	1,143	1,234	3,131	3,437	7,412	4,588	3,689	5,700	5,699	2,288	1,969	1,752	1,630	1,652	2,187
1933	1,924	1,426	1,424	1,625	1,933	2,037	1,660	3,200	3,199	1,403	1,254	1,077	1,029	1,106	1,178
1934	1,326	1,205	1,316	1,316	1,855	1,639	1,326	2,000	2,000	1,005	1,046	955	778	927	933
1935	1,243	1,372	1,455	3,630	3,420	3,577	5,423	7,149	7,000	4,272	2,964	2,080	1,773	1,807	2,120
1936	1,732	1,465	1,587	1,868	9,548	5,727	6,506	7,347	6,999	3,764	2,309	1,925	1,756	1,799	2,500
1937	2,425	1,550	1,790	2,539	14,345	10,702	8,554	9,567	10,074	7,929	2,584	2,080	1,854	1,899	3,562
1938	3,268	1,631	5,503	6,585	20,028	27,227	17,446	17,446	21,253	21,253	19,395	3,575	2,234	2,900	7,859
1939	8,848	1,822	2,118	2,287	3,082	3,864	3,299	5,699	5,477	2,551	1,852	1,762	1,717	1,601	2,264
1940	1,984	1,501	1,529	4,048	5,747	9,383	6,285	7,000	6,999	3,834	2,580	2,058	1,978	1,927	2,693
1941	2,515	1,799	2,812	5,285	14,035	11,104	10,005	10,046	9,583	8,079	6,353	2,370	2,157	1,973	4,135
1942	4,658	1,851	4,919	7,648	8,684	5,873	6,905	7,000	7,000	5,915	5,299	2,782	2,305	2,180	3,581
1943	5,532	2,087	3,610	12,379	10,734	17,286	7,791	7,821	7,809	6,347	3,103	2,548	2,238	2,192	4,615
1944	3,404	1,885	1,972	1,998	3,247	3,405	3,246	6,999	6,246	3,328	2,254	2,171	2,099	1,851	2,059
1945	2,164	1,947	1,946	1,854	6,641	7,956	6,286	7,424	7,000	4,053	2,639	2,342	2,245	2,002	2,644
1946	3,507	2,027	5,531	4,714	5,185	4,528	4,703	6,999	6,999	3,529	2,564	2,183	2,104	1,942	2,733
1947	2,294	1,950	2,191	1,946	2,735	1,922	1,758	3,200	3,200	1,570	1,679	1,606	1,017	1,249	1,410
1948	1,691	1,358	1,288	1,184	1,368	1,835	3,105	4,450	4,450	2,693	2,252	1,814	1,722	1,689	1,421
1949	1,880	1,428	1,407	1,299	1,686	2,655	2,615	4,450	4,449	2,215	1,754	1,706	1,643	1,617	1,444
1950	1,656	1,411	1,390	2,007	2,727	2,355	2,486	4,450	4,449	2,002	1,734	1,597	1,549	1,580	1,484
1951	1,650	3,660	8,076	9,516	9,763	5,435	3,876	6,999	6,999	3,502	2,470	1,841	1,711	1,826	3,395
1952	2,387	1,780	2,815	5,547	6,122	11,353	9,754	9,754	13,544	12,811	13,462	3,286	2,176	2,586	4,487
1953	8,141	1,844	2,644	6,512	4,931	3,171	3,636	5,699	5,699	3,148	2,353	1,907	1,811	1,698	2,660
1954	2,171	1,581	1,634	1,690	2,280	2,632	3,901	5,700	5,699	2,997	1,943	1,890	1,802	1,679	1,714
1955	2,127	1,509	1,610	1,848	1,957	1,760	1,719	3,200	3,200	1,635	1,711	1,639	1,106	1,245	1,289
1956	1,532	1,393	10,420	16,689	11,987	6,370	4,892	6,999	6,999	3,623	5,465	2,350	2,005	2,375	4,314
1957	4,805	1,614	1,773	1,751	2,617	4,247	3,137	5,699	5,700	3,231	2,331	1,838	1,717	1,673	2,007
1958	2,282	1,649	1,742	1,983	3,422	9,008	14,395	14,395	12,769	11,820	9,901	2,680	2,279	2,475	3,865
1959	5,934	1,786	1,878	2,175	4,868	3,209	2,466	5,699	4,354	2,118	1,647	1,592	1,530	1,529	2,009
1960	1,814	1,343	1,327	1,386	2,152	1,859	1,707	3,200	3,199	1,437	1,479	1,364	815	1,138	1,169
1961	1,545	1,285	1,353	1,212	1,380	1,280	1,422	1,647	1,449	1,268	1,407	1,040	805	1,133	924
1962	1,397	1,237	1,249	1,199	5,499	4,540	3,630	5,700	5,699	2,225	1,698	1,589	1,512	1,555	1,797
1963	1,621	1,388	1,363	1,846	3,420	2,765	4,538	7,000	6,999	3,720	2,954	2,196	1,848	1,834	1,943
1964	2,003	1,705	1,726	1,661	1,663	1,685	1,539	3,200	3,199	1,365	1,420	1,332	934	1,172	1,202
1965	1,672	1,637	4,068	9,868	6,905	4,832	6,630	7,017	7,000	4,116	2,926	2,040	1,786	1,821	3,001
1966	2,329	3,044	5,249	4,801	4,803	3,452	2,183	5,699	4,799	1,912	1,798	1,760	1,690	1,596	2,274
1967	2,077	1,633	2,854	3,217	3,166	6,852	12,486	12,486	13,950	12,488	16,178	9,008	2,082	3,211	4,586
1968	5,613	1,592	1,920	2,063	4,062	3,284	2,808	5,699	4,555	2,072	1,703	1,656	1,586	1,552	1,960
1969	1,999	1,571	1,931	13,070	24,229	17,682	18,434	18,434	23,420	23,420	24,557	4,037	2,140	2,858	8,122
1970	8,894	1,768	3,320	17,107	9,377	7,424	4,366	6,999	6,999	3,730	2,527	1,977	1,905	1,906	4,054
1971	2,369	1,857	2,413	2,356	2,671	3,399	3,113	5,699	5,699	2,980	2,218	1,966	1,872	1,706	1,903
1972	2,094	1,549	1,786	1,714	1,911	1,694	1,580	3,200	3,200	1,686	1,540	1,496	1,448	1,455	1,297
1973	1,848	1,441	1,489	2,402	7,372	8,264	5,514	7,567	7,000	4,098	2,210	1,976	1,881	1,881	2,565
1974	2,375	1,598	2,041	5,438	4,740	6,368	7,755	7,755	7,000	5,417	3,420	2,190	1,985	2,043	2,780
1975	3,645	1,762	1,922	1,960	5,692	8,606	6,637	7,327	7,000	4,831	4,871	2,347	2,042	2,077	2,874
1976	4,263	1,704	1,809	1,712	1,947	1,796	1,604	3,200	3,199	1,405	1,484	1,408	1,396	1,242	1,416
1977	3,176	2,092	1,684	1,306	1,381	1,271	1,354	2,000	2,000	1,180	1,219	884	673	974	1,082
1978	1,458	1,340	1,512	3,728	7,851	9,079	11,682	13,920	12,104	9,865	11,270	2,532	1,875	2,604	4,018
1979	4,600	1,543	1,720	4,973	9,354	8,715	5,547	7,000	7,000	4,239	2,154	1,841	1,751	1,837	3,017
1980	2,454	1,704	1,839	12,484	19,835	13,106	7,673	7,693	7,000	5,286	5,766	3,927	1,984	2,857	4,751
1981	5,220	1,650	1,790	2,123	2,582	3,678	3,004	5,699	4,990	2,331	1,718	1,676	1,612	1,563	1,909
1982	2,077	1,705	1,757	7,409	12,994	14,949	24,472	24,472	16,101	16,101	9,848	3,778	2,178	4,215	6,084
1983	12,599	7,644	18,296	23,448	31,152	37,464	20,190	20,190	20,374	19,121	34,745	17,785	2,071	6,571	13,927
1984	12,334	12,740	20,738	14,505	9,698	6,181	3,866	6,999	6,888	3,507	2,639	2,218	2,119	1,948	5,783
1985	2,317	1,917	1,966	1,787	2,203	2,205	1,898	4,450	4,449	2,554	1,721	1,610	1,534	1,554	1,536
1986	2,165	1,683	1,760	2,180	16,510	22,794	11,712	12,232	8,489	7,027	6,726	2,389	2,150	2,156	4,791
1987	3,663	1,668	1,705	1,677	2,045	1,979	1,653	3,200	3,200	1,448	1,523	1,489	1,378	1,177	1,391
1988	1,644	1,320	1,275	1,278	1,320	1,259	1,410	2,000	2,000	1,221	1,282	1,132	692	1,035	937
1989	1,543	1,193	1,300	1,185	1,365	1,606	1,410	2,002	1,706	1,201	1,273	1,299	852	1,150	960
1990	1,312	1,228	1,158	1,188	1,369	1,326	1,298	1,827	1,586	1,095	1,169	1,029	896	1,078	883
1991	1,040	1,173	1,130	1,033	1,149	2,398	1,951	2,526	2,022	1,447	1,140	1,074	917	1,019	968
1992	1,240	1,202	1,132	1,205	2,201	1,902	1,634	2,208	1,656	1,082	1,097	1,174	816	1,073	980
1993	1,377	1,345	1,479	7,412	5,288	4,568	3,770	5,700	5,700	3,636	3,335	2,100	1,905	1,788	2,404
1994	3,620	1,466	1,464	1,355	1,713	1,500	1,344	3,200	3,199	1,268	1,422	1,			

Table I-19b. CALSIM Simulated San Joaquin River Flow at Vernalis, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	2,272	1,751	2,657	2,797	6,464	5,538	4,936	7,510	7,000	4,811	5,293	2,142	2,038	1,975	2,700
1923	3,232	1,731	3,435	4,169	4,420	2,795	4,172	7,000	6,999	3,570	2,593	2,101	2,015	1,906	2,362
1924	2,240	1,535	1,646	1,613	1,847	1,643	1,387	2,000	2,000	1,149	1,212	1,167	971	1,072	1,097
1925	1,644	1,396	1,396	1,277	2,782	2,483	3,002	5,700	5,699	2,430	2,079	1,756	1,640	1,652	1,593
1926	1,891	1,400	1,478	1,299	1,909	1,745	2,392	4,450	4,449	1,674	1,537	1,383	978	1,220	1,282
1927	1,713	1,806	1,983	1,768	4,609	3,741	4,085	7,000	6,999	2,871	2,283	1,849	1,697	1,625	2,010
1928	1,773	1,889	2,103	2,163	2,460	3,124	2,939	6,999	4,806	2,432	1,785	1,604	1,536	1,539	1,720
1929	1,837	1,409	1,463	1,424	1,790	1,657	1,441	3,200	3,199	1,244	1,317	1,262	846	1,093	1,122
1930	1,471	1,195	1,175	1,262	1,593	1,800	1,471	3,200	3,199	1,210	1,259	1,200	773	1,066	1,043
1931	1,452	1,195	1,169	1,153	1,357	1,246	1,208	1,534	1,325	994	1,063	928	779	943	832
1932	1,182	1,234	3,132	3,433	7,412	4,572	3,632	5,700	5,699	2,214	1,952	1,758	1,654	1,665	2,186
1933	1,976	1,427	1,425	1,626	1,935	2,021	1,602	3,200	3,199	1,329	1,246	1,080	1,042	1,119	1,177
1934	1,379	1,205	1,318	1,316	1,855	1,631	1,299	2,000	2,000	991	1,044	961	769	971	937
1935	1,255	1,374	1,457	3,630	3,289	3,561	5,367	7,094	7,000	4,197	2,944	2,082	1,794	1,814	2,108
1936	1,781	1,465	1,587	1,867	9,552	5,752	5,861	7,722	7,000	4,172	2,288	1,925	1,775	1,819	2,511
1937	2,099	1,549	1,791	2,420	11,646	7,572	7,064	9,530	10,889	8,775	2,627	2,077	1,871	1,906	3,202
1938	2,372	1,618	4,533	4,801	18,563	27,145	17,568	17,568	20,938	20,938	19,387	3,508	2,256	2,551	7,511
1939	8,227	1,825	2,121	2,243	3,054	3,201	3,033	5,699	5,115	2,473	1,823	1,739	1,712	1,628	2,158
1940	2,034	1,499	1,527	4,034	5,251	9,208	6,036	7,000	6,999	3,762	2,564	2,058	1,984	1,939	2,647
1941	2,566	1,799	2,814	4,894	13,118	11,000	9,693	9,731	10,367	8,867	6,413	2,383	2,189	1,993	4,094
1942	3,769	1,856	4,351	7,621	8,604	5,723	6,749	7,000	7,137	6,476	5,646	2,785	2,327	2,192	3,517
1943	4,639	2,090	3,255	12,372	10,579	17,189	7,936	8,157	8,220	6,758	3,084	2,552	2,260	2,204	4,564
1944	2,584	1,885	1,975	1,998	3,199	3,299	3,136	6,999	6,101	3,248	2,217	2,135	2,080	1,834	1,983
1945	2,209	1,946	1,945	1,847	6,062	7,208	6,066	7,365	7,000	4,404	2,655	2,299	2,218	2,015	2,569
1946	3,209	2,004	3,980	4,766	5,054	4,402	4,513	6,999	6,999	3,757	2,556	2,188	2,115	1,956	2,609
1947	2,347	1,953	2,195	1,948	2,513	1,907	1,730	3,200	3,199	1,526	1,642	1,576	1,035	1,254	1,396
1948	1,740	1,358	1,288	1,179	1,358	1,819	3,047	4,450	4,449	2,618	2,233	1,814	1,730	1,701	1,418
1949	1,931	1,428	1,407	1,299	1,686	2,639	2,558	4,450	4,449	2,142	1,749	1,711	1,655	1,630	1,443
1950	1,707	1,411	1,390	2,007	2,728	2,338	2,426	4,450	4,449	1,924	1,709	1,574	1,540	1,598	1,480
1951	1,719	3,661	6,638	6,085	8,688	5,368	3,759	6,999	6,910	3,428	2,452	1,844	1,733	1,838	3,029
1952	2,438	1,780	2,818	5,547	5,269	11,235	9,861	9,861	13,955	12,893	13,097	3,211	2,198	2,528	4,428
1953	7,225	1,844	2,607	6,483	4,842	3,125	3,389	5,699	5,699	3,071	2,330	1,890	1,806	1,705	2,579
1954	2,219	1,580	1,632	1,686	2,280	2,616	3,222	5,700	5,699	2,912	1,930	1,883	1,804	1,685	1,692
1955	2,149	1,509	1,612	1,847	1,955	1,742	1,689	3,200	3,200	1,583	1,672	1,602	1,104	1,288	1,284
1956	1,559	1,390	10,423	13,133	11,948	6,283	4,732	6,999	7,000	4,313	5,695	2,356	2,030	2,268	4,116
1957	3,946	1,617	1,773	1,751	2,429	4,116	3,082	5,699	5,700	3,156	2,310	1,816	1,708	1,676	1,929
1958	2,310	1,647	1,742	1,979	3,420	7,387	14,644	14,644	13,184	11,722	9,576	2,681	2,299	2,315	3,763
1959	5,072	1,785	1,877	2,174	4,812	3,173	2,040	5,699	4,222	2,047	1,655	1,615	1,562	1,544	1,937
1960	1,846	1,345	1,329	1,390	2,159	1,851	1,678	3,200	3,199	1,418	1,463	1,351	822	1,139	1,169
1961	1,568	1,285	1,353	1,209	1,376	1,271	1,412	1,620	1,410	1,242	1,386	1,035	812	1,137	920
1962	1,429	1,236	1,248	1,196	5,471	4,524	3,572	5,700	5,699	2,152	1,681	1,595	1,526	1,568	1,793
1963	1,673	1,388	1,364	1,847	3,420	2,747	4,479	7,000	6,999	3,649	2,941	2,205	1,874	1,844	1,943
1964	2,055	1,709	1,731	1,664	1,670	1,667	1,477	3,200	3,199	1,289	1,420	1,299	913	1,177	1,198
1965	1,744	1,636	3,351	5,665	6,846	4,746	6,351	7,000	6,999	4,043	2,909	2,044	1,808	1,826	2,684
1966	2,520	2,564	4,993	4,724	4,725	3,390	2,068	5,699	4,659	1,834	1,773	1,739	1,683	1,603	2,216
1967	2,125	1,633	2,854	3,218	3,159	5,310	12,530	12,530	14,591	13,129	15,906	8,851	2,105	2,651	4,479
1968	5,226	1,592	1,922	2,063	3,994	3,243	2,539	5,699	4,421	1,999	1,702	1,668	1,607	1,561	1,918
1969	2,012	1,574	1,935	11,728	24,212	17,615	18,572	18,572	23,519	23,519	24,550	3,963	2,161	2,522	8,026
1970	7,802	1,974	3,487	17,081	9,323	7,369	4,183	6,999	6,999	3,656	2,509	1,978	1,913	1,918	3,993
1971	2,420	1,859	2,415	2,356	2,302	2,357	2,966	5,699	5,699	2,907	2,201	1,967	1,881	1,718	1,815
1972	2,145	1,552	1,789	1,714	1,911	1,618	1,559	3,200	3,200	1,627	1,526	1,497	1,463	1,461	1,294
1973	1,902	1,444	1,491	2,403	5,116	7,457	5,495	7,510	7,000	4,023	2,192	1,978	1,889	1,890	2,389
1974	2,407	1,601	2,043	5,811	4,705	6,382	7,509	7,509	7,676	6,214	3,420	2,196	2,009	2,056	2,837
1975	2,748	1,762	1,925	1,925	5,373	8,115	6,401	7,270	7,000	5,010	5,218	2,360	2,070	2,092	2,790
1976	3,151	1,708	1,813	1,714	1,923	1,778	1,585	3,200	3,199	1,374	1,472	1,409	1,411	1,233	1,344
1977	3,217	2,091	1,684	1,304	1,379	1,272	1,353	2,000	2,000	1,179	1,221	879	676	976	1,084
1978	1,499	1,341	1,513	3,727	7,850	9,070	11,637	13,871	12,921	10,687	11,344	2,449	1,866	2,173	4,041
1979	4,184	1,538	1,718	3,796	9,035	8,632	5,339	7,000	7,000	5,001	2,135	1,839	1,754	1,851	2,913
1980	2,446	1,705	1,841	11,057	19,800	13,098	7,400	7,635	7,539	6,077	5,205	3,854	2,006	2,600	4,640
1981	4,481	1,648	1,790	2,123	2,535	3,482	2,741	5,699	4,722	2,255	1,697	1,662	1,613	1,558	1,828
1982	2,114	1,706	1,758	6,242	12,983	14,840	24,614	24,614	16,226	15,940	9,720	3,703	2,186	3,549	5,963
1983	12,324	7,708	18,182	23,423	31,066	37,366	19,952	19,952	21,166	19,713	34,313	17,655	2,082	5,967	13,854
1984	11,664	13,120	20,679	14,444	9,683	6,069	3,809	6,999	6,750	3,431	2,618	2,205	2,108	1,957	5,739
1985	2,366	1,919	1,967	1,784	2,198	2,190	1,841	4,450	4,449	2,493	1,722	1,623	1,559	1,563	1,537
1986	2,214	1,686	1,764	2,180	13,476	22,554	11,683	12,371	9,124	7,662	6,536	2,380	2,162	2,158	4,642
1987	2,769	1,654	1,700	1,670	2,031	1,963	1,630	3,200	3,199	1,411	1,498	1,474	1,399	1,186	1,330
1988	1,683	1,318	1,275	1,274	1,314	1,260	1,406	2,000	2,000	1,214	1,289	1,102	695	1,039	938
1989	1,571	1,190	1,303	1,188	1,370	1,598	1,389	1,973	1,668	1,182	1,259	1,289	865	1,153	958
1990	1,336	1,229	1,157	1,186	1,366	1,318	1,289	1,799	1,550	1,080	1,164	1,105	819	1,084	881
1991	1,066	1,173	1,130	1,033	1,149	2,391	1,924	2,499	1,987	1,412	1,109	1,076	946	1,025	966
1992	1,266	1,175	1,132	1,141	2,202	1,894	1,606	2,181	1,621	1,046	1,091	1,175	827	1,079	973
1993	1,532	1,345	2,188	5,952	5,250	4,633	3,711	5,700	7,211	5,501	4,392	2,100	1,924	1,797	2,537
1994	3,251	1,462	1,463	1,353	1,710	1,488	1,326	3,200	3,199	1,218	1,396	1,352	1,006	1,154	1,212
Avg	2,780	1,862	2,663	3,801	5,567	5,610	4,956	6,577	6,469	4,461	3,9				

Table I-19c. CALSIM Simulated San Joaquin River Flow at Vernalis, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	51	3	3	0	-181	-2,287	-1,219	-59	-1,022	-1,661	-6,598	-10	-2	9	-661
1923	-929	-4	-1,179	-3,085	-1,834	-196	-1,012	0	0	-83	-16	8	13	9	-465
1924	23	1	2	2	2	-16	-20	0	0	-33	-13	1	23	13	1
1925	42	2	2	-1	-1	-18	-59	0	0	-77	-23	-2	18	3	-3
1926	46	-2	0	-4	-7	-15	-56	0	0	-73	3	13	26	15	1
1927	70	3	3	2	-5	-17	-58	0	0	-101	-18	3	22	12	0
1928	0	0	2	-1	0	-2,782	-1,410	0	-965	-88	-24	-22	-8	6	-247
1929	6	-2	-3	-4	-8	-15	-14	0	0	-24	-4	10	-4	12	-2
1930	94	1	1	1	2	-8	-28	354	377	-17	-11	-5	-23	1	24
1931	-7	-1	-1	-1	-2	-7	-10	-27	-36	-17	-5	64	-12	-2	-1
1932	39	0	1	-4	0	-16	-57	0	0	-74	-17	6	24	13	-1
1933	52	1	1	1	2	-16	-58	0	0	-74	-8	3	13	13	0
1934	53	0	2	0	0	-8	-27	0	0	-14	-2	6	-9	44	4
1935	12	2	2	0	-131	-16	-56	-55	0	-75	-20	2	21	7	-12
1936	49	0	0	-1	4	25	-645	375	1	408	-21	0	19	20	11
1937	-326	-1	1	-119	-2,699	-3,130	-1,490	-37	815	846	43	-3	17	7	-360
1938	-896	-13	-970	-1,784	-1,465	-82	122	122	-315	-315	-8	-67	22	-349	-348
1939	-621	3	3	-44	-28	-663	-266	0	-362	-78	-29	-23	-5	27	-106
1940	50	-2	-2	-14	-496	-175	-249	0	0	-72	-16	0	6	12	-46
1941	51	0	2	-391	-917	-104	-312	-315	784	788	60	13	32	20	-41
1942	-889	5	-568	-27	-80	-150	-156	0	137	561	347	3	22	12	-64
1943	-893	3	-355	-7	-155	-97	145	336	411	411	-19	4	22	12	-51
1944	-820	0	3	0	-48	-106	-110	0	-145	-80	-37	-36	-19	-17	-76
1945	45	-1	-1	-7	-579	-748	-220	-59	0	351	16	-43	-27	13	-76
1946	-298	-23	-1,551	52	-131	-126	-190	0	0	228	-8	5	11	14	-124
1947	53	3	4	2	-222	-15	-28	0	-1	-44	-37	-30	18	5	-14
1948	49	0	0	-5	-10	-16	-58	0	-1	-75	-19	0	8	12	-3
1949	51	0	0	0	0	-16	-57	0	0	-73	-5	5	12	13	0
1950	51	0	0	0	1	-17	-60	0	0	-78	-25	-23	-9	18	-4
1951	69	1	-1,438	-3,431	-1,075	-67	-117	0	-89	-74	-18	3	22	12	-366
1952	51	0	3	0	-853	-118	107	107	411	82	-365	-75	22	-58	-59
1953	-916	0	-37	-29	-89	-46	-247	0	0	-77	-23	-17	-5	7	-80
1954	48	-1	-2	-4	0	-16	-679	0	0	-85	-13	-7	2	6	-22
1955	22	0	2	-1	-2	-18	-30	0	0	-52	-39	-37	-2	43	-5
1956	27	-3	3	-3,556	-39	-87	-160	0	1	690	230	6	25	-107	-198
1957	-859	3	0	0	-188	-131	-55	0	0	-75	-21	-22	-9	3	-78
1958	28	-2	0	-4	-2	-1,621	249	249	415	-98	-325	1	20	-160	-102
1959	-862	-1	-1	-1	-56	-36	-426	0	-132	-71	8	23	32	15	-73
1960	32	2	2	4	7	-8	-29	0	0	-19	-16	-13	7	1	0
1961	23	0	0	-3	-4	-9	-10	-27	-39	-26	-21	-5	7	4	-4
1962	32	-1	-1	-3	-28	-16	-58	0	0	-73	-17	6	14	13	-4
1963	52	0	1	1	0	-18	-59	0	0	-71	-13	9	26	10	0
1964	52	4	5	3	7	-18	-62	0	0	-76	0	-33	-21	5	-4
1965	72	-1	-717	-4,203	-59	-86	-279	-17	-1	-73	-17	4	22	5	-317
1966	191	-480	-256	-77	-78	-62	-115	0	-140	-78	-25	-21	-7	7	-58
1967	48	0	0	1	-7	-1,542	44	44	641	641	-272	-157	23	-560	-108
1968	-387	0	2	0	-68	-41	-269	0	-134	-73	-1	12	21	9	-42
1969	13	3	4	-1,342	-17	-67	138	138	99	99	-7	-74	21	-336	-96
1970	-1,092	206	167	-26	-54	-55	-183	0	0	-74	-18	1	8	12	-60
1971	51	2	2	0	-369	-1,042	-147	0	0	-73	-17	1	9	12	-88
1972	51	3	3	0	0	-76	-21	0	0	-59	-14	1	15	6	-3
1973	54	3	2	1	-2,256	-807	-19	-57	0	-75	-18	2	8	9	-176
1974	32	3	2	373	-35	14	-246	-246	676	797	0	6	24	13	58
1975	-897	0	3	-35	-319	-491	-236	-57	0	179	347	13	28	15	-84
1976	-1,112	4	4	2	-24	-18	-19	0	0	-31	-12	1	15	-9	-72
1977	41	-1	0	-2	-2	1	-1	0	0	-1	2	-5	3	2	2
1978	41	1	1	-1	-1	-9	-45	-49	817	822	74	-83	-9	-431	23
1979	-416	-5	-2	-1,177	-319	-83	-208	0	0	762	-19	-2	3	14	-103
1980	-8	1	2	-1,427	-35	-8	-273	-58	539	791	-561	-73	22	-257	-111
1981	-739	-2	0	0	-47	-196	-263	0	-268	-76	-21	-14	1	-5	-81
1982	37	1	1	-1,167	-11	-109	142	142	125	-161	-128	-75	8	-666	-121
1983	-275	64	-114	-25	-86	-98	-238	-238	792	592	-432	-130	11	-604	-73
1984	-670	380	-59	-61	-15	-112	-57	0	-138	-76	-21	-13	-11	9	-44
1985	49	2	1	-3	-5	-15	-57	0	0	-61	1	13	25	9	1
1986	49	3	4	0	-3,034	-240	-29	139	635	635	-190	-9	12	2	-149
1987	-894	-14	-5	-7	-14	-16	-23	0	-1	-37	-25	-15	21	9	-61
1988	39	-2	0	-4	-6	1	-4	0	0	-7	7	-30	3	4	0
1989	28	-3	3	3	5	-8	-21	-29	-38	-19	-14	-10	13	3	-2
1990	24	1	-1	-2	-3	-8	-9	-28	-36	-15	-5	76	-77	6	-2
1991	26	0	0	0	0	-7	-27	-27	-35	-35	-31	2	29	6	-2
1992	26	-27	0	-64	1	-8	-28	-27	-35	-36	-6	1	11	6	-7
1993	155	0	709	-1,460	-38	65	-59	0	1,511	1,865	1,057	0	19	9	132
1994	-369	-4	-1	-2	-3	-12	-18	0	0	-50	-26	-27	21	9	-28
Avg	-175	2	-86	-318	-250	-250	-162	8	72	88	-103	-12	9	-40	-73
Min	-1,112	-480	-1,551	-4,203	-3,034	-3,130	-1,490	-315	-1,022	-1,661	-6,598	-157	-77	-666	-661
Max	191	380	709	373	7	65	249	375	1,511	1,865	1,057	76	32	44	132

Table I-19d. CALSIM Simulated Monthly Cumulative Distribution of San Joaquin River Flows at Vernalis for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1– 4/15	VAMP 4/16– 4/30	VAMP 5/1– 5/15	Post-VAMP 5/16– 5/31	Jun	Jul	Aug	Sep	taf/ year
A: 2001 Baseline															
Min	1,040	1,173	1,130	1,033	1,149	1,253	1,218	1,561	1,361	1,005	1,046	864	673	927	
10	1,377	1,228	1,275	1,205	1,380	1,606	1,410	2,000	2,000	1,201	1,225	1,077	815	1,065	
20	1,602	1,358	1,394	1,316	1,855	1,796	1,634	3,200	3,199	1,405	1,422	1,364	952	1,150	
30	1,691	1,411	1,479	1,677	2,152	2,037	1,951	4,450	4,354	1,747	1,679	1,592	1,448	1,455	
40	1,880	1,509	1,644	1,846	2,671	2,765	3,004	5,699	4,799	2,288	1,754	1,676	1,612	1,580	
50	2,127	1,598	1,773	2,007	3,420	3,577	3,636	5,700	5,699	2,980	2,210	1,841	1,717	1,679	
60	2,294	1,668	1,920	2,356	4,931	4,568	4,349	6,999	6,999	3,529	2,353	1,976	1,811	1,821	
70	2,454	1,748	2,041	3,728	6,254	6,181	5,514	7,000	6,999	3,834	2,639	2,100	1,905	1,899	
80	3,663	1,844	2,815	6,512	9,354	8,606	6,905	7,569	7,000	5,417	4,871	2,347	2,071	2,043	
90	5,532	1,950	4,919	9,868	12,994	11,353	11,682	12,232	12,104	9,865	9,901	2,782	2,157	2,586	
Max	12,599	12,740	20,738	23,448	31,152	37,464	24,472	24,472	23,420	23,420	34,745	17,785	2,305	6,571	
Avg	2,955	1,860	2,749	4,119	5,817	5,860	5,118	6,569	6,397	4,373	4,088	2,211	1,607	1,793	2,660
B: 2020 Baseline															
Min	1,066	1,173	1,130	1,033	1,149	1,246	1,208	1,534	1,325	991	1,044	879	676	943	
10	1,429	1,229	1,275	1,196	1,376	1,598	1,389	2,000	2,000	1,182	1,221	1,102	819	1,072	
20	1,644	1,358	1,396	1,316	1,855	1,778	1,602	3,200	3,199	1,374	1,420	1,351	978	1,154	
30	1,744	1,411	1,491	1,670	2,159	2,021	1,924	4,450	4,222	1,674	1,655	1,576	1,463	1,461	
40	1,931	1,509	1,684	1,847	2,513	2,639	2,741	5,699	4,659	2,214	1,749	1,668	1,613	1,598	
50	2,145	1,601	1,789	2,007	3,420	3,299	3,222	5,700	5,699	2,907	2,192	1,839	1,730	1,685	
60	2,310	1,654	1,925	2,356	4,812	4,524	4,085	6,999	6,999	3,570	2,330	1,978	1,808	1,826	
70	2,446	1,751	2,103	3,727	5,373	5,723	5,339	7,000	7,000	4,172	2,627	2,101	1,924	1,906	
80	3,217	1,856	2,818	5,547	8,688	7,457	6,749	7,510	7,211	6,077	5,205	2,356	2,080	2,056	
90	4,639	1,974	3,980	7,621	11,948	11,235	11,637	12,371	12,921	10,687	9,576	2,785	2,186	2,315	
Max	12,324	13,120	20,679	23,423	31,066	37,366	24,614	24,614	23,519	23,519	34,313	17,655	2,327	5,967	
Avg	2,780	1,862	2,663	3,801	5,567	5,610	4,956	6,577	6,469	4,461	3,985	2,199	1,616	1,753	2,587
Comparison: B – A															
Min	26	0	0	0	0	-7	-10	-27	-36	-14	-2	15	3	16	
10	52	1	0	-9	-4	-8	-21	0	0	-19	-4	25	4	7	
20	42	0	2	0	0	-18	-32	0	0	-31	-2	-13	26	4	
30	53	0	12	-7	7	-16	-27	0	-132	-73	-24	-16	15	6	
40	51	0	40	1	-158	-126	-263	0	-140	-74	-5	-8	1	18	
50	18	3	16	0	0	-278	-414	0	0	-73	-18	-2	13	6	
60	16	-14	5	0	-119	-44	-264	0	0	41	-23	2	-3	5	
70	-8	3	62	-1	-881	-458	-175	0	1	338	-12	1	19	7	
80	-446	12	3	-965	-666	-1,149	-156	-59	211	660	334	9	9	13	
90	-893	24	-939	-2,247	-1,046	-118	-45	139	817	822	-325	3	29	-271	
Max	-275	380	-59	-25	-86	-98	142	142	99	99	-432	-130	22	-604	
Avg	-175	2	-86	-318	-250	-250	-162	8	72	88	-103	-12	9	-40	-73

Table I-20a. CALSIM Simulated CVP San Luis Reservoir Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	364	494	680	803	873	972	972	850	680	556	396	419
1923	489	624	710	787	827	849	809	568	303	162	101	120
1924	200	266	355	511	580	552	512	435	330	232	176	195
1925	242	250	443	630	868	786	794	684	489	351	294	344
1926	421	504	483	699	761	775	811	725	581	369	200	238
1927	275	442	574	720	925	972	949	730	496	299	152	171
1928	245	382	547	690	793	928	881	630	314	203	114	155
1929	184	323	491	641	701	645	574	449	317	184	191	215
1930	251	276	514	764	897	972	921	806	588	345	168	225
1931	276	355	357	544	579	579	540	464	416	307	217	275
1932	320	341	602	774	972	972	972	884	792	719	740	966
1933	972	972	972	972	972	972	933	882	768	647	542	607
1934	666	653	886	972	972	939	889	796	657	506	450	439
1935	420	598	756	920	932	972	972	825	701	477	442	569
1936	604	654	673	786	849	839	748	621	418	263	207	303
1937	394	501	566	688	858	972	972	943	807	658	637	719
1938	814	972	972	970	962	950	839	651	473	317	173	400
1939	464	595	748	858	861	908	801	618	453	259	135	148
1940	114	157	104	340	479	612	631	503	304	156	70	146
1941	231	377	566	751	909	972	925	783	652	567	435	459
1942	535	677	869	972	972	972	938	728	579	435	267	281
1943	350	484	643	819	841	972	950	786	473	287	126	138
1944	209	324	486	624	702	818	730	563	338	205	135	178
1945	162	318	425	647	810	920	852	662	430	205	68	152
1946	226	365	575	721	809	828	789	629	379	169	45	107
1947	178	322	489	566	654	742	664	444	210	72	45	135
1948	135	213	297	458	690	772	772	598	360	166	47	74
1949	161	323	494	574	606	780	707	485	240	165	135	201
1950	243	324	407	515	617	742	633	455	289	217	187	243
1951	276	436	691	845	972	972	898	652	409	210	87	128
1952	206	324	418	514	656	756	691	545	489	242	45	99
1953	185	391	543	584	622	534	483	291	208	45	45	60
1954	131	267	427	565	651	758	731	546	316	89	45	156
1955	229	367	530	676	699	694	615	399	180	135	135	209
1956	224	324	446	558	674	857	835	722	591	427	304	416
1957	485	620	780	916	972	972	934	737	431	217	147	206
1958	276	411	601	662	710	803	843	705	565	355	100	290
1959	356	488	643	748	826	772	640	463	309	120	45	98
1960	135	131	113	187	279	437	352	208	56	102	135	261
1961	299	435	632	791	972	972	872	667	355	144	45	135
1962	152	305	472	549	657	769	704	540	349	162	81	238
1963	315	455	650	800	923	971	961	713	505	303	164	228
1964	303	442	608	755	758	764	638	504	316	194	135	181
1965	157	314	538	731	861	971	961	769	468	246	76	51
1966	152	286	444	595	675	753	688	456	276	82	45	96
1967	135	297	389	482	614	691	606	456	341	279	139	175
1968	249	417	597	742	818	874	743	552	321	115	45	66
1969	141	302	392	480	614	792	721	574	492	496	256	605
1970	669	848	972	972	972	972	904	656	350	222	97	151
1971	229	370	539	692	809	917	889	642	387	151	45	130
1972	202	339	502	643	739	851	764	581	354	230	135	165
1973	234	377	549	763	880	972	937	730	506	277	184	206
1974	280	418	582	669	764	915	877	633	401	170	45	184
1975	258	395	559	719	849	874	852	632	367	240	119	231
1976	305	443	606	750	785	786	704	562	399	249	178	247
1977	251	268	263	262	242	215	177	105	45	81	104	198
1978	273	288	437	609	762	929	831	662	512	406	236	248
1979	317	466	605	756	872	972	863	698	431	248	130	263
1980	336	474	637	798	972	972	972	804	607	562	411	464
1981	533	666	826	961	972	972	902	654	376	141	45	152
1982	197	334	421	505	612	675	713	578	443	304	151	402
1983	469	636	748	822	817	800	688	499	319	170	55	109
1984	298	463	530	573	586	682	574	346	214	45	45	61
1985	135	271	433	620	669	715	586	378	153	45	45	90
1986	158	315	423	613	776	954	972	827	678	388	255	278
1987	354	493	662	812	908	972	925	781	572	332	143	135
1988	134	213	341	533	612	552	474	380	275	154	179	279
1989	265	318	413	544	528	723	703	527	332	207	135	190
1990	269	287	405	520	650	699	640	536	393	242	169	195
1991	231	203	274	340	375	576	520	420	326	168	166	293
1992	347	343	419	540	773	888	815	697	524	269	171	139
1993	245	212	404	535	685	780	757	644	542	356	293	419
1994	497	640	812	968	972	971	858	627	319	71	45	88
Avg	302	413	547	677	764	824	771	607	420	263	172	242
Min	114	131	104	187	242	215	177	105	45	45	45	51
Max	972	972	972	972	972	972	972	943	807	719	740	966

Table I-20b. CALSIM Simulated CVP San Luis Reservoir Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	364	494	571	695	765	906	931	816	659	418	317	458
1923	530	667	867	934	972	972	925	680	394	195	86	189
1924	268	329	332	485	556	529	490	415	314	220	169	206
1925	258	278	486	645	883	805	819	662	470	319	165	220
1926	287	363	486	660	769	865	790	764	597	370	188	197
1927	231	396	525	667	868	972	949	730	495	276	133	171
1928	245	382	546	690	792	906	866	633	336	225	120	168
1929	201	324	498	657	729	671	596	466	321	182	199	197
1930	234	274	510	758	907	972	928	819	597	367	224	283
1931	335	441	438	637	687	696	656	580	514	404	313	377
1932	396	451	600	847	972	972	972	880	785	741	755	912
1933	972	972	972	972	972	972	933	891	777	657	556	571
1934	645	638	885	972	972	956	903	807	662	505	477	475
1935	459	632	849	961	972	972	972	828	706	515	484	591
1936	568	606	638	752	847	836	751	632	441	274	229	322
1937	407	528	542	668	843	857	875	860	757	671	687	779
1938	878	972	972	972	972	960	848	658	477	319	162	278
1939	343	473	626	749	756	804	760	594	435	253	135	157
1940	90	126	106	351	500	633	653	526	327	181	96	158
1941	244	374	563	749	907	972	925	830	665	414	253	267
1942	338	474	645	802	962	972	938	728	579	315	165	160
1943	230	364	523	676	715	870	848	684	374	220	60	101
1944	172	324	486	624	702	811	740	598	412	261	173	226
1945	190	346	462	572	749	863	805	577	361	194	99	194
1946	277	423	638	800	809	845	804	641	386	172	45	69
1947	162	324	522	670	759	888	826	628	392	245	135	182
1948	165	264	346	522	767	853	854	681	444	250	130	158
1949	221	324	480	635	670	845	771	547	285	200	135	172
1950	213	324	410	518	618	746	648	486	344	302	293	352
1951	383	547	807	972	972	972	898	652	359	161	60	142
1952	220	356	525	621	764	851	880	733	569	386	149	353
1953	416	556	709	834	835	755	717	536	332	143	45	65
1954	140	278	415	559	654	755	732	553	325	118	45	143
1955	205	344	509	658	692	689	629	506	386	200	208	271
1956	275	375	506	631	763	935	915	801	628	367	253	299
1957	369	504	663	799	884	972	933	692	449	256	123	185
1958	259	407	572	642	739	844	891	759	607	429	273	383
1959	451	584	741	872	972	971	878	688	416	181	45	72
1960	135	92	59	127	210	353	275	142	45	94	135	142
1961	185	353	552	730	932	972	870	631	319	131	62	135
1962	145	186	382	491	607	718	656	489	315	118	45	155
1963	230	370	564	712	833	941	938	745	516	272	118	155
1964	228	364	526	666	686	696	670	492	331	135	135	197
1965	156	313	542	747	892	971	966	773	471	262	90	98
1966	167	300	458	609	690	815	699	543	320	150	71	157
1967	158	320	418	518	643	719	633	482	363	298	153	252
1968	326	494	659	803	920	972	840	644	379	185	59	126
1969	149	290	378	463	594	715	651	508	348	351	172	251
1970	316	447	618	762	823	927	860	613	312	164	45	72
1971	150	291	460	614	809	917	888	641	391	156	45	68
1972	141	284	447	588	687	800	664	485	285	166	127	164
1973	240	384	556	656	795	925	895	687	464	305	158	197
1974	271	409	573	660	754	865	827	583	365	228	118	309
1975	382	519	683	845	928	972	950	730	460	302	192	352
1976	425	562	726	870	840	865	783	643	478	290	254	303
1977	298	321	316	321	302	273	233	157	82	89	90	122
1978	196	218	366	536	740	802	721	578	469	457	325	348
1979	424	541	618	783	942	972	945	783	517	308	164	184
1980	258	397	561	649	774	937	948	780	581	538	392	390
1981	459	559	719	854	945	972	906	714	446	225	98	156
1982	207	346	437	526	639	762	810	690	552	321	208	522
1983	593	763	867	822	804	789	677	488	308	168	62	85
1984	238	403	462	522	601	639	605	387	201	45	45	66
1985	140	278	443	647	704	733	601	386	152	45	45	87
1986	135	191	297	408	568	761	802	685	579	379	286	324
1987	407	555	733	900	972	972	887	751	553	325	135	135
1988	121	212	438	669	740	674	626	521	382	223	187	257
1989	280	321	402	535	512	707	693	524	331	215	135	192
1990	274	314	436	555	688	740	681	577	427	273	224	241
1991	277	250	322	393	429	630	573	471	380	248	156	296
1992	355	337	413	525	752	870	827	672	463	194	171	133
1993	183	186	323	454	604	705	725	620	527	356	290	414
1994	495	609	784	944	972	971	858	637	244	45	45	90
Avg	298	406	541	673	767	832	787	628	435	274	181	242
Min	90	92	59	127	210	273	233	142	45	45	45	65
Max	972	972	972	972	972	972	972	891	785	741	755	912

Table I-20c. CALSIM Simulated CVP San Luis Reservoir Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	-109	-108	-108	-66	-41	-34	-21	-138	-79	39
1923	41	43	157	147	145	123	116	112	91	33	-15	69
1924	68	63	-23	-26	-24	-23	-22	-20	-16	-12	-7	11
1925	16	28	43	15	15	19	25	-22	-19	-32	-129	-124
1926	-134	-141	3	-39	8	90	-21	39	16	1	-12	-41
1927	-44	-46	-49	-53	-57	0	0	0	-1	-23	-19	0
1928	0	0	-1	0	-1	-22	-15	3	22	22	6	13
1929	17	1	7	16	28	26	22	17	4	-2	8	-18
1930	-17	-2	-4	-6	10	0	7	13	9	22	56	58
1931	59	86	81	93	108	117	116	116	98	97	96	102
1932	76	110	-2	73	0	0	0	-4	-7	22	15	-54
1933	0	0	0	0	0	0	0	9	9	10	14	-36
1934	-21	-15	-1	0	0	17	14	11	5	-1	27	36
1935	39	34	93	41	40	0	0	3	5	38	42	22
1936	-36	-48	-35	-34	-2	-3	3	11	23	11	22	19
1937	13	27	-24	-20	-15	-115	-97	-83	-50	13	50	60
1938	64	0	0	2	10	10	9	7	4	2	-11	-122
1939	-121	-122	-122	-109	-105	-104	-41	-24	-18	-6	0	9
1940	-24	-31	2	11	21	21	22	23	23	25	26	12
1941	13	-3	-3	-2	-2	0	0	47	13	-153	-182	-192
1942	-197	-203	-224	-170	-10	0	0	0	0	-120	-102	-121
1943	-120	-120	-120	-143	-126	-102	-102	-102	-99	-67	-66	-37
1944	-37	0	0	0	0	-7	10	35	74	56	38	48
1945	28	28	37	-75	-61	-57	-47	-85	-69	-11	31	42
1946	51	58	63	79	0	17	15	12	7	3	0	-38
1947	-16	2	33	104	105	146	162	184	182	173	90	47
1948	30	51	49	64	77	81	82	83	84	84	83	84
1949	60	1	-14	61	64	65	64	62	45	35	0	-29
1950	-30	0	3	3	1	4	15	31	55	85	106	109
1951	107	111	116	127	0	0	0	0	-50	-49	-27	14
1952	14	32	107	107	108	95	189	188	80	144	104	254
1953	231	165	166	250	213	221	234	245	124	98	0	5
1954	9	11	-12	-6	3	-3	1	7	9	29	0	-13
1955	-24	-23	-21	-18	-7	-5	14	107	206	65	73	62
1956	51	51	60	73	89	78	80	79	37	-60	-51	-117
1957	-116	-116	-117	-117	-88	0	-1	-45	18	39	-24	-21
1958	-17	-4	-29	-20	29	41	48	54	42	74	173	93
1959	95	96	98	124	146	199	238	225	107	61	0	-26
1960	0	-39	-54	-60	-69	-84	-77	-66	-11	-8	0	-119
1961	-114	-82	-80	-61	-40	0	-2	-36	-36	-13	17	0
1962	-7	-119	-90	-58	-50	-51	-48	-51	-34	-44	-36	-83
1963	-85	-85	-86	-88	-90	-30	-23	32	11	-31	-46	-73
1964	-75	-78	-82	-89	-72	-68	32	-12	15	-59	0	16
1965	-1	-1	4	16	31	0	5	4	3	16	14	47
1966	15	14	14	14	15	62	11	87	44	68	26	61
1967	23	23	29	36	29	28	27	26	22	19	14	77
1968	77	77	62	61	102	98	97	92	58	70	14	60
1969	8	-12	-14	-17	-20	-77	-70	-66	-144	-145	-84	-354
1970	-353	-401	-354	-210	-149	-45	-44	-43	-38	-58	-52	-79
1971	-79	-79	-79	-78	0	0	-1	-1	4	5	0	-62
1972	-61	-55	-55	-55	-52	-51	-100	-96	-69	-64	-8	-1
1973	6	7	7	-107	-85	-47	-42	-43	-42	28	-26	-9
1974	-9	-9	-9	-9	-10	-50	-50	-50	-36	58	73	125
1975	124	124	124	126	79	98	98	98	93	62	73	121
1976	120	119	120	120	55	79	79	81	79	41	76	56
1977	47	53	53	59	60	58	56	52	37	8	-14	-76
1978	-77	-70	-71	-73	-22	-127	-110	-84	-43	51	89	100
1979	107	75	13	27	70	0	82	85	86	60	34	-79
1980	-78	-77	-76	-149	-198	-35	-24	-24	-26	-24	-19	-74
1981	-74	-107	-107	-107	-27	0	4	60	70	84	53	4
1982	10	12	16	21	27	87	97	112	109	17	57	120
1983	124	127	119	0	-13	-11	-11	-11	-11	-2	7	-24
1984	-60	-60	-68	-51	15	-43	31	41	-13	0	0	5
1985	5	7	10	27	35	18	15	8	-1	0	0	-3
1986	-23	-124	-126	-205	-208	-193	-170	-142	-99	-9	31	46
1987	53	62	71	88	64	0	-38	-30	-19	-7	-8	0
1988	-13	-1	97	136	128	122	152	141	107	69	8	-22
1989	15	3	-11	-9	-16	-16	-10	-3	-1	8	0	2
1990	5	27	31	35	38	41	41	41	34	31	55	46
1991	46	47	48	53	54	54	53	51	54	80	-10	3
1992	8	-6	-6	-15	-21	-18	12	-25	-61	-75	0	-6
1993	-62	-26	-81	-81	-81	-75	-32	-24	-15	0	-3	-5
1994	-2	-31	-28	-24	0	0	0	10	-75	-26	0	2
Avg	-4	-7	-6	-4	3	8	16	21	15	11	9	0
Min	-353	-401	-354	-210	-208	-193	-170	-142	-144	-153	-182	-354
Max	231	165	166	250	213	221	238	245	206	173	173	254

Table I-20d. CALSIM Simulated Monthly Cumulative Distribution of CVP San Luis Reservoir Storage for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	114	131	104	187	242	215	177	105	45	45	45	51
10	135	250	355	482	580	579	540	399	214	82	45	90
20	178	288	418	540	622	715	638	463	314	151	45	130
30	209	318	437	573	674	764	703	536	326	168	87	148
40	234	324	489	624	710	786	731	568	354	205	126	171
50	258	370	539	688	785	849	801	629	399	232	135	198
60	276	417	574	731	826	915	843	652	431	259	164	228
70	317	455	606	763	861	954	881	697	489	303	178	261
80	394	501	673	803	923	972	925	730	565	356	236	303
90	497	640	780	920	972	972	961	804	652	496	396	439
Max	972	972	972	972	972	972	972	943	807	719	740	966
Avg	302	413	547	677	764	824	771	607	420	263	172	242
B: 2020 Baseline												
Min	90	92	59	127	210	273	233	142	45	45	45	65
10	141	218	332	463	568	671	605	471	285	118	45	85
20	167	290	415	526	654	718	656	508	325	166	62	135
30	205	321	447	609	692	761	717	553	348	194	99	156
40	230	337	486	642	740	811	771	598	380	220	133	168
50	258	364	525	660	765	857	826	641	416	253	149	194
60	277	397	556	690	809	888	858	672	460	276	165	226
70	338	451	600	752	847	937	887	690	478	315	192	278
80	407	541	663	822	928	972	925	751	569	367	253	348
90	459	606	784	900	972	972	938	807	628	429	317	414
Max	972	972	972	972	972	972	972	891	785	741	755	912
Avg	298	406	541	673	767	832	787	628	435	274	181	242
Comparison: B – A												
Min	-24	-39	-45	-60	-32	58	56	37	0	0	0	14
10	6	-32	-23	-19	-12	92	65	72	71	36	0	-5
20	-11	2	-3	-14	32	3	18	45	11	15	17	5
30	-4	3	10	36	18	-3	14	17	22	26	12	8
40	-4	13	-3	18	30	25	40	30	26	15	7	-3
50	0	-6	-14	-28	-20	8	25	12	17	21	14	-4
60	1	-20	-18	-41	-17	-27	15	20	29	17	1	-2
70	21	-4	-6	-11	-14	-17	6	-7	-11	12	14	17
80	13	40	-10	19	5	0	0	21	4	11	17	45
90	-38	-34	4	-20	0	0	-23	3	-24	-67	-79	-25
Max	0	0	0	0	0	0	0	-52	-22	22	15	-54
Avg	-4	-7	-6	-4	3	8	16	21	15	11	9	0

Table I-21a. CALSIM Simulated SWP San Luis Reservoir Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	165	93	155	482	776	925	833	734	772	378	414	586
1923	743	787	1,035	1,067	1,067	1,027	931	739	624	415	265	298
1924	275	167	159	290	410	341	264	201	131	117	110	110
1925	156	220	370	516	714	597	644	614	701	479	712	793
1926	864	789	830	944	1,067	1,021	985	698	502	379	246	136
1927	121	292	339	507	747	827	752	613	675	373	336	458
1928	436	593	797	1,067	1,067	1,067	978	715	586	308	192	163
1929	145	130	176	368	482	493	435	344	303	185	237	266
1930	258	195	400	619	708	844	729	554	426	390	370	405
1931	320	163	138	270	305	267	177	103	121	139	110	179
1932	176	136	344	552	705	751	648	605	463	567	355	655
1933	827	841	1,020	958	1,000	898	821	745	614	434	342	269
1934	280	210	368	535	754	699	567	414	308	111	190	142
1935	143	183	250	467	589	892	788	404	320	241	160	134
1936	122	55	55	335	720	921	776	534	420	354	265	368
1937	274	145	66	366	751	999	855	710	529	372	291	338
1938	397	545	776	839	881	924	806	639	678	662	631	705
1939	894	940	1,067	1,067	1,055	956	689	406	217	165	125	110
1940	110	55	55	195	598	827	733	542	338	314	218	221
1941	156	68	253	627	921	1,067	1,013	965	888	540	621	740
1942	953	1,043	1,067	1,067	944	1,045	963	853	850	444	448	565
1943	741	901	1,067	1,067	950	1,046	906	719	636	353	338	442
1944	496	354	325	506	636	685	519	294	109	55	55	147
1945	129	264	286	458	821	905	725	491	437	328	237	241
1946	302	438	496	817	650	799	646	446	270	234	165	220
1947	166	140	312	407	532	618	469	263	110	115	131	110
1948	110	110	66	263	208	333	406	282	260	268	307	519
1949	510	397	471	581	659	855	749	590	570	364	148	307
1950	207	110	110	318	646	752	619	414	362	337	353	532
1951	609	770	850	1,054	1,067	941	765	561	269	183	166	232
1952	224	230	434	798	1,067	1,067	956	925	1,047	903	934	1,039
1953	1,067	1,067	1,067	1,035	997	1,067	933	764	747	443	377	422
1954	570	711	813	1,067	1,067	1,011	916	732	499	311	165	151
1955	141	152	336	699	663	675	593	537	571	466	277	303
1956	289	350	507	852	1,000	1,067	936	797	821	465	421	504
1957	673	605	629	841	1,050	1,067	967	814	566	368	180	215
1958	397	562	630	931	1,035	1,067	923	798	940	637	652	788
1959	967	956	1,038	1,067	1,016	823	626	399	253	209	156	115
1960	111	55	55	191	547	725	557	439	365	365	422	387
1961	309	350	451	587	748	723	598	332	191	126	115	110
1962	110	99	278	354	760	1,035	869	568	386	194	132	110
1963	275	426	480	762	957	1,025	908	748	471	262	218	393
1964	563	716	772	1,041	924	839	593	364	156	123	118	116
1965	110	170	241	602	868	912	818	634	476	269	286	452
1966	461	641	904	1,067	1,020	1,067	908	610	395	242	165	147
1967	130	215	468	823	1,067	1,067	904	737	766	738	713	998
1968	1,067	1,067	1,067	1,067	985	844	600	392	237	165	164	140
1969	138	131	337	735	1,061	1,067	948	921	1,032	691	740	886
1970	1,067	1,067	1,067	1,067	1,067	1,067	913	688	513	221	165	141
1971	142	289	493	758	596	791	658	351	354	223	158	294
1972	450	400	589	862	900	998	856	667	500	324	312	261
1973	258	452	688	843	978	1,067	931	757	625	480	393	413
1974	530	682	882	1,067	1,067	1,067	939	795	822	644	642	691
1975	860	919	1,067	1,067	1,067	915	829	705	779	390	358	520
1976	685	833	1,030	1,067	1,047	944	735	503	281	165	153	123
1977	117	76	55	88	85	94	67	55	63	110	110	173
1978	184	189	389	616	896	1,067	897	892	985	601	653	759
1979	865	768	652	1,006	973	1,067	881	707	462	290	257	297
1980	373	398	605	976	1,067	1,015	968	842	810	457	503	687
1981	872	760	818	1,067	969	1,051	894	610	347	214	165	133
1982	130	285	484	607	870	978	834	690	732	344	342	664
1983	849	1,014	1,067	1,067	1,067	1,067	1,067	936	1,007	1,067	1,067	1,067
1984	1,067	1,067	1,067	991	839	932	722	470	549	327	269	235
1985	293	441	635	722	722	687	488	232	64	55	55	55
1986	80	70	85	470	855	1,044	959	777	734	343	389	581
1987	727	603	546	744	823	785	631	337	160	160	125	110
1988	55	55	55	292	258	206	182	201	154	117	133	119
1989	110	214	289	425	389	596	461	225	104	76	92	110
1990	110	55	55	347	371	474	394	373	277	165	140	154
1991	165	110	135	157	169	398	342	281	297	181	110	110
1992	110	104	129	215	428	545	473	358	306	156	111	161
1993	150	110	256	478	737	824	735	586	588	538	477	491
1994	631	535	559	753	782	610	431	183	55	55	55	110
Avg	405	426	519	697	798	846	726	561	479	333	301	358
Min	55	55	55	88	85	94	67	55	55	55	55	55
Max	1,067	1,067	1,067	1,067	1,067	1,067	1,067	965	1,047	1,067	1,067	1,067

Table I-21b. CALSIM Simulated SWP San Luis Reservoir Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	165	84	86	386	650	779	622	475	495	453	392	360
1923	428	413	426	680	617	526	397	233	218	165	164	196
1924	182	99	141	320	434	352	265	213	155	110	110	148
1925	204	272	442	566	756	628	678	671	828	653	845	951
1926	989	948	1,012	1,064	1,036	907	874	697	453	367	321	174
1927	126	320	366	680	922	961	782	599	551	337	274	260
1928	165	285	435	705	846	1,037	910	641	529	183	165	182
1929	146	132	159	352	457	456	393	308	272	157	221	311
1930	293	232	442	650	694	795	640	474	334	298	279	443
1931	309	186	140	264	298	254	149	81	123	139	110	255
1932	250	226	410	810	922	934	851	835	706	530	764	800
1933	862	908	1,067	999	1,033	923	837	781	646	482	427	383
1934	387	322	503	663	778	705	554	411	297	110	156	110
1935	110	172	240	426	536	816	685	298	217	147	112	133
1936	96	55	55	317	689	837	639	415	330	274	211	290
1937	163	55	55	273	646	893	744	611	575	394	345	409
1938	366	513	472	750	876	932	725	559	594	535	466	559
1939	697	639	753	863	789	692	515	274	165	164	140	110
1940	110	55	55	213	605	770	599	376	229	210	165	128
1941	107	55	140	442	653	839	702	610	431	431	465	732
1942	907	927	1,067	1,067	1,067	879	759	647	657	541	475	600
1943	760	915	1,067	1,067	950	1,009	847	607	743	413	404	451
1944	453	316	284	455	558	580	378	178	60	55	55	163
1945	137	297	307	472	808	908	658	412	327	240	165	248
1946	244	286	298	567	467	530	337	158	60	55	55	155
1947	143	131	152	221	346	445	270	55	55	57	132	110
1948	110	110	58	245	177	295	351	219	274	260	281	406
1949	338	222	207	367	439	623	499	390	437	282	298	323
1950	202	131	112	308	617	684	499	307	297	274	286	442
1951	519	683	743	951	1,050	1,067	803	585	449	301	255	274
1952	253	265	439	742	987	1,067	1,007	959	1,045	734	641	730
1953	905	965	1,067	1,067	1,013	1,067	867	704	749	455	376	396
1954	539	676	626	860	1,020	1,062	896	727	452	296	165	143
1955	131	144	292	650	617	614	535	507	510	437	294	373
1956	363	484	656	914	1,015	1,067	832	662	676	616	537	565
1957	701	593	469	555	737	935	793	556	453	279	234	327
1958	520	671	730	1,004	1,067	1,067	907	781	846	459	413	602
1959	749	694	727	959	908	658	441	239	188	165	157	177
1960	110	55	110	266	616	819	605	484	388	337	326	310
1961	217	245	443	574	723	832	641	374	176	135	127	110
1962	110	110	272	343	739	977	755	491	280	141	94	110
1963	267	404	434	670	838	941	759	572	401	226	167	318
1964	431	554	557	813	668	526	379	142	55	83	121	110
1965	110	235	327	645	864	862	772	599	499	283	315	474
1966	488	681	936	1,067	1,067	1,067	792	568	401	251	165	144
1967	123	237	293	629	823	914	719	553	588	526	498	862
1968	1,003	1,049	1,067	1,067	975	1,013	689	497	329	165	165	152
1969	140	141	340	479	744	920	836	772	855	493	502	753
1970	919	1,053	1,067	1,067	912	971	731	426	436	165	111	138
1971	125	266	439	653	392	544	347	55	55	55	55	106
1972	193	134	262	514	635	821	612	467	363	255	289	323
1973	336	560	809	1,067	1,067	1,067	899	747	719	402	397	413
1974	523	674	849	1,067	1,067	1,067	896	742	812	434	375	479
1975	621	659	822	973	1,067	1,067	914	777	733	397	339	414
1976	553	685	843	943	888	808	627	438	289	165	147	114
1977	115	110	55	86	75	71	55	55	86	110	110	120
1978	110	136	337	556	777	819	689	599	807	372	370	563
1979	457	286	376	715	798	900	727	552	389	193	192	323
1980	384	410	587	694	903	1,057	922	785	790	409	416	589
1981	711	560	602	871	866	788	586	359	153	120	113	118
1982	120	280	292	568	773	910	739	595	614	555	482	592
1983	741	883	1,067	1,067	1,067	1,067	1,024	884	955	1,067	1,067	1,067
1984	1,067	1,067	1,067	941	1,043	838	637	360	503	301	181	165
1985	232	368	530	599	586	509	232	55	55	55	55	55
1986	55	55	55	332	706	870	744	580	583	595	588	719
1987	817	673	639	759	815	717	423	140	136	137	124	110
1988	55	55	55	188	164	106	116	142	125	110	119	127
1989	110	209	363	490	444	637	436	208	70	55	61	120
1990	110	55	55	323	349	439	344	331	250	139	115	128
1991	137	110	139	160	148	363	294	236	330	213	110	110
1992	132	110	149	232	433	537	492	376	306	150	117	168
1993	115	110	423	631	833	890	698	518	514	448	380	334
1994	341	197	321	454	504	322	146	55	55	55	69	110
Avg	359	382	461	636	732	776	624	463	418	297	277	332
Min	55	55	55	86	75	71	55	55	55	55	55	55
Max	1,067	1,067	1,067	1,067	1,067	1,067	1,024	959	1,045	1,067	1,067	1,067

Table I-21c. CALSIM Simulated SWP San Luis Reservoir Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	-9	-69	-96	-126	-146	-211	-259	-277	75	-22	-226
1923	-315	-374	-609	-387	-450	-501	-534	-506	-406	-250	-101	-102
1924	-93	-68	-18	30	24	11	1	12	24	-7	0	38
1925	48	52	72	50	42	31	34	57	127	174	133	158
1926	125	159	182	120	-31	-114	-111	-1	-49	-12	75	38
1927	5	28	27	173	175	134	30	-14	-124	-36	-62	-198
1928	-271	-308	-362	-362	-221	-30	-68	-74	-57	-125	-27	19
1929	1	2	-17	-16	-25	-37	-42	-36	-31	-28	-16	45
1930	35	37	42	31	-14	-49	-89	-80	-92	-92	-91	38
1931	-11	23	2	-6	-7	-13	-28	-22	2	0	0	76
1932	74	90	66	258	217	183	203	230	243	-37	409	145
1933	35	67	47	41	33	25	16	36	32	48	85	114
1934	107	112	135	128	24	6	-13	-3	-11	-1	-34	-32
1935	-33	-11	-10	-41	-53	-76	-103	-106	-103	-94	-48	-1
1936	-26	0	0	-18	-31	-84	-137	-119	-90	-80	-54	-78
1937	-111	-90	-11	-93	-105	-106	-111	-99	46	22	54	71
1938	-31	-32	-304	-89	-5	8	-81	-80	-84	-127	-165	-146
1939	-197	-301	-314	-204	-266	-264	-174	-132	-52	-1	15	0
1940	0	0	0	18	7	-57	-134	-166	-109	-104	-53	-93
1941	-49	-13	-113	-185	-268	-228	-311	-355	-457	-109	-156	-8
1942	-46	-116	0	0	123	-166	-204	-206	-193	97	27	35
1943	19	14	0	0	0	-37	-59	-112	107	60	66	9
1944	-43	-38	-41	-51	-78	-105	-141	-116	-49	0	0	16
1945	8	33	21	14	-13	3	-67	-79	-110	-88	-72	7
1946	-58	-152	-198	-250	-183	-269	-309	-288	-210	-179	-110	-65
1947	-23	-9	-160	-186	-186	-173	-199	-208	-55	-58	1	0
1948	0	0	-8	-18	-31	-38	-55	-63	14	-8	-26	-113
1949	-172	-175	-264	-214	-220	-232	-250	-200	-133	-82	150	16
1950	-5	21	2	-10	-29	-68	-120	-107	-65	-63	-67	-90
1951	-90	-87	-107	-103	-17	126	38	24	180	118	89	42
1952	29	35	5	-56	-80	0	51	34	-2	-169	-293	-309
1953	-162	-102	0	32	16	0	-66	-60	2	12	-1	-26
1954	-31	-35	-187	-207	-47	51	-20	-5	-47	-15	0	-8
1955	-10	-8	-44	-49	-46	-61	-58	-30	-61	-29	17	70
1956	74	134	149	62	15	0	-104	-135	-145	151	116	61
1957	28	-12	-160	-286	-313	-132	-174	-258	-113	-89	54	112
1958	123	109	100	73	32	0	-16	-17	-94	-178	-239	-186
1959	-218	-262	-311	-108	-108	-165	-185	-160	-65	-44	1	62
1960	-1	0	55	75	69	94	48	45	23	-28	-96	-77
1961	-92	-105	-8	-13	-25	109	43	42	-15	9	12	0
1962	0	11	-6	-11	-21	-58	-114	-77	-106	-53	-38	0
1963	-8	-22	-46	-92	-119	-84	-149	-176	-70	-36	-51	-75
1964	-132	-162	-215	-228	-256	-313	-214	-222	-101	-40	3	-6
1965	0	65	86	43	-4	-50	-46	-35	23	14	29	22
1966	27	40	32	0	47	0	-116	-42	6	9	0	-3
1967	-7	22	-175	-194	-244	-153	-185	-184	-178	-212	-215	-136
1968	-64	-18	0	0	-10	169	89	105	92	0	1	12
1969	2	10	3	-256	-317	-147	-112	-149	-177	-198	-238	-133
1970	-148	-14	0	0	-155	-96	-182	-262	-77	-56	-54	-3
1971	-17	-23	-54	-105	-204	-247	-311	-296	-299	-168	-103	-188
1972	-257	-266	-327	-348	-265	-177	-244	-200	-137	-69	-23	62
1973	78	108	121	224	89	0	-32	-10	94	-78	4	0
1974	-7	-8	-33	0	0	0	-43	-53	-10	-210	-267	-212
1975	-239	-260	-245	-94	0	152	85	72	-46	7	-19	-106
1976	-132	-148	-187	-124	-159	-136	-108	-65	8	0	-6	-9
1977	-2	34	0	-2	-10	-23	-12	0	23	0	0	-53
1978	-74	-53	-52	-60	-119	-248	-208	-293	-178	-229	-283	-196
1979	-408	-482	-276	-291	-175	-167	-154	-155	-73	-97	-65	26
1980	11	12	-18	-282	-164	42	-46	-57	-20	-48	-87	-98
1981	-161	-200	-216	-196	-103	-263	-308	-251	-194	-94	-52	-15
1982	-10	-5	-192	-39	-97	-68	-95	-95	-118	211	140	-72
1983	-108	-131	0	0	0	0	-43	-52	-52	0	0	0
1984	0	0	0	-50	204	-94	-85	-110	-46	-26	-88	-70
1985	-61	-73	-105	-123	-136	-178	-256	-177	-9	0	0	0
1986	-25	-15	-30	-138	-149	-174	-215	-197	-151	252	199	138
1987	90	70	93	15	-8	-68	-208	-197	-24	-23	-1	0
1988	0	0	0	-104	-94	-100	-66	-59	-29	-7	-14	8
1989	0	-5	74	65	55	41	-25	-17	-34	-21	-31	10
1990	0	0	0	-24	-22	-35	-50	-42	-27	-26	-25	-26
1991	-28	0	4	3	-21	-35	-48	-45	33	32	0	0
1992	22	6	20	17	5	-8	19	18	0	-6	6	7
1993	-35	0	167	153	96	66	-37	-68	-74	-90	-97	-157
1994	-290	-338	-238	-299	-278	-288	-285	-128	0	0	14	0
Avg	-46	-44	-58	-61	-66	-70	-102	-98	-61	-36	-24	-26
Min	-408	-482	-609	-387	-450	-501	-534	-506	-457	-250	-293	-309
Max	125	159	182	258	217	183	203	230	243	252	409	158

Table I-21d. CALSIM Simulated Monthly Cumulative Distribution of SWP San Luis Reservoir Storage for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	55	55	55	88	85	94	67	55	55	55	55	55
10	110	70	66	270	389	474	406	232	121	115	110	110
20	130	110	159	368	598	685	557	351	253	165	132	133
30	150	163	286	482	708	785	626	406	303	194	160	147
40	184	214	344	587	751	839	722	503	362	242	166	215
50	280	350	471	735	855	915	765	590	463	324	246	269
60	397	438	559	823	924	956	833	639	529	354	291	368
70	530	603	688	944	985	1,025	897	710	614	379	353	452
80	741	770	882	1,067	1,050	1,067	931	748	734	465	421	581
90	872	940	1,067	1,067	1,067	1,067	959	814	822	601	642	740
Max	1,067	1,067	1,067	1,067	1,067	1,067	1,067	965	1,047	1,067	1,067	1,067
Avg	405	426	519	697	798	846	726	561	479	333	301	358
B: 2020 Baseline												
Min	55	55	55	86	75	71	55	55	55	55	55	55
10	110	55	55	245	349	363	270	140	60	57	94	110
20	115	110	141	332	504	537	393	233	165	137	115	120
30	137	141	272	454	617	658	499	331	272	164	140	144
40	165	226	321	556	689	788	612	411	327	193	165	174
50	250	280	423	645	773	837	678	484	401	274	221	290
60	341	322	442	680	823	893	725	556	453	301	289	327
70	453	554	587	810	888	923	759	599	529	397	345	409
80	621	674	753	951	987	1,009	836	662	657	453	413	559
90	817	908	1,067	1,067	1,050	1,067	896	772	790	535	498	719
Max	1,067	1,067	1,067	1,067	1,067	1,067	1,024	959	1,045	1,067	1,067	1,067
Avg	359	382	461	636	732	776	624	463	418	297	277	332
Comparison: B – A												
Min	0	0	0	-2	-10	-23	-12	0	0	0	0	0
10	0	-15	-11	-25	-40	-111	-136	-92	-61	-58	-16	0
20	-15	0	-18	-36	-94	-148	-164	-118	-88	-28	-17	-13
30	-13	-22	-14	-28	-91	-127	-127	-75	-31	-30	-20	-3
40	-19	12	-23	-31	-62	-51	-110	-92	-35	-49	-1	-41
50	-30	-70	-48	-90	-82	-78	-87	-106	-62	-50	-25	21
60	-56	-116	-117	-143	-101	-63	-108	-83	-76	-53	-2	-41
70	-77	-49	-101	-134	-97	-102	-138	-111	-85	18	-8	-43
80	-120	-96	-129	-116	-63	-58	-95	-86	-77	-12	-8	-22
90	-55	-32	0	0	-17	0	-63	-42	-32	-66	-144	-21
Max	0	0	0	0	0	0	-43	-6	-2	0	0	0
Avg	-46	-44	-58	-61	-66	-70	-102	-98	-61	-36	-24	-26

Table I-22a. CALSIM Simulated Total San Luis Reservoir Storage, for 2001 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	529	587	835	1,285	1,649	1,897	1,805	1,584	1,452	934	810	1,005
1923	1,232	1,411	1,745	1,854	1,894	1,876	1,740	1,307	927	577	366	418
1924	475	433	514	801	990	893	776	636	461	349	286	305
1925	398	470	813	1,146	1,582	1,383	1,438	1,298	1,190	830	1,006	1,137
1926	1,285	1,293	1,313	1,643	1,828	1,796	1,796	1,423	1,083	748	446	374
1927	396	734	913	1,227	1,672	1,799	1,701	1,343	1,171	672	488	629
1928	681	975	1,344	1,757	1,860	1,995	1,859	1,345	900	511	306	318
1929	329	453	667	1,009	1,183	1,138	1,009	793	620	369	428	481
1930	509	471	914	1,383	1,605	1,816	1,650	1,360	1,014	735	538	630
1931	596	518	495	814	884	846	717	567	537	446	327	454
1932	496	477	946	1,326	1,677	1,723	1,620	1,489	1,255	1,286	1,095	1,621
1933	1,799	1,813	1,992	1,930	1,972	1,870	1,754	1,627	1,382	1,081	884	876
1934	946	863	1,254	1,507	1,726	1,638	1,456	1,210	965	617	640	581
1935	563	781	1,006	1,387	1,521	1,864	1,760	1,229	1,021	718	602	703
1936	726	709	728	1,121	1,569	1,760	1,524	1,155	838	617	472	671
1937	668	646	632	1,054	1,609	1,971	1,827	1,653	1,336	1,030	928	1,057
1938	1,211	1,517	1,748	1,809	1,843	1,874	1,645	1,290	1,151	979	804	1,105
1939	1,358	1,535	1,815	1,925	1,916	1,864	1,490	1,024	670	424	260	258
1940	224	212	159	535	1,077	1,439	1,364	1,045	642	470	288	367
1941	387	445	819	1,378	1,830	2,039	1,938	1,748	1,540	1,107	1,056	1,199
1942	1,488	1,720	1,936	2,039	1,916	2,017	1,901	1,581	1,429	879	715	846
1943	1,091	1,385	1,710	1,886	1,791	2,018	1,856	1,505	1,109	640	464	580
1944	705	678	811	1,130	1,338	1,503	1,249	857	447	260	190	325
1945	291	582	711	1,105	1,631	1,825	1,577	1,153	867	533	305	393
1946	528	803	1,071	1,538	1,459	1,627	1,435	1,075	649	403	210	327
1947	344	462	801	973	1,186	1,360	1,133	707	320	187	176	245
1948	245	323	363	721	898	1,105	1,178	880	620	434	354	593
1949	671	720	965	1,155	1,265	1,635	1,456	1,075	810	529	283	508
1950	450	434	517	833	1,263	1,494	1,252	869	651	554	540	775
1951	885	1,206	1,541	1,899	2,039	1,913	1,663	1,213	678	393	253	360
1952	430	554	852	1,312	1,723	1,823	1,647	1,470	1,536	1,145	979	1,138
1953	1,252	1,458	1,610	1,619	1,619	1,601	1,416	1,055	955	488	422	482
1954	701	978	1,240	1,632	1,718	1,769	1,647	1,278	815	400	210	307
1955	370	519	866	1,375	1,362	1,369	1,208	936	751	601	412	512
1956	513	674	953	1,410	1,674	1,924	1,771	1,519	1,412	892	725	920
1957	1,158	1,225	1,409	1,757	2,022	2,039	1,901	1,551	997	585	327	421
1958	673	973	1,231	1,593	1,745	1,870	1,766	1,503	1,505	992	752	1,078
1959	1,323	1,444	1,681	1,815	1,842	1,595	1,266	862	562	329	201	213
1960	246	186	168	378	826	1,162	909	647	421	467	557	648
1961	608	785	1,083	1,378	1,720	1,695	1,470	999	546	270	160	245
1962	262	404	750	903	1,417	1,804	1,573	1,108	735	356	213	348
1963	590	881	1,130	1,562	1,880	1,996	1,869	1,461	976	565	382	621
1964	866	1,158	1,380	1,796	1,682	1,603	1,231	868	472	317	253	297
1965	267	484	779	1,333	1,729	1,883	1,779	1,403	944	515	362	503
1966	613	927	1,348	1,662	1,695	1,820	1,596	1,066	671	324	210	243
1967	265	512	857	1,305	1,681	1,758	1,510	1,193	1,107	1,017	852	1,173
1968	1,316	1,484	1,664	1,809	1,803	1,718	1,343	944	558	280	209	206
1969	279	433	729	1,215	1,675	1,859	1,669	1,495	1,524	1,187	996	1,491
1970	1,736	1,915	2,039	2,039	2,039	2,039	1,817	1,344	863	443	262	292
1971	371	659	1,032	1,450	1,405	1,708	1,547	993	741	374	203	424
1972	652	739	1,091	1,505	1,639	1,849	1,620	1,248	854	554	447	426
1973	492	829	1,237	1,606	1,858	2,039	1,868	1,487	1,131	757	577	619
1974	810	1,100	1,464	1,736	1,831	1,982	1,816	1,428	1,223	814	687	875
1975	1,118	1,314	1,626	1,786	1,916	1,789	1,681	1,337	1,146	630	477	751
1976	990	1,276	1,636	1,817	1,832	1,730	1,439	1,065	680	414	331	370
1977	368	344	318	350	327	309	244	160	108	191	214	371
1978	457	477	826	1,225	1,658	1,996	1,728	1,554	1,497	1,007	889	1,007
1979	1,182	1,234	1,257	1,762	1,845	2,039	1,744	1,405	893	538	387	560
1980	709	872	1,242	1,774	2,039	1,987	1,940	1,646	1,417	1,019	914	1,151
1981	1,405	1,426	1,644	2,028	1,941	2,023	1,796	1,264	723	355	210	285
1982	327	619	905	1,112	1,482	1,653	1,547	1,268	1,175	648	493	1,066
1983	1,318	1,650	1,815	1,889	1,884	1,867	1,755	1,435	1,326	1,237	1,122	1,176
1984	1,365	1,530	1,597	1,564	1,425	1,614	1,296	816	763	372	314	296
1985	428	712	1,068	1,342	1,391	1,402	1,074	610	217	100	100	145
1986	238	385	508	1,083	1,631	1,998	1,931	1,604	1,412	731	644	859
1987	1,081	1,096	1,208	1,556	1,731	1,757	1,556	1,118	732	492	268	245
1988	189	268	396	825	870	758	656	581	429	271	312	398
1989	375	532	702	969	917	1,319	1,164	752	436	283	227	300
1990	379	342	460	867	1,021	1,173	1,034	909	670	407	309	349
1991	396	313	409	497	544	974	862	701	623	349	276	403
1992	457	447	548	755	1,201	1,433	1,288	1,055	830	425	282	300
1993	395	322	660	1,013	1,422	1,604	1,492	1,230	1,130	894	770	910
1994	1,128	1,175	1,371	1,721	1,754	1,581	1,289	810	374	126	100	198
Avg	707	840	1,067	1,374	1,563	1,670	1,498	1,167	899	596	473	599
Min	189	186	159	350	327	309	244	160	108	100	100	145
Max	1,799	1,915	2,039	2,039	2,039	2,039	1,940	1,748	1,540	1,286	1,122	1,621

Table I-22b. CALSIM Simulated Total San Luis Reservoir Storage, for 2020 Baseline Conditions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	529	578	657	1,081	1,415	1,685	1,553	1,291	1,154	871	709	818
1923	958	1,080	1,293	1,614	1,589	1,498	1,322	913	612	360	250	385
1924	450	428	473	805	990	881	755	628	469	330	279	354
1925	462	550	928	1,211	1,639	1,433	1,497	1,333	1,298	972	1,010	1,171
1926	1,276	1,311	1,498	1,724	1,805	1,772	1,664	1,461	1,050	737	509	371
1927	357	716	891	1,347	1,790	1,933	1,731	1,329	1,046	613	407	431
1928	410	667	981	1,395	1,638	1,943	1,776	1,274	865	408	285	350
1929	347	456	657	1,009	1,186	1,127	989	774	593	339	420	508
1930	527	506	952	1,408	1,601	1,767	1,568	1,293	931	665	503	726
1931	644	627	578	901	985	950	805	661	637	543	423	632
1932	646	677	1,010	1,657	1,894	1,906	1,823	1,715	1,491	1,271	1,519	1,712
1933	1,834	1,880	2,039	1,971	2,005	1,895	1,770	1,672	1,423	1,139	983	954
1934	1,032	960	1,388	1,635	1,750	1,661	1,457	1,218	959	615	633	585
1935	569	804	1,089	1,387	1,508	1,788	1,657	1,126	923	662	596	724
1936	664	661	693	1,069	1,536	1,673	1,390	1,047	771	548	440	612
1937	570	583	597	941	1,489	1,750	1,619	1,471	1,332	1,065	1,032	1,188
1938	1,244	1,485	1,444	1,722	1,848	1,892	1,573	1,217	1,071	854	628	837
1939	1,040	1,112	1,379	1,612	1,545	1,496	1,275	868	600	417	275	267
1940	200	181	161	564	1,105	1,403	1,252	902	556	391	261	286
1941	351	429	703	1,191	1,560	1,811	1,627	1,440	1,096	845	718	999
1942	1,245	1,401	1,712	1,869	2,029	1,851	1,697	1,375	1,236	856	640	760
1943	990	1,279	1,590	1,743	1,665	1,879	1,695	1,291	1,117	633	464	552
1944	625	640	770	1,079	1,260	1,391	1,118	776	472	316	228	389
1945	327	643	769	1,044	1,557	1,771	1,463	989	688	434	264	442
1946	521	709	936	1,367	1,276	1,375	1,141	799	446	227	100	224
1947	305	455	674	891	1,105	1,333	1,096	683	447	302	267	292
1948	275	374	404	767	944	1,148	1,205	900	718	510	411	564
1949	559	546	687	1,002	1,109	1,468	1,270	937	722	482	433	495
1950	415	455	522	826	1,235	1,430	1,147	793	641	576	579	794
1951	902	1,230	1,550	1,923	2,022	2,039	1,701	1,237	808	462	315	416
1952	473	621	964	1,363	1,751	1,918	1,887	1,692	1,614	1,120	790	1,083
1953	1,321	1,521	1,776	1,901	1,848	1,822	1,584	1,240	1,081	598	421	461
1954	679	954	1,041	1,419	1,674	1,817	1,628	1,280	777	414	210	286
1955	336	488	801	1,308	1,309	1,303	1,164	1,013	896	637	502	644
1956	638	859	1,162	1,545	1,778	2,002	1,747	1,463	1,304	983	790	864
1957	1,070	1,097	1,132	1,354	1,621	1,907	1,726	1,248	902	535	357	512
1958	779	1,078	1,302	1,646	1,806	1,911	1,798	1,540	1,453	888	686	985
1959	1,200	1,278	1,468	1,831	1,880	1,629	1,319	927	604	346	202	249
1960	245	147	169	393	826	1,172	880	626	433	431	461	452
1961	402	598	995	1,304	1,655	1,804	1,511	1,005	495	266	189	245
1962	255	296	654	834	1,346	1,695	1,411	980	595	259	139	265
1963	497	774	998	1,382	1,671	1,882	1,697	1,317	917	498	285	473
1964	659	918	1,083	1,479	1,354	1,222	1,049	634	386	218	256	307
1965	266	548	869	1,392	1,756	1,833	1,738	1,372	970	545	405	572
1966	655	981	1,394	1,676	1,757	1,882	1,491	1,111	721	401	236	301
1967	281	557	711	1,147	1,466	1,633	1,352	1,035	951	824	651	1,114
1968	1,329	1,543	1,726	1,870	1,895	1,985	1,529	1,141	708	350	224	278
1969	289	431	718	942	1,338	1,635	1,487	1,280	1,203	844	674	1,004
1970	1,235	1,500	1,685	1,829	1,735	1,898	1,591	1,039	748	329	156	210
1971	275	557	899	1,267	1,201	1,461	1,235	696	446	211	100	174
1972	334	418	709	1,102	1,322	1,621	1,276	952	648	421	416	487
1973	576	944	1,365	1,723	1,862	1,992	1,794	1,434	1,183	707	555	610
1974	794	1,083	1,422	1,727	1,821	1,932	1,723	1,325	1,177	662	493	788
1975	1,003	1,178	1,505	1,818	1,995	2,039	1,864	1,507	1,193	699	531	766
1976	978	1,247	1,569	1,813	1,728	1,673	1,410	1,081	767	455	401	417
1977	413	431	371	407	377	344	288	212	168	199	200	242
1978	306	354	703	1,092	1,517	1,621	1,410	1,177	1,276	829	695	911
1979	881	827	994	1,498	1,740	1,872	1,672	1,335	906	501	356	507
1980	642	807	1,148	1,343	1,677	1,994	1,870	1,565	1,371	947	808	979
1981	1,170	1,119	1,321	1,725	1,811	1,760	1,492	1,073	599	345	211	274
1982	327	626	729	1,094	1,412	1,672	1,549	1,285	1,166	876	690	1,114
1983	1,334	1,646	1,934	1,889	1,871	1,856	1,701	1,372	1,263	1,235	1,129	1,152
1984	1,305	1,470	1,529	1,463	1,644	1,477	1,242	747	704	346	226	231
1985	372	646	973	1,246	1,290	1,242	833	441	207	100	100	142
1986	190	246	352	740	1,274	1,631	1,546	1,265	1,162	974	874	1,043
1987	1,224	1,228	1,372	1,659	1,787	1,689	1,310	891	689	462	259	245
1988	176	267	493	857	904	780	742	663	507	333	306	384
1989	390	530	765	1,025	956	1,344	1,129	732	401	270	196	312
1990	384	369	491	878	1,037	1,179	1,025	908	677	412	339	369
1991	414	360	461	553	577	993	867	707	710	461	266	406
1992	487	447	562	757	1,185	1,407	1,319	1,048	769	344	288	301
1993	298	296	746	1,085	1,437	1,595	1,423	1,138	1,041	804	670	748
1994	836	806	1,105	1,398	1,476	1,293	1,004	692	299	100	114	200
Avg	657	788	1,003	1,309	1,499	1,608	1,410	1,090	853	570	458	575
Min	176	147	161	393	377	344	288	212	168	100	100	142
Max	1,834	1,880	2,039	1,971	2,029	2,039	1,887	1,715	1,614	1,271	1,519	1,712

Table I-22c. CALSIM Simulated Total San Luis Reservoir Storage, 2020 Baseline minus 2001 Baseline (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	-9	-178	-204	-234	-212	-252	-293	-298	-63	-101	-187
1923	-274	-331	-452	-240	-305	-378	-418	-394	-315	-217	-116	-33
1924	-25	-5	-41	4	0	-12	-21	-8	8	-19	-7	49
1925	64	80	115	65	57	50	59	35	108	142	4	34
1926	-9	18	185	81	-23	-24	-132	38	-33	-11	63	-3
1927	-39	-18	-22	120	118	134	30	-14	-125	-59	-81	-198
1928	-271	-308	-363	-362	-222	-52	-83	-71	-35	-103	-21	32
1929	18	3	-10	0	3	-11	-20	-19	-27	-30	-8	27
1930	18	35	38	25	-4	-49	-82	-67	-83	-70	-35	96
1931	48	109	83	87	101	104	88	94	100	97	96	178
1932	150	200	64	331	217	183	203	226	236	-15	424	91
1933	35	67	47	41	33	25	16	45	41	58	99	78
1934	86	97	134	128	24	23	1	8	-6	-2	-7	4
1935	6	23	83	0	-13	-76	-103	-103	-98	-56	-6	21
1936	-62	-48	-35	-52	-33	-87	-134	-108	-67	-69	-32	-59
1937	-98	-63	-35	-113	-120	-221	-208	-182	-4	35	104	131
1938	33	-32	-304	-87	5	18	-72	-73	-80	-125	-176	-268
1939	-318	-423	-436	-313	-371	-368	-215	-156	-70	-7	15	9
1940	-24	-31	2	29	28	-36	-112	-143	-86	-79	-27	-81
1941	-36	-16	-116	-187	-270	-228	-311	-308	-444	-262	-338	-200
1942	-243	-319	-224	-170	113	-166	-204	-206	-193	-23	-75	-86
1943	-101	-106	-120	-143	-126	-139	-161	-214	8	-7	0	-28
1944	-80	-38	-41	-51	-78	-112	-131	-81	25	56	38	64
1945	36	61	58	-61	-74	-54	-114	-164	-179	-99	-41	49
1946	-7	-94	-135	-171	-183	-252	-294	-276	-203	-176	-110	-103
1947	-39	-7	-127	-82	-81	-27	-37	-24	127	115	91	47
1948	30	51	41	46	46	43	27	20	98	76	57	-29
1949	-112	-174	-278	-153	-156	-167	-186	-138	-88	-47	150	-13
1950	-35	21	5	-7	-28	-64	-105	-76	-10	22	39	19
1951	17	24	9	24	-17	126	38	24	130	69	62	56
1952	43	67	112	51	28	95	240	222	78	-25	-189	-55
1953	69	63	166	282	229	221	168	185	126	110	-1	-21
1954	-22	-24	-199	-213	-44	48	-19	2	-38	14	0	-21
1955	-34	-31	-65	-67	-53	-66	-44	77	145	36	90	132
1956	125	185	209	135	104	78	-24	-56	-108	91	65	-56
1957	-88	-128	-277	-403	-401	-132	-175	-303	-95	-50	30	91
1958	106	105	71	53	61	41	32	37	-52	-104	-66	-93
1959	-123	-166	-213	16	38	34	53	65	42	17	1	36
1960	-1	-39	1	15	0	10	-29	-21	12	-36	-96	-196
1961	-206	-187	-88	-74	-65	109	41	6	-51	-4	29	0
1962	-7	-108	-96	-69	-71	-109	-162	-128	-140	-97	-74	-83
1963	-93	-107	-132	-180	-209	-114	-172	-144	-59	-67	-97	-148
1964	-207	-240	-297	-317	-328	-381	-182	-234	-86	-99	3	10
1965	-1	64	90	59	27	-50	-41	-31	26	30	43	69
1966	42	54	46	14	62	62	-105	45	50	77	26	58
1967	16	45	-146	-158	-215	-125	-158	-158	-156	-193	-201	-59
1968	13	59	62	61	92	267	186	197	150	70	15	72
1969	10	-2	-11	-273	-337	-224	-182	-215	-321	-343	-322	-487
1970	-501	-415	-354	-210	-304	-141	-226	-305	-115	-114	-106	-82
1971	-96	-102	-133	-183	-204	-247	-312	-297	-295	-163	-103	-250
1972	-318	-321	-382	-403	-317	-228	-344	-296	-206	-133	-31	61
1973	84	115	128	117	4	-47	-74	-53	52	-50	-22	-9
1974	-16	-17	-42	-9	-10	-50	-93	-103	-46	-152	-194	-87
1975	-115	-136	-121	32	79	250	183	170	47	69	54	15
1976	-12	-29	-67	-4	-104	-57	-29	16	87	41	70	47
1977	45	87	53	57	50	35	44	52	60	8	-14	-129
1978	-151	-123	-123	-133	-141	-375	-318	-377	-221	-178	-194	-96
1979	-301	-407	-263	-264	-105	-167	-72	-70	13	-37	-31	-53
1980	-67	-65	-94	-431	-362	7	-70	-81	-46	-72	-106	-172
1981	-235	-307	-323	-303	-130	-263	-304	-191	-124	-10	1	-11
1982	0	7	-176	-18	-70	19	2	17	-9	228	197	48
1983	16	-4	119	0	-13	-11	-54	-63	-63	-2	7	-24
1984	-60	-60	-68	-101	219	-137	-54	-69	-59	-26	-88	-65
1985	-56	-66	-95	-96	-101	-160	-241	-169	-10	0	0	-3
1986	-48	-139	-156	-343	-357	-367	-385	-339	-250	243	230	184
1987	143	132	164	103	56	-68	-246	-227	-43	-30	-9	0
1988	-13	-1	97	32	34	22	86	82	78	62	-6	-14
1989	15	-2	63	56	39	25	-35	-20	-35	-13	-31	12
1990	5	27	31	11	16	6	-9	-1	7	5	30	20
1991	18	47	52	56	33	19	5	6	87	112	-10	3
1992	30	0	14	2	-16	-26	31	-7	-61	-81	6	1
1993	-97	-26	86	72	15	-9	-69	-92	-89	-90	-100	-162
1994	-292	-369	-266	-323	-278	-288	-285	-118	-75	-26	14	2
Avg	-49	-52	-64	-65	-64	-62	-87	-77	-46	-25	-15	-25
Min	-501	-423	-452	-431	-401	-381	-418	-394	-444	-343	-338	-487
Max	150	200	209	331	229	267	240	226	236	243	424	184

Table I-22d. CALSIM Simulated Total San Luis Reservoir Storage, Percentiles for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	189	186	159	350	327	309	244	160	108	100	100	145
10	269	352	498	816	996	1,164	1,042	716	450	281	209	248
20	370	449	681	1,011	1,294	1,435	1,250	868	620	355	237	302
30	397	501	807	1,140	1,445	1,604	1,395	1,014	671	405	283	356
40	489	613	864	1,311	1,617	1,705	1,486	1,075	749	463	314	402
50	590	720	1,006	1,383	1,674	1,769	1,573	1,213	863	533	382	482
60	675	865	1,213	1,557	1,721	1,823	1,648	1,292	967	604	466	598
70	874	1,098	1,325	1,651	1,796	1,870	1,742	1,377	1,117	723	565	722
80	1,146	1,286	1,575	1,781	1,844	1,952	1,789	1,480	1,210	887	741	916
90	1,318	1,479	1,704	1,880	1,916	2,013	1,858	1,553	1,416	1,019	909	1,131
Max	1,799	1,915	2,039	2,039	2,039	2,039	1,940	1,748	1,540	1,286	1,122	1,621
Avg	707	840	1,067	1,374	1,563	1,670	1,498	1,167	899	596	473	599
B: 2020 Baseline												
Min	176	147	161	393	377	344	288	212	168	100	100	142
10	276	362	491	809	999	1,173	992	685	446	267	197	245
20	330	437	657	941	1,215	1,356	1,143	783	594	341	231	286
30	388	540	710	1,080	1,332	1,465	1,273	911	645	397	267	352
40	460	595	795	1,207	1,474	1,627	1,382	1,011	716	433	313	414
50	559	661	964	1,354	1,560	1,673	1,487	1,111	777	501	411	487
60	644	806	1,049	1,400	1,657	1,771	1,550	1,238	925	601	462	575
70	811	968	1,297	1,613	1,744	1,840	1,627	1,287	1,058	679	565	735
80	1,020	1,154	1,411	1,723	1,799	1,894	1,699	1,334	1,173	845	672	853
90	1,242	1,383	1,565	1,827	1,869	1,933	1,765	1,463	1,294	967	790	1,035
Max	1,834	1,880	2,039	1,971	2,029	2,039	1,887	1,715	1,614	1,271	1,519	1,712
Avg	657	788	1,003	1,309	1,499	1,608	1,410	1,090	853	570	458	575
Comparison: B – A												
Min	-13	-39	2	43	50	35	44	52	60	0	0	-3
10	7	10	-6	-7	3	9	-50	-31	-4	-14	-12	-3
20	-41	-12	-24	-69	-80	-79	-107	-86	-26	-14	-6	-16
30	-10	39	-97	-59	-114	-138	-122	-103	-25	-8	-16	-3
40	-29	-18	-69	-104	-143	-78	-104	-64	-33	-29	0	12
50	-31	-59	-42	-29	-114	-96	-86	-102	-86	-32	29	5
60	-30	-59	-163	-157	-64	-52	-98	-54	-43	-3	-4	-24
70	-63	-129	-29	-38	-52	-30	-114	-90	-59	-45	0	13
80	-126	-132	-164	-59	-45	-58	-90	-146	-37	-42	-69	-63
90	-75	-96	-139	-53	-47	-80	-93	-91	-122	-52	-119	-95
Max	35	-35	0	-68	-10	0	-53	-33	74	-15	397	91
Avg	-49	-52	-64	-65	-64	-62	-87	-77	-46	-25	-15	-25

Table I-23a. CALSIM Simulated CVP Tracy Pumping, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-	VAMP	VAMP	Post-	Jun	Jul	Aug	Sep	taf/yr
							VAMP	4/16-	5/1-	VAMP					
							4/1-4/15	4/30	5/15	5/16-5/31					
1922	4,391	4,265	4,227	4,232	4,254	3,683	3,969	1,500	1,500	1,500	3,000	4,600	4,553	4,481	2,770
1923	4,366	4,257	3,005	3,009	3,405	2,852	4,544	800	800	800	2,235	4,562	4,523	4,465	2,422
1924	4,335	2,958	2,889	4,225	3,426	800	800	800	800	800	800	1,087	1,502	2,521	1,573
1925	2,585	1,139	3,704	3,473	4,218	800	4,600	1,125	1,125	3,001	1,987	3,191	4,309	4,389	2,092
1926	4,027	3,018	800	4,220	4,234	1,989	4,544	800	800	800	800	800	868	3,711	1,673
1927	3,100	4,217	2,992	2,995	4,224	3,353	4,600	1,500	1,500	1,500	2,920	4,588	4,543	4,475	2,526
1928	4,355	4,254	4,223	4,228	4,245	4,279	4,544	800	800	800	1,809	4,573	4,531	4,469	2,682
1929	3,568	4,220	4,222	4,226	3,482	800	800	800	800	800	1,497	1,783	3,361	3,425	1,939
1930	3,031	1,771	4,211	4,213	3,399	3,233	2,679	800	800	2,495	1,325	1,422	1,873	4,348	1,944
1931	3,491	2,882	1,082	4,095	2,144	1,240	800	800	800	800	1,420	800	1,063	2,351	1,336
1932	2,550	1,370	4,209	2,991	3,632	1,527	2,612	1,125	1,125	1,125	2,012	2,571	3,767	4,281	1,922
1933	2,123	1,163	743	691	994	1,247	800	800	800	1,571	800	800	982	2,912	872
1934	2,799	800	4,209	1,797	641	863	800	800	800	800	800	800	2,121	2,192	1,132
1935	1,616	4,066	3,035	2,993	1,031	2,176	2,406	1,500	800	800	2,557	2,117	4,469	4,370	1,886
1936	3,309	2,431	1,404	2,999	2,077	2,143	800	800	800	800	2,345	3,745	4,484	4,404	1,871
1937	4,296	3,447	2,236	3,001	4,235	3,640	1,345	1,345	1,500	1,500	2,511	3,164	4,463	4,359	2,301
1938	4,275	4,223	792	800	800	1,666	800	800	800	800	3,000	4,600	4,576	4,493	1,866
1939	4,389	4,264	4,227	4,232	3,016	2,870	1,125	1,125	1,125	1,125	2,510	3,070	2,988	3,866	2,276
1940	2,277	2,384	351	4,221	4,235	4,252	4,600	1,500	1,500	3,000	3,000	4,536	4,504	4,448	2,381
1941	4,315	4,199	4,219	4,223	4,239	3,685	4,544	800	800	800	3,000	4,573	4,531	4,469	2,709
1942	4,343	4,250	4,222	3,167	2,053	2,772	4,600	1,500	1,500	1,500	3,000	4,600	4,558	4,483	2,541
1943	4,370	4,259	4,225	4,229	3,137	3,864	4,544	800	800	800	2,195	4,600	4,552	4,480	2,623
1944	4,364	3,904	4,224	4,229	3,943	4,272	1,500	1,500	1,500	1,500	2,339	4,527	4,492	4,431	2,642
1945	2,620	4,239	2,999	4,222	4,237	4,278	3,590	800	800	2,953	2,857	4,584	4,539	4,473	2,602
1946	4,351	4,253	4,223	4,227	4,104	2,718	3,441	1,500	1,500	3,000	3,000	4,574	4,532	4,470	2,727
1947	4,261	4,250	4,222	3,040	4,020	3,503	2,939	800	800	800	1,778	4,538	4,505	4,450	2,488
1948	2,925	3,065	2,680	4,122	4,238	3,207	4,544	800	800	2,953	3,000	4,565	4,525	4,466	2,493
1949	4,337	4,248	4,221	3,026	2,915	4,241	3,091	800	800	800	2,061	4,540	4,507	4,454	2,497
1950	3,623	3,118	2,652	3,004	3,924	3,968	800	800	800	800	2,466	4,488	4,467	4,366	2,273
1951	3,249	4,230	4,215	4,219	3,882	2,644	3,564	800	800	800	3,000	4,568	4,528	4,467	2,532
1952	4,340	3,850	3,002	3,006	4,242	4,292	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,557
1953	4,391	4,265	4,227	3,733	3,679	1,241	4,005	1,125	1,125	3,001	3,000	4,600	4,553	4,481	2,584
1954	4,365	4,257	4,224	4,229	4,249	4,273	4,600	1,125	1,125	3,001	2,850	4,590	4,545	4,476	2,838
1955	4,357	4,254	4,224	4,228	2,992	2,284	2,729	800	800	800	1,934	4,533	4,501	4,280	2,427
1956	3,149	3,412	2,999	3,003	4,237	4,286	4,451	800	800	2,953	3,000	4,600	4,556	4,482	2,547
1957	4,368	4,258	4,225	4,229	3,723	2,663	4,502	1,125	1,125	3,001	2,711	4,600	4,555	4,482	2,700
1958	4,368	4,258	4,225	3,009	4,249	4,289	4,600	1,500	1,500	1,500	3,000	4,600	4,569	4,489	2,750
1959	4,381	4,262	4,226	4,231	4,252	1,865	1,125	1,125	1,125	2,807	3,000	4,574	4,532	4,470	2,588
1960	3,692	1,829	1,193	3,007	3,939	4,225	800	800	800	800	1,678	4,447	4,410	4,297	2,070
1961	3,157	3,741	4,112	3,430	4,225	2,306	2,619	800	800	2,336	2,039	4,577	4,535	4,128	2,384
1962	3,395	4,251	4,222	3,073	4,245	4,276	3,120	1,125	1,125	3,001	2,766	4,574	4,532	4,470	2,655
1963	4,344	4,250	4,222	4,226	4,245	3,422	4,544	800	800	800	3,000	4,581	4,537	4,472	2,700
1964	4,349	4,252	4,223	4,227	2,465	2,403	800	800	800	2,949	2,367	4,371	4,250	4,418	2,424
1965	2,455	4,237	4,218	4,222	4,236	4,278	4,600	1,500	1,500	3,000	3,000	4,600	4,562	4,485	2,751
1966	4,374	4,260	4,225	4,230	4,251	4,273	3,324	1,125	1,125	1,125	3,000	4,574	4,532	4,470	2,748
1967	3,735	4,250	3,002	3,007	4,245	4,036	800	800	800	800	3,000	4,585	4,540	4,474	2,439
1968	4,352	4,253	4,223	4,227	3,770	3,651	1,125	1,125	1,125	2,692	3,000	4,586	4,541	4,474	2,667
1969	4,353	4,253	3,003	3,008	4,247	4,308	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,584
1970	4,391	4,265	3,932	1,921	2,252	2,622	3,753	800	800	800	1,979	4,570	4,529	4,468	2,298
1971	4,341	4,249	4,222	4,226	4,244	4,280	4,600	1,125	1,125	1,125	3,000	4,594	4,547	4,478	2,785
1972	4,359	4,255	4,224	4,228	4,194	4,275	2,613	800	800	2,586	3,000	4,561	4,522	4,464	2,747
1973	4,159	4,247	4,221	4,225	4,243	4,136	4,200	1,500	1,500	1,500	2,755	4,587	4,542	4,475	2,772
1974	4,354	4,253	4,223	3,008	4,247	4,293	4,544	800	800	800	2,852	4,590	4,544	4,476	2,672
1975	4,356	4,254	4,223	4,228	4,247	3,132	4,600	1,500	1,500	1,500	3,000	4,588	4,543	4,475	2,750
1976	4,355	4,254	4,223	4,228	3,081	1,863	800	800	800	800	1,511	2,018	2,752	3,575	2,019
1977	2,588	1,728	800	800	800	800	800	800	800	800	1,476	3,214	2,988	2,810	1,187
1978	3,052	1,251	2,989	2,991	4,218	4,305	800	800	800	800	2,942	4,600	4,557	4,483	2,231
1979	4,369	4,258	3,893	4,229	4,250	4,255	1,500	1,500	1,500	3,000	3,000	4,590	4,544	4,476	2,755
1980	4,356	4,254	4,224	4,228	4,246	1,746	4,154	800	800	800	2,393	4,600	4,557	4,483	2,553
1981	4,369	4,227	4,225	4,229	2,923	2,624	3,349	1,125	1,125	1,125	2,850	4,595	4,548	4,478	2,565
1982	3,914	4,255	3,004	3,008	4,248	4,286	4,600	1,500	1,500	1,500	3,000	4,600	4,567	4,488	2,647
1983	4,379	4,261	3,212	3,011	2,036	1,670	800	800	800	800	3,000	4,600	4,578	4,494	2,229
1984	4,391	4,265	3,213	2,622	3,096	4,292	1,500	1,500	1,500	1,500	2,540	4,598	4,550	4,479	2,481
1985	4,362	4,256	4,224	4,229	3,519	3,084	800	800	800	800	1,806	4,525	4,495	4,428	2,449
1986	3,964	4,238	2,999	4,222	4,237	4,274	4,426	800	800	800	2,329	3,300	4,533	4,470	2,530
1987	4,345	4,251	4,222	4,227	4,176	2,799	2,919	800	800	1,767	1,646	1,587	1,716	3,283	2,131
1988	2,667	2,896	3,135	4,218	2,877	800	800	800	800	1,990	2,149	1,968	3,718	4,275	1,864
1989	2,263	2,297	2,377	2,885	800	4,217	4,004	800	800	800	1,734	3,576	3,764	4,364	1,910
1990	4,007	1,865	3,014	2,999	3,916	2,324	800	800	800	800	907	857	2,048	2,531	1,568
1991	2,912	800	1,826	1,553	1,389	4,230	800	800	800	800	1,220	847	2,591	4,269	1,407
1992	2,849	1,053	1,827	2,389	4,222	3,352	800	800	800	800	800	800	2,115	1,410	1,346
1993	2,998	800	3,966	3,000	4,232	4,273	4,600	1,125	1,125	1,125	3,000	4,561	4,522	4,464	2,401
1994	4,334	4,247	4,221	4,225	2,375	2,576	2,208	800	800	1,775	2,416	4,600	4,569	4,489	2,474
Avg	3,781	3,541	3,415	3,504	3,479	3,088	2,737	1,019	1,011	1,507	2,365	3,790	4,021	4,183	2,312
Min	1,616	800	351	691	641	800	800	800	800	800	800	800	868	1,410	872
Max	4,391	4,265	4,227	4,232	4,254	4,308	4,600	1,500	1,500	3,001	3,000	4,600	4,578	4,494	2,838

Table I-23b. CALSIM Simulated CVP Tracy Pumping, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr	
1922	4,391	4,265	3,007	4,232	4,254	4,287	4,600	1,500	1,500	1,500	3,000	4,593	4,547	4,477	2,750	
1923	4,359	4,255	4,224	2,774	3,289	2,602	4,544	800	800	800	2,260	4,568	4,527	4,467	2,463	
1924	4,339	2,913	1,512	4,226	3,508	800	800	800	800	800	800	1,244	1,795	2,867	1,539	
1925	2,672	1,333	3,940	2,991	4,218	800	4,600	1,125	1,125	1,125	2,008	3,176	2,424	4,363	1,917	
1926	3,787	2,859	3,079	4,219	4,231	3,440	800	800	800	2,939	1,259	857	1,168	3,327	1,861	
1927	3,084	4,219	2,992	2,995	4,225	4,204	4,600	1,500	1,500	1,500	2,908	4,588	4,543	4,475	2,577	
1928	4,355	4,254	4,223	4,228	4,245	4,274	4,544	800	800	800	1,767	4,553	4,516	4,461	2,676	
1929	3,543	3,870	4,221	4,225	3,516	800	800	800	800	800	1,460	1,837	3,623	3,020	1,912	
1930	3,062	2,065	4,211	4,214	3,736	3,049	2,816	800	800	800	2,559	1,184	1,518	2,345	4,339	2,003
1931	3,496	3,319	982	4,217	2,354	1,390	800	800	800	800	1,179	800	1,061	2,334	1,369	
1932	2,122	1,935	2,989	4,211	2,359	1,561	2,713	1,125	1,125	1,125	2,072	3,170	3,739	4,289	1,903	
1933	3,016	1,181	767	728	1,040	1,247	800	800	800	1,856	800	800	898	2,530	915	
1934	3,037	902	4,209	1,820	641	1,166	800	800	800	800	800	800	2,657	2,356	1,216	
1935	1,667	4,020	3,999	2,183	1,057	1,521	2,604	1,500	800	800	2,523	2,560	4,466	4,364	1,888	
1936	2,360	2,213	1,601	2,999	2,594	2,064	800	800	800	800	2,333	3,261	4,476	4,386	1,803	
1937	4,171	3,651	1,353	3,000	4,233	2,065	1,500	1,500	1,500	1,500	2,682	3,725	4,450	4,330	2,205	
1938	4,262	3,108	723	715	798	1,666	800	800	800	800	3,000	4,600	4,578	4,494	1,790	
1939	4,390	4,265	4,227	4,232	3,104	2,827	3,004	1,125	1,125	1,125	2,553	2,847	2,686	3,850	2,304	
1940	1,664	2,215	800	4,220	4,232	4,252	4,600	1,500	1,500	3,000	3,000	4,535	4,503	4,446	2,360	
1941	4,315	3,927	4,219	4,223	4,239	3,715	4,544	800	800	2,953	3,000	4,600	4,552	4,480	2,767	
1942	4,364	4,257	4,224	4,229	4,249	3,013	4,600	1,500	1,500	1,500	3,000	4,600	4,558	4,483	2,745	
1943	4,370	4,259	4,225	4,229	4,050	4,308	4,544	800	800	800	2,233	4,600	4,552	4,480	2,703	
1944	4,364	4,257	4,224	4,229	3,943	3,980	1,500	1,500	1,500	1,500	2,324	3,434	3,712	4,380	2,526	
1945	2,178	4,232	2,996	3,000	4,233	4,273	3,714	800	800	800	2,323	4,548	4,512	4,459	2,397	
1946	4,324	4,244	4,220	4,224	2,342	3,011	3,450	1,500	1,500	3,000	3,000	4,578	4,535	4,471	2,646	
1947	4,347	4,251	4,223	4,227	4,063	4,120	2,954	800	800	800	1,836	3,892	3,620	4,406	2,514	
1948	2,527	3,320	2,517	4,160	4,234	3,292	4,544	800	800	2,953	3,000	4,564	4,524	4,466	2,481	
1949	4,062	3,589	3,991	4,226	2,956	4,240	3,127	800	800	800	2,045	4,543	4,508	4,457	2,504	
1950	3,623	3,626	2,718	3,004	3,925	3,963	800	800	800	800	2,445	4,468	4,451	4,332	2,301	
1951	3,154	4,225	4,214	3,413	1,417	2,644	3,554	800	800	800	2,151	4,568	4,527	4,467	2,288	
1952	4,339	4,152	4,222	3,006	4,242	4,301	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,743	
1953	4,391	4,265	4,227	4,232	3,010	1,194	4,159	1,125	1,125	3,001	3,000	4,586	4,542	4,475	2,577	
1954	4,354	4,253	3,779	4,228	4,247	4,274	4,600	1,125	1,125	3,001	3,000	4,583	4,539	4,473	2,817	
1955	4,151	4,253	4,223	4,227	3,116	2,192	2,767	800	800	2,898	3,000	2,449	3,883	4,321	2,383	
1956	2,834	3,301	2,997	3,000	4,232	4,290	4,544	800	800	2,953	3,000	4,600	4,556	4,482	2,524	
1957	4,368	4,258	4,225	4,229	4,250	4,054	4,466	1,125	1,125	1,125	3,000	4,586	4,541	4,474	2,769	
1958	4,353	4,253	4,223	3,008	4,247	4,284	4,600	1,500	1,500	1,500	3,000	4,600	4,563	4,486	2,748	
1959	4,376	4,260	4,225	4,230	4,251	2,667	2,541	1,125	1,125	2,859	3,000	4,590	4,544	4,476	2,683	
1960	4,179	1,223	1,029	3,008	3,941	3,952	800	800	800	800	1,671	4,423	4,370	3,217	1,969	
1961	3,186	4,217	4,085	3,649	4,224	2,869	2,561	800	800	800	1,692	4,561	4,523	3,957	2,378	
1962	3,203	2,524	4,221	3,463	4,243	4,277	3,255	1,125	1,125	3,001	3,000	4,578	4,535	4,471	2,583	
1963	4,347	4,251	4,223	4,227	4,245	4,280	4,544	800	800	2,953	3,000	4,596	4,549	4,479	2,823	
1964	4,361	4,256	4,224	4,228	2,885	2,324	3,817	800	800	800	1,541	2,255	4,290	4,369	2,285	
1965	2,057	4,230	4,216	4,219	4,232	3,723	4,600	1,500	1,500	3,000	3,000	4,600	4,562	4,486	2,692	
1966	4,375	4,260	4,225	4,230	4,251	4,271	1,125	1,125	1,125	3,001	2,695	4,557	4,519	4,463	2,721	
1967	3,023	4,246	3,001	3,005	3,927	4,036	800	800	800	800	3,000	4,586	4,541	4,474	2,377	
1968	4,353	4,253	4,223	4,227	4,245	3,548	1,125	1,125	1,125	2,706	3,000	4,593	4,546	4,477	2,688	
1969	3,556	4,255	3,004	3,008	4,248	4,305	1,500	1,500	1,500	1,500	3,000	4,600	4,575	4,492	2,534	
1970	4,388	4,264	4,227	4,231	3,325	4,283	3,791	800	800	800	2,046	4,570	4,529	4,468	2,625	
1971	4,341	4,249	4,222	4,226	4,244	4,280	4,600	1,125	1,125	1,125	3,000	4,594	4,547	4,478	2,785	
1972	4,359	4,255	4,224	4,228	4,246	4,274	800	800	800	2,627	3,000	4,558	4,520	4,463	2,697	
1973	4,259	4,247	4,221	3,005	4,242	4,286	4,350	1,500	1,500	1,500	2,752	4,588	4,542	4,475	2,716	
1974	4,354	4,254	4,223	3,008	4,247	4,289	4,544	800	800	800	2,725	4,590	4,544	4,476	2,664	
1975	4,356	4,254	4,223	4,228	4,247	3,424	4,600	1,500	1,500	1,500	3,000	4,588	4,543	4,475	2,768	
1976	4,355	4,254	4,223	4,228	1,961	2,222	800	800	800	800	1,474	1,355	3,453	3,928	2,000	
1977	2,454	1,796	800	883	800	800	800	800	800	800	1,475	2,889	2,607	2,803	1,144	
1978	3,035	1,386	2,989	2,992	3,904	2,557	800	800	800	800	2,931	4,574	4,532	4,470	2,109	
1979	4,344	3,854	2,755	4,226	4,245	2,929	4,438	1,500	1,500	3,000	3,000	4,586	4,541	4,474	2,665	
1980	4,353	4,253	4,223	3,008	4,245	4,298	4,544	800	800	800	2,351	4,600	4,557	4,483	2,644	
1981	4,369	3,675	4,225	4,229	4,250	3,048	3,501	1,125	1,125	2,553	2,888	4,582	4,538	4,473	2,682	
1982	3,957	4,252	3,003	3,007	4,246	4,288	4,600	1,500	1,500	1,500	3,000	4,600	4,552	4,480	2,648	
1983	4,364	4,257	3,004	941	1,639	1,670	800	800	800	800	3,000	4,600	4,578	4,494	2,066	
1984	4,391	4,265	3,567	2,890	4,252	3,340	4,172	1,500	1,500	1,500	2,499	4,587	4,542	4,475	2,600	
1985	4,354	4,253	4,223	4,228	3,567	2,823	800	800	800	800	1,774	4,533	4,501	4,442	2,435	
1986	3,679	2,678	2,999	3,003	4,238	4,264	4,544	800	800	800	2,301	3,820	4,507	4,456	2,375	
1987	4,319	4,242	4,220	4,224	3,410	1,757	1,297	800	800	1,620	1,509	1,405	1,478	3,316	1,937	
1988	2,401	3,049	4,214	4,217	2,591	800	2,154	800	800	2,028	2,034	1,977	3,577	4,080	1,922	
1989	2,907	2,147	2,225	2,995	800	4,217	4,057	800	800	800	1,810	3,517	3,462	4,349	1,921	
1990	4,005	2,233	3,027	2,998	3,915	2,367	800	800	800	800	800	807	2,454	2,517	1,608	
1991	2,921	800	1,851	1,623	1,422	4,231	800	800	800	800	1,275	1,289	1,586	4,249	1,383	
1992	2,941	828	1,944	2,483	4,222	3,419	2,634	800	800	800	800	800	3,689	1,198	1,494	
1993	3,047	1,328	2,996	3,000	4,232	4,265	4,600	1,125	1,125	1,125	3,000	4,552	4,515	4,461	2,374	
1994	4,327	3,728	4,220	4,224	2,718	2,576	2,223	800	800	1,821	800	4,600	4,561	4,464	2,365	
Avg	3,723	3,487	3,417	3,498	3,487	3,152	2,895	1,021	1,011	1,543	2,326	3,720	3,990	4,152	2,305	
Min	1,664	800	723	715	641	800	800	800	800	800	800	800	898	1,198	915	
Max	4,391	4,265	4,227	4,232	4,254	4,308	4,600	1,500	1,500	3,001	3,000	4,600	4,578	4,494	2,823	

Table I-23c. CALSIM Simulated CVP Tracy Pumping, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	-1,220	0	0	604	631	0	0	0	0	-7	-6	-4	-20
1923	-7	-2	1,219	-235	-116	-250	0	0	0	0	25	6	4	2	40
1924	4	-45	-1,377	1	82	0	0	0	0	0	0	157	293	346	-34
1925	87	194	236	-482	0	0	0	0	0	-1,876	21	-15	-1,885	-26	-175
1926	-240	-159	2,279	-1	-3	1,451	-3,744	0	0	2,139	459	57	300	-384	188
1927	-16	2	0	0	0	1	851	0	0	0	-12	0	0	0	51
1928	0	0	0	0	0	0	-5	0	0	0	-42	-20	-15	-8	-5
1929	-25	-350	-1	-1	34	0	0	0	0	0	-37	54	262	-405	-27
1930	31	294	0	1	337	-184	137	0	0	64	-141	96	472	-9	59
1931	5	437	-100	122	210	150	0	0	0	0	-241	0	-2	-17	33
1932	-428	565	-1,220	1,220	-1,273	34	101	0	0	0	60	599	-28	8	-19
1933	893	18	24	37	46	0	0	0	0	285	0	0	-84	-382	43
1934	238	102	0	23	0	303	0	0	0	0	0	0	536	164	83
1935	51	-46	964	-810	26	-655	197	0	0	0	-34	443	-3	-6	2
1936	-949	-218	197	0	517	-79	0	0	0	0	-12	-484	-8	-18	-67
1937	-125	204	-883	-1	-2	-1,575	155	155	0	0	171	561	-13	-29	-96
1938	-13	-1,115	-69	-85	-2	0	0	0	0	0	0	0	2	1	-77
1939	1	1	0	0	88	-43	1,879	0	0	0	43	-223	-302	-16	28
1940	-613	-169	449	-1	-3	0	0	0	0	0	0	-1	-1	-2	-21
1941	0	-272	0	0	0	30	0	0	0	2,153	0	27	21	11	58
1942	21	7	2	1,062	2,196	241	0	0	0	0	0	0	0	0	204
1943	0	0	0	0	913	444	0	0	0	0	38	0	0	0	80
1944	0	353	0	0	0	-292	0	0	0	0	-15	-1,093	-780	-51	-116
1945	-442	-7	-3	-1,222	-4	-5	124	0	0	-2,153	-534	-36	-27	-14	-205
1946	-27	-9	-3	-3	-1,762	293	9	0	0	0	0	4	3	1	-82
1947	86	1	1	1,187	43	617	15	0	0	0	58	-646	-885	-44	26
1948	-398	255	-163	38	-4	85	0	0	0	0	0	-1	-1	0	-12
1949	-275	-659	-230	1,200	41	-1	36	0	0	0	-16	3	1	3	6
1950	0	508	66	0	1	-5	0	0	0	0	-21	-20	-16	-34	29
1951	-95	-5	-1	-806	-2,465	0	-11	0	0	0	-849	0	-1	0	-244
1952	-1	302	1,220	0	0	9	3,100	0	0	0	0	0	0	0	186
1953	0	0	0	499	-669	-47	154	0	0	0	0	-14	-11	-6	-7
1954	-11	-4	-445	-1	-2	1	0	0	0	0	150	-7	-6	-3	-20
1955	-206	-1	-1	-1	124	-92	39	0	0	2,098	1,066	-2,084	-618	41	-44
1956	-315	-111	-2	-3	-5	4	92	0	0	0	0	0	0	0	-24
1957	0	0	0	0	527	1,391	-36	0	0	-1,876	289	-14	-14	-8	69
1958	-15	-5	-2	-1	-2	-5	0	0	0	0	0	0	-6	-3	-2
1959	-5	-2	-1	-1	-1	802	1,416	0	0	52	0	16	12	6	95
1960	487	-606	-164	1	2	-273	0	0	0	0	-7	-24	-40	-1,080	-101
1961	29	476	-27	219	-1	563	-58	0	0	-1,536	-347	-16	-12	-171	-7
1962	-192	-1,727	-1	390	-2	1	135	0	0	0	234	4	3	1	-72
1963	3	1	1	1	0	858	0	0	0	2,153	0	15	12	7	124
1964	12	4	1	1	420	-79	3,017	0	0	-2,149	-826	-2,116	40	-49	-139
1965	-398	-7	-2	-3	-4	-555	0	0	0	0	0	0	0	1	-60
1966	1	0	0	0	0	-2	-2,199	0	0	1,876	-305	-17	-13	-7	-26
1967	-712	-4	-1	-2	-318	0	0	0	0	0	0	1	1	0	-62
1968	1	0	0	0	475	-103	0	0	0	14	0	7	5	3	21
1969	-797	2	1	0	1	-3	0	0	0	0	0	0	-3	-2	-49
1970	-3	-1	295	2,310	1,073	1,661	39	0	0	0	67	0	0	0	327
1971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	52	-1	-1,813	0	0	41	0	-3	-2	-1	-50
1973	100	0	0	-1,220	-1	150	150	0	0	0	-3	1	0	0	-55
1974	0	1	0	0	0	-4	0	0	0	0	-127	0	0	0	-8
1975	0	0	0	0	0	292	0	0	0	0	0	0	0	0	18
1976	0	0	0	0	-1,120	359	0	0	0	0	-37	-663	701	353	-19
1977	-134	68	0	83	0	0	0	0	0	0	-1	-325	-381	-7	-43
1978	-17	135	0	1	-314	-1,748	0	0	0	0	-11	-26	-25	-13	-122
1979	-25	-404	-1,138	-3	-5	-1,326	2,938	0	0	0	0	-4	-3	-2	-91
1980	-3	-1	-1	-1,220	-1	2,552	390	0	0	0	-42	0	0	0	91
1981	0	-552	0	0	1,327	424	152	0	0	1,428	38	-13	-10	-5	117
1982	43	-3	-1	-1	-2	2	0	0	0	0	0	0	-15	-8	1
1983	-15	-4	-208	-2,070	-397	0	0	0	0	0	0	0	0	0	-163
1984	0	0	354	268	1,156	-952	2,672	0	0	0	-41	-11	-8	-4	120
1985	-8	-3	-1	-1	48	-261	0	0	0	0	-32	8	6	14	-14
1986	-285	-1,560	0	-1,219	1	-10	118	0	0	0	-28	520	-26	-14	-155
1987	-26	-9	-2	-3	-766	-1,042	-1,622	0	0	-147	-137	-182	-238	33	-194
1988	-266	153	1,079	-1	-286	0	1,354	0	0	39	-115	9	-141	-195	58
1989	644	-150	-152	110	0	0	54	0	0	0	76	-59	-302	-15	11
1990	-2	368	13	-1	-1	43	0	0	0	0	-107	-50	406	-14	40
1991	9	0	25	70	33	1	0	0	0	0	55	442	-1,005	-20	-24
1992	92	-225	117	94	0	67	1,834	0	0	0	0	0	1,574	-212	148
1993	49	528	-970	0	0	-8	0	0	0	0	0	-9	-7	-3	-27
1994	-7	-519	-1	-1	343	0	15	0	0	47	-1,616	0	-8	-25	-109
Avg	-58	-54	2	-6	8	64	157	2	0	36	-39	-70	-31	-31	-7
Min	-949	-1,727	-1,377	-2,070	-2,465	-1,748	-3,744	0	0	-2,153	-1,616	-2,116	-1,885	-1,080	-244
Max	893	565	2,279	2,310	2,196	2,552	3,100	155	0	2,153	1,066	599	1,574	353	327

Table I-23d. CALSIM Simulated Monthly Cumulative Distribution of CVP Tracy Pumping, for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Pre- VAMP 4/1- 4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post- VAMP 5/16- 5/31	Jun	Jul	Aug	Sep	taf/ year
A: 2001 Baseline															
Min	1,616	800	351	691	641	800	800	800	800	800	800	800	868	1,410	
10	2,594	1,442	1,488	2,675	2,039	1,242	800	800	800	800	1,344	1,154	2,116	3,311	
20	3,011	2,611	2,929	2,999	2,892	1,915	800	800	800	800	1,752	2,771	3,736	4,277	
30	3,361	3,433	3,003	3,008	3,294	2,507	1,125	800	800	800	2,028	4,121	4,468	4,368	
40	3,954	4,219	3,213	3,037	3,714	2,794	2,066	800	800	800	2,344	4,538	4,507	4,450	
50	4,315	4,247	4,209	4,122	4,020	3,352	2,919	800	800	1,125	2,540	4,570	4,531	4,468	
60	4,344	4,250	4,221	4,222	4,224	3,721	3,569	1,125	865	1,500	2,853	4,578	4,535	4,470	
70	4,355	4,253	4,222	4,226	4,237	4,234	4,290	1,125	1,125	1,528	3,000	4,589	4,543	4,475	
80	4,365	4,256	4,224	4,228	4,245	4,274	4,544	1,500	1,500	2,650	3,000	4,600	4,553	4,481	
90	4,373	4,260	4,225	4,229	4,247	4,285	4,600	1,500	1,500	3,000	3,000	4,600	4,561	4,485	
Max	4,391	4,265	4,227	4,232	4,254	4,308	4,600	1,500	1,500	3,001	3,000	4,600	4,578	4,494	
Avg	3,781	3,541	3,415	3,504	3,479	3,088	2,737	1,019	1,011	1,507	2,365	3,790	4,021	4,183	2,312
B: 2020 Baseline															
Min	1,664	800	723	715	641	800	800	800	800	800	800	800	898	1,198	
10	2,469	1,468	1,530	2,541	1,465	1,276	800	800	800	800	1,199	1,302	2,430	3,059	
20	3,019	2,349	2,849	2,998	2,644	2,064	800	800	800	800	1,593	2,493	3,594	4,148	
30	3,173	3,312	3,000	3,005	3,311	2,592	1,419	800	800	800	2,024	3,484	4,338	4,357	
40	3,765	3,829	3,469	3,008	3,913	2,995	2,595	800	800	800	2,293	4,535	4,506	4,445	
50	4,259	4,225	4,211	4,214	4,218	3,424	3,127	800	800	1,125	2,523	4,561	4,523	4,463	
60	4,339	4,249	4,220	4,224	4,232	3,991	3,865	1,125	865	1,500	2,913	4,579	4,536	4,471	
70	4,353	4,253	4,223	4,226	4,242	4,245	4,544	1,125	1,125	1,700	3,000	4,587	4,542	4,475	
80	4,359	4,255	4,223	4,228	4,245	4,274	4,544	1,500	1,500	2,798	3,000	4,594	4,547	4,477	
90	4,370	4,259	4,225	4,229	4,248	4,287	4,600	1,500	1,500	2,990	3,000	4,600	4,558	4,483	
Max	4,391	4,265	4,227	4,232	4,254	4,308	4,600	1,500	1,500	3,001	3,000	4,600	4,578	4,494	
Avg	3,723	3,487	3,417	3,498	3,487	3,152	2,895	1,021	1,011	1,543	2,326	3,720	3,990	4,152	2,305
Comparison: B - A															
Min	48	0	372	24	0	0	0	0	0	0	0	0	30	-212	
10	-126	26	41	-133	-574	33	0	0	0	0	-145	148	314	-252	
20	8	-262	-80	-1	-249	150	0	0	0	0	-159	-277	-142	-129	
30	-187	-121	-2	-3	16	85	294	0	0	0	-5	-637	-130	-11	
40	-189	-391	257	-29	199	201	529	0	0	0	-51	-3	0	-4	
50	-56	-22	2	92	198	72	208	0	0	0	-17	-9	-8	-5	
60	-5	-1	-1	2	8	270	296	0	0	0	60	1	0	1	
70	-2	0	1	0	5	10	253	0	0	172	0	-1	-1	0	
80	-6	-1	-1	0	0	0	0	0	0	148	0	-6	-6	-4	
90	-3	-1	0	0	1	2	0	0	0	-9	0	0	-3	-2	
Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Avg	-58	-54	2	-6	8	64	157	2	0	36	-40	-71	-31	-32	-7

Table I-24a. CALSIM Simulated SWP Banks Pumping, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	5,175	3,014	5,317	7,612	8,500	7,561	5,640	1,500	1,500	5,640	6,680	3,678	6,680	6,680	4,099
1923	6,680	5,020	7,523	6,456	3,405	2,852	5,697	700	700	4,215	5,104	5,285	5,480	6,680	3,642
1924	3,872	2,317	3,609	3,242	3,426	300	300	300	606	606	842	3,487	2,428	1,544	1,567
1925	1,732	2,329	3,704	3,473	5,651	300	5,154	1,125	1,125	3,690	3,475	2,579	5,809	3,977	2,316
1926	3,047	923	2,710	5,281	7,319	1,989	4,926	700	700	700	2,359	6,414	5,785	3,387	2,565
1927	3,382	6,680	4,263	4,349	8,218	7,286	5,640	1,500	1,500	5,600	5,761	3,367	7,180	6,678	3,864
1928	4,137	6,679	7,064	7,401	6,368	7,561	5,697	700	700	700	3,826	4,209	6,977	4,851	3,798
1929	3,292	3,493	4,262	4,247	3,482	1,596	700	700	300	300	1,247	4,099	2,491	1,156	1,834
1930	977	300	5,118	5,272	4,036	6,972	2,794	700	700	2,589	2,151	6,814	5,263	3,844	2,677
1931	1,747	692	2,673	4,095	2,144	850	300	300	700	700	2,271	2,784	4,107	1,658	1,455
1932	1,116	765	5,387	4,556	4,821	4,541	877	877	1,125	3,303	300	6,658	661	3,868	2,162
1933	4,712	2,454	5,490	2,406	5,176	2,351	1,330	700	700	1,861	300	3,002	300	1,237	1,789
1934	1,778	732	4,472	3,893	5,593	1,121	300	300	300	300	300	2,665	2,456	1,838	1,526
1935	1,772	2,749	3,035	4,581	4,111	7,257	5,640	1,500	324	324	6,072	7,041	6,280	4,781	3,113
1936	5,561	2,833	3,164	7,303	8,437	7,561	5,500	700	700	4,205	5,436	7,180	5,819	5,799	3,895
1937	3,956	2,384	2,896	6,012	8,500	7,561	5,640	1,500	1,500	5,048	3,435	6,138	6,794	5,269	3,601
1938	4,978	6,680	7,678	3,988	6,668	6,464	5,697	700	700	5,687	6,680	7,180	6,749	7,180	4,263
1939	6,680	6,680	7,047	5,869	3,016	2,870	304	304	1,125	1,125	3,361	7,180	6,923	5,762	3,445
1940	3,946	3,330	300	5,967	8,437	7,561	5,640	1,500	1,500	4,583	4,242	7,180	5,749	5,153	3,517
1941	5,290	3,017	7,194	8,442	8,500	7,109	5,697	700	700	5,687	4,451	4,182	6,680	7,180	4,128
1942	6,680	5,855	7,579	5,433	2,940	7,561	5,640	1,500	1,500	5,640	6,680	3,589	6,680	7,180	4,081
1943	6,680	6,680	7,340	8,500	3,137	7,561	5,697	700	700	2,899	4,985	3,944	7,180	6,680	4,104
1944	5,657	1,777	3,238	4,730	4,875	4,393	2,904	1,500	1,500	2,976	4,016	7,180	6,806	6,017	3,212
1945	4,182	6,588	4,263	6,775	8,500	6,445	3,704	700	700	3,850	4,747	6,491	6,258	6,630	3,932
1946	5,901	6,609	5,703	8,251	831	6,328	3,441	1,500	1,500	3,800	4,166	7,180	6,133	6,117	3,793
1947	3,675	3,774	7,080	3,040	4,020	3,503	3,053	700	700	2,787	3,733	7,180	6,743	5,027	3,111
1948	4,509	3,675	2,680	4,122	2,106	3,207	5,697	700	700	5,687	5,736	7,180	7,177	6,678	3,242
1949	5,232	2,255	5,031	3,026	2,915	5,271	3,205	700	700	2,591	4,582	6,806	2,386	4,098	2,739
1950	1,237	1,459	2,840	4,382	7,589	4,409	4,619	700	700	3,926	5,798	7,180	7,180	6,680	3,230
1951	5,429	6,680	5,705	8,500	7,721	3,689	3,679	700	700	4,649	2,748	6,549	6,749	6,476	3,927
1952	4,984	4,385	7,195	8,500	8,437	7,561	1,500	1,500	1,500	5,640	6,277	6,083	6,680	7,180	4,365
1953	6,680	5,022	7,163	3,733	3,112	7,191	4,005	1,125	1,125	5,382	6,680	3,829	7,180	7,180	3,854
1954	6,680	6,680	6,979	7,243	7,433	5,260	5,640	1,125	1,125	5,151	2,850	5,229	5,802	6,630	4,061
1955	5,511	4,555	6,974	7,296	1,674	2,284	1,484	700	700	2,963	4,201	5,852	2,565	3,090	2,853
1956	1,535	3,092	4,504	8,500	8,437	7,561	4,566	700	700	5,687	6,680	4,007	6,680	7,180	3,852
1957	6,680	4,860	4,762	6,333	7,552	6,654	4,502	1,125	1,125	4,097	2,995	5,562	5,869	6,680	3,821
1958	6,680	6,680	5,193	7,341	7,821	7,561	5,640	1,500	1,500	5,640	6,680	4,510	6,680	7,180	4,428
1959	6,680	5,380	5,747	7,405	4,675	921	1,125	1,125	1,125	2,807	4,254	6,680	7,180	6,060	3,512
1960	5,553	1,796	2,997	4,973	7,373	4,374	300	300	700	2,651	2,124	7,153	5,480	4,805	2,929
1961	1,337	3,355	4,112	3,430	4,904	3,175	2,734	700	300	300	1,445	6,352	6,524	4,650	2,489
1962	3,379	3,519	6,124	2,179	8,500	6,914	3,120	1,125	903	903	4,112	5,230	6,858	5,782	3,340
1963	6,680	6,680	5,141	7,295	7,768	6,920	5,697	700	700	5,687	2,886	3,841	7,180	6,209	4,041
1964	6,680	6,680	6,874	7,234	1,890	2,403	544	544	700	3,042	3,275	7,180	6,724	5,946	3,483
1965	3,985	5,097	5,513	8,500	8,500	4,234	5,640	1,500	1,500	2,912	3,366	4,589	7,180	6,680	3,814
1966	4,900	6,680	7,639	8,280	4,813	7,203	3,324	1,125	1,125	1,125	3,534	5,883	6,855	6,680	3,981
1967	4,423	6,198	7,202	7,752	7,735	4,920	5,697	700	700	5,687	6,680	7,180	7,180	7,180	4,393
1968	6,680	6,596	7,031	7,368	3,770	3,651	300	300	1,125	2,692	3,640	5,418	7,180	6,466	3,636
1969	4,269	4,432	7,033	8,500	8,500	7,561	1,500	1,500	1,500	5,640	6,262	4,745	6,680	7,180	4,235
1970	6,680	6,216	5,545	5,272	5,848	5,722	3,867	700	700	3,190	4,338	3,753	7,180	6,680	3,709
1971	5,467	6,680	7,121	7,465	1,623	7,228	4,824	1,125	1,125	1,125	6,019	5,273	7,180	7,180	3,963
1972	6,680	5,532	7,006	7,251	4,194	6,953	2,727	700	700	2,680	2,642	5,809	6,286	3,881	3,618
1973	3,166	6,680	6,952	5,554	8,500	7,561	4,200	1,500	1,500	4,521	5,266	5,820	6,680	6,661	4,135
1974	6,254	6,680	7,053	8,493	8,260	7,561	5,697	700	700	5,536	6,680	5,367	7,180	7,180	4,646
1975	6,680	6,680	7,031	6,754	8,500	3,132	5,571	1,500	1,500	5,640	6,680	3,601	6,680	7,180	4,213
1976	6,680	6,680	7,011	5,406	3,081	2,739	700	700	700	1,762	2,270	6,278	5,512	4,288	3,146
1977	3,272	3,229	2,643	1,718	1,063	1,158	700	700	700	700	1,426	4,854	1,639	1,526	1,452
1978	848	994	4,230	4,593	8,500	7,561	700	700	700	5,687	6,539	3,083	6,680	7,180	3,251
1979	6,537	2,418	1,605	8,338	6,313	7,561	1,500	1,500	1,500	4,187	4,482	5,100	6,680	6,231	3,602
1980	5,326	4,388	7,016	8,500	8,221	2,475	4,527	700	700	4,139	5,578	4,307	6,680	7,180	3,895
1981	6,680	2,571	4,514	7,388	3,808	7,273	3,349	1,125	1,125	1,125	2,850	5,901	6,503	6,095	3,452
1982	4,210	6,680	7,001	4,816	8,500	7,561	5,640	1,500	1,500	5,640	6,680	3,874	6,680	7,180	4,231
1983	6,680	6,680	7,362	2,645	2,694	2,570	5,303	700	700	700	4,126	7,180	6,926	6,598	3,459
1984	6,680	6,680	3,213	2,622	3,096	7,561	1,405	1,405	1,500	1,500	4,347	4,390	7,003	6,592	3,332
1985	5,388	6,680	7,039	6,384	3,519	3,084	2,849	700	700	2,917	3,819	7,180	6,700	6,680	3,637
1986	6,371	4,208	4,250	7,407	8,500	7,561	5,633	700	700	4,040	5,387	1,445	6,680	7,180	3,882
1987	6,680	2,549	2,541	5,411	4,176	4,151	3,034	700	436	436	3,222	7,180	6,590	5,170	3,023
1988	2,666	1,816	3,135	7,106	1,201	452	700	700	700	2,083	1,482	3,816	1,214	837	1,572
1989	723	2,878	2,377	3,318	762	5,150	4,118	700	700	2,856	4,027	7,180	6,680	5,305	2,588
1990	4,443	1,630	3,787	7,076	1,865	3,044	300	300	700	1,994	300	3,990	867	1,810	1,856
1991	1,235	386	1,710	1,246	1,290	5,243	700	700	700	700	300	4,123	946	1,337	1,169
1992	1,042	1,198	1,712	2,389	5,486	3,352	700	700	300	300	332	3,461	1,506	2,905	1,457
1993	1,190	980	3,966	4,812	8,443	7,417	5,640	1,125	1,125	5,639	6,680	7,180	6,749	6,680	3,662
1994	6,680	3,363	4,681	6,101	4,110	1,017	2,322	700	700	1,868	2,416	6,680	7,180	5,952	3,086
Avg	4,583	4,172	5,110	5,769	5,409	5,006	3,413	905	916	3,214	3,991	5,350	5,767	5,457	3,312
Min	723	300	300	1,246	762	300	300	300	300	300	300	1,445	300	837	1,169
Max	6,680	6,680	7,678	8,500	8,500	7,561	5,697	1,500	1,500	5,687	6,680	7,180	7,180	7	

Table I-24b. CALSIM Simulated SWP Banks Pumping, for 2020 Baseline Conditions (cfs)

Year	Pre-VAMP						VAMP	VAMP	Post-VAMP					taf/yr	
	Oct	Nov	Dec	Jan	Feb	Mar	4/1-4/15	4/16-4/30	5/1-5/15	5/16-5/31	Jun	Jul	Aug		Sep
1922	5,335	3,336	4,315	7,612	8,500	7,561	5,640	1,500	1,500	5,640	6,680	7,180	6,749	5,870	4,237
1923	6,680	5,653	5,425	8,070	3,867	3,776	5,697	700	700	4,186	5,181	6,685	6,889	6,161	3,878
1924	4,036	2,504	4,581	4,815	3,508	300	320	320	700	700	300	3,856	2,007	1,325	1,708
1925	1,935	2,377	3,940	3,150	5,651	300	5,357	1,125	1,125	3,619	3,038	2,450	4,842	3,983	2,237
1926	2,362	1,177	2,876	4,704	4,291	1,359	4,964	700	700	3,033	300	6,424	4,450	2,162	2,104
1927	2,630	6,680	4,263	7,269	8,216	7,283	5,640	1,500	1,500	5,499	5,724	4,400	7,180	5,040	3,958
1928	4,782	6,680	7,064	7,401	6,461	7,184	5,697	700	700	700	3,368	2,613	7,180	4,880	3,709
1929	3,017	3,982	4,125	4,509	3,516	1,648	989	700	300	300	1,210	4,123	2,486	1,422	1,882
1930	850	301	5,118	5,272	3,837	6,970	2,931	700	700	2,653	2,292	6,805	5,339	4,482	2,714
1931	1,037	1,188	2,599	4,297	2,354	1,043	300	300	700	700	2,318	2,726	4,381	1,522	1,480
1932	1,141	998	4,341	7,824	6,675	4,817	1,560	1,125	1,125	3,355	300	2,051	5,539	3,626	2,465
1933	2,792	2,666	5,499	2,068	5,243	2,438	1,399	700	700	1,950	300	2,496	302	1,475	1,660
1934	1,608	615	4,920	3,985	5,644	1,173	300	300	300	300	300	2,740	1,859	1,579	1,500
1935	1,783	2,979	2,999	4,277	4,280	7,254	5,640	1,500	324	324	5,969	7,180	7,058	4,884	3,172
1936	5,394	2,809	3,484	7,302	8,437	7,561	5,564	700	700	4,255	5,398	7,180	6,070	5,380	3,895
1937	3,078	2,412	3,277	6,209	8,500	7,561	5,640	1,500	1,500	5,179	5,046	5,808	6,594	5,380	3,658
1938	3,507	6,680	3,587	8,280	8,500	7,561	5,697	700	700	5,687	6,680	7,180	6,749	7,180	4,354
1939	6,680	5,434	7,068	5,503	3,104	2,827	3,004	1,125	925	925	3,021	7,180	6,487	5,468	3,379
1940	4,003	2,574	1,065	5,964	8,370	7,561	5,640	1,500	1,500	4,559	4,442	7,180	6,543	5,946	3,626
1941	6,042	4,183	7,194	8,311	8,500	7,561	5,697	700	700	5,687	1,986	7,180	6,749	7,180	4,305
1942	6,680	6,365	7,475	8,500	7,926	3,368	5,640	1,500	1,500	5,640	6,680	5,768	7,180	7,180	4,477
1943	6,680	6,680	7,275	8,500	4,050	7,561	5,697	700	700	700	5,098	3,561	7,180	6,678	4,064
1944	4,620	1,788	3,346	4,929	4,870	4,807	2,848	1,500	1,500	3,033	3,973	7,180	7,180	5,602	3,189
1945	4,300	6,680	4,262	4,783	8,500	6,238	3,829	700	700	3,804	5,368	6,811	6,099	5,339	3,782
1946	6,242	5,318	5,501	8,269	2,846	5,549	3,450	1,500	1,500	3,769	4,148	7,180	7,026	6,510	3,866
1947	5,084	4,234	5,255	2,736	4,063	3,900	3,068	700	700	892	3,717	7,180	7,180	5,140	3,093
1948	4,287	3,343	2,574	4,160	2,097	3,292	5,697	700	700	5,687	5,530	7,180	7,180	6,678	3,197
1949	4,111	1,971	3,991	4,012	2,956	5,269	3,241	700	700	3,219	4,534	6,391	3,928	4,083	2,738
1950	728	1,549	2,493	4,382	7,589	4,476	4,660	700	700	3,990	5,735	7,180	7,180	6,462	3,173
1951	5,252	6,680	5,705	8,500	8,500	6,936	3,668	700	700	4,556	4,852	5,740	6,749	6,200	4,214
1952	5,399	4,621	7,195	8,500	8,376	7,561	5,640	1,500	1,500	5,640	6,100	4,398	5,899	7,180	4,363
1953	6,680	5,728	7,157	8,500	2,942	7,184	4,159	1,125	1,125	5,512	6,680	3,964	7,180	7,180	4,196
1954	6,680	6,680	3,779	7,242	7,431	7,102	5,640	1,125	1,125	5,151	2,660	5,910	6,190	6,380	4,016
1955	6,131	5,080	6,975	7,296	1,778	2,192	1,596	700	700	2,992	3,133	5,237	1,161	3,361	2,755
1956	1,435	3,782	4,503	8,500	8,437	7,561	4,726	700	700	5,687	6,641	7,180	6,749	7,180	4,089
1957	6,680	4,618	3,257	4,625	7,490	7,344	4,466	1,125	1,125	1,125	3,980	4,342	7,033	6,153	3,577
1958	6,680	6,274	4,612	7,340	7,818	7,561	5,640	1,500	1,500	5,640	6,680	3,583	6,680	7,180	4,311
1959	6,680	5,505	5,536	7,405	5,686	950	2,541	1,125	1,125	2,859	3,980	6,680	7,180	6,052	3,592
1960	3,596	1,976	5,496	3,626	7,375	5,071	300	300	700	2,717	2,391	6,197	3,866	2,576	2,661
1961	1,145	3,192	6,002	3,649	5,298	4,450	2,676	700	300	300	1,804	6,935	6,446	4,956	2,766
1962	3,351	3,367	6,506	2,280	8,500	7,079	3,255	1,125	1,125	1,700	3,107	5,453	7,158	6,450	3,417
1963	6,680	6,680	5,141	7,296	7,768	7,123	5,697	700	700	5,687	3,837	4,813	7,180	5,857	4,149
1964	6,680	6,680	6,996	7,235	1,862	1,721	3,931	700	700	700	3,651	7,180	6,680	4,773	3,428
1965	3,771	5,354	5,415	8,500	8,500	4,282	5,640	1,500	1,500	2,537	3,297	4,622	7,180	6,527	3,790
1966	3,945	6,680	7,593	8,255	6,576	6,935	1,125	1,125	1,125	3,258	3,796	5,741	6,453	6,204	3,956
1967	4,712	6,357	4,326	7,753	7,733	7,536	5,697	700	700	5,687	6,680	7,180	7,180	7,180	4,404
1968	6,680	6,680	7,031	7,368	4,724	7,203	300	300	1,125	2,706	3,699	5,570	7,157	6,465	3,924
1969	3,633	4,043	7,034	4,816	8,500	7,561	5,640	1,500	1,500	5,640	6,074	4,246	6,680	7,170	4,027
1970	6,680	6,680	7,317	8,500	3,325	7,561	3,906	700	700	700	4,538	4,111	7,180	6,656	3,972
1971	5,658	6,680	7,121	7,465	1,994	7,060	4,989	1,125	1,125	1,125	5,343	6,680	7,180	7,180	4,037
1972	6,680	5,554	7,007	7,251	5,884	6,941	700	700	700	2,721	2,821	6,547	6,148	4,204	3,720
1973	3,083	6,680	6,953	7,481	8,385	7,561	4,350	1,500	1,500	4,416	5,256	4,102	6,680	6,680	4,138
1974	6,680	6,680	7,054	8,500	8,248	7,561	5,697	700	700	5,615	6,575	3,651	6,680	7,180	4,532
1975	6,680	6,680	7,032	7,010	8,471	6,925	5,640	1,500	1,500	5,640	6,463	3,966	6,680	7,180	4,472
1976	6,680	6,680	7,011	5,499	2,906	2,806	2,146	700	700	1,799	2,197	4,052	6,102	4,167	3,078
1977	3,065	2,974	1,957	1,824	1,095	1,182	410	410	700	700	1,425	1,781	3,743	1,532	1,315
1978	586	1,423	4,230	4,593	8,171	6,135	5,697	700	700	5,687	6,680	2,950	6,680	6,867	3,285
1979	4,553	3,035	6,314	7,945	6,314	7,561	4,438	1,500	1,500	4,197	3,752	4,691	6,656	6,499	3,816
1980	5,264	4,519	7,017	4,815	8,437	7,561	4,684	700	700	4,282	5,452	3,761	6,680	6,660	3,934
1981	6,642	1,455	5,092	7,388	4,478	4,394	3,501	1,125	1,125	2,553	2,888	7,180	6,738	6,550	3,452
1982	4,624	6,680	4,252	8,500	8,500	7,561	5,640	1,500	1,500	5,640	6,680	7,180	6,749	7,180	4,521
1983	6,680	6,680	7,678	3,921	3,610	3,555	5,697	700	700	700	3,877	7,180	7,180	5,537	3,618
1984	6,680	6,680	3,567	2,890	8,437	3,340	4,172	1,500	1,500	1,500	4,498	4,816	5,922	6,611	3,462
1985	6,680	6,680	7,040	6,354	3,567	2,823	700	700	700	2,984	3,723	7,180	6,832	6,677	3,642
1986	5,680	4,632	4,251	7,407	8,500	7,561	5,697	700	700	4,095	5,302	7,180	6,749	6,686	4,191
1987	6,566	1,502	3,453	4,577	4,232	3,783	300	300	579	579	4,646	7,180	7,063	5,131	2,966
1988	2,678	1,946	5,131	5,274	1,250	568	2,269	700	700	2,122	300	4,051	369	801	1,539
1989	608	2,790	3,562	3,291	778	5,149	4,171	700	700	2,847	3,832	7,180	6,680	5,028	2,621
1990	4,370	1,957	3,691	7,075	2,108	3,083	300	300	700	2,128	333	3,990	894	1,801	1,888
1991	1,242	857	1,726	1,358	1,059	5,242	700	700	700	700	1,225	2,776	463	1,070	1,119
1992	1,448	929	1,880	2,483	5,486	3,419	2,749	700	300	300	572	3,580	1,528	2,943	1,572
1993	655	1,587	6,713	4,812	8,430	7,427	5,640	1,125	1,125	5,639	6,680	7,180	6,749	5,652	3,773
1994	6,464	2,941	6,707	5,072	4,238	1,342	2,337	700	700	1,915	3,854	6,853	7,107	6,056	3,235
Avg	4,436	4,220	5,122	5,987	5,692	5,201	3,763	914	920	3,160	3,981	5,433	5,861	5,290	3,357
Min	586	301	1,065	1,358	778	300	300	300	300	300	300	1,781	302	801	1,119
Max	6,680	6,680	7,678	8,500	8,500	7,561	5,697	1,500	1						

Table I-24c. CALSIM Simulated SWP Banks Pumping, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	160	322	-1,002	0	0	0	0	0	0	0	0	3,502	69	-810	139
1923	0	633	-2,098	1,614	462	924	0	0	0	-29	77	1,400	1,409	-519	236
1924	164	187	972	1,573	82	0	20	20	94	94	-542	369	-421	-219	141
1925	203	48	236	-323	0	0	204	0	0	-72	-437	-129	-967	6	-79
1926	-685	254	166	-577	-3,028	-630	39	0	0	2,333	-2,059	10	-1,335	-1,225	-461
1927	-752	0	0	2,920	-2	-3	0	0	0	-101	-37	1,033	0	-1,638	94
1928	645	1	0	0	93	-377	0	0	0	0	-458	-1,596	203	29	-90
1929	-275	489	-137	262	34	52	289	0	0	0	-37	24	-5	266	48
1930	-127	1	0	0	-199	-2	137	0	0	64	141	-9	76	638	38
1931	-710	496	-74	202	210	193	0	0	0	0	47	-58	274	-136	25
1932	25	233	-1,046	3,268	1,854	276	683	248	0	52	0	-4,607	4,878	-242	304
1933	-1,920	212	9	-338	67	87	69	0	0	89	0	-506	2	238	-129
1934	-170	-117	448	92	51	52	0	0	0	0	0	75	-597	-259	-26
1935	11	230	-36	-304	169	-3	0	0	0	0	-103	139	778	103	59
1936	-167	-24	320	-1	0	0	64	0	0	50	-38	0	251	-419	0
1937	-878	28	381	197	0	0	0	0	0	132	1,611	-330	-200	111	57
1938	-1,471	0	-4,091	4,292	1,832	1,097	0	0	0	0	0	0	0	0	91
1939	0	-1,246	21	-366	88	-43	2,700	821	-200	-200	-340	0	-436	-294	-65
1940	57	-756	765	-3	-67	0	0	0	0	-23	200	0	794	793	109
1941	752	1,166	0	-131	0	452	0	0	0	0	-2,465	2,998	69	0	177
1942	0	510	-104	3,067	4,986	-4,193	0	0	0	0	0	2,179	500	0	396
1943	0	0	-65	0	913	0	0	0	0	-2,199	113	-383	0	-2	-40
1944	-1,037	11	108	199	-5	414	-56	0	0	56	-43	0	374	-415	-23
1945	118	92	-1	-1,992	0	-207	124	0	0	-47	621	320	-159	-1,291	-150
1946	341	-1,291	-202	18	2,015	-779	9	0	0	-31	-18	0	893	393	73
1947	1,409	460	-1,825	-304	43	397	15	0	0	-1,895	-16	0	437	113	-17
1948	-222	-332	-106	38	-9	85	0	0	0	0	-206	0	3	0	-45
1949	-1,121	-284	-1,040	986	41	-2	36	0	0	628	-48	-415	1,542	-15	0
1950	-509	90	-347	0	0	67	41	0	0	64	-63	0	0	-218	-57
1951	-177	0	0	0	779	3,247	-11	0	0	-93	2,104	-809	0	-276	288
1952	415	236	0	0	-61	0	4,140	0	0	0	-177	-1,685	-781	0	-3
1953	0	706	-6	4,767	-170	-7	154	0	0	130	0	135	0	0	342
1954	0	0	-3,200	-1	-2	1,842	0	0	0	0	-190	681	388	-250	-44
1955	620	525	1	0	104	-92	111	0	0	29	-1,068	-615	-1,404	271	-98
1956	-100	690	-1	0	0	0	161	0	0	0	-39	3,173	69	0	237
1957	0	-242	-1,505	-1,708	-62	690	-36	0	0	-2,972	985	-1,220	1,164	-527	-245
1958	0	-406	-581	-1	-3	0	0	0	0	0	0	-927	0	0	-117
1959	0	125	-211	0	1,011	29	1,416	0	0	52	-274	0	0	-8	79
1960	-1,957	180	2,499	-1,347	2	697	0	0	0	66	267	-956	-1,614	-2,229	-269
1961	-192	-163	1,890	219	394	1,275	-58	0	0	0	359	583	-78	306	277
1962	-28	-152	382	101	0	165	135	0	222	797	-1,005	223	300	668	77
1963	0	0	0	1	0	203	0	0	0	0	951	972	0	-352	108
1964	0	0	122	1	-28	-682	3,387	156	0	-2,342	376	0	-44	-1,173	-55
1965	-214	257	-98	0	0	48	0	0	0	-376	-69	33	0	-153	-24
1966	-955	0	-46	-25	1,763	-268	-2,199	0	0	2,133	262	-142	-402	-476	-26
1967	289	159	-2,876	1	-2	2,616	0	0	0	0	0	0	0	0	11
1968	0	84	0	0	954	3,552	0	0	0	14	59	152	-23	-1	288
1969	-636	-389	1	-3,684	0	0	4,140	0	0	0	-188	-499	0	-10	-208
1970	0	464	1,772	3,228	-2,523	1,839	39	0	0	-2,490	200	358	0	-24	263
1971	191	0	0	0	371	-168	165	0	0	0	-676	1,407	0	0	73
1972	0	22	1	0	1,690	-12	-2,027	0	0	41	179	738	-138	323	102
1973	-83	0	1	1,927	-115	0	150	0	0	-105	-10	-1,718	0	19	3
1974	426	0	1	7	-12	0	0	0	0	79	-105	-1,716	-500	0	-114
1975	0	0	1	256	-29	3,793	69	0	0	0	-217	365	0	0	259
1976	0	0	0	93	-175	67	1,446	0	0	37	-73	-2,226	590	-121	-68
1977	-207	-255	-686	106	32	24	-290	-290	0	0	-1	-3,073	2,104	6	-137
1978	-262	429	0	0	-329	-1,426	4,997	0	0	0	141	-133	0	-313	34
1979	-1,984	617	4,709	-393	1	0	2,938	0	0	10	-730	-409	-24	268	214
1980	-62	131	1	-3,685	216	5,086	156	0	0	143	-126	-546	0	-520	39
1981	-38	-1,116	578	0	670	-2,879	152	0	0	1,428	38	1,279	235	455	-1
1982	414	0	-2,749	3,684	0	0	0	0	0	0	0	3,306	69	0	291
1983	0	0	316	1,276	916	985	394	0	0	0	-249	0	254	-1,061	159
1984	0	0	354	268	5,341	-4,221	2,767	95	0	0	151	426	-1,081	19	130
1985	1,292	0	1	-30	48	-261	-2,149	0	0	68	-96	0	132	-3	5
1986	-691	424	1	0	0	0	64	0	0	54	-85	5,735	69	-494	309
1987	-114	-1,047	912	-834	56	-368	-2,734	-400	143	143	1,424	0	473	-39	-57
1988	12	130	1,996	-1,832	49	116	1,569	0	0	39	-1,182	235	-845	-36	-34
1989	-115	-88	1,185	-27	16	-1	54	0	0	-10	-195	0	0	-277	33
1990	-73	327	-96	-1	243	39	0	0	0	134	33	0	27	-9	32
1991	7	471	16	112	-231	-1	0	0	0	0	925	-1,347	-483	-267	-50
1992	406	-269	168	94	0	67	2,049	0	0	0	240	119	22	38	115
1993	-535	607	2,747	0	-13	10	0	0	0	0	0	0	0	-1,028	111
1994	-216	-422	2,026	-1,029	128	325	15	0	0	47	1,438	173	-73	104	150
Avg	-147	48	12	218	283	195	350	9	4	-54	-10	83	94	-167	45
Min	-1,984	-1,291	-4,091	-3,685	-3,028	-4,221	-2,734	-400	-200	-2,972	-2,465	-4,607	-1,614	-2,229	-461
Max	1,409	1,166	4,709	4,767	5,341	5,086	4,997	821	222	2,333	2,104	5,735	4,878	793	396

Table I-24d. CALSIM Simulated Monthly Cumulative Distribution of SWP Banks Pumping, for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Pre- VAMP 4/1- 4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post- VAMP 5/16- 5/31	Jun	Jul	Aug	Sep	taf/ year
A: 2001 Baseline															
Min	723	300	300	1,246	762	300	300	300	300	300	300	1,445	300	837	
10	1,257	1,035	2,674	3,029	1,870	1,246	575	575	700	700	1,283	3,466	2,394	1,816	
20	2,818	2,280	3,147	3,931	3,042	2,638	771	700	700	1,125	2,306	3,834	5,480	3,919	
30	3,793	2,678	4,054	4,571	3,504	3,194	1,500	700	700	1,944	2,951	4,158	5,849	4,957	
40	4,257	3,310	4,498	5,272	4,163	4,346	3,008	700	700	2,768	3,522	4,832	6,577	5,796	
50	4,984	4,208	5,193	5,967	5,176	5,260	3,679	700	700	2,976	4,112	5,418	6,680	6,209	
60	5,476	5,037	5,713	6,835	6,798	6,915	4,535	700	741	3,949	4,368	6,094	6,680	6,636	
70	6,437	6,591	7,003	7,299	7,748	7,240	5,529	1,125	1,125	4,545	5,314	6,667	6,767	6,680	
80	6,680	6,680	7,044	7,442	8,437	7,561	5,640	1,500	1,500	5,624	6,051	7,180	6,993	7,180	
90	6,680	6,680	7,195	8,483	8,500	7,561	5,697	1,500	1,500	5,640	6,680	7,180	7,180	7,180	
Max	6,680	6,680	7,678	8,500	8,500	7,561	5,697	1,500	1,500	5,687	6,680	7,180	7,180	7,180	
Avg	4,583	4,172	5,110	5,769	5,409	5,006	3,413	905	916	3,214	3,991	5,350	5,767	5,457	3,312
B: 2020 Baseline															
Min	586	301	1,065	1,358	778	300	300	300	300	300	300	1,781	302	801	
10	1,164	1,429	2,901	3,178	2,099	1,345	468	468	700	700	700	2,811	2,103	1,623	
20	2,469	1,963	3,564	4,207	3,192	2,825	1,574	700	700	777	2,302	3,899	5,041	4,023	
30	3,244	2,740	4,188	4,672	3,977	3,688	2,808	700	700	1,868	3,079	4,118	6,130	4,927	
40	4,029	3,307	4,338	5,043	4,675	4,741	3,491	700	700	2,695	3,722	4,789	6,644	5,380	
50	4,624	4,234	5,131	6,354	5,686	6,135	4,172	700	700	3,033	3,973	5,768	6,680	5,946	
60	5,395	5,370	5,508	7,296	7,443	7,064	4,969	785	745	3,841	4,560	6,680	6,749	6,394	
70	6,505	6,360	6,809	7,406	8,189	7,266	5,640	1,125	1,125	4,472	5,318	7,180	7,029	6,574	
80	6,680	6,680	7,032	8,020	8,437	7,561	5,640	1,500	1,500	5,630	5,875	7,180	7,180	6,684	
90	6,680	6,680	7,150	8,500	8,500	7,561	5,697	1,500	1,500	5,640	6,680	7,180	7,180	7,180	
Max	6,680	6,680	7,678	8,500	8,500	7,561	5,697	1,500	1,500	5,687	6,680	7,180	7,180	7,180	
Avg	4,436	4,220	5,122	5,987	5,692	5,201	3,763	914	920	3,160	3,981	5,433	5,861	5,290	3,357
Comparison: B - A															
Min	-137	1	765	112	16	0	0	0	0	0	0	336	2	-36	
10	-93	395	226	149	229	100	-107	-107	0	0	-583	-655	-292	-192	
20	-349	-317	417	276	150	187	803	0	0	-348	-4	65	-439	104	
30	-549	63	134	101	473	493	1,308	0	0	-76	128	-40	281	-29	
40	-228	-3	-160	-229	512	395	484	0	0	-72	200	-44	67	-416	
50	-360	26	-62	387	510	875	494	0	0	56	-139	350	0	-263	
60	-81	333	-205	461	645	149	434	85	4	-108	192	586	69	-242	
70	67	-231	-194	107	441	26	111	0	0	-74	4	513	262	-106	
80	0	0	-12	578	0	0	0	0	0	6	-175	0	187	-496	
90	0	0	-45	17	0	0	0	0	0	0	0	0	0	0	
Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Avg	-147	47	12	218	283	194	350	9	4	-54	-10	83	94	-167	45

Table I-25a. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, for 2001 Baseline Conditions (cfs)

Year	Pre-VAMP						VAMP	VAMP	Post-VAMP				Jun	Jul	Aug	Sep	taf/yr
	Oct	Nov	Dec	Jan	Feb	Mar	4/1-4/15	4/30	5/15	5/16-5/31							
1922	9,566	7,279	9,544	11,844	12,754	11,244	9,609	3,000	3,000	7,140	9,680	8,278	11,233	11,161	6,869		
1923	11,046	9,277	10,528	9,465	6,810	5,704	10,241	1,500	1,500	5,015	7,339	9,847	10,003	11,145	6,065		
1924	8,207	5,275	6,498	7,467	6,852	1,100	1,100	1,100	1,406	1,406	1,642	4,574	3,930	4,065	3,141		
1925	4,317	3,468	7,408	6,946	9,869	1,100	9,754	2,250	2,250	6,691	5,462	5,770	10,118	8,366	4,407		
1926	7,074	3,941	3,510	9,501	11,553	3,978	9,469	1,500	1,500	1,500	3,159	7,214	6,653	7,098	4,238		
1927	6,482	10,897	7,255	7,344	12,442	10,639	10,240	3,000	3,000	7,100	8,681	7,955	11,723	11,153	6,390		
1928	8,492	10,933	11,287	11,629	10,613	11,840	10,241	1,500	1,500	1,500	5,635	8,782	11,508	9,320	6,480		
1929	6,860	7,713	8,484	8,473	6,964	2,396	1,500	1,500	1,100	1,100	2,744	5,882	5,852	4,581	3,773		
1930	4,008	2,071	9,329	9,485	7,435	10,205	5,473	1,500	1,500	5,084	3,476	8,236	7,136	8,192	4,621		
1931	5,238	3,574	3,755	8,190	4,288	2,090	1,100	1,100	1,500	1,500	3,691	3,584	5,170	4,009	2,791		
1932	3,666	2,135	9,596	7,547	8,453	6,068	3,489	2,002	2,250	4,428	2,312	9,229	4,428	8,149	4,083		
1933	6,835	3,617	6,233	3,097	6,170	3,598	2,130	1,500	1,500	3,432	1,100	3,802	1,282	4,149	2,660		
1934	4,577	1,532	8,681	5,690	6,234	1,984	1,100	1,100	1,100	1,100	1,100	3,465	4,577	4,030	2,658		
1935	3,388	6,815	6,070	7,574	5,142	9,433	8,046	3,000	1,124	1,124	8,629	9,158	10,749	9,151	4,999		
1936	8,870	5,264	4,568	10,302	10,514	9,704	6,300	1,500	1,500	5,005	7,781	10,925	10,303	10,203	5,766		
1937	8,252	5,831	5,132	9,013	12,735	11,201	6,985	2,845	3,000	6,548	5,946	9,302	11,257	9,628	5,902		
1938	9,253	10,903	8,470	4,788	7,468	8,130	6,497	1,500	1,500	6,487	9,680	11,780	11,325	11,673	6,129		
1939	11,069	10,944	11,274	10,101	6,032	5,740	1,429	1,429	2,250	2,250	5,871	10,250	9,911	9,628	5,721		
1940	6,223	5,714	651	10,188	12,672	11,813	10,240	3,000	3,000	7,582	7,242	11,716	10,253	9,601	5,898		
1941	9,605	7,216	11,413	12,665	12,739	10,794	10,241	1,500	1,500	6,487	7,451	8,755	11,211	11,649	6,837		
1942	11,023	10,105	11,801	8,600	4,993	10,333	10,240	3,000	3,000	7,140	9,680	8,189	11,238	11,663	6,622		
1943	11,050	10,939	11,565	12,729	6,274	11,425	10,241	1,500	1,500	3,699	7,180	8,544	11,732	11,160	6,726		
1944	10,021	5,681	7,462	8,959	8,818	8,665	4,404	3,000	3,000	4,476	6,355	11,707	11,298	10,448	5,854		
1945	6,802	10,827	7,262	10,997	12,737	10,723	7,294	1,500	1,500	6,803	7,604	11,075	10,797	11,103	6,534		
1946	10,252	10,862	9,926	12,478	4,935	9,046	6,883	3,000	3,000	6,799	7,166	11,754	10,665	10,587	6,520		
1947	7,936	8,024	11,302	6,080	8,040	7,006	5,991	1,500	1,500	3,587	5,511	11,718	11,248	9,477	5,598		
1948	7,434	6,740	5,360	8,244	6,344	6,414	10,241	1,500	1,500	8,640	8,736	11,745	11,702	11,144	5,736		
1949	9,569	6,503	9,252	6,052	5,830	9,512	6,296	1,500	1,500	3,391	6,643	11,346	6,893	8,552	5,236		
1950	4,860	4,577	5,492	7,386	11,513	8,377	5,419	1,500	1,500	4,726	8,264	11,668	11,647	11,046	5,502		
1951	8,678	10,910	9,920	12,719	11,603	6,333	7,243	1,500	1,500	5,449	5,748	11,117	11,277	10,943	6,458		
1952	9,324	8,235	10,197	11,506	12,679	11,853	3,000	3,000	3,000	7,140	9,277	10,683	11,258	11,674	6,923		
1953	11,071	9,287	11,390	7,466	6,791	8,432	8,010	2,250	2,250	8,382	9,680	8,429	11,733	11,661	6,438		
1954	11,045	10,937	11,203	11,472	11,682	9,533	10,240	2,250	2,250	8,152	5,700	9,819	10,347	11,106	6,898		
1955	9,868	8,809	11,198	11,524	4,666	4,568	4,213	1,500	1,500	3,763	6,135	10,385	7,066	7,370	5,280		
1956	4,684	6,504	7,503	11,503	12,674	11,847	9,017	1,500	1,500	8,640	9,680	8,607	11,236	11,662	6,399		
1957	11,048	9,118	8,987	10,562	11,275	9,317	9,004	2,250	2,250	7,098	5,706	10,162	10,424	11,162	6,521		
1958	11,048	10,938	9,418	10,350	12,070	11,850	10,240	3,000	3,000	7,140	9,680	9,110	11,249	11,669	7,178		
1959	11,061	9,642	9,973	11,636	8,927	2,786	2,250	2,250	2,250	5,614	7,254	11,254	11,712	10,530	6,101		
1960	9,245	3,625	4,190	7,980	11,312	8,599	1,100	1,100	1,500	3,451	3,802	11,600	9,890	9,102	5,000		
1961	4,494	7,096	8,224	6,860	9,129	5,481	5,353	1,500	1,100	2,636	3,484	10,929	11,059	8,778	4,873		
1962	6,774	7,770	10,346	5,252	12,745	11,190	6,240	2,250	2,028	3,904	6,878	9,804	11,390	10,252	5,995		
1963	11,024	10,930	9,363	11,521	12,013	10,342	10,241	1,500	1,500	6,487	5,886	8,422	11,717	10,681	6,741		
1964	11,029	10,932	11,097	11,461	4,355	4,806	1,344	1,344	1,500	5,991	5,642	11,551	10,974	10,364	5,907		
1965	6,440	9,334	9,731	12,722	12,736	8,512	10,240	3,000	3,000	5,912	6,366	9,189	11,742	11,165	6,565		
1966	9,274	10,940	11,864	12,510	9,064	11,476	6,647	2,250	2,250	2,250	6,534	10,457	11,387	11,150	6,729		
1967	8,158	10,448	10,204	10,759	11,980	8,956	6,497	1,500	1,500	6,487	9,680	11,765	11,720	11,654	6,832		
1968	11,032	10,849	11,254	11,595	7,540	7,302	1,425	1,425	2,250	5,385	6,640	10,004	11,721	10,940	6,303		
1969	8,622	8,685	10,036	11,508	12,747	11,869	3,000	3,000	3,000	7,140	9,262	9,345	11,258	11,674	6,818		
1970	11,071	10,481	9,477	7,193	8,100	8,344	7,620	1,500	1,500	3,990	6,317	8,323	11,709	11,148	6,007		
1971	9,808	10,929	11,343	11,691	5,867	11,508	9,424	2,250	2,250	2,250	9,019	9,867	11,727	11,658	6,749		
1972	11,039	9,787	11,230	11,479	8,388	11,228	5,340	1,500	1,500	5,267	5,642	10,370	10,808	8,345	6,365		
1973	7,325	10,927	11,173	9,779	12,743	11,697	8,400	3,000	3,000	6,021	8,021	10,407	11,222	11,136	6,907		
1974	10,608	10,933	11,276	11,501	12,507	11,854	10,241	1,500	1,500	6,336	9,532	9,957	11,724	11,656	7,318		
1975	11,036	10,934	11,254	10,982	12,747	6,264	10,171	3,000	3,000	7,140	9,680	8,189	11,223	11,655	6,962		
1976	11,035	10,934	11,234	9,634	6,162	4,602	1,500	1,500	1,500	2,562	3,781	8,296	8,264	7,863	5,165		
1977	5,860	4,957	3,443	2,518	1,863	1,958	1,500	1,500	1,500	1,500	2,902	8,068	4,627	4,336	2,639		
1978	3,900	2,245	7,219	7,584	12,718	11,866	1,500	1,500	1,500	6,487	9,481	7,683	11,237	11,663	5,482		
1979	10,906	6,676	5,498	12,567	10,563	11,816	3,000	3,000	3,000	7,187	7,482	9,690	11,224	10,707	6,358		
1980	9,682	8,642	11,240	12,728	12,467	4,221	8,681	1,500	1,500	4,939	7,971	8,907	11,237	11,663	6,448		
1981	11,049	6,798	8,739	11,617	6,731	9,897	6,699	2,250	2,250	2,250	5,700	10,496	11,051	10,573	6,017		
1982	8,124	10,935	10,005	7,824	12,748	11,847	10,240	3,000	3,000	7,140	9,680	8,474	11,247	11,668	6,877		
1983	11,059	10,941	10,574	5,656	4,730	4,240	6,103	1,500	1,500	1,500	7,126	11,780	11,504	11,092	5,688		
1984	11,071	10,945	6,426	5,244	6,192	11,853	2,905	2,905	3,000	3,000	6,887	8,988	11,553	11,071	5,813		
1985	9,750	10,936	11,263	10,613	7,038	6,168	3,649	1,500	1,500	3,717	5,625	11,705	11,195	11,108	6,087		
1986	10,335	8,446	7,249	11,629	12,737	11,835	10,059	1,500	1,500	4,840	7,716	4,745	11,213	11,650	6,411		
1987	11,025	6,800	6,763	9,638	8,352	6,950	5,953	1,500	1,236	2,203	4,868	8,767	8,306	8,453	5,154		
1988	5,333	4,712	6,270	11,324	4,078	1,252	1,500	1,500	1,500	4,073	3,631	5,784	4,932	5,112	3,437		
1989	2,986	5,175	4,754	6,203	1,562	9,367	8,121	1,500	1,500	3,656	5,761	10,756	10,444	9,669	4,498		
1990	8,450	3,495	6,801	10,075	5,781	5,368	1,100	1,100	1,500	2,794	1,207	4,847	2,915	4,341	3,423		
1991	4,147	1,186	3,536	2,799	2,679	9,473	1,500	1,500	1,500	1,500	1,520	4,970	3,537	5,606	2,576		
1992	3,891	2,251	3,539	4,778	9,708	6,704	1,500	1,500	1,100	1,100	1,132	4,261	3,621	4,315	2,802		
1993	4,188	1,780	7,932	7,812	12,675	11,690	10,240	2,250	2,250	6,7							

Table I-25b. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre- VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post- VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	9,726	7,601	7,322	11,844	12,754	11,848	10,240	3,000	3,000	7,140	9,680	11,773	11,296	10,347	6,987
1923	11,039	9,908	9,649	10,844	7,156	6,378	10,241	1,500	1,500	4,986	7,441	11,253	11,416	10,628	6,341
1924	8,375	5,417	6,093	9,041	7,016	1,100	1,120	1,120	1,500	1,500	1,100	5,100	3,802	4,192	3,247
1925	4,607	3,710	7,880	6,141	9,869	1,100	9,957	2,250	2,250	4,744	5,046	5,626	7,266	8,346	4,153
1926	6,149	4,036	5,955	8,923	8,522	4,799	5,764	1,500	1,500	5,972	1,559	7,281	5,618	5,489	3,965
1927	5,714	10,899	7,255	10,264	12,441	11,487	10,240	3,000	3,000	6,999	8,632	8,988	11,723	9,515	6,535
1928	9,137	10,934	11,287	11,629	10,706	11,458	10,241	1,500	1,500	1,500	5,135	7,166	11,696	9,341	6,385
1929	6,560	7,852	8,346	8,734	7,032	2,448	1,789	1,500	1,100	1,100	2,670	5,960	6,109	4,442	3,794
1930	3,912	2,366	9,329	9,486	7,573	10,019	5,747	1,500	1,500	5,212	3,476	8,323	7,684	8,821	4,718
1931	4,533	4,507	3,581	8,514	4,708	2,433	1,100	1,100	1,500	1,500	3,497	3,526	5,442	3,856	2,849
1932	3,263	2,933	7,330	12,035	9,034	6,378	4,273	2,250	2,250	4,480	2,372	5,221	9,278	7,915	4,368
1933	5,808	3,847	6,266	2,796	6,283	3,685	2,199	1,500	1,500	3,806	1,100	3,296	1,200	4,005	2,575
1934	4,645	1,517	9,129	5,805	6,285	2,339	1,100	1,100	1,100	1,100	1,100	3,540	4,516	3,935	2,716
1935	3,450	6,999	6,998	6,460	5,337	8,775	8,244	3,000	1,124	1,124	8,492	9,740	11,524	9,248	5,060
1936	7,754	5,022	5,085	10,301	11,031	9,625	6,364	1,500	1,500	5,055	7,731	10,441	10,546	9,766	5,698
1937	7,249	6,063	4,630	9,209	12,733	9,626	7,140	3,000	3,000	6,679	7,728	9,533	11,044	9,710	5,864
1938	7,769	9,788	4,310	8,995	9,298	9,227	6,497	1,500	1,500	6,487	9,680	11,780	11,327	11,674	6,143
1939	11,070	9,699	11,295	9,735	6,208	5,654	6,009	2,250	2,050	2,050	5,574	10,027	9,173	9,318	5,683
1940	5,667	4,789	1,865	10,184	12,602	11,813	10,240	3,000	3,000	7,559	7,442	11,715	11,046	10,392	5,986
1941	10,357	8,110	11,413	12,534	12,739	11,276	10,241	1,500	1,500	8,640	4,986	11,780	11,301	11,660	7,072
1942	11,044	10,622	11,699	12,729	12,175	6,381	10,240	3,000	3,000	7,140	9,680	10,368	11,738	11,663	7,223
1943	11,050	10,939	11,500	12,729	8,100	11,869	10,241	1,500	1,500	1,500	7,331	8,161	11,732	11,158	6,766
1944	8,984	6,045	7,570	9,158	8,813	8,787	4,348	3,000	3,000	4,533	6,297	10,614	10,892	9,982	5,715
1945	6,478	10,912	7,258	7,783	12,733	10,511	7,543	1,500	1,500	4,604	7,691	11,359	10,611	9,798	6,179
1946	10,566	9,562	9,721	12,493	5,188	8,560	6,900	3,000	3,000	6,768	7,148	11,758	11,561	10,981	6,512
1947	9,431	8,485	9,478	6,963	8,126	8,020	6,021	1,500	1,500	1,692	5,553	11,072	10,800	9,546	5,607
1948	6,814	6,663	5,091	8,320	6,331	6,584	10,241	1,500	1,500	8,640	8,530	11,744	11,704	11,144	5,679
1949	8,173	5,560	7,982	8,238	5,912	9,509	6,369	1,500	1,500	4,019	6,579	10,934	8,436	8,540	5,242
1950	4,351	5,175	5,211	7,386	11,514	8,439	5,460	1,500	1,500	4,790	8,180	11,648	11,631	10,794	5,474
1951	8,406	10,905	9,919	11,913	9,917	9,580	7,221	1,500	1,500	5,356	7,003	10,308	11,276	10,667	6,502
1952	9,738	8,773	11,417	11,506	12,618	11,862	10,240	3,000	3,000	7,140	9,100	8,998	10,477	11,674	7,106
1953	11,071	9,993	11,384	12,732	5,952	8,378	8,319	2,250	2,250	8,512	9,680	8,550	11,722	11,655	6,773
1954	11,034	10,933	7,558	11,470	11,678	11,376	10,240	2,250	2,250	8,152	5,660	10,493	10,729	10,853	6,834
1955	10,282	9,333	11,198	11,523	4,894	4,384	4,363	1,500	1,500	5,890	6,133	7,686	5,044	7,682	5,138
1956	4,269	7,083	7,500	11,500	12,669	11,851	9,270	1,500	1,500	8,640	9,641	11,780	11,305	11,662	6,613
1957	11,048	8,876	7,482	8,854	11,740	11,398	8,931	2,250	2,250	2,250	6,980	8,928	11,574	10,627	6,346
1958	11,033	10,527	8,835	10,348	12,065	11,845	10,240	3,000	3,000	7,140	9,680	8,183	11,243	11,666	7,059
1959	11,056	9,765	9,761	11,635	9,937	3,617	5,083	2,250	2,250	5,718	6,980	11,270	11,724	10,528	6,275
1960	7,775	3,199	6,525	6,634	11,316	9,023	1,100	1,100	1,500	3,517	4,062	10,620	8,236	5,793	4,630
1961	4,331	7,409	10,087	7,298	9,522	7,319	5,237	1,500	1,100	1,100	3,496	11,496	10,969	8,913	5,144
1962	6,554	5,891	10,727	5,743	12,743	11,356	6,510	2,250	2,250	4,701	6,107	10,031	11,693	10,921	6,000
1963	11,027	10,931	9,364	11,523	12,013	11,403	10,241	1,500	1,500	8,640	6,837	9,409	11,729	10,336	6,973
1964	11,041	10,936	11,220	11,463	4,747	4,045	7,749	1,500	1,500	1,500	5,192	9,435	10,970	9,142	5,713
1965	5,828	9,584	9,631	12,719	12,732	8,005	10,240	3,000	3,000	5,536	6,297	9,222	11,742	11,013	6,482
1966	8,320	10,940	11,818	12,485	10,827	11,206	2,250	2,250	2,250	6,259	6,491	10,298	10,972	10,667	6,677
1967	7,735	10,603	7,327	10,758	11,660	11,572	6,497	1,500	1,500	6,487	9,680	11,766	11,721	11,654	6,781
1968	11,033	10,933	11,254	11,595	8,969	10,751	1,425	1,425	2,250	5,412	6,699	10,163	11,703	10,942	6,612
1969	7,189	8,298	10,038	7,824	12,748	11,866	7,140	3,000	3,000	7,140	9,074	8,846	11,255	11,662	6,561
1970	11,068	10,944	11,544	12,731	6,650	11,844	7,697	1,500	1,500	1,500	6,584	8,681	11,709	11,124	6,597
1971	9,999	10,929	11,343	11,691	6,238	11,340	9,589	2,250	2,250	2,250	8,343	11,274	11,727	11,658	6,822
1972	11,039	9,809	11,231	11,479	10,130	11,215	1,500	1,500	1,500	5,348	5,821	11,105	10,668	8,667	6,417
1973	7,342	10,927	11,174	10,486	12,627	11,847	8,700	3,000	3,000	5,916	8,008	8,690	11,222	11,155	6,855
1974	11,034	10,934	11,277	11,508	12,495	11,850	10,241	1,500	1,500	6,415	9,300	8,241	11,224	11,656	7,196
1975	11,036	10,934	11,255	11,238	12,718	10,349	10,240	3,000	3,000	7,140	9,463	8,554	11,223	11,655	7,239
1976	11,035	10,934	11,234	9,727	4,867	5,028	2,946	1,500	1,500	2,599	3,671	5,407	9,555	8,095	5,078
1977	5,519	4,770	2,757	2,707	1,895	1,982	1,210	1,210	1,500	1,500	2,900	4,670	6,350	4,335	2,459
1978	3,621	2,809	7,219	7,585	12,075	8,692	6,497	1,500	1,500	6,487	9,611	7,524	11,212	11,337	5,394
1979	8,897	6,889	9,069	12,171	10,559	10,490	8,876	3,000	3,000	7,197	6,752	9,277	11,197	10,973	6,481
1980	9,617	8,772	11,240	7,823	12,682	11,859	9,227	1,500	1,500	5,082	7,803	8,361	11,237	11,143	6,578
1981	11,011	5,130	9,317	11,617	8,728	7,442	7,003	2,250	2,250	5,106	5,776	11,762	11,276	11,023	6,134
1982	8,581	10,932	7,255	11,507	12,746	11,849	10,240	3,000	3,000	7,140	9,680	11,780	11,301	11,660	7,169
1983	11,044	10,937	10,682	4,862	5,249	5,225	6,497	1,500	1,500	1,500	6,877	11,780	11,758	10,031	5,683
1984	11,071	10,945	7,134	5,780	12,689	6,680	8,344	3,000	3,000	3,000	6,997	9,403	10,464	11,086	6,063
1985	11,034	10,933	11,263	10,582	7,134	5,646	1,500	1,500	1,500	3,784	5,497	11,713	11,333	11,119	6,077
1986	9,359	7,310	7,250	10,410	12,738	11,825	10,241	1,500	1,500	4,895	7,603	11,000	11,256	11,142	6,566
1987	10,885	5,744	7,673	8,801	7,642	5,540	1,597	1,100	1,379	2,199	6,155	8,585	8,541	8,447	4,903
1988	5,079	4,995	9,345	9,491	3,841	1,368	4,423	1,500	1,500	4,151	2,334	6,028	3,946	4,881	3,461
1989	3,515	4,937	5,787	6,286	1,578	9,366	8,229	1,500	1,500	3,647	5,642	10,697	10,142	9,377	4,542
1990	8,375	4,190	6,718	10,073	6,023	5,450	1,100	1,100	1,500	2,928	1,133	4,797	3,348	4,318	3,495
1991	4,163	1,657	3,577	2,981	2,481	9,473	1,500	1,500	1,500	1,500	2,500	4,065	2,049	5,319	2,501
1992	4,389	1,757	3,824	4,966	9,708	6,838	5,383	1,500	1,100	1,100	1,372	4,380	5,217	4,141	3,066
1993	3,702	2,915	9,709	7,812	12,662	11,692	10,240	2,250	2,250	6,764	9,680	11,732	11,264	10,113	6,147
1994	10,791	6,669	10,927	9,296	6,956										

Table I-25c. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Baseline minus 2001 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1–4/15	VAMP 4/16– 4/30	VAMP 5/1– 5/15	Post-VAMP 5/16–5/31	Jun	Jul	Aug	Sep	taf/yr
1922	160	322	-2,222	0	0	604	631	0	0	0	0	3,495	63	-814	119
1923	-7	631	-879	1,379	346	674	0	0	0	-29	102	1,406	1,413	-517	276
1924	168	142	-405	1,574	164	0	20	20	94	-542	526	-128	127	107	
1925	290	242	472	-805	0	0	204	0	0	-1,947	-416	-144	-2,852	-20	-254
1926	-925	95	2,445	-578	-3,031	821	-3,705	0	0	4,472	-1,600	67	-1,035	-1,609	-273
1927	-768	2	0	2,920	-1	848	0	0	0	-101	-49	1,033	0	-1,638	145
1928	645	1	0	0	93	-382	0	0	0	0	-500	-1,616	188	21	-95
1929	-300	139	-138	261	68	52	289	0	0	0	-74	78	257	-139	21
1930	-96	295	0	1	138	-186	274	0	0	128	0	87	548	629	97
1931	-705	933	-174	324	420	343	0	0	0	0	-194	-58	272	-153	58
1932	-403	798	-2,266	4,488	581	310	784	248	0	52	60	-4,008	4,850	-234	285
1933	-1,027	230	33	-301	113	87	69	0	0	374	0	-506	-82	-144	-85
1934	68	-15	448	115	51	355	0	0	0	0	0	75	-61	-95	58
1935	62	184	928	-1,114	195	-658	197	0	0	0	-137	582	775	97	61
1936	-1,116	-242	517	-1	517	-79	64	0	0	50	-50	-484	243	-437	-68
1937	-1,003	232	-502	196	-2	-1,575	155	155	0	132	1,782	231	-213	82	-38
1938	-1,484	-1,115	-4,160	4,207	1,830	1,097	0	0	0	0	0	0	2	1	15
1939	1	-1,245	21	-366	176	-86	4,580	821	-200	-200	-297	-223	-738	-310	-38
1940	-556	-925	1,214	-4	-70	0	0	0	0	-23	200	-1	793	791	88
1941	752	894	0	-131	0	482	0	0	0	2,153	-2,465	3,025	90	11	235
1942	21	517	-102	4,129	7,182	-3,952	0	0	0	0	0	2,179	500	0	600
1943	0	0	-65	0	1,826	444	0	0	0	-2,199	151	-383	0	-2	40
1944	-1,037	364	108	199	-5	122	-56	0	0	56	-58	-1,093	-406	-466	-139
1945	-324	85	-4	-3,214	-4	-212	249	0	0	-2,199	87	284	-186	-1,305	-355
1946	314	-1,300	-205	15	253	-486	17	0	0	-31	-18	4	896	394	-8
1947	1,495	461	-1,824	883	86	1,014	30	0	0	-1,895	42	-646	-448	69	9
1948	-620	-77	-269	76	-13	170	0	0	0	0	-206	-1	2	0	-57
1949	-1,396	-943	-1,270	2,186	82	-3	73	0	0	628	-64	-412	1,543	-12	6
1950	-509	598	-281	0	1	62	41	0	0	64	-84	-20	-16	-252	-28
1951	-272	-5	-1	-806	-1,686	3,247	-21	0	0	-93	1,255	-809	-1	-276	44
1952	414	538	1,220	0	-61	9	7,240	0	0	0	-177	-1,685	-781	0	183
1953	0	706	-6	5,266	-839	-54	309	0	0	130	0	121	-11	-6	335
1954	-11	-4	-3,645	-2	-4	1,843	0	0	0	0	-40	674	382	-253	-65
1955	414	524	0	-1	228	-184	150	0	0	2,127	-2	-2,699	-2,022	312	-142
1956	-415	579	-3	-3	-5	4	253	0	0	0	-39	3,173	69	0	213
1957	0	-242	-1,505	-1,708	465	2,081	-73	0	0	-4,848	1,274	-1,234	1,150	-535	-175
1958	-15	-411	-583	-2	-5	-5	0	0	0	0	0	-927	-6	-3	-120
1959	-5	123	-212	-1	1,010	831	2,833	0	0	105	-274	16	12	-2	174
1960	-1,470	-426	2,335	-1,346	4	424	0	0	0	66	260	-980	-1,654	-3,309	-370
1961	-163	313	1,863	438	393	1,838	-116	0	0	-1,536	12	567	-90	135	271
1962	-220	-1,879	381	491	-2	166	270	0	222	797	-771	227	303	669	5
1963	3	1	1	2	0	1,061	0	0	0	2,153	951	987	12	-345	232
1964	12	4	123	2	392	-761	6,405	156	0	-4,491	-450	-2,116	-4	-1,222	-194
1965	-612	250	-100	-3	-4	-507	0	0	0	-376	-69	33	0	-152	-84
1966	-954	0	-46	-25	1,763	-270	-4,397	0	0	4,009	-43	-159	-415	-483	-52
1967	-423	155	-2,877	-1	-320	2,616	0	0	0	0	0	1	1	0	-51
1968	1	84	0	0	1,429	3,449	0	0	0	27	59	159	-18	2	310
1969	-1,433	-387	2	-3,684	1	-3	4,140	0	0	0	-188	-499	-3	-12	-257
1970	-3	463	2,067	5,538	-1,450	3,500	77	0	0	-2,490	267	358	0	-24	590
1971	191	0	0	0	371	-168	165	0	0	0	-676	1,407	0	0	73
1972	0	22	1	0	1,742	-13	-3,840	0	0	81	179	735	-140	322	52
1973	17	0	1	707	-116	150	300	0	0	-105	-13	-1,717	0	19	-52
1974	426	1	1	7	-12	-4	0	0	0	79	-232	-1,716	-500	0	-122
1975	0	0	1	256	-29	4,085	69	0	0	0	-217	365	0	0	277
1976	0	0	0	93	-1,295	426	1,446	0	0	37	-110	-2,889	1,291	232	-87
1977	-341	-187	-686	189	32	24	-290	-290	0	0	-2	-3,398	1,723	-1	-180
1978	-279	564	0	1	-643	-3,174	4,997	0	0	0	130	-159	-25	-326	-89
1979	-2,009	213	3,571	-396	-4	-1,326	5,876	0	0	10	-730	-413	-27	266	123
1980	-65	130	0	-4,905	215	7,638	546	0	0	143	-168	-546	0	-520	130
1981	-38	-1,668	578	0	1,997	-2,455	304	0	0	2,856	76	1,266	225	450	117
1982	457	-3	-2,750	3,683	-2	2	0	0	0	0	0	3,306	54	-8	292
1983	-15	-4	108	-794	519	985	394	0	0	0	-249	0	254	-1,061	-5
1984	0	0	708	536	6,497	-5,173	5,439	95	0	0	110	415	-1,089	15	250
1985	1,284	-3	0	-31	96	-522	-2,149	0	0	68	-128	8	138	11	-10
1986	-976	-1,136	1	-1,219	1	-10	182	0	0	54	-113	6,255	43	-508	154
1987	-140	-1,056	910	-837	-710	-1,410	-4,356	-400	143	-4	1,287	-182	235	-6	-251
1988	-254	283	3,075	-1,833	-237	116	2,923	0	0	78	-1,297	244	-986	-231	24
1989	529	-238	1,033	83	16	-1	107	0	0	-10	-119	-59	-302	-292	44
1990	-75	695	-83	-2	242	82	0	0	0	134	-74	-50	433	-23	72
1991	16	471	41	182	-198	0	0	0	0	0	980	-905	-1,488	-287	-74
1992	498	-494	285	188	0	134	3,883	0	0	0	240	119	1,596	-174	264
1993	-486	1,135	1,777	0	-13	2	0	0	0	0	0	-9	-7	-1,031	84
1994	-223	-941	2,025	-1,030	471	325	30	0	0	93	-178	173	-81	79	41
Avg	-205	-7	14	212	291	258	507	11	4	-18	-49	13	62	-199	38
Min	-2,009	-1,879	-4,160	-4,905	-3,031	-5,173	-4,397	-400	-200	-4,848	-2,465	-4,008	-2,852	-3,309	-370
Max	1,495	1,135	3,571	5,538	7,182	7,638	7,240	821	222	4,472	1,782	6,255	4,850	791	600

Table I-25d. CALSIM Simulated Monthly Cumulative Distribution of Combined CVP Tracy and SWP Banks Pumping, for 2001 and 2020 Baselines (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1- 4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16- 5/31	Jun	Jul	Aug	Sep	taf/ year
A: 2001 Baseline															
Min	2,986	1,186	651	2,518	1,562	1,100	1,100	1,100	1,100	1,100	1,100	3,465	1,282	4,009	
10	4,214	3,473	4,605	5,663	4,771	2,947	1,443	1,443	1,500	1,500	2,776	5,130	4,688	4,687	
20	5,544	4,810	6,248	7,253	6,084	4,684	1,752	1,500	1,500	2,250	3,789	8,116	7,587	8,253	
30	6,850	6,234	7,253	7,721	6,633	6,226	3,585	1,500	1,500	3,443	5,639	8,426	10,283	9,252	
40	8,197	7,040	8,421	8,887	7,461	7,964	5,462	1,500	1,500	3,875	5,849	8,882	10,806	10,242	
50	9,245	8,235	9,329	9,779	8,818	8,956	6,497	1,500	1,500	4,939	6,534	9,345	11,222	10,681	
60	9,696	9,296	9,921	10,572	10,573	9,567	7,359	1,500	1,606	5,673	7,192	10,036	11,240	11,104	
70	10,727	10,836	10,419	11,475	11,801	10,751	9,009	2,250	2,250	6,487	7,742	10,571	11,273	11,149	
80	11,034	10,930	11,232	11,567	12,673	11,495	10,213	2,962	3,000	6,980	8,906	11,270	11,535	11,650	
90	11,049	10,936	11,285	12,351	12,737	11,846	10,240	3,000	3,000	7,140	9,680	11,714	11,721	11,663	
Max	11,071	10,945	11,864	12,729	12,754	11,869	10,241	3,000	3,000	8,640	9,680	11,780	11,749	11,674	
Avg	8,364	7,714	8,525	9,273	8,888	8,095	6,150	1,924	1,927	4,721	6,356	9,140	9,788	9,640	5,624
B: 2020 Baseline															
Min	3,263	1,517	1,865	2,707	1,578	1,100	1,100	1,100	1,100	1,100	1,100	3,296	1,200	3,856	
10	4,281	3,301	5,086	5,872	4,953	3,631	1,500	1,440	1,500	1,500	2,398	5,124	5,262	4,530	
20	5,255	4,848	6,602	7,466	6,220	5,315	3,477	1,500	1,500	1,835	3,827	7,378	8,316	8,195	
30	6,524	5,670	7,257	8,436	7,026	6,503	5,325	1,500	1,500	3,310	5,531	8,474	10,472	9,206	
40	7,750	6,977	7,568	9,135	8,443	8,306	6,368	1,500	1,500	4,414	6,128	8,976	10,954	9,755	
50	8,406	8,298	9,129	10,073	9,708	9,227	7,003	1,500	1,500	4,986	6,699	9,533	11,222	10,392	
60	9,639	9,607	9,661	10,617	10,868	10,085	8,232	1,650	1,610	5,437	7,032	10,383	11,266	10,806	
70	10,829	10,557	10,700	11,502	12,034	11,302	9,244	2,250	2,250	6,444	7,729	11,029	11,329	11,048	
80	11,034	10,930	11,238	11,624	12,623	11,538	10,240	3,000	3,000	7,084	8,591	11,479	11,683	11,157	
90	11,044	10,934	11,333	12,422	12,733	11,848	10,241	3,000	3,000	7,185	9,672	11,761	11,723	11,660	
Max	11,071	10,945	11,818	12,732	12,754	11,869	10,241	3,000	3,000	8,640	9,680	11,780	11,758	11,674	
Avg	8,160	7,706	8,539	9,485	9,179	8,353	6,657	1,935	1,931	4,703	6,307	9,153	9,850	9,442	5,661
Comparison: B - A															
Min	277	331	1,214	189	16	0	0	0	0	0	0	-169	-82	-153	
10	68	-172	481	209	182	683	57	-3	0	0	-378	-6	574	-157	
20	-289	38	354	212	136	631	1,725	0	0	-415	38	-738	729	-58	
30	-326	-564	4	716	393	277	1,739	0	0	-133	-109	48	189	-47	
40	-447	-63	-853	247	981	342	906	0	0	539	279	94	148	-487	
50	-839	63	-200	294	890	271	506	0	0	47	165	188	0	-289	
60	-57	311	-260	45	295	518	872	150	4	-236	-160	347	27	-298	
70	101	-278	281	28	233	550	235	0	0	-43	-13	458	56	-101	
80	0	1	5	58	-50	43	27	38	0	104	-315	209	148	-493	
90	-5	-2	49	71	-4	2	1	0	0	45	-8	47	2	-3	
Max	0	0	-46	3	0	0	0	0	0	0	0	0	9	0	
Avg	-205	-7	14	212	291	258	507	11	4	-18	-49	13	62	-199	38

Table I-26a. CALSIM Simulated Total Delta Outflow, for 2001 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	4,000	4,500	10,956	7,708	35,835	27,016	24,693	53,790	35,045	8,000	4,000	4,098	13,160
1923	4,857	4,510	31,266	29,618	14,849	10,874	26,779	18,136	9,734	6,500	4,000	4,509	10,008
1924	4,000	5,228	4,688	6,076	10,201	10,106	6,336	4,443	5,196	6,148	3,376	3,000	4,152
1925	3,947	5,016	7,208	6,982	64,416	27,191	23,124	15,309	8,331	5,000	5,090	3,058	10,281
1926	4,057	5,503	7,122	9,098	35,242	10,026	21,862	11,668	4,962	5,000	4,730	3,000	7,240
1927	4,472	14,227	13,812	26,837	127,756	38,171	46,717	24,534	11,746	8,320	4,000	4,069	19,055
1928	4,154	7,151	6,518	13,561	17,122	102,642	26,054	16,411	5,773	8,489	4,000	3,113	13,071
1929	4,636	6,288	4,978	5,657	10,422	10,045	6,921	7,302	5,968	4,000	4,139	3,000	4,406
1930	3,924	5,407	9,510	14,290	13,103	24,643	10,676	9,079	6,251	5,000	4,905	3,032	6,626
1931	4,210	5,352	6,582	7,060	7,828	6,142	6,816	5,512	4,030	8,419	3,000	3,000	4,095
1932	3,903	5,561	16,386	17,355	15,443	11,400	11,197	13,055	10,183	5,000	5,607	3,000	7,142
1933	4,069	5,747	4,500	13,992	7,098	11,646	10,021	5,694	6,038	4,000	4,984	3,000	4,877
1934	3,257	6,069	7,322	15,264	12,283	11,400	9,996	5,619	6,896	4,000	3,500	3,000	5,325
1935	4,302	5,881	5,476	29,153	11,153	22,069	51,122	26,803	10,918	6,500	4,000	3,000	10,887
1936	5,532	4,876	6,680	33,010	76,365	27,558	25,700	18,106	10,122	6,500	4,000	3,554	13,263
1937	4,752	5,351	7,408	7,698	41,850	45,774	27,994	21,235	9,591	6,500	4,000	3,204	11,060
1938	4,515	14,406	57,767	33,883	147,035	169,720	77,564	73,991	42,614	8,000	4,000	8,042	38,299
1939	11,857	4,782	5,005	5,446	8,557	11,757	10,024	9,726	5,949	5,000	3,668	3,323	5,135
1940	5,712	4,500	10,090	31,336	61,607	104,168	66,267	18,136	8,449	8,000	4,000	3,375	19,620
1941	4,894	5,994	38,592	95,296	122,079	92,082	76,040	46,724	14,594	8,000	4,410	6,494	30,756
1942	6,254	4,500	62,179	84,324	145,546	19,897	50,129	36,886	20,029	8,000	4,000	7,008	26,572
1943	7,331	8,478	22,332	84,125	60,033	85,412	28,686	21,114	8,837	8,852	4,000	3,812	20,640
1944	4,022	5,528	4,500	6,793	21,325	14,973	11,423	10,862	7,401	5,000	3,500	3,551	5,941
1945	5,633	5,177	11,590	6,000	46,875	20,074	14,476	15,125	9,103	6,500	4,000	3,973	8,791
1946	4,595	6,442	67,784	40,741	25,153	15,964	12,739	14,282	8,714	6,500	4,000	3,733	12,743
1947	4,630	5,729	6,403	6,530	12,706	15,631	11,195	9,972	5,599	5,000	4,969	3,016	5,494
1948	5,502	4,882	4,738	8,416	11,208	11,334	26,559	27,516	12,117	6,500	4,000	4,201	7,670
1949	4,769	5,625	5,224	6,549	7,745	40,304	12,116	12,636	7,513	5,000	4,473	3,000	6,968
1950	4,898	5,057	5,341	16,549	27,304	14,657	20,770	16,183	10,733	6,500	4,000	4,300	8,139
1951	4,539	46,549	97,874	62,531	67,331	28,500	14,922	20,555	6,114	9,940	4,000	3,948	22,017
1952	4,000	6,821	40,208	86,412	74,751	63,057	71,589	71,480	40,766	8,000	4,000	11,862	29,147
1953	13,325	4,500	37,081	104,867	21,310	14,658	16,658	23,221	16,611	8,978	4,000	7,386	16,549
1954	4,363	7,165	4,931	22,067	55,195	44,525	39,566	21,471	6,133	8,000	4,000	4,104	13,183
1955	4,714	6,249	14,801	11,866	11,400	8,076	12,076	11,866	6,989	5,000	4,459	3,000	6,057
1956	4,897	5,262	91,989	170,554	80,181	31,460	19,492	40,163	13,290	8,000	4,000	8,632	28,983
1957	10,334	4,500	4,500	6,656	24,649	42,683	18,819	17,283	8,744	8,000	4,000	4,265	9,279
1958	8,450	4,594	15,527	32,688	179,007	94,799	98,853	53,118	32,607	8,000	4,000	9,765	31,944
1959	11,935	4,500	4,500	25,953	50,091	21,109	9,413	9,131	8,536	7,003	4,000	4,745	9,545
1960	4,000	6,245	5,965	6,336	22,460	15,063	11,400	9,991	5,647	5,000	4,760	3,000	6,001
1961	5,226	5,262	8,585	6,935	24,426	14,435	10,153	9,413	5,736	5,000	5,207	3,000	6,165
1962	5,080	6,102	6,121	6,000	47,163	19,945	11,404	11,901	7,871	6,500	4,000	3,707	8,013
1963	25,810	5,005	19,256	8,358	72,053	25,851	86,865	33,893	10,626	8,634	4,000	3,851	18,070
1964	7,262	18,400	4,921	13,440	11,195	8,554	10,826	10,499	6,568	5,000	4,626	3,839	6,343
1965	4,303	6,453	83,859	112,050	27,337	18,819	44,548	23,073	7,495	10,350	4,000	4,090	21,017
1966	4,000	12,982	9,873	23,358	21,726	20,189	12,386	12,165	7,513	6,500	4,000	4,209	8,340
1967	4,456	6,742	34,295	44,954	48,671	60,372	55,284	57,914	46,650	9,727	4,000	11,345	23,115
1968	12,297	4,787	6,309	20,627	61,191	32,996	13,691	8,806	7,414	7,116	4,000	3,980	10,966
1969	4,848	5,859	16,331	122,865	131,081	56,720	59,680	67,648	35,438	8,000	4,000	9,514	31,105
1970	13,598	4,580	53,371	216,843	78,170	35,183	15,438	12,101	7,143	12,027	4,000	3,818	27,536
1971	4,000	9,272	54,424	41,878	25,936	41,846	20,322	29,790	12,305	10,105	4,000	8,071	15,857
1972	4,870	4,500	10,388	7,695	17,863	26,037	9,973	8,420	10,927	6,500	4,000	3,015	6,896
1973	4,928	10,215	16,852	84,620	87,854	54,373	16,532	18,191	9,834	8,000	4,000	4,128	19,049
1974	4,706	56,411	64,239	128,217	33,124	107,730	66,931	24,751	13,852	8,000	4,073	11,335	31,697
1975	9,605	4,798	6,609	6,000	58,102	92,447	24,221	29,109	18,755	8,000	4,000	9,552	16,220
1976	14,185	6,499	5,696	4,908	7,720	10,771	8,499	4,148	4,103	4,000	3,941	3,472	4,718
1977	3,927	4,833	6,865	7,480	6,636	6,049	7,100	4,770	4,838	4,000	4,545	3,000	3,860
1978	3,942	5,542	9,032	67,182	47,682	64,438	44,335	26,223	14,773	8,000	4,000	5,595	18,074
1979	4,301	4,500	5,352	19,146	45,283	29,101	19,636	16,113	10,215	6,500	4,000	3,767	9,982
1980	4,885	5,774	10,243	109,334	129,449	59,417	19,084	17,824	10,472	8,000	4,000	4,539	22,965
1981	4,428	4,500	7,074	12,553	22,349	25,708	12,827	9,500	5,460	5,000	4,354	3,989	7,055
1982	4,616	26,105	89,560	79,387	101,475	81,725	140,525	50,557	20,216	8,000	4,000	12,281	37,038
1983	24,836	37,053	83,574	108,625	182,517	258,250	82,545	82,068	81,853	26,688	9,329	22,739	59,978
1984	21,086	74,595	158,773	66,573	39,161	30,083	17,087	13,033	8,892	10,262	4,000	3,685	27,144
1985	5,396	22,986	12,517	6,000	10,589	12,961	11,423	10,662	5,508	5,000	4,380	4,450	6,730
1986	4,880	5,695	13,114	15,968	218,478	140,437	24,791	16,932	9,600	8,000	4,000	4,660	27,306
1987	4,450	4,500	5,711	5,871	13,465	20,870	11,037	7,514	6,355	5,000	3,549	3,000	5,487
1988	6,456	4,500	12,880	19,548	11,184	7,873	8,329	6,394	6,826	4,000	3,471	3,000	5,720
1989	5,070	4,330	5,534	7,027	7,883	43,059	16,311	10,435	6,095	5,000	4,377	4,184	7,229
1990	4,352	6,145	4,500	9,848	11,400	8,800	9,850	7,467	4,000	4,641	4,603	3,000	4,721
1991	3,305	6,386	3,500	4,500	7,374	25,076	11,191	5,580	4,000	5,843	3,786	3,000	5,045
1992	3,916	5,263	3,500	6,413	27,994	14,808	10,358	6,094	6,594	4,000	3,972	3,000	5,738
1993	3,570	5,685	6,269	65,942	53,770	40,970	36,649	33,585	17,822	8,000	4,000	3,878	16,783
1994	4,637	5,235	6,538	5,902	24,667	10,996	8,030	5,940	4,000	8,453	3,000	3,687	5,414
Avg	6,308	9,255	22,123	36,511	47,938	39,500	27,735	21,105	12,296	7,096	4,175	4,898	14,322
Min	3,257	4,330	3,500	4,500	6,636	6,049	6,336	4,148	4,000	4,000	3,000	3,000	3,860
Max	25,810	74,595	158,773	216,843	218,478	258,250	140,525	82,068	81,853	26,688	9,329	22,739	59,978

Table I-26b. CALSIM Simulated Total Delta Outflow, for 2020 Baseline Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	4,000	4,500	14,099	8,388	36,007	24,560	24,796	52,172	28,264	8,000	4,000	3,537	12,723
1923	4,627	6,441	27,354	25,014	12,816	10,594	27,459	17,912	10,005	6,500	4,000	4,053	9,471
1924	4,125	5,916	6,153	4,889	10,545	10,107	6,471	4,428	5,199	6,377	3,363	3,000	4,258
1925	3,878	5,233	7,539	8,144	65,979	27,184	24,337	15,804	8,229	5,000	4,957	3,000	10,553
1926	4,063	5,304	4,500	10,342	38,986	9,527	24,101	10,633	5,066	5,000	4,630	3,000	7,391
1927	4,024	15,216	12,849	24,398	126,681	37,573	47,802	23,923	11,732	8,405	4,000	3,223	18,762
1928	5,158	6,885	6,461	13,712	17,235	99,351	26,241	16,412	5,894	8,166	4,000	3,000	12,919
1929	4,816	6,026	5,325	5,350	10,619	10,341	6,907	7,387	5,959	4,000	3,960	3,000	4,426
1930	4,051	5,204	10,406	14,782	13,425	25,375	11,529	9,300	5,887	5,000	4,413	3,000	6,781
1931	4,864	4,683	6,884	7,468	7,945	6,122	6,812	4,585	5,117	6,189	3,149	3,000	4,023
1932	4,321	4,898	19,676	13,393	16,384	11,400	11,197	13,212	10,181	5,000	4,571	3,000	7,087
1933	4,019	5,353	4,700	14,898	7,233	11,721	10,018	6,015	6,003	4,000	4,940	3,000	4,946
1934	3,217	6,060	7,871	15,315	12,387	11,400	9,995	5,743	6,846	4,000	3,559	3,000	5,373
1935	4,228	6,126	4,768	30,534	11,136	23,644	52,157	26,438	10,750	6,500	4,000	3,000	11,063
1936	5,293	5,181	6,626	33,298	73,792	26,646	26,293	18,259	10,108	6,500	4,000	3,155	13,097
1937	5,180	5,016	7,549	7,840	39,472	44,498	28,143	21,843	9,878	6,500	4,000	3,127	10,932
1938	5,055	15,438	55,669	28,497	143,820	168,837	78,723	73,368	41,937	8,000	4,000	5,088	37,515
1939	11,606	4,500	4,986	5,931	8,638	11,607	10,985	9,503	5,618	5,000	3,664	3,000	5,131
1940	6,158	4,500	9,292	32,974	61,328	104,279	67,071	18,030	9,266	8,000	4,000	3,669	19,797
1941	4,907	6,311	33,341	92,916	118,950	91,986	77,153	45,061	14,702	8,000	4,000	6,624	30,079
1942	5,644	4,651	56,695	80,199	138,509	24,159	51,136	37,146	18,910	8,105	4,000	5,561	25,753
1943	6,670	5,310	22,465	84,286	58,258	85,012	29,947	22,185	9,203	8,725	4,000	3,870	20,464
1944	4,000	5,701	4,500	6,881	21,081	15,259	11,377	11,056	7,394	5,000	3,500	3,144	5,944
1945	6,174	5,613	11,970	7,220	44,523	19,907	15,330	15,878	9,409	6,500	4,000	3,116	8,872
1946	5,573	5,816	66,771	42,790	24,862	15,146	12,977	14,039	8,718	6,500	4,000	3,805	12,767
1947	5,221	5,357	8,533	6,000	13,066	14,520	11,543	9,442	6,388	5,000	4,517	3,000	5,565
1948	5,782	4,500	5,086	8,223	11,208	11,869	27,675	27,540	11,818	6,500	4,000	4,032	7,747
1949	4,612	5,466	6,971	4,619	7,856	39,263	12,566	12,625	7,511	5,000	3,881	3,000	6,869
1950	5,283	4,673	5,626	16,221	27,426	15,053	21,268	16,502	10,651	6,500	4,000	3,987	8,194
1951	4,745	42,263	97,325	60,060	68,182	25,314	15,059	19,950	8,490	8,000	4,000	3,693	21,418
1952	4,726	6,282	33,990	86,635	74,206	63,246	69,853	70,006	40,016	8,000	4,000	10,670	28,461
1953	12,609	4,500	37,183	99,700	21,676	14,575	17,527	23,880	14,381	8,229	4,000	6,997	16,099
1954	4,462	5,670	6,230	24,571	55,513	43,166	40,226	21,392	6,133	8,000	4,000	3,842	13,287
1955	5,293	6,115	14,167	11,417	11,400	7,668	12,442	10,840	7,026	5,000	4,128	3,000	5,933
1956	5,164	4,701	90,493	167,809	81,169	32,045	20,503	39,919	13,240	8,000	4,005	6,690	28,725
1957	7,733	4,500	4,500	6,197	24,739	40,782	18,844	20,012	8,425	8,271	4,000	3,843	9,121
1958	6,554	4,500	15,842	33,044	178,185	93,553	100,230	52,152	28,276	8,000	4,000	8,791	31,448
1959	10,647	4,500	4,500	26,036	49,828	21,115	8,814	9,320	8,115	7,245	4,000	4,541	9,410
1960	4,000	5,830	6,057	8,256	21,280	15,936	11,400	10,271	5,628	5,000	4,088	3,000	6,061
1961	5,015	5,908	6,778	7,095	21,044	13,245	10,169	8,567	6,403	5,000	4,968	3,000	5,802
1962	5,347	5,210	6,924	6,000	48,107	20,489	12,458	11,871	6,519	6,595	4,000	3,870	8,108
1963	24,422	4,760	19,491	8,667	73,301	25,621	87,693	31,134	10,724	8,957	4,000	3,678	17,953
1964	4,961	16,423	4,957	13,916	11,195	7,930	15,751	9,554	5,800	5,000	4,798	3,000	6,227
1965	4,916	6,019	81,004	109,607	27,603	18,834	46,101	22,840	7,493	10,399	4,000	4,033	20,796
1966	4,000	10,668	9,868	23,695	20,193	19,706	14,982	11,314	7,815	6,500	4,000	3,760	8,201
1967	4,906	6,507	34,904	45,222	47,569	56,629	56,379	57,990	42,994	8,093	4,000	10,142	22,571
1968	12,131	4,784	6,571	21,285	59,922	29,579	13,822	8,814	7,820	6,500	4,000	3,798	10,713
1969	4,905	5,563	16,626	123,174	131,356	56,979	58,750	65,927	35,056	8,000	4,000	4,155	30,656
1970	12,968	4,790	51,533	211,435	79,897	31,817	15,788	13,747	7,724	11,614	4,000	3,833	27,085
1971	4,000	9,568	53,096	42,145	25,923	37,206	21,337	29,131	11,085	11,088	4,000	6,833	15,458
1972	5,079	4,500	8,021	6,621	16,875	26,288	11,323	8,579	10,844	6,500	4,000	3,000	6,740
1973	5,149	11,158	15,304	82,561	85,866	53,328	17,412	17,599	9,895	8,000	4,000	4,009	18,734
1974	4,817	53,918	64,450	128,638	33,331	108,096	67,750	25,070	12,711	8,000	4,000	10,024	31,547
1975	6,226	4,752	6,994	6,000	58,329	88,194	25,002	28,297	17,199	8,000	4,000	8,233	15,610
1976	10,812	6,463	5,915	4,985	9,376	10,869	7,986	4,408	4,110	8,303	3,000	3,000	4,793
1977	4,099	4,646	5,353	6,940	6,724	6,114	7,100	4,682	4,971	6,356	3,000	3,000	3,795
1978	4,246	4,964	9,832	67,142	53,194	69,381	46,237	26,084	14,785	8,000	4,000	3,980	18,724
1979	4,000	5,356	6,706	16,055	42,068	30,362	18,267	16,100	10,290	6,500	4,000	3,766	9,729
1980	5,001	5,581	9,860	109,234	129,440	52,249	20,003	18,512	10,262	8,000	4,000	4,044	22,544
1981	4,231	5,007	6,013	12,525	20,312	25,228	13,837	8,034	5,732	5,000	4,742	4,031	6,876
1982	4,636	23,670	90,960	74,856	102,427	81,911	141,745	49,851	19,374	8,000	4,000	9,228	36,563
1983	19,125	37,969	83,181	109,134	181,814	257,091	83,303	82,085	80,862	25,485	8,186	22,911	59,431
1984	20,437	75,759	157,895	65,981	32,675	35,305	16,689	12,852	8,405	11,976	4,000	3,735	27,076
1985	5,471	19,228	12,874	6,000	10,825	12,009	13,349	10,972	5,379	5,000	4,569	4,252	6,613
1986	4,771	5,334	12,217	18,438	213,896	140,523	25,580	17,253	9,529	8,000	5,264	4,389	27,249
1987	4,208	5,420	4,680	6,928	14,684	21,716	10,752	7,809	6,822	5,000	3,500	3,000	5,674
1988	6,675	4,500	9,660	22,352	11,184	7,869	8,219	6,524	6,790	4,000	3,927	3,000	5,735
1989	4,412	5,141	4,825	7,249	7,883	43,712	16,705	10,338	5,937	5,000	4,494	3,819	7,241
1990	4,735	5,602	4,500	10,606	11,400	8,880	9,847	8,195	4,000	4,446	4,494	3,000	4,790
1991	3,345	6,369	3,500	4,500	7,370	26,051	11,435	8,015	4,000	4,100	5,138	3,000	5,247
1992	3,417	5,700	3,500	6,512	28,063	15,264	10,355	5,753	6,712	4,000	3,349	3,000	5,719
1993	4,323	4,592	6,350	64,406	54,083	42,342	37,304	32,030	18,143	8,000	4,000	3,125	16,694
1994	4,318	6,358	5,734	6,087	20,320	11,003	8,407	6,119	4,000	7,992	3,000	3,676	5,186
Avg	6,077	8,999	21,713	36,085	47,460	39,125	28,339	20,962	12,008	7,084	4,106	4,444	14,169
Min	3,217	4,500	3,500	4,500	6,724	6,114	6,471	4,408	4,000	4,000	3,000	3,000	3,795
Max	24,422	75,759	157,895	211,435	213,896	257,091	141,745	82,085	80,862	25,485	8,186	22,911	59,431

Table I-26c. CALSIM Simulated Total Delta Outflow, 2020 Baseline minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	3,143	680	172	-2,456	103	-1,618	-6,781	0	0	-561	-437
1923	-230	1,931	-3,912	-4,604	-2,033	-280	680	-224	271	0	0	-456	-537
1924	125	688	1,465	-1,187	344	1	135	-15	3	229	-13	0	106
1925	-69	217	331	1,162	1,563	-7	1,213	495	-102	0	-133	-58	272
1926	6	-199	-2,622	1,244	3,744	-499	2,239	-1,035	104	0	-100	0	151
1927	-448	989	-963	-2,439	-1,075	-598	1,085	-611	-14	85	0	-846	-293
1928	1,004	-266	-57	151	113	-3,291	187	1	121	-323	0	-113	-152
1929	180	-262	347	-307	197	296	-14	85	-9	0	-179	0	20
1930	127	-203	896	492	322	732	853	221	-364	0	-492	-32	155
1931	654	-669	302	408	117	-20	-4	-927	1,087	-2,230	149	0	-71
1932	418	-663	3,290	-3,962	941	0	0	157	-2	0	-1,036	0	-55
1933	-50	-394	200	906	135	75	-3	321	-35	0	-44	0	68
1934	-40	-9	549	51	104	0	-1	124	-50	0	59	0	48
1935	-74	245	-708	1,381	-17	1,575	1,035	-365	-168	0	0	0	177
1936	-239	305	-54	288	-2,573	-912	593	153	-14	0	0	-399	-166
1937	428	-335	141	142	-2,378	-1,276	149	608	287	0	0	-77	-128
1938	540	1,032	-2,098	-5,386	-3,215	-883	1,159	-623	-677	0	0	-2,954	-784
1939	-251	-282	-19	485	81	-150	961	-223	-331	0	-4	-323	-4
1940	446	0	-798	1,638	-279	111	804	-106	817	0	0	294	177
1941	13	317	-5,251	-2,380	-3,129	-96	1,113	-1,663	108	0	-410	130	-676
1942	-610	151	-5,484	-4,125	-7,037	4,262	1,007	260	-1,119	105	0	-1,447	-819
1943	-661	-3,168	133	161	-1,775	-400	1,261	1,071	366	-127	0	58	-176
1944	-22	173	0	88	-244	286	-46	194	-7	0	0	-407	2
1945	541	436	380	1,220	-2,352	-167	854	753	306	0	0	-857	81
1946	978	-626	-1,013	2,049	-291	-818	238	-243	4	0	0	72	24
1947	591	-372	2,130	-530	360	-1,111	348	-530	789	0	-452	-16	71
1948	280	-382	348	-193	0	535	1,116	24	-299	0	0	-169	77
1949	-157	-159	1,747	-1,930	111	-1,041	450	-11	-2	0	-592	0	-99
1950	385	-384	285	-328	122	396	498	319	-82	0	0	-313	55
1951	206	-4,286	-549	-2,471	851	-3,186	137	-605	2,376	-1,940	0	-255	-599
1952	726	-539	-6,218	223	-545	189	-1,736	-1,474	-750	0	0	-1,192	-685
1953	-716	0	102	-5,167	366	-83	869	659	-2,230	-749	0	-389	-450
1954	99	-1,495	1,299	2,504	318	-1,359	660	-79	0	0	0	-262	104
1955	579	-134	-634	-449	0	-408	366	-1,026	37	0	-331	0	-124
1956	267	-561	-1,496	-2,745	988	585	1,011	-244	-50	0	5	-1,942	-258
1957	-2,601	0	0	-459	90	-1,901	25	2,729	-319	271	0	-422	-158
1958	-1,896	-94	315	356	-822	-1,246	1,377	-966	-4,331	0	0	-974	-496
1959	-1,288	0	0	83	-263	6	-599	189	-421	242	0	-204	-135
1960	0	-415	92	1,920	-1,180	873	0	280	-19	0	-672	0	60
1961	-211	646	-1,807	160	-3,382	-1,190	16	-846	667	0	-239	0	-363
1962	267	-892	803	0	944	544	1,054	-30	-1,352	95	0	163	95
1963	-1,388	-245	235	309	1,248	-230	828	-2,759	98	323	0	-173	-116
1964	-2,301	-1,977	36	476	0	-624	4,925	-945	-768	0	172	-839	-116
1965	613	-434	-2,855	-2,443	266	15	1,553	-233	-2	49	0	-57	-221
1966	0	-2,314	-5	337	-1,533	-483	2,596	-851	302	0	0	-449	-139
1967	450	-235	609	268	-1,102	-3,743	1,095	76	-3,656	-1,634	0	-1,203	-544
1968	-166	-3	262	658	-1,269	-3,417	131	8	406	-616	0	-182	-253
1969	57	-296	295	309	275	259	-930	-1,721	-382	0	0	-5,359	-449
1970	-630	210	-1,838	-5,408	1,727	-3,366	350	1,646	581	-413	0	15	-451
1971	0	296	-1,328	267	-13	-4,640	1,015	-659	-1,220	983	0	-1,238	-400
1972	209	0	-2,367	-1,074	-988	251	1,350	159	-83	0	0	-15	-156
1973	221	943	-1,548	-2,059	-1,988	-1,045	880	-592	61	0	0	-119	-314
1974	111	-2,493	211	421	207	366	819	319	-1,141	0	-73	-1,311	-151
1975	-3,379	-46	385	0	227	-4,253	781	-812	-1,556	0	0	-1,319	-610
1976	-3,373	-36	219	77	1,656	98	-513	260	7	4,303	-941	-472	74
1977	172	-187	-1,512	-540	88	65	0	-88	133	2,356	-1,545	0	-65
1978	304	-578	800	-40	5,512	4,943	1,902	-139	12	0	0	-1,615	651
1979	-301	856	1,354	-3,091	-3,215	1,261	-1,369	-13	75	0	0	-1	-253
1980	116	-193	-383	-100	-9	-7,168	919	688	-210	0	0	-495	-420
1981	-197	507	-1,061	-28	-2,037	-480	1,010	-1,466	272	0	388	42	-179
1982	20	-2,435	1,400	-4,531	952	186	1,220	-706	-842	0	0	-3,053	-475
1983	-5,711	916	-393	509	-703	-1,159	758	17	-991	-1,203	-1,143	172	-547
1984	-649	1,164	-878	-592	-6,486	5,222	-398	-181	-487	1,714	0	50	-68
1985	75	-3,758	357	0	236	-952	1,926	310	-129	0	189	-198	-117
1986	-109	-361	-897	2,470	-4,582	86	789	321	-71	0	1,264	-271	-57
1987	-242	920	-1,031	1,057	1,219	846	-285	295	467	0	-49	0	187
1988	219	0	-3,220	2,804	0	-4	-110	130	-36	0	456	0	15
1989	-658	811	-709	222	0	653	394	-97	-158	0	117	-365	12
1990	383	-543	0	758	0	80	-3	728	0	-195	-109	0	69
1991	40	-17	0	0	-4	975	244	2,435	0	-1,743	1,352	0	201
1992	-499	437	0	99	69	456	-3	-341	118	0	-623	0	-19
1993	753	-1,093	81	-1,536	313	1,372	655	-1,555	321	0	0	-753	-89
1994	-319	1,123	-804	185	-4,347	7	377	179	0	-461	0	-11	-227
Avg	-231	-256	-410	-426	-478	-375	604	-143	-288	-12	-69	-454	-153
Min	-5,711	-4,286	-6,218	-5,408	-7,037	-7,168	-1,736	-2,759	-6,781	-2,230	-1,545	-5,359	-819
Max	1,004	1,931	3,290	2,804	5,512	5,222	4,925	2,729	2,376	4,303	1,352	294	651

Table I-26d. CALSIM Simulated Total Delta Outflow, Percentiles for 2001 and 2020 Baselines
(thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	3,257	4,330	3,500	4,500	6,636	6,049	6,336	4,148	4,000	4,000	3,000	3,000	
10	3,927	4,500	4,500	6,000	7,883	10,026	8,499	5,694	4,962	4,000	3,549	3,000	
20	4,000	4,594	5,341	6,549	11,208	11,400	10,358	8,806	5,949	5,000	4,000	3,000	
30	4,302	5,005	6,121	7,480	14,849	14,808	11,400	9,991	6,355	5,000	4,000	3,058	
40	4,472	5,262	6,609	9,848	22,349	19,945	12,739	11,901	7,401	6,500	4,000	3,554	
50	4,706	5,561	8,585	15,968	27,337	25,708	16,658	15,309	8,536	6,500	4,000	3,839	
60	4,880	5,859	10,956	23,358	45,283	29,101	20,770	18,106	9,600	8,000	4,000	4,069	
70	5,080	6,249	15,527	33,010	55,195	40,970	26,054	21,471	10,626	8,000	4,000	4,209	
80	6,456	7,151	37,081	67,182	74,751	59,417	44,548	29,109	13,852	8,000	4,410	5,595	
90	11,935	14,406	64,239	104,867	127,756	92,447	66,931	50,557	20,216	8,978	4,760	9,514	
Max	25,810	74,595	158,773	216,843	218,478	258,250	140,525	82,068	81,853	26,688	9,329	22,739	
Avg	6,308	9,255	22,123	36,511	47,938	39,500	27,735	21,105	12,296	7,096	4,175	4,898	14,322
B: 2020 Baseline													
Min	3,217	4,500	3,500	4,500	6,724	6,114	6,471	4,408	4,000	4,000	3,000	3,000	
10	4,000	4,500	4,500	6,000	8,638	9,527	8,407	6,015	5,117	4,446	3,500	3,000	
20	4,099	4,683	5,325	6,881	11,208	11,607	10,985	8,567	5,894	5,000	4,000	3,000	
30	4,321	4,964	6,153	7,840	14,684	15,053	11,543	9,554	6,519	5,000	4,000	3,000	
40	4,726	5,233	6,778	10,606	21,044	19,907	13,837	11,314	7,493	6,500	4,000	3,127	
50	4,906	5,466	8,021	15,315	27,603	25,314	17,412	15,878	8,425	6,500	4,000	3,693	
60	5,079	5,701	10,406	24,398	42,068	29,579	21,337	18,030	9,878	8,000	4,000	3,833	
70	5,293	6,060	15,304	33,044	55,513	39,263	26,293	22,185	10,651	8,000	4,000	4,009	
80	6,174	6,463	33,990	67,142	73,792	56,629	46,237	28,297	13,240	8,000	4,413	4,389	
90	10,812	15,438	64,450	99,700	126,681	91,986	67,750	49,851	19,374	8,405	4,742	6,997	
Max	24,422	75,759	157,895	211,435	213,896	257,091	141,745	82,085	80,862	25,485	8,186	22,911	
Avg	6,077	8,999	21,713	36,085	47,460	39,125	28,339	20,962	12,008	7,084	4,106	4,444	14,169
Comparison: B - A													
Min	-40	170	0	0	88	65	135	260	0	0	0	0	
10	73	0	0	0	755	-499	-92	321	155	446	-49	0	
20	99	89	-16	332	0	207	627	-239	-55	0	0	0	
30	19	-41	32	360	-165	245	143	-437	164	0	0	-58	
40	254	-29	169	758	-1,305	-38	1,098	-587	92	0	0	-427	
50	200	-95	-564	-653	266	-394	754	569	-111	0	0	-146	
60	199	-158	-550	1,040	-3,215	478	567	-76	278	0	0	-236	
70	213	-189	-223	34	318	-1,707	239	714	25	0	0	-200	
80	-282	-688	-3,091	-40	-959	-2,788	1,689	-812	-612	0	3	-1,206	
90	-1,123	1,032	211	-5,167	-1,075	-461	819	-706	-842	-573	-18	-2,517	
Max	-1,388	1,164	-878	-5,408	-4,582	-1,159	1,220	17	-991	-1,203	-1,143	172	
Avg	-231	-256	-410	-426	-478	-375	604	-143	-288	-12	-69	-454	-153

Table I-27a. CALSIM Simulated Beginning-of-Month X2 Location (km from Golden Gate), for 2001 Baseline Conditions

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	74.9	83.2	85.0	78.8	79.4	67.8	66.2	66.4	60.5	61.8	73.6	82.7
1923	85.6	85.2	85.6	70.9	66.5	70.4	74.0	68.3	69.4	74.6	79.3	84.6
1924	85.4	86.6	85.0	85.3	83.4	78.8	77.3	80.5	84.2	84.2	82.9	87.1
1925	89.4	88.0	85.7	82.2	81.3	64.0	64.9	66.4	70.1	76.0	81.8	83.6
1926	88.1	87.4	84.8	82.0	79.2	67.9	73.8	69.8	73.3	81.0	83.5	84.7
1927	88.6	86.8	77.4	74.5	68.4	54.5	59.2	59.2	64.1	71.4	76.4	83.7
1928	85.9	86.5	82.5	81.9	76.1	72.4	57.5	63.1	68.5	78.3	78.5	84.4
1929	88.2	86.4	83.5	84.3	83.6	78.7	77.4	79.8	80.2	81.8	85.4	86.4
1930	89.1	88.0	85.2	79.9	75.1	74.1	69.0	73.7	76.5	80.3	83.2	84.3
1931	88.4	87.2	85.0	82.7	81.4	80.1	81.6	81.3	82.8	85.7	81.0	87.4
1932	89.5	88.1	85.0	75.7	72.2	71.9	74.2	75.0	74.2	75.8	81.8	82.8
1933	88.0	87.3	84.5	85.4	77.0	79.5	76.5	76.7	81.0	82.0	85.5	85.0
1934	88.7	89.3	84.7	81.8	75.2	74.7	75.1	76.2	81.0	81.0	85.2	87.6
1935	89.5	87.4	84.3	83.9	70.9	74.0	69.8	62.0	64.4	72.0	78.5	84.4
1936	88.5	85.1	85.0	82.6	69.5	58.8	63.1	65.0	68.4	73.9	79.1	84.6
1937	87.2	85.9	84.6	81.6	80.4	67.0	61.9	64.0	66.8	73.8	79.1	84.6
1938	88.0	86.6	77.2	63.5	63.0	51.7	46.8	51.2	53.1	57.9	72.3	82.3
1939	80.3	76.6	82.4	83.9	83.8	80.3	76.7	76.7	77.0	80.8	83.4	86.6
1940	88.4	84.9	85.5	79.6	68.9	60.3	53.4	54.6	64.9	74.2	77.6	84.1
1941	87.5	85.8	83.6	68.7	56.8	51.0	51.3	52.9	57.1	67.4	75.4	82.6
1942	82.0	82.1	84.6	65.3	56.7	49.6	62.6	59.8	61.2	66.3	75.1	83.2
1943	81.6	80.7	79.3	71.4	58.7	57.1	53.9	61.2	65.9	74.2	76.8	83.8
1944	86.5	86.9	84.6	85.5	82.6	72.9	72.4	74.3	75.3	78.6	82.7	86.7
1945	88.0	84.8	84.5	78.2	81.1	66.4	68.0	71.1	71.7	75.8	79.8	84.8
1946	86.5	85.9	83.1	64.2	61.9	64.8	69.3	72.4	72.6	76.5	80.0	84.8
1947	87.0	86.0	84.1	82.6	81.9	76.6	73.3	74.8	76.1	81.0	83.5	84.3
1948	88.4	85.2	85.0	85.2	80.8	77.2	76.0	69.0	66.5	71.9	78.5	84.3
1949	85.9	85.4	84.0	84.1	82.4	80.6	67.3	72.2	73.5	77.9	82.4	84.8
1950	88.6	86.1	85.1	84.3	75.4	68.6	71.2	69.3	70.6	74.2	79.2	84.6
1951	85.8	85.8	67.9	56.4	56.0	55.3	61.7	68.8	68.6	77.9	77.2	83.9
1952	86.2	86.9	83.0	68.1	57.4	55.0	55.5	54.7	54.5	58.7	72.5	82.4
1953	77.3	74.7	82.2	68.5	56.0	64.2	69.7	70.5	68.3	70.1	75.4	83.3
1954	81.2	84.6	81.9	83.9	73.0	62.4	60.6	60.9	65.7	76.9	78.5	84.4
1955	86.1	85.6	83.3	75.9	75.2	75.2	77.9	75.7	75.1	79.0	82.8	84.9
1956	88.7	86.1	84.8	62.4	50.3	52.1	59.9	66.1	62.6	69.9	76.2	83.6
1957	80.1	77.6	83.2	85.0	82.6	71.8	64.0	67.7	69.6	75.4	78.0	84.2
1958	85.7	81.0	84.1	75.8	67.4	51.6	51.3	50.8	55.5	60.7	73.2	82.6
1959	78.9	76.1	82.7	84.8	72.1	62.9	66.5	73.9	76.5	77.9	79.9	84.8
1960	85.1	86.5	83.6	83.0	82.3	72.4	72.2	74.3	75.9	80.9	83.4	84.6
1961	88.6	85.6	84.6	80.5	80.8	71.2	72.1	75.1	76.7	81.0	83.5	84.0
1962	88.4	85.8	83.5	82.7	82.6	66.8	68.2	73.0	74.2	77.8	80.4	85.0
1963	87.1	72.9	80.8	73.1	76.9	61.7	64.5	56.2	60.7	71.0	76.0	83.5
1964	86.3	82.3	73.9	81.3	76.0	75.6	77.6	76.4	76.3	79.8	83.1	84.7
1965	86.7	86.5	83.3	62.6	53.6	61.5	66.9	62.1	65.5	75.3	76.0	83.5
1966	85.8	86.8	78.0	77.3	70.4	68.7	68.7	72.5	73.9	78.0	80.5	85.0
1967	86.1	86.0	82.8	69.3	62.8	60.1	57.5	57.3	56.9	58.5	71.0	81.9
1968	77.5	75.4	82.0	82.0	72.9	61.6	62.6	69.7	75.4	78.6	80.0	84.8
1969	86.5	85.5	83.7	75.3	57.0	50.6	54.9	55.9	55.3	60.0	73.0	82.5
1970	79.0	75.2	82.2	65.7	49.6	52.1	59.0	67.6	72.3	77.9	75.7	83.4
1971	86.3	86.9	80.7	65.1	61.9	64.6	61.8	66.4	65.0	71.3	74.9	83.2
1972	80.5	83.5	85.1	79.2	79.6	73.2	68.3	74.0	77.2	76.2	79.9	84.8
1973	88.6	86.1	79.6	73.7	59.4	54.4	56.5	66.3	68.7	74.3	77.7	84.1
1974	85.9	85.5	66.4	59.1	51.4	59.3	52.8	54.3	62.5	69.6	76.1	83.4
1975	78.0	77.5	82.6	81.9	82.3	65.1	55.9	63.1	64.1	67.8	75.5	83.4
1976	79.3	74.9	79.5	82.0	83.9	81.1	77.6	78.3	84.0	86.0	86.8	87.2
1977	88.3	87.7	85.9	82.6	80.9	81.3	82.1	81.1	83.9	84.7	86.4	86.0
1978	89.0	87.9	84.9	80.2	63.3	60.4	57.1	58.9	63.5	69.4	76.1	83.6
1979	83.4	85.4	85.7	84.5	74.3	64.4	64.5	67.6	70.1	74.4	79.3	84.6
1980	86.8	85.6	83.9	78.9	59.1	51.4	54.8	64.6	68.3	73.6	77.5	84.0
1981	85.2	85.8	85.8	82.4	76.9	70.6	67.5	71.8	75.5	81.0	83.5	85.3
1982	86.6	85.9	72.4	58.5	54.9	51.8	52.5	48.5	55.1	64.3	74.4	83.0
1983	77.2	69.9	64.5	56.5	51.8	46.3	41.9	49.1	51.6	52.4	61.2	72.2
1984	69.0	68.5	58.6	49.6	53.3	58.6	62.4	67.9	71.8	76.0	76.3	83.6
1985	86.7	84.7	73.0	73.8	79.7	77.3	74.9	75.1	75.7	81.0	83.5	85.3
1986	85.8	85.2	83.8	77.0	73.3	52.0	48.4	60.5	67.4	74.0	77.6	84.0
1987	85.0	85.7	85.8	84.0	83.2	76.6	71.1	74.1	78.1	80.7	83.4	86.9
1988	89.3	84.2	85.3	77.6	71.9	74.3	77.8	78.5	80.8	81.0	85.2	87.6
1989	89.6	86.2	86.3	84.4	82.0	80.3	66.7	69.7	74.1	79.7	83.0	85.2
1990	86.2	86.2	83.6	85.1	79.6	76.7	77.7	77.2	79.1	84.6	85.2	85.5
1991	88.8	89.2	84.3	87.3	86.3	82.2	71.5	74.2	80.4	85.0	83.6	86.4
1992	89.2	88.0	85.4	87.6	83.7	71.2	71.9	74.9	80.0	81.0	85.2	86.6
1993	89.2	88.7	85.0	83.0	64.4	59.8	60.4	61.4	62.5	67.6	75.5	83.4
1994	86.2	85.7	84.7	82.6	82.7	71.8	74.4	77.7	81.1	85.2	80.8	87.3
Avg	85.5	84.2	82.1	77.0	71.6	66.4	65.8	67.8	70.3	75.0	79.3	84.4
Min	69.0	68.5	58.6	49.6	49.6	46.3	41.9	48.5	51.6	52.4	61.2	72.2
Max	89.6	89.3	86.3	87.6	86.3	82.2	82.1	81.3	84.2	86.0	86.8	87.6

Table I-27b. CALSIM Simulated Beginning-of-Month X2 Location (km from Golden Gate), for 2020 Baseline Conditions

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	74.9	83.2	85.0	76.8	78.1	67.4	66.8	66.5	60.7	63.5	74.1	82.9
1923	86.7	85.9	83.1	71.1	67.9	72.0	74.7	68.4	69.5	74.4	79.3	84.6
1924	86.3	86.7	84.0	82.9	84.2	78.8	77.4	80.3	84.2	84.2	82.6	87.0
1925	89.4	88.2	85.5	81.8	80.0	63.4	64.7	66.0	69.7	75.9	81.8	83.8
1926	88.3	87.4	85.1	85.6	79.4	67.2	74.0	69.1	73.8	81.0	83.5	84.9
1927	88.6	87.6	77.1	75.0	69.3	54.9	59.4	59.1	64.3	71.4	76.4	83.7
1928	87.7	85.4	82.5	82.0	76.1	72.4	57.7	63.1	68.5	78.1	78.8	84.4
1929	88.5	86.2	83.7	83.9	83.9	78.6	77.1	79.7	80.1	81.8	85.4	86.7
1930	89.3	87.8	85.4	79.3	74.6	73.8	68.7	73.0	76.1	80.6	83.3	85.2
1931	88.8	86.2	85.7	82.5	80.9	79.9	81.5	81.3	84.2	84.3	82.9	87.6
1932	89.6	87.4	85.7	74.5	73.8	72.0	74.2	75.1	74.1	75.7	81.7	84.4
1933	88.5	87.6	85.1	85.3	76.5	79.2	76.3	76.6	80.6	81.9	85.5	85.0
1934	88.7	89.4	84.7	81.2	75.0	74.5	75.0	76.2	80.8	81.0	85.2	87.4
1935	89.5	87.5	84.0	84.8	70.8	74.0	69.3	61.6	64.4	72.1	78.5	84.4
1936	88.5	85.5	84.7	82.5	69.4	59.0	63.4	65.0	68.3	73.9	79.1	84.6
1937	88.2	85.5	84.9	81.6	80.2	67.4	62.2	64.1	66.6	73.5	79.0	84.5
1938	88.2	85.7	76.4	63.5	64.4	52.3	47.1	51.2	53.1	58.0	72.3	82.3
1939	83.8	77.9	83.3	84.2	83.2	80.0	76.7	76.0	76.9	81.2	83.5	86.7
1940	89.2	84.6	85.4	80.2	68.7	60.2	53.4	54.5	64.9	73.5	77.4	84.0
1941	86.8	85.5	83.2	69.6	57.3	51.4	51.4	52.8	57.4	67.5	75.4	83.3
1942	82.1	82.9	84.6	66.0	57.3	50.2	61.3	59.2	60.9	66.7	75.1	83.2
1943	83.4	82.0	83.3	72.7	59.1	57.5	54.0	60.9	65.5	73.7	76.8	83.8
1944	86.3	86.9	84.4	85.4	82.5	72.9	72.3	74.3	75.2	78.6	82.7	86.7
1945	88.9	84.4	83.7	77.7	79.6	66.2	68.0	70.6	71.2	75.4	79.6	84.7
1946	88.3	85.0	83.6	64.5	61.6	64.8	69.7	72.4	72.7	76.5	80.0	84.8
1947	86.8	85.0	84.3	80.4	81.9	76.4	73.8	74.7	76.5	80.1	83.2	85.0
1948	88.7	84.9	85.5	84.8	80.9	77.2	75.6	68.6	66.3	72.1	78.5	84.4
1949	86.2	85.8	84.4	82.0	84.4	81.1	67.7	72.0	73.4	77.9	82.4	85.9
1950	89.0	85.7	85.5	84.0	75.4	68.6	71.0	69.1	70.4	74.2	79.2	84.6
1951	86.4	85.6	68.6	56.7	56.4	55.4	62.6	69.0	68.9	75.4	78.0	84.2
1952	86.8	85.8	83.3	69.5	57.8	55.2	55.6	54.9	54.7	58.9	72.6	82.4
1953	78.1	75.4	82.4	68.6	56.4	64.2	69.7	70.2	67.9	71.1	76.4	83.7
1954	81.8	84.6	83.7	82.7	71.8	62.0	60.7	60.8	65.7	76.9	78.5	84.4
1955	86.6	84.9	83.2	76.2	75.6	75.4	78.3	75.6	75.8	79.1	82.9	85.5
1956	88.9	85.8	85.5	62.7	50.6	52.1	59.8	65.7	62.5	69.9	76.2	83.6
1957	82.1	80.5	84.1	85.3	83.2	71.9	64.4	67.9	68.5	75.4	77.8	84.1
1958	86.5	83.2	85.0	75.9	67.3	51.6	51.4	50.8	55.6	61.9	73.6	82.7
1959	79.7	77.2	83.0	84.9	72.1	62.9	66.5	74.4	76.5	78.3	79.7	84.8
1960	85.4	86.6	84.1	83.0	80.3	72.1	71.7	74.1	75.7	80.8	83.4	85.8
1961	89.0	86.0	83.8	82.1	81.1	72.5	73.2	75.5	77.5	80.4	83.3	84.3
1962	88.4	85.4	84.6	82.1	82.4	66.6	67.9	72.2	73.9	79.1	80.7	85.1
1963	86.8	73.2	81.3	73.1	76.7	61.5	64.5	56.1	61.3	71.2	75.8	83.5
1964	86.6	85.4	75.8	81.8	75.9	75.6	78.2	73.7	76.1	80.7	83.4	84.6
1965	88.5	86.1	83.7	63.0	53.9	61.5	66.9	61.8	65.5	75.3	76.0	83.5
1966	85.9	86.8	79.6	77.8	70.5	69.3	69.1	71.2	74.0	77.7	80.4	85.0
1967	87.0	85.6	82.9	69.2	62.7	60.2	58.0	57.4	56.9	59.1	72.6	82.4
1968	78.5	75.9	82.1	81.7	72.6	61.7	63.5	69.9	75.5	78.2	80.5	85.0
1969	86.9	85.5	84.1	75.3	57.0	50.6	54.8	56.0	55.5	60.2	73.0	82.6
1970	85.4	77.6	82.7	66.1	49.9	52.0	59.8	67.7	71.4	77.0	75.7	83.4
1971	86.3	86.9	80.4	65.2	61.9	64.6	62.7	66.3	65.2	72.2	74.5	83.0
1972	81.7	83.6	85.1	81.2	81.4	74.3	68.5	73.1	76.7	76.1	79.9	84.8
1973	88.6	85.7	78.9	74.2	59.7	54.7	56.7	65.9	68.9	74.3	77.7	84.1
1974	86.2	85.4	66.7	59.2	51.4	59.2	52.8	54.2	62.3	70.2	76.3	83.6
1975	79.0	81.1	83.9	81.8	82.3	65.1	56.2	63.0	64.3	68.5	75.8	83.5
1976	80.4	77.4	80.3	81.9	83.8	79.6	77.0	78.6	83.6	85.8	81.2	87.4
1977	89.5	87.8	86.2	84.7	82.2	81.6	82.1	81.1	84.0	84.5	82.8	88.0
1978	89.7	87.6	85.7	79.8	63.2	59.5	56.3	58.3	63.4	69.4	76.0	83.6
1979	86.0	86.8	84.8	82.5	75.0	65.2	64.5	68.1	70.3	74.4	79.3	84.6
1980	86.8	85.4	84.1	79.3	59.3	51.4	55.8	64.6	68.0	73.7	77.5	84.0
1981	86.1	86.4	85.2	83.4	77.2	71.5	67.9	71.4	76.7	81.0	83.5	84.7
1982	86.3	85.8	73.1	58.6	55.4	51.9	52.5	48.5	55.2	64.6	74.5	83.0
1983	79.4	72.7	65.2	56.7	51.9	46.4	41.9	49.1	51.6	52.5	61.6	73.3
1984	69.3	68.8	58.6	49.7	53.4	60.0	61.6	67.9	71.9	76.5	75.3	83.3
1985	86.5	84.6	74.3	74.0	79.8	77.1	75.5	74.1	75.2	81.0	83.5	85.0
1986	86.0	85.5	84.4	77.7	72.4	51.9	48.3	60.2	67.2	74.0	77.6	81.9
1987	84.8	86.0	84.5	85.1	82.3	75.6	70.4	74.1	77.8	80.0	83.1	86.9
1988	89.3	84.0	85.2	79.8	71.6	74.2	77.8	78.6	80.6	81.0	85.2	86.7
1989	89.2	87.1	85.3	85.1	82.0	80.3	66.6	69.5	74.1	79.9	83.1	85.0
1990	86.8	85.8	84.2	85.3	79.1	76.5	77.6	77.2	78.4	84.3	85.5	85.7
1991	88.9	89.1	84.3	87.3	86.3	82.2	71.2	73.9	77.5	84.0	86.0	84.9
1992	88.7	88.9	85.0	87.5	83.6	71.1	71.7	74.8	80.4	81.0	85.2	87.9
1993	89.6	87.4	86.2	83.3	64.6	59.9	60.2	61.2	62.7	67.6	75.5	83.4
1994	87.8	86.8	83.5	83.2	82.7	73.3	74.9	77.5	80.8	85.1	81.2	87.4
Avg	86.1	84.5	82.4	77.1	71.7	66.5	65.9	67.6	70.2	75.0	79.3	84.5
Min	69.3	68.8	58.6	49.7	49.9	46.4	41.9	48.5	51.6	52.5	61.6	73.3
Max	89.7	89.4	86.2	87.5	86.3	82.2	82.1	81.3	84.2	85.8	86.0	88.0

Table I-27c. CALSIM Simulated Beginning-of-Month X2 Location (km from Golden Gate), 2020 Baseline minus 2001 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0.0	0.0	0.0	-2.0	-1.3	-0.4	0.6	0.1	0.2	1.7	0.5	0.2
1923	1.1	0.7	-2.5	0.2	1.4	1.6	0.7	0.1	0.1	-0.2	0.0	0.0
1924	0.9	0.1	-1.0	-2.4	0.8	0.0	0.1	-0.2	0.0	0.0	-0.3	-0.1
1925	0.0	0.2	-0.2	-0.4	-1.3	-0.6	-0.2	-0.4	-0.4	-0.1	0.0	0.2
1926	0.2	0.0	0.3	3.6	0.2	-0.7	0.2	-0.7	0.5	0.0	0.0	0.2
1927	0.0	0.8	-0.3	0.5	0.9	0.4	0.2	-0.1	0.2	0.0	0.0	0.0
1928	1.8	-1.1	0.0	0.1	0.0	0.0	0.2	0.0	0.0	-0.2	0.3	0.0
1929	0.3	-0.2	0.2	-0.4	0.3	-0.1	-0.3	-0.1	-0.1	0.0	0.0	0.3
1930	0.2	-0.2	0.2	-0.6	-0.5	-0.3	-0.3	-0.7	-0.4	0.3	0.1	0.9
1931	0.4	-1.0	0.7	-0.2	-0.5	-0.2	-0.1	0.0	1.4	-1.4	1.9	0.2
1932	0.1	-0.7	0.7	-1.2	1.6	0.1	0.0	0.1	-0.1	-0.1	-0.1	1.6
1933	0.5	0.3	0.6	-0.1	-0.5	-0.3	-0.2	-0.1	-0.4	-0.1	0.0	0.0
1934	0.0	0.1	0.0	-0.6	-0.2	-0.2	-0.1	0.0	-0.2	0.0	0.0	-0.2
1935	0.0	0.1	-0.3	0.9	-0.1	0.0	-0.5	-0.4	0.0	0.1	0.0	0.0
1936	0.0	0.4	-0.3	-0.1	-0.1	0.2	0.3	0.0	-0.1	0.0	0.0	0.0
1937	1.0	-0.4	0.3	0.0	-0.2	0.4	0.3	0.1	-0.2	-0.3	-0.1	-0.1
1938	0.2	-0.9	-0.8	0.0	1.4	0.6	0.3	0.0	0.0	0.1	0.0	0.0
1939	3.5	1.3	0.9	0.3	-0.6	-0.3	0.0	-0.7	-0.1	0.4	0.1	0.1
1940	0.8	-0.3	-0.1	0.6	-0.2	-0.1	0.0	-0.1	0.0	-0.7	-0.2	-0.1
1941	-0.7	-0.3	-0.4	0.9	0.5	0.4	0.1	-0.1	0.3	0.1	0.0	0.7
1942	0.1	0.8	0.0	0.7	0.6	0.6	-1.3	-0.6	-0.3	0.4	0.0	0.0
1943	1.8	1.3	4.0	1.3	0.4	0.4	0.1	-0.3	-0.4	-0.5	0.0	0.0
1944	-0.2	0.0	-0.2	-0.1	-0.1	0.0	-0.1	0.0	-0.1	0.0	0.0	0.0
1945	0.9	-0.4	-0.8	-0.5	-1.5	-0.2	0.0	-0.5	-0.5	-0.4	-0.2	-0.1
1946	1.8	-0.9	0.5	0.3	-0.3	0.0	0.4	0.0	0.1	0.0	0.0	0.0
1947	-0.2	-1.0	0.2	-2.2	0.0	-0.2	0.5	-0.1	0.4	-0.9	-0.3	0.7
1948	0.3	-0.3	0.5	-0.4	0.1	0.0	-0.4	-0.4	-0.2	0.2	0.0	0.1
1949	0.3	0.4	0.4	-2.1	2.0	0.5	0.4	-0.2	-0.1	0.0	0.0	1.1
1950	0.4	-0.4	0.4	-0.3	0.0	0.0	-0.2	-0.2	-0.2	0.0	0.0	0.0
1951	0.6	-0.2	0.7	0.3	0.4	0.1	0.9	0.2	0.3	-2.5	0.8	0.3
1952	0.6	-1.1	0.3	1.4	0.4	0.2	0.1	0.2	0.2	0.2	0.1	0.0
1953	0.8	0.7	0.2	0.1	0.4	0.0	0.0	-0.3	-0.4	1.0	1.0	0.4
1954	0.6	0.0	1.8	-1.2	-1.2	-0.4	0.1	-0.1	0.0	0.0	0.0	0.0
1955	0.5	-0.7	-0.1	0.3	0.4	0.2	0.4	-0.1	0.7	0.1	0.1	0.6
1956	0.2	-0.3	0.7	0.3	0.3	0.0	-0.1	-0.4	-0.1	0.0	0.0	0.0
1957	2.0	2.9	0.9	0.3	0.6	0.1	0.4	0.2	-1.1	0.0	-0.2	-0.1
1958	0.8	2.2	0.9	0.1	-0.1	0.0	0.1	0.0	0.1	1.2	0.4	0.1
1959	0.8	1.1	0.3	0.1	0.0	0.0	0.0	0.5	0.0	0.4	-0.2	0.0
1960	0.3	0.1	0.5	0.0	-2.0	-0.3	-0.5	-0.2	-0.2	-0.1	0.0	1.2
1961	0.4	0.4	-0.8	1.6	0.3	1.3	1.1	0.4	0.8	-0.6	-0.2	0.3
1962	0.0	-0.4	1.1	-0.6	-0.2	-0.2	-0.3	-0.8	-0.3	1.3	0.3	0.1
1963	-0.3	0.3	0.5	0.0	-0.2	-0.2	0.0	-0.1	0.6	0.2	-0.2	0.0
1964	0.3	3.1	1.9	0.5	-0.1	0.0	0.6	-2.7	-0.2	0.9	0.3	-0.1
1965	1.8	-0.4	0.4	0.4	0.3	0.0	0.0	-0.3	0.0	0.0	0.0	0.0
1966	0.1	0.0	1.6	0.5	0.1	0.6	0.4	-1.3	0.1	-0.3	-0.1	0.0
1967	0.9	-0.4	0.1	-0.1	-0.1	0.1	0.5	0.1	0.0	0.6	1.6	0.5
1968	1.0	0.5	0.1	-0.3	-0.3	0.1	0.9	0.2	0.1	-0.4	0.5	0.2
1969	0.4	0.0	0.4	0.0	0.0	0.0	-0.1	0.1	0.2	0.2	0.0	0.1
1970	6.4	2.4	0.5	0.4	0.3	-0.1	0.8	0.1	-0.9	-0.9	0.0	0.0
1971	0.0	0.0	-0.3	0.1	0.0	0.0	0.9	-0.1	0.2	0.9	-0.4	-0.2
1972	1.2	0.1	0.0	2.0	1.8	1.1	0.2	-0.9	-0.5	-0.1	0.0	0.0
1973	0.0	-0.4	-0.7	0.5	0.3	0.3	0.2	-0.4	0.2	0.0	0.0	0.0
1974	0.3	-0.1	0.3	0.1	0.0	-0.1	0.0	-0.1	-0.2	0.6	0.2	0.2
1975	1.0	3.6	1.3	-0.1	0.0	0.0	0.3	-0.1	0.2	0.7	0.3	0.1
1976	1.1	2.5	0.8	-0.1	-0.1	-1.5	-0.6	0.3	-0.4	-0.2	-5.6	0.2
1977	1.2	0.1	0.3	2.1	1.3	0.3	0.0	0.0	0.1	-0.2	-3.6	2.0
1978	0.7	-0.3	0.8	-0.4	-0.1	-0.9	-0.8	-0.6	-0.1	0.0	-0.1	0.0
1979	2.6	1.4	-0.9	-2.0	0.7	0.8	0.0	0.5	0.2	0.0	0.0	0.0
1980	0.0	-0.2	0.2	0.4	0.2	0.0	1.0	0.0	-0.3	0.1	0.0	0.0
1981	0.9	0.6	-0.6	1.0	0.3	0.9	0.4	-0.4	1.2	0.0	0.0	-0.6
1982	-0.3	-0.1	0.7	0.1	0.5	0.1	0.0	0.0	0.1	0.3	0.1	0.0
1983	2.2	2.8	0.7	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.4	1.1
1984	0.3	0.3	0.0	0.1	0.1	1.4	-0.8	0.0	0.1	0.5	-1.0	-0.3
1985	-0.2	-0.1	1.3	0.2	0.1	-0.2	0.6	-1.0	-0.5	0.0	0.0	-0.3
1986	0.2	0.3	0.6	0.7	-0.9	-0.1	-0.1	-0.3	-0.2	0.0	0.0	-2.1
1987	-0.2	0.3	-1.3	1.1	-0.9	-1.0	-0.7	0.0	-0.3	-0.7	-0.3	0.0
1988	0.0	-0.2	-0.1	2.2	-0.3	-0.1	0.0	0.1	-0.2	0.0	0.0	-0.9
1989	-0.4	0.9	-1.0	0.7	0.0	0.0	-0.1	-0.2	0.0	0.2	0.1	-0.2
1990	0.6	-0.4	0.6	0.2	-0.5	-0.2	-0.1	0.0	-0.7	-0.3	0.3	0.2
1991	0.1	-0.1	0.0	0.0	0.0	0.0	-0.3	-0.3	-2.9	-1.0	2.4	-1.5
1992	-0.5	0.9	-0.4	-0.1	-0.1	-0.1	-0.2	-0.1	0.4	0.0	0.0	1.3
1993	0.4	-1.3	1.2	0.3	0.2	0.1	-0.2	-0.2	0.2	0.0	0.0	0.0
1994	1.6	1.1	-1.2	0.6	0.0	1.5	0.5	-0.2	-0.3	-0.1	0.4	0.1
Avg	0.6	0.3	0.3	0.1	0.1	0.1	0.1	-0.2	-0.1	0.0	0.0	0.1
Min	-0.7	-1.3	-2.5	-2.4	-2.0	-1.5	-1.3	-2.7	-2.9	-2.5	-5.6	-2.1
Max	6.4	3.6	4.0	3.6	2.0	1.6	1.1	0.5	1.4	1.7	2.4	2.0

Table I-27d. CALSIM Simulated Beginning-of-Month X2 Location (km from Golden Gate), Percentiles for 2001 and 2020 Baselines

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	69.0	68.5	58.6	49.6	49.6	46.3	41.9	48.5	51.6	52.4	61.2	72.2
10	78.9	75.4	73.9	62.6	54.9	51.7	52.8	54.6	56.9	61.8	73.6	82.6
20	82.0	82.3	80.8	68.7	59.1	55.3	57.1	60.5	63.5	69.9	75.7	83.4
30	85.7	84.9	82.6	74.5	64.4	60.3	60.6	63.1	65.7	73.6	76.4	83.6
40	86.1	85.5	83.3	77.6	70.9	64.0	63.1	66.4	68.4	74.3	78.0	84.0
50	86.5	85.8	83.9	80.5	75.1	67.0	66.9	69.0	70.6	76.0	79.3	84.4
60	87.1	86.0	84.5	82.0	76.9	71.2	69.0	71.8	73.9	77.9	80.4	84.6
70	88.2	86.5	84.8	82.6	80.4	72.9	71.9	74.0	75.5	79.7	82.7	84.8
80	88.6	86.9	85.0	84.0	82.0	76.6	74.4	75.1	77.0	81.0	83.4	85.3
90	89.1	87.9	85.5	85.0	82.7	79.5	77.4	77.2	80.8	82.0	85.2	86.7
Max	89.6	89.3	86.3	87.6	86.3	82.2	82.1	81.3	84.2	86.0	86.8	87.6
Avg	85.5	84.2	82.1	77.0	71.6	66.4	65.8	67.8	70.3	75.0	79.3	84.4
B: 2020 Baseline												
Min	69.3	68.8	58.6	49.7	49.9	46.4	41.9	48.5	51.6	52.5	61.6	73.3
10	79.7	77.4	75.8	63.0	55.4	51.9	52.8	54.5	56.9	63.5	74.1	82.7
20	84.8	83.2	82.1	69.5	59.3	55.4	56.7	60.2	63.4	70.2	75.8	83.4
30	86.2	84.9	83.2	74.5	64.6	60.2	60.7	63.1	65.5	73.5	76.4	83.7
40	86.5	85.4	83.7	77.7	70.8	63.4	63.5	66.3	68.3	74.3	78.0	84.1
50	86.8	85.6	84.1	81.2	75.0	67.2	66.9	69.0	70.4	75.9	79.3	84.5
60	88.2	85.8	84.4	81.9	76.7	71.9	69.1	71.2	73.9	77.9	80.5	84.7
70	88.5	86.2	84.7	82.5	80.0	73.3	71.7	73.7	75.7	79.9	82.6	85.0
80	88.9	86.9	85.1	84.0	82.0	75.6	74.9	74.8	76.9	81.0	83.3	85.7
90	89.3	87.6	85.5	85.1	83.2	79.2	77.1	77.2	80.6	81.9	83.5	86.9
Max	89.7	89.4	86.2	87.5	86.3	82.2	82.1	81.3	84.2	85.8	86.0	88.0
Avg	86.1	84.5	82.4	77.1	71.7	66.5	65.9	67.6	70.2	75.0	79.3	84.5
Comparison: B – A												
Min	0.3	0.3	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.1	0.4	1.1
10	0.8	2.0	1.9	0.4	0.5	0.2	0.0	-0.1	0.0	1.7	0.5	0.1
20	2.8	0.9	1.3	0.8	0.2	0.1	-0.4	-0.3	-0.1	0.3	0.1	0.0
30	0.5	0.0	0.6	0.0	0.2	-0.1	0.1	0.0	-0.2	-0.1	0.0	0.1
40	0.4	-0.1	0.4	0.1	-0.1	-0.6	0.4	-0.1	-0.1	0.0	0.0	0.1
50	0.3	-0.2	0.2	0.7	-0.1	0.2	0.0	0.0	-0.2	-0.1	0.0	0.1
60	1.1	-0.2	-0.1	-0.1	-0.2	0.7	0.1	-0.6	0.0	0.0	0.1	0.1
70	0.3	-0.3	-0.1	-0.1	-0.4	0.4	-0.2	-0.3	0.2	0.2	-0.1	0.2
80	0.3	0.0	0.1	0.0	0.0	-1.0	0.5	-0.3	-0.1	0.0	-0.1	0.4
90	0.2	-0.3	0.0	0.1	0.5	-0.3	-0.3	0.0	-0.2	-0.1	-1.7	0.2
Max	0.1	0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	-0.2	-0.8	0.4
Avg	0.6	0.3	0.3	0.1	0.1	0.1	0.1	-0.2	-0.1	0.0	0.0	0.1

Table I-28a. CALSIM Simulated CVP Tracy Pumping, for 2001 Scenario A Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-	VAMP	VAMP	Post-	Jun	Jul	Aug	Sep	taf/yr
							VAMP	4/16-	5/15	VAMP					
							4/1-4/15	4/30	5/15	5/16-5/31					
1922	4,391	4,265	4,227	4,232	4,254	3,467	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,778
1923	4,391	4,265	3,007	3,012	3,406	2,848	4,544	800	800	800	2,232	4,546	4,511	4,458	2,422
1924	4,323	2,553	2,881	4,224	3,425	800	800	800	800	800	800	1,482	1,489	2,675	1,581
1925	2,575	1,138	3,653	3,474	4,219	800	4,600	1,125	1,125	3,001	2,027	3,194	4,142	4,393	2,080
1926	4,028	3,005	800	4,220	4,234	1,988	4,544	800	800	800	1,145	800	800	3,409	1,671
1927	3,107	4,219	2,992	2,995	4,225	4,301	4,600	1,500	1,500	1,500	2,923	4,600	4,572	4,490	2,589
1928	3,576	4,263	4,226	4,231	4,251	4,275	4,544	800	800	800	1,809	4,557	4,519	4,463	2,633
1929	3,420	2,966	4,221	4,225	3,476	800	800	800	800	800	1,497	1,786	3,786	3,441	1,882
1930	3,031	2,076	4,211	4,214	3,342	2,421	2,679	800	800	800	2,495	1,380	1,341	2,049	1,919
1931	3,489	2,659	1,090	4,094	2,145	1,196	800	800	800	800	1,301	800	1,053	2,336	1,312
1932	2,470	2,120	4,209	2,991	2,670	1,436	2,351	1,125	1,125	1,125	1,995	2,553	3,260	4,260	1,860
1933	1,960	1,114	681	596	877	1,247	800	800	800	1,788	800	800	963	2,912	848
1934	3,018	800	4,209	1,437	641	867	800	800	800	800	800	800	2,188	2,206	1,129
1935	1,566	4,063	3,022	2,993	1,008	2,509	2,430	1,500	800	800	2,555	2,116	4,469	4,370	1,902
1936	2,670	1,956	1,714	2,999	2,561	2,160	800	800	800	800	2,346	3,871	4,485	4,406	1,858
1937	4,297	3,589	2,244	3,001	4,235	2,726	1,359	1,359	1,500	1,500	2,407	3,170	4,465	4,362	2,249
1938	4,276	3,139	799	800	800	1,666	800	800	800	800	3,000	4,600	4,578	4,494	1,802
1939	4,391	4,265	4,227	4,232	3,011	2,870	1,125	1,125	1,125	1,125	2,967	3,541	2,884	3,851	2,325
1940	2,120	2,383	184	4,221	4,234	4,267	4,600	1,500	1,500	3,000	3,000	4,571	4,530	4,468	2,366
1941	4,342	4,067	4,222	4,226	4,244	4,294	4,544	800	800	800	3,000	4,600	4,558	4,483	2,745
1942	4,370	4,259	4,225	4,229	2,386	3,020	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,645
1943	4,391	4,265	4,227	4,232	3,192	4,321	4,544	800	800	800	2,196	4,600	4,578	4,494	2,658
1944	4,391	4,265	4,227	4,232	3,948	4,269	1,500	1,500	1,500	1,500	2,338	4,518	4,098	4,417	2,640
1945	2,537	4,237	2,998	4,222	4,236	4,276	3,592	800	800	2,953	2,857	4,600	4,559	4,484	2,599
1946	4,371	4,259	4,225	4,230	4,204	2,711	3,437	1,500	1,500	3,000	3,000	4,598	4,550	4,479	2,737
1947	3,629	4,256	4,224	3,110	4,016	3,477	2,941	800	800	800	1,844	4,528	4,497	4,433	2,454
1948	2,593	2,809	2,738	4,056	4,236	3,223	4,544	800	800	2,953	3,000	4,574	4,532	4,470	2,459
1949	3,953	3,297	4,222	2,948	3,017	4,243	3,078	800	800	800	2,060	4,554	4,517	4,462	2,420
1950	3,556	3,843	2,775	3,005	3,927	3,965	800	800	800	800	2,464	4,479	4,460	4,352	2,317
1951	3,383	4,228	4,215	2,372	1,525	2,914	3,564	800	800	800	3,000	4,600	4,556	4,482	2,316
1952	4,368	4,258	3,005	3,009	4,248	4,306	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,585
1953	4,391	4,265	4,227	2,811	3,640	800	4,007	1,125	1,125	3,001	3,000	4,600	4,578	4,494	2,500
1954	4,391	4,265	4,227	4,232	4,254	4,284	4,600	1,125	1,125	3,001	3,000	4,600	4,578	4,494	2,854
1955	4,391	4,265	4,227	4,232	3,641	2,292	2,718	800	800	800	1,934	4,506	3,541	3,558	2,363
1956	3,055	3,399	2,997	3,001	4,233	4,305	4,451	800	800	2,953	3,000	4,600	4,578	4,494	2,543
1957	4,391	4,265	4,227	4,232	4,254	4,303	4,506	1,125	1,125	3,001	2,713	4,600	4,565	4,487	2,834
1958	4,377	4,261	4,226	3,010	4,251	4,302	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,753
1959	4,391	4,265	4,227	4,232	3,841	1,930	1,125	1,125	1,125	2,793	3,000	4,598	4,550	4,479	2,573
1960	3,244	1,477	800	3,009	3,942	4,222	800	800	800	800	1,762	4,438	4,381	3,246	1,938
1961	3,157	4,094	4,131	3,427	4,224	2,297	2,619	800	800	2,344	2,188	4,573	4,532	3,991	2,406
1962	3,026	2,769	4,222	3,475	4,245	4,279	3,120	1,125	1,125	3,001	2,766	4,596	4,548	4,478	2,572
1963	4,361	4,256	4,224	4,228	4,248	4,302	4,544	800	800	800	3,000	4,600	4,564	4,487	2,759
1964	4,376	4,261	4,226	4,230	2,890	2,409	800	800	800	2,883	2,366	4,517	4,489	4,414	2,472
1965	2,296	4,032	4,218	4,221	4,236	4,213	4,600	1,500	1,500	3,000	3,000	4,600	4,578	4,494	2,727
1966	4,391	4,265	4,227	4,232	4,254	4,292	3,324	1,125	1,125	1,125	3,000	4,600	4,554	4,481	2,754
1967	4,098	4,257	3,005	3,009	4,249	4,036	800	800	800	800	3,000	4,600	4,565	4,487	2,466
1968	4,377	4,261	4,226	4,230	3,674	3,703	1,125	1,125	1,125	2,692	3,000	4,600	4,555	4,482	2,669
1969	4,025	3,941	3,005	3,009	4,249	4,318	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,546
1970	4,391	4,265	2,223	1,921	2,252	2,837	3,759	800	800	800	1,987	4,600	4,557	4,483	2,212
1971	4,369	4,258	4,225	4,229	4,250	4,294	4,600	1,125	1,125	1,125	3,000	4,600	4,573	4,491	2,792
1972	4,385	4,263	4,226	4,231	4,152	4,283	2,671	800	800	2,583	3,000	4,573	4,464	4,183	2,730
1973	3,681	4,250	4,222	4,226	4,245	4,085	4,202	1,500	1,500	1,500	2,754	4,600	4,569	4,489	2,743
1974	4,381	4,262	4,226	3,011	4,252	4,299	4,544	800	800	800	2,884	4,600	4,571	4,490	2,680
1975	4,384	4,263	4,226	4,231	4,253	3,185	4,600	1,500	1,500	1,500	3,000	4,600	4,570	4,490	2,759
1976	4,382	4,262	4,226	4,231	3,209	1,850	800	800	800	800	1,510	2,507	3,241	4,114	2,120
1977	2,732	1,401	800	800	800	800	800	800	800	800	1,484	3,082	2,629	2,810	1,147
1978	2,843	1,661	2,989	2,991	4,218	4,300	800	800	800	800	2,941	4,600	4,578	4,494	2,244
1979	4,391	3,945	4,226	4,232	4,254	4,281	1,500	1,500	1,500	3,000	3,000	4,600	4,562	4,485	2,763
1980	4,374	4,260	4,225	4,230	4,249	2,543	4,409	800	800	800	2,395	4,600	4,578	4,494	2,614
1981	4,391	4,265	4,227	4,232	4,254	4,290	3,347	1,125	1,125	1,125	2,875	4,567	4,309	4,467	2,730
1982	3,820	4,249	3,002	3,006	4,244	4,310	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,643
1983	4,391	4,265	4,227	2,991	1,936	1,670	800	800	800	800	3,000	4,600	4,578	4,494	2,285
1984	4,391	4,265	2,174	2,622	3,096	4,301	1,500	1,500	1,500	1,500	2,562	4,600	4,578	4,494	2,421
1985	4,391	4,265	4,227	4,232	3,515	2,978	800	800	800	800	1,811	4,539	4,505	4,451	2,448
1986	3,511	2,345	3,000	4,223	4,239	4,269	4,544	800	800	800	2,324	3,262	4,511	4,459	2,388
1987	4,323	4,244	4,220	3,508	2,160	1,737	2,842	800	800	1,852	1,718	1,672	1,828	3,262	1,923
1988	2,528	2,999	2,888	4,219	2,878	800	800	800	800	1,941	2,284	1,991	3,611	2,941	1,769
1989	3,090	1,962	2,540	2,889	800	4,217	4,004	800	800	800	1,251	4,006	3,724	4,356	1,946
1990	3,315	1,085	2,690	2,999	3,916	2,331	800	800	800	800	1,412	1,271	1,529	2,522	1,482
1991	2,917	800	1,826	1,554	1,384	4,230	800	800	800	800	1,220	864	3,212	4,269	1,446
1992	2,932	1,903	1,827	2,423	4,222	3,353	800	800	800	800	800	800	2,049	1,397	1,399
1993	3,005	800	3,968	2,998	4,229	4,283	4,600	1,125	1,125	1,125	3,000	4,600	4,564	4,487	2,408
1994	4,376	4,261	4,226	4,230	4,251	2,922	2,212	800	800	1,775	2,416	4,600	4,563	4,150	2,583
Avg	3,718	3,456	3,389	3,470	3,476	3,156	2,748	1,019	1,011	1,509	2,385	3,827	4,010	4,140	2,304
Min	1,566	800	184	596	641	800	800	800	800	800	800	800	800	1,397	848
Max	4,391	4,265	4,227	4,2											

Table I-28b. CALSIM Simulated CVP Tracy Pumping, 2001 Scenario A minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre- VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post- VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	0	0	0	-216	631	0	0	0	0	0	25	13	8
1923	25	8	2	3	1	-4	0	0	0	0	-3	-16	-12	-7	0
1924	-12	-405	-8	-1	-1	0	0	0	0	0	0	395	-13	154	7
1925	-10	-1	-51	1	1	0	0	0	0	0	40	3	-167	4	-11
1926	1	-13	0	0	0	-1	0	0	0	0	345	0	-68	-302	-2
1927	7	2	0	0	1	948	0	0	0	0	3	12	29	15	63
1928	-779	9	3	3	6	-4	0	0	0	0	0	-16	-12	-6	-49
1929	-148	-1,254	-1	-1	-6	0	0	0	0	0	0	3	425	16	-57
1930	0	305	0	1	-57	-812	0	0	0	0	55	-81	176	1	-26
1931	-2	-223	8	-1	1	-44	0	0	0	0	-119	0	-10	-15	-24
1932	-80	750	0	0	-962	-91	-261	0	0	0	-17	-18	-507	-21	-62
1933	-163	-49	-62	-95	-117	0	0	0	0	217	0	0	-19	0	-23
1934	219	0	0	-360	0	4	0	0	0	0	0	0	67	14	-3
1935	-50	-3	-13	0	-23	333	24	0	0	0	-2	-1	0	0	16
1936	-639	-475	310	0	484	17	0	0	0	0	1	126	1	2	-13
1937	1	142	8	0	0	-914	14	14	0	0	-104	6	2	3	-52
1938	1	-1,084	7	0	0	0	0	0	0	0	0	0	2	1	-64
1939	2	1	0	0	-5	0	0	0	0	0	457	471	-104	-15	49
1940	-157	-1	-167	0	-1	15	0	0	0	0	0	35	26	20	-14
1941	27	-132	3	3	5	609	0	0	0	0	0	27	27	14	36
1942	27	9	3	1,062	333	248	0	0	0	0	0	0	20	11	103
1943	21	6	2	3	55	457	0	0	0	0	1	0	26	14	36
1944	27	361	3	3	5	-3	0	0	0	0	-1	-9	-394	-14	-2
1945	-83	-2	-1	0	-1	-2	2	0	0	0	0	16	20	11	-3
1946	20	6	2	3	100	-7	-4	0	0	0	0	24	18	9	10
1947	-632	6	2	70	-4	-26	2	0	0	0	66	-10	-8	-17	-34
1948	-332	-256	58	-66	-2	16	0	0	0	0	0	9	7	4	-34
1949	-384	-951	1	-78	102	2	-13	0	0	0	-1	14	10	8	-78
1950	-67	725	123	1	3	-3	0	0	0	0	-2	-9	-7	-14	45
1951	134	-2	0	-1,847	-2,357	270	0	0	0	0	0	32	28	15	-215
1952	28	408	3	3	6	14	0	0	0	0	0	0	0	0	28
1953	0	0	0	-922	-39	-441	2	0	0	0	0	0	25	13	-84
1954	26	8	3	3	5	11	0	0	0	0	150	10	33	18	16
1955	34	11	3	4	649	8	-11	0	0	0	0	-27	-960	-722	-64
1956	-94	-13	-2	-2	-4	19	0	0	0	0	0	0	22	12	-4
1957	23	7	2	3	531	1,640	4	0	0	0	2	0	10	5	134
1958	9	3	1	1	2	13	0	0	0	0	0	0	9	5	3
1959	10	3	1	1	-411	65	0	0	0	-14	0	24	18	9	-15
1960	-448	-352	-393	2	3	-3	0	0	0	0	84	-9	-29	-1,051	-132
1961	0	353	19	-3	-1	-9	0	0	0	8	149	-4	-3	-137	22
1962	-369	-1,482	0	402	0	3	0	0	0	0	0	22	16	8	-83
1963	17	6	2	2	3	880	0	0	0	0	0	19	27	15	60
1964	27	9	3	3	425	6	0	0	0	-66	-1	146	239	-4	48
1965	-159	-205	0	-1	0	-65	0	0	0	0	0	0	16	9	-25
1966	17	5	2	2	3	19	0	0	0	0	0	26	22	11	7
1967	363	7	3	2	4	0	0	0	0	0	0	15	25	13	27
1968	25	8	3	3	-96	52	0	0	0	0	0	14	14	8	2
1969	-328	-312	2	1	2	10	0	0	0	0	0	0	0	0	-38
1970	0	0	-1,709	0	0	215	6	0	0	0	8	30	28	15	-87
1971	28	9	3	3	6	14	0	0	0	0	0	6	26	13	7
1972	26	8	2	3	-42	8	58	0	0	-4	0	12	-58	-281	-17
1973	-478	3	1	1	2	-51	2	0	0	0	-1	13	27	14	-29
1974	27	9	3	3	5	6	0	0	0	0	32	10	27	14	8
1975	28	9	3	3	6	53	0	0	0	0	0	12	27	15	10
1976	27	8	3	3	128	-13	0	0	0	0	-1	489	489	539	101
1977	144	-327	0	0	0	0	0	0	0	0	8	-132	-359	0	-40
1978	-209	410	0	0	0	-5	0	0	0	0	-1	0	21	11	13
1979	22	-313	333	3	4	26	0	0	0	0	0	10	18	9	7
1980	18	6	1	2	3	797	255	0	0	0	2	0	21	11	60
1981	22	38	2	3	1,331	1,666	-2	0	0	0	25	-28	-239	-11	165
1982	-94	-6	-2	-2	-4	24	0	0	0	0	0	0	11	6	-4
1983	12	4	1,015	-20	-100	0	0	0	0	0	0	0	0	0	57
1984	0	0	-1,039	0	0	9	0	0	0	0	22	2	28	15	-59
1985	29	9	3	3	-4	-106	0	0	0	0	5	14	10	23	-1
1986	-453	-1,893	1	1	2	-5	118	0	0	0	-5	-38	-22	-11	-142
1987	-22	-7	-2	-719	-2,016	-1,062	-77	0	0	85	72	85	112	-21	-208
1988	-139	103	-247	1	1	0	0	0	0	-48	135	23	-107	-1,334	-96
1989	827	-335	163	4	0	0	0	0	0	0	-483	430	-40	-8	36
1990	-692	-780	-324	0	0	7	0	0	0	0	505	414	-519	-9	-85
1991	5	0	0	1	-5	0	0	0	0	0	0	17	621	0	39
1992	83	850	0	34	0	1	0	0	0	0	0	0	-66	-13	53
1993	7	0	2	-2	-3	10	0	0	0	0	0	39	42	23	7
1994	42	14	5	5	1,876	346	4	0	0	0	0	0	-6	-339	109
Avg	-63	-85	-26	-34	-3	68	10	0	0	2	20	37	-11	-43	-8
Min	-779	-1,893	-1,709	-1,847	-2,357	-1,062	-261	0	0	-66	-483	-132	-960	-1,334	-215
Max	827	850	1,015	1,062	1,876	1,666	631	14	0	217	505	489	621	539	165

Table I-29a. CALSIM Simulated CVP Tracy Pumping, for 2020 Scenario A Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr	
1922	4,391	4,265	3,007	4,232	4,254	4,301	4,600	1,500	1,500	1,500	3,000	4,600	4,574	4,492	2,754	
1923	4,386	4,264	4,227	3,012	3,578	3,216	4,544	800	800	800	2,256	4,110	4,509	4,457	2,503	
1924	4,321	2,497	1,433	4,224	3,381	800	800	800	800	800	800	1,221	1,784	2,880	1,500	
1925	2,661	1,343	3,948	2,991	4,218	800	4,600	1,125	1,125	1,125	1,977	3,184	2,290	4,380	1,909	
1926	3,789	2,815	3,095	4,220	4,233	3,393	800	800	800	2,939	1,455	800	1,104	3,012	1,842	
1927	3,588	4,219	2,992	2,995	4,225	4,301	4,600	1,500	1,500	1,500	2,911	4,600	4,572	4,490	2,618	
1928	4,166	4,263	4,226	4,231	4,251	4,265	4,544	800	800	800	1,813	4,537	4,504	4,449	2,666	
1929	3,460	3,612	4,219	4,223	3,534	800	800	800	800	800	1,101	1,121	2,858	3,025	1,780	
1930	3,062	1,236	4,211	4,214	3,645	3,801	2,816	800	800	800	2,561	1,379	1,136	1,821	4,341	1,951
1931	3,503	3,005	800	4,218	2,357	1,392	800	800	800	800	1,433	800	1,148	2,334	1,360	
1932	2,189	2,191	2,989	4,211	3,375	1,543	2,657	1,125	1,125	1,125	2,072	3,166	3,540	4,284	1,963	
1933	3,186	1,171	754	708	1,015	1,247	800	800	800	1,856	800	800	898	2,539	922	
1934	2,999	874	4,209	1,883	641	1,167	800	800	800	800	800	800	1,293	2,219	1,124	
1935	1,803	4,081	4,025	2,993	1,178	2,017	2,625	1,500	800	800	2,522	2,559	4,466	4,365	1,989	
1936	2,281	1,957	2,033	2,999	2,397	2,065	800	800	800	800	2,334	3,262	4,476	4,386	1,799	
1937	3,717	3,664	1,241	3,000	4,233	1,657	1,500	1,500	1,500	1,500	2,683	3,735	4,454	4,337	2,148	
1938	4,265	2,349	741	746	800	1,666	800	800	800	800	3,000	4,600	4,578	4,494	1,748	
1939	4,391	4,265	4,227	4,232	3,041	2,435	2,653	1,125	1,125	1,125	2,760	3,302	2,906	3,795	2,316	
1940	2,109	2,208	800	4,223	4,237	4,262	4,600	1,500	1,500	3,000	3,000	4,561	4,522	4,464	2,392	
1941	4,334	3,500	4,221	4,225	4,243	4,294	4,544	800	800	2,953	3,000	4,600	4,571	4,490	2,781	
1942	4,384	4,263	4,226	4,231	4,253	3,423	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,775	
1943	4,391	4,265	4,227	4,232	4,188	4,309	4,544	800	800	800	2,233	4,600	4,558	4,483	2,713	
1944	4,206	4,167	4,225	4,229	3,944	3,979	1,500	1,500	1,500	1,500	2,324	3,549	3,179	4,382	2,485	
1945	2,272	4,232	2,996	3,000	4,233	4,268	3,716	800	800	800	2,321	4,569	4,528	4,468	2,405	
1946	4,340	4,229	4,222	4,226	2,033	2,971	3,448	1,500	1,500	3,000	3,000	4,600	4,552	4,480	2,629	
1947	3,636	4,257	4,224	4,229	4,064	3,919	2,883	800	800	800	1,849	3,452	3,237	4,382	2,405	
1948	2,095	3,192	2,719	3,883	4,232	3,292	4,544	800	800	2,953	3,000	4,587	4,542	4,475	2,445	
1949	3,819	3,824	4,077	4,228	2,922	4,238	3,131	800	800	800	2,045	4,545	4,510	4,458	2,506	
1950	3,528	3,760	2,730	3,004	3,925	3,962	800	800	800	800	2,430	4,465	4,449	4,327	2,302	
1951	3,296	4,224	4,214	706	1,388	2,914	3,554	800	800	800	2,151	4,600	4,556	4,482	2,150	
1952	4,368	4,042	4,225	3,009	4,248	4,310	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,740	
1953	4,391	4,265	4,227	4,232	2,981	886	4,159	1,125	1,125	3,001	3,000	4,600	4,565	4,487	2,560	
1954	4,377	4,261	2,895	4,230	4,251	4,285	4,600	1,125	1,125	3,001	3,000	4,600	4,574	4,492	2,770	
1955	4,386	4,264	4,227	4,231	3,635	2,191	2,774	800	800	2,908	3,000	1,887	2,145	3,962	2,265	
1956	2,822	4,088	2,996	2,999	4,231	4,300	4,544	800	800	2,953	3,000	4,600	4,578	4,494	2,572	
1957	4,391	4,265	4,227	4,232	4,254	4,293	4,468	1,125	1,125	1,125	3,000	4,600	4,556	4,482	2,789	
1958	4,368	4,258	4,225	3,009	4,250	4,302	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,752	
1959	4,391	4,265	4,227	4,232	4,254	3,770	2,546	1,125	1,125	2,807	3,000	4,592	4,546	4,477	2,751	
1960	2,235	1,946	1,064	3,008	3,942	3,945	800	800	800	800	1,752	4,406	4,358	3,064	1,888	
1961	2,468	4,198	3,985	3,632	4,223	3,224	2,561	800	800	800	1,692	4,556	4,518	3,939	2,346	
1962	2,994	2,200	4,221	3,900	4,242	4,275	3,253	1,125	1,125	3,001	3,000	4,598	4,550	4,479	2,580	
1963	4,362	4,256	4,224	4,229	4,248	4,291	4,544	800	800	2,953	3,000	4,600	4,578	4,494	2,828	
1964	4,391	4,265	4,227	4,232	2,887	2,328	3,931	800	800	800	1,548	2,805	4,382	4,378	2,332	
1965	2,082	4,231	4,216	4,219	4,233	3,516	4,600	1,500	1,500	3,000	3,000	4,600	4,570	4,489	2,681	
1966	4,382	4,262	4,226	4,231	4,252	4,291	1,125	1,125	1,125	3,001	2,695	4,595	4,548	4,478	2,728	
1967	3,543	4,255	3,004	3,008	3,933	4,036	800	800	800	800	3,000	4,600	4,559	4,484	2,413	
1968	4,371	4,259	4,225	4,230	2,802	2,833	1,125	1,125	1,125	2,706	3,000	4,600	4,569	4,489	2,568	
1969	3,700	3,769	3,006	3,011	4,252	4,315	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,516	
1970	4,391	4,265	4,227	1,921	2,252	2,698	3,772	800	800	800	2,048	4,592	4,546	4,477	2,329	
1971	4,358	4,255	4,224	4,228	4,247	4,294	4,600	1,125	1,125	1,125	3,000	4,600	4,573	4,491	2,791	
1972	4,385	4,263	4,226	4,231	3,715	4,282	800	800	800	2,623	3,000	4,550	4,514	4,342	2,662	
1973	3,706	4,245	4,220	3,005	4,241	4,299	4,350	1,500	1,500	1,500	2,753	4,600	4,570	4,489	2,686	
1974	4,382	4,262	4,226	3,011	4,252	4,295	4,544	800	800	800	2,725	4,600	4,567	4,488	2,670	
1975	4,379	4,014	4,226	4,230	4,252	4,290	4,600	1,500	1,500	1,500	3,000	4,600	4,570	4,490	2,812	
1976	4,382	4,262	4,226	4,231	3,113	2,192	800	800	800	800	1,482	1,620	2,526	3,460	1,997	
1977	2,459	1,650	800	833	800	800	800	800	800	800	1,466	3,121	3,061	2,803	1,175	
1978	3,052	1,111	2,989	2,992	3,904	2,026	800	800	800	800	2,955	4,600	4,558	4,483	2,066	
1979	4,370	3,685	2,391	4,229	4,250	4,269	4,438	1,500	1,500	3,000	3,000	4,567	4,527	4,467	2,714	
1980	4,339	4,249	4,222	3,006	4,242	3,587	4,544	800	800	800	2,355	4,600	4,578	4,494	2,601	
1981	4,391	3,886	4,227	4,232	4,229	3,227	3,506	1,125	1,125	2,553	2,892	4,578	4,535	4,471	2,706	
1982	3,903	4,251	3,003	3,007	4,245	4,302	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,647	
1983	4,391	4,265	3,730	1,653	1,936	1,670	800	800	800	800	3,000	4,600	4,578	4,494	2,173	
1984	4,391	4,265	2,292	2,890	4,252	3,381	4,174	1,500	1,500	1,500	2,500	4,600	4,570	4,490	2,528	
1985	4,383	4,263	4,226	4,231	3,553	2,690	800	800	800	800	1,793	4,547	4,512	4,459	2,432	
1986	3,419	2,268	3,000	3,004	4,241	4,260	4,544	800	800	800	2,302	3,792	4,494	4,426	2,330	
1987	4,305	4,238	3,564	1,380	1,936	1,712	800	800	800	1,647	1,527	1,422	1,540	3,235	1,623	
1988	1,958	3,016	4,214	4,217	1,417	800	2,152	800	800	2,026	2,221	2,181	3,645	4,125	1,858	
1989	3,093	2,236	2,229	2,995	800	4,217	4,055	800	800	800	1,863	2,893	3,414	4,348	1,900	
1990	3,789	1,284	2,803	2,998	3,915	2,370	800	800	800	800	1,123	867	2,057	2,512	1,523	
1991	2,921	800	1,850	1,623	1,443	4,231	800	800	800	800	1,276	1,256	2,014	4,247	1,408	
1992	2,942	1,426	1,985	2,462	4,222	3,420	2,634	800	800	800	800	800	3,177	1,185	1,498	
1993	2,688	1,287	2,995	2,999	4,231	4,272	4,600	1,125	1,125	1,125	3,000	4,590	4,544	4,476	2,355	
1994	4,356	3,881	4,223	4,228	4,247	2,658	2,219	800	800	1,821	800	4,600	4,554	3,747	2,423	
Avg	3,667	3,441	3,387	3,417	3,467	3,183	2,883	1,021	1,011	1,543	2,343	3,705	3,914	4,124	2,286	
Min	1,803	800	741	706	641	800	800	800	800	800	800	800	898	1,185	922	
Max	4,391	4,265	4,227	4,232	4,254	4,315	4,600	1,500	1,500	3,001	3,000	4,600	4,578	4,494	2,828	

Table I-29b. CALSIM Simulated CVP Tracy Pumping, 2020 Scenario A minus 2020 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	0	0	0	14	0	0	0	0	0	7	27	15	4
1923	27	9	3	238	289	614	0	0	0	0	-4	-458	-18	-10	41
1924	-18	-416	-79	-2	-127	0	0	0	0	0	0	-23	-11	13	-39
1925	-11	10	8	0	0	0	0	0	0	0	-31	8	-134	17	-8
1926	2	-44	16	1	2	-47	0	0	0	0	196	-57	-64	-315	-19
1927	504	0	0	0	0	97	0	0	0	0	3	12	29	15	41
1928	-189	9	3	3	6	-9	0	0	0	0	46	-16	-12	-12	-11
1929	-83	-258	-2	-2	18	0	0	0	0	0	-359	-716	-765	5	-132
1930	0	-829	0	0	-91	752	0	0	0	2	195	-382	-524	2	-52
1931	7	-314	-182	1	3	2	0	0	0	0	254	0	87	0	-9
1932	67	256	0	0	1,016	-18	-56	0	0	0	0	-4	-199	-5	60
1933	170	-10	-13	-20	-25	0	0	0	0	0	0	0	0	9	7
1934	-38	-28	0	63	0	1	0	0	0	0	0	0	-1,364	-137	-92
1935	136	61	26	810	121	496	21	0	0	0	-1	-1	0	1	101
1936	-79	-256	432	0	-197	1	0	0	0	0	1	1	0	0	-4
1937	-454	13	-112	0	0	-408	0	0	0	0	1	10	4	7	-58
1938	3	-759	18	31	2	0	0	0	0	0	0	0	0	0	-42
1939	1	0	0	0	-63	-392	-351	0	0	0	207	455	220	-55	13
1940	445	-7	0	3	5	10	0	0	0	0	0	26	19	18	32
1941	19	-427	2	2	4	579	0	0	0	0	0	0	19	10	14
1942	20	6	2	2	4	410	0	0	0	0	0	0	20	11	29
1943	21	6	2	3	138	1	0	0	0	0	0	0	6	3	10
1944	-158	-90	1	0	1	-1	0	0	0	0	0	115	-533	2	-41
1945	94	0	0	0	0	-5	2	0	0	0	-2	21	16	9	8
1946	16	-15	2	2	-309	-40	-2	0	0	0	0	22	17	9	-16
1947	-711	6	1	2	1	-201	-71	0	0	0	13	-440	-383	-24	-109
1948	-432	-128	202	-277	-2	0	0	0	0	0	0	23	18	9	-36
1949	-243	235	86	2	-34	-2	4	0	0	0	0	2	2	1	3
1950	-95	134	12	0	0	-1	0	0	0	0	-15	-3	-2	-5	1
1951	142	-1	0	-2,707	-29	270	0	0	0	0	0	32	29	15	-138
1952	29	-110	3	3	6	9	0	0	0	0	0	0	0	0	-4
1953	0	0	0	0	-29	-308	0	0	0	0	0	14	23	12	-18
1954	23	8	-884	2	4	11	0	0	0	0	0	17	35	19	-47
1955	235	11	4	4	519	-1	6	0	0	10	0	-562	-1,738	-359	-118
1956	-12	787	-1	-1	-1	10	0	0	0	0	0	0	22	12	49
1957	23	7	2	3	4	239	2	0	0	0	0	14	15	8	19
1958	15	5	2	1	3	18	0	0	0	0	0	0	15	8	4
1959	15	5	2	2	3	1,103	4	0	0	-52	0	2	2	1	68
1960	-1,944	723	35	0	1	-7	0	0	0	0	81	-17	-12	-153	-81
1961	-718	-19	-100	-17	-1	355	0	0	0	0	0	-5	-5	-18	-32
1962	-209	-324	0	437	-1	-2	-2	0	0	0	0	20	15	8	-3
1963	15	5	1	2	3	11	0	0	0	0	0	4	29	15	5
1964	30	9	3	4	2	4	114	0	0	0	7	550	92	9	47
1965	25	1	0	0	1	-207	0	0	0	0	0	0	8	3	-10
1966	7	2	1	1	1	20	0	0	0	0	0	38	29	15	7
1967	520	9	3	3	6	0	0	0	0	0	0	14	18	10	36
1968	18	6	2	3	-1,443	-715	0	0	0	0	0	7	23	12	-120
1969	144	-486	2	3	4	10	0	0	0	0	0	0	3	2	-19
1970	3	1	0	-2,310	-1,073	-1,585	-19	0	0	0	2	22	17	9	-296
1971	17	6	2	2	3	14	0	0	0	0	0	6	26	13	5
1972	26	8	2	3	-531	8	0	0	0	-4	0	-8	-6	-121	-35
1973	-553	-2	-1	0	-1	13	0	0	0	0	1	12	28	14	-30
1974	28	8	3	3	5	6	0	0	0	0	0	10	23	12	6
1975	23	-240	3	2	5	866	0	0	0	0	0	12	27	15	44
1976	27	8	3	3	1,152	-30	0	0	0	0	8	265	-927	-468	-3
1977	5	-146	0	-50	0	0	0	0	0	0	-9	232	454	0	30
1978	17	-275	0	0	0	-531	0	0	0	0	24	26	26	13	-43
1979	26	-169	-364	3	5	1,340	0	0	0	0	0	-19	-14	-7	50
1980	-14	-4	-1	-2	-3	-711	0	0	0	0	4	0	21	11	-43
1981	22	211	2	3	-21	179	4	0	0	0	4	-4	-3	-2	24
1982	-54	-1	0	0	-1	14	0	0	0	0	0	0	26	14	0
1983	27	8	726	712	297	0	0	0	0	0	0	0	0	0	107
1984	0	0	-1,275	0	0	41	2	0	0	0	1	13	28	15	-72
1985	29	10	3	3	-14	-133	0	0	0	0	19	14	11	17	-3
1986	-260	-410	1	1	3	-4	0	0	0	0	1	-28	-13	-30	-45
1987	-14	-4	-656	-2,844	-1,474	-45	-497	0	0	27	18	17	62	-81	-314
1988	-443	-33	0	0	-1,174	0	-2	0	0	-2	187	204	68	45	-64
1989	186	89	4	0	0	0	-2	0	0	0	53	-624	-48	-1	-21
1990	-216	-949	-224	0	0	3	0	0	0	0	323	60	-397	-5	-85
1991	0	0	-1	0	21	0	0	0	0	0	1	-33	428	-2	25
1992	1	598	41	-21	0	1	0	0	0	0	0	0	-512	-13	5
1993	-359	-41	-1	-1	-1	7	0	0	0	0	0	38	29	15	-19
1994	29	153	3	4	1,529	82	-4	0	0	0	0	0	-7	-717	58
Avg	-56	-46	-30	-81	-20	31	-12	0	0	0	17	-15	-76	-28	-19
Min	-1,944	-949	-1,275	-2,844	-1,474	-1,585	-497	0	0	-52	-359	-716	-1,738	-717	-314
Max	520	787	726	810	1,529	1,340	114	0	0	27	323	550	454	45	107

Table I-30a. CALSIM Simulated SWP Banks Pumping, 2001 Scenario A Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre- VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post- VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	5,175	3,014	6,318	7,628	8,500	8,500	5,683	1,500	1,500	6,549	8,500	3,956	7,355	6,225	4,389
1923	6,280	5,587	8,500	5,604	3,406	2,848	5,839	700	700	4,217	5,095	6,180	7,379	6,146	3,803
1924	3,593	2,421	3,586	3,240	3,425	300	300	300	604	604	555	2,032	4,234	1,391	1,550
1925	1,799	2,295	3,653	3,474	5,374	300	5,154	1,125	1,125	3,690	3,485	2,603	5,841	3,974	2,303
1926	3,104	919	2,709	5,684	8,500	1,988	4,926	700	700	700	2,432	6,978	5,160	3,687	2,677
1927	3,466	8,500	4,810	4,811	8,500	8,500	6,551	1,500	1,500	5,600	5,770	4,470	7,878	6,098	4,234
1928	4,224	7,021	7,486	8,500	6,368	8,500	5,894	700	700	700	3,826	4,191	7,200	4,700	3,985
1929	2,686	3,866	3,715	4,089	3,476	1,592	700	700	300	300	1,247	4,806	2,071	1,111	1,790
1930	622	362	4,931	6,321	4,073	8,500	2,794	700	700	2,589	2,354	7,439	4,574	3,845	2,816
1931	1,501	1,650	3,157	4,094	2,145	896	300	300	700	700	2,194	2,788	4,125	1,669	1,527
1932	1,100	585	6,323	4,809	5,848	4,641	1,001	1,001	1,125	3,171	300	6,897	300	3,196	2,242
1933	4,922	2,378	5,549	1,935	5,291	2,347	1,334	700	700	1,882	300	2,871	320	1,237	1,772
1934	1,553	757	4,343	4,251	5,596	1,122	300	300	300	300	300	3,556	2,617	1,830	1,592
1935	1,738	2,823	3,022	4,810	4,092	8,371	6,551	1,500	324	324	6,048	7,215	8,043	4,227	3,308
1936	5,563	2,578	3,356	8,500	8,500	8,481	5,500	700	700	4,203	5,438	7,713	6,915	5,269	4,094
1937	3,746	1,713	2,869	6,048	8,500	8,500	6,028	1,500	1,500	5,046	2,243	6,851	7,049	5,297	3,608
1938	4,873	8,500	8,500	3,988	6,668	6,464	6,608	700	700	6,598	8,387	4,813	7,648	8,500	4,561
1939	8,500	5,426	6,995	5,099	3,011	2,870	316	316	1,125	1,125	2,751	7,948	7,154	5,173	3,422
1940	3,717	3,260	300	6,320	8,500	8,500	6,551	1,500	1,500	4,583	4,015	7,656	7,568	5,743	3,772
1941	5,491	2,078	8,500	8,500	8,500	7,903	6,608	700	700	6,598	4,412	4,354	8,119	8,500	4,449
1942	7,721	5,042	8,500	5,684	3,023	7,768	6,551	1,500	1,500	6,549	8,120	4,645	7,014	8,500	4,491
1943	8,500	7,759	8,500	8,500	3,192	8,500	6,274	700	700	2,901	4,988	4,933	8,032	7,350	4,582
1944	5,212	2,085	2,814	5,278	5,168	4,399	1,016	1,016	1,500	2,984	4,014	8,500	8,098	5,617	3,294
1945	4,219	6,312	4,517	6,239	8,500	6,447	3,706	700	700	3,852	4,747	6,640	7,626	6,054	3,960
1946	5,878	5,178	6,319	8,500	705	6,330	3,437	1,500	1,500	3,800	3,559	7,924	7,834	6,739	3,904
1947	4,396	2,982	7,144	3,110	4,016	3,477	3,055	700	425	425	3,925	8,500	7,444	5,018	3,166
1948	3,911	4,002	2,738	4,056	2,109	3,223	5,789	700	700	6,080	5,738	8,500	7,898	6,990	3,385
1949	3,502	1,698	4,804	2,948	3,017	6,314	3,192	700	700	2,622	4,581	7,219	2,572	4,050	2,685
1950	1,106	2,755	2,525	4,814	8,500	4,399	4,615	700	700	3,945	5,792	7,945	7,887	6,728	3,449
1951	5,258	8,500	6,321	8,353	6,312	3,773	3,679	700	700	4,649	2,748	6,037	8,500	6,879	4,080
1952	4,983	4,909	8,500	8,500	8,500	8,500	1,500	1,500	1,500	6,549	6,277	7,291	7,040	8,500	4,742
1953	8,500	5,567	8,500	2,811	3,080	7,634	4,007	1,125	1,125	5,382	7,621	4,689	7,514	8,500	4,258
1954	8,492	5,856	2,550	8,500	8,500	6,304	6,551	1,125	1,125	4,616	2,701	6,329	6,418	7,019	4,181
1955	5,713	4,845	8,500	8,500	1,674	2,292	1,521	700	700	2,986	4,203	5,433	5,634	3,885	3,263
1956	1,584	3,098	4,811	8,500	8,500	8,500	4,566	700	700	6,598	6,727	4,743	7,976	8,500	4,171
1957	8,500	4,468	4,766	5,235	8,500	7,659	4,506	1,125	1,125	4,097	2,996	6,319	7,472	6,840	4,112
1958	7,293	5,620	6,319	8,500	8,500	8,500	6,551	1,500	1,500	6,549	8,493	5,725	8,310	8,500	5,056
1959	8,039	4,653	5,594	8,500	3,841	954	1,125	1,125	1,125	2,793	4,323	7,384	7,829	6,920	3,704
1960	5,961	2,088	2,773	4,971	8,500	4,378	300	300	700	2,655	2,994	7,194	5,386	4,938	3,077
1961	1,163	3,192	4,131	3,427	5,511	3,174	2,734	700	300	300	2,982	6,160	6,205	4,407	2,549
1962	3,236	3,426	6,504	2,136	8,500	6,922	3,120	1,125	899	899	4,112	6,526	8,195	6,113	3,528
1963	8,500	7,781	6,319	7,641	8,500	7,090	6,608	700	700	6,598	3,269	4,912	7,858	7,003	4,597
1964	6,097	8,500	5,170	8,500	1,850	2,409	551	551	700	2,977	3,299	8,500	7,660	5,422	3,634
1965	4,038	4,911	6,321	8,500	8,500	4,232	6,551	1,500	1,500	2,909	3,366	5,409	8,171	5,730	3,938
1966	5,184	8,500	8,500	8,500	4,812	7,189	3,324	1,125	1,125	1,125	3,527	6,559	7,145	7,316	4,270
1967	4,224	6,045	8,500	8,500	8,500	4,899	6,608	700	700	6,598	8,473	8,500	7,347	8,500	4,871
1968	8,473	6,056	7,883	8,500	3,674	3,703	300	300	1,125	2,692	3,652	5,476	7,611	7,405	3,921
1969	3,948	4,301	8,500	8,500	8,500	8,500	1,500	1,500	1,500	6,549	6,230	5,251	4,699	8,500	4,370
1970	8,500	6,067	7,239	4,946	5,848	5,722	3,874	700	700	3,192	4,361	4,945	8,500	6,803	4,060
1971	5,439	7,653	8,500	8,500	2,062	8,500	4,862	1,125	1,125	1,125	6,020	4,756	8,500	8,500	4,400
1972	8,500	2,837	8,500	8,364	4,152	8,500	2,785	700	700	2,676	2,276	6,929	6,047	4,183	3,874
1973	3,623	8,500	8,500	6,318	8,500	6,049	4,202	1,500	1,500	4,521	5,263	6,732	7,963	7,533	4,508
1974	5,832	8,500	8,500	4,922	8,500	8,500	6,608	700	700	5,536	7,053	6,197	8,310	8,500	4,917
1975	8,500	6,748	7,982	6,003	8,500	3,185	5,574	1,500	1,500	6,464	7,116	4,343	8,310	8,500	4,621
1976	8,500	8,500	7,487	6,341	3,209	2,773	700	700	700	1,762	2,286	3,635	6,301	4,259	3,347
1977	3,364	2,779	4,177	1,730	652	741	300	300	700	700	1,434	1,493	3,509	1,526	1,362
1978	759	1,216	4,177	4,809	8,500	8,500	700	700	700	5,817	6,557	4,423	7,866	7,101	3,483
1979	5,959	2,064	1,343	8,500	6,311	8,500	1,500	1,500	1,500	4,189	3,124	6,607	7,793	7,169	3,733
1980	5,427	4,005	8,500	8,500	8,500	2,543	4,523	700	700	4,137	5,584	5,368	7,352	6,831	4,075
1981	6,536	1,871	4,342	8,500	4,435	8,234	3,347	1,125	1,125	1,125	2,875	6,508	6,167	6,208	3,578
1982	4,285	8,500	8,500	4,815	8,500	8,500	6,551	1,500	1,500	6,549	7,351	4,823	8,310	8,500	4,827
1983	8,500	8,083	5,518	2,630	2,694	2,570	5,303	700	700	700	4,126	8,500	8,500	8,500	3,832
1984	8,500	6,042	2,174	2,622	3,096	8,500	1,347	1,347	1,500	1,500	4,267	5,320	7,812	7,463	3,550
1985	5,594	8,500	8,500	6,385	3,515	2,978	2,851	700	700	2,915	3,834	8,500	8,419	6,944	4,045
1986	5,478	4,157	4,737	8,500	8,500	8,500	5,635	700	700	4,044	5,371	1,532	7,704	7,014	4,036
1987	6,049	2,198	2,286	6,031	4,146	3,073	2,956	700	300	300	4,055	8,500	7,309	5,008	3,073
1988	2,552	1,802	2,888	8,500	1,199	448	700	700	700	2,035	1,392	3,919	691	1,186	1,623
1989	349	2,662	2,540	3,215	765	6,321	4,118	700	700	2,856	4,788	7,933	6,950	5,293	2,735
1990	4,065	1,565	3,696	7,820	1,865	3,155	300	300	700	1,990	1,325	4,650	450	1,784	1,950
1991	1,220	300	1,710	1,247	1,349	5,793	700	700	700	700	300	4,477	501	909	1,169
1992	934	300	1,712	2,423	6,320	3,353	700	700	300	300	541	3,276	1,399	2,914	1,440
1993	1,203	1,267	3,968	4,812	8,500	8,500	6,551	1,125	1,125	6,550	6,976	8,500	6,749	7,174	3,934
1994	6,609	2,012	3,973	5,203	6,312	1,004	2,326	700	700	1,868	2,416	8,000	8,000	6,840	3,208
Avg	4,843	4,301	5,457	5,960	5,571	5,384	3,578	894	910	3,338	4,162	5,869	6,470	5,786	3,514
Min	349	300	300	1,247	652	300	300	300	300	300	300	1,493	300	909	1,169
Max	8,500	8,500	8,500	8,500	8,500	8,500	6,608	1,500	1,500	6,598	8,500	8,500	8		

Table I-30b. CALSIM Simulated SWP Banks Pumping, 2001 Scenario A minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	1,001	16	0	939	43	0	0	909	1,820	278	675	-455	290
1923	-400	567	977	-852	1	-4	141	0	0	2	-9	895	1,899	-534	160
1924	-279	104	-23	-2	-1	0	0	0	-2	-2	-287	-1,455	1,806	-153	-17
1925	67	-34	-51	1	-277	0	0	0	0	0	10	24	32	-3	-13
1926	57	-4	-1	403	1,181	-1	0	0	0	0	73	564	-625	300	112
1927	84	1,820	547	462	282	1,214	911	0	0	0	9	1,103	698	-580	370
1928	87	342	422	1,099	0	939	197	0	0	0	0	-18	223	-151	186
1929	-606	373	-547	-158	-6	-4	0	0	0	0	0	707	-420	-45	-44
1930	-355	62	-187	1,049	37	1,528	0	0	0	0	203	625	-689	1	139
1931	-246	958	484	-1	1	46	0	0	0	0	-77	4	18	11	72
1932	-16	-180	936	253	1,027	100	124	124	0	-132	0	239	-361	-672	80
1933	210	-76	59	-471	115	-4	4	0	0	21	0	-131	20	0	-17
1934	-225	25	-129	358	3	1	0	0	0	0	0	891	161	-8	66
1935	-34	74	-13	229	-19	1,114	911	0	0	0	-24	174	1,763	-554	195
1936	2	-255	192	1,197	63	920	0	0	0	-2	2	533	1,096	-530	199
1937	-210	-671	-27	36	0	939	388	0	0	-2	-1,192	713	255	28	7
1938	-105	1,820	822	0	0	0	911	0	0	911	1,707	-2,367	899	1,320	298
1939	1,820	-1,254	-52	-770	-5	0	12	12	0	0	-610	768	231	-589	-23
1940	-229	-70	0	353	63	939	911	0	0	0	-227	476	1,819	590	255
1941	201	-939	1,306	58	0	794	911	0	0	911	-39	172	1,439	1,320	321
1942	1,041	-813	921	251	83	207	911	0	0	909	1,440	1,056	334	1,320	411
1943	1,820	1,079	1,160	0	55	939	576	0	0	2	3	989	852	670	479
1944	-445	308	-424	548	293	6	-1,888	-484	0	8	-2	1,320	1,292	-400	82
1945	37	-276	254	-536	0	2	2	0	0	2	0	149	1,368	-576	28
1946	-23	-1,431	616	249	-126	2	-4	0	0	0	-607	744	1,701	622	111
1947	721	-792	64	70	-4	-26	2	0	-275	-2,362	192	1,320	701	-9	56
1948	-598	327	58	-66	3	16	92	0	0	393	2	1,320	721	312	143
1949	-1,730	-557	-227	-78	102	1,043	-13	0	0	31	-1	413	186	-48	-54
1950	-131	1,296	-315	432	911	-10	-4	0	0	19	-6	765	707	48	220
1951	-171	1,820	616	-147	-1,409	84	0	0	0	0	0	-512	1,751	403	154
1952	-1	524	1,305	0	63	939	0	0	0	909	0	1,208	360	1,320	376
1953	1,820	545	1,337	-922	-32	443	2	0	0	0	941	860	334	1,320	403
1954	1,812	-824	-4,429	1,257	1,067	1,044	911	0	0	-535	-149	1,100	616	389	121
1955	202	290	1,526	1,204	0	8	36	0	0	23	2	-419	3,069	795	410
1956	49	6	307	0	63	939	0	0	0	911	47	736	1,296	1,320	319
1957	1,820	-392	4	-1,098	948	1,005	4	0	0	0	1	757	1,603	160	291
1958	613	-1,060	1,126	1,159	679	939	911	0	0	909	1,813	1,215	1,630	1,320	628
1959	1,359	-727	-153	1,095	-834	33	0	0	0	-14	69	704	649	860	192
1960	408	292	-224	-2	1,127	4	0	0	0	4	870	41	-94	133	148
1961	-174	-163	19	-3	607	-1	0	0	0	0	1,537	-192	-319	-243	60
1962	-143	-93	380	-43	0	8	0	0	-4	-4	0	1,296	1,337	331	188
1963	1,820	1,101	1,178	346	732	170	911	0	0	911	383	1,071	678	794	556
1964	-583	1,820	-1,704	1,266	-40	6	7	7	0	-66	24	1,320	936	-524	151
1965	53	-186	808	0	0	-2	911	0	0	-4	0	820	991	-950	124
1966	284	1,820	861	220	-1	-14	0	0	0	0	-7	676	290	636	288
1967	-199	-153	1,298	748	765	-21	911	0	0	911	1,793	1,320	167	1,320	478
1968	1,793	-540	852	1,132	-96	52	0	0	0	0	12	58	431	939	285
1969	-321	-131	1,467	0	0	939	0	0	0	909	-32	506	-1,981	1,320	135
1970	1,820	-149	1,694	-326	0	0	6	0	0	2	23	1,192	1,320	123	351
1971	-28	973	1,379	1,035	439	1,272	39	0	0	0	1	-517	1,320	1,320	436
1972	1,820	-2,695	1,494	1,113	-42	1,547	58	0	0	-4	-366	1,120	-239	302	257
1973	457	1,820	1,548	764	0	-1,512	2	0	0	0	-3	912	1,283	872	372
1974	-422	1,820	1,447	-3,571	240	939	911	0	0	0	373	830	1,130	1,320	271
1975	1,820	68	951	-751	0	53	2	0	0	823	436	742	1,630	1,320	408
1976	1,820	1,820	476	935	128	34	0	0	0	0	16	-2,643	789	-29	201
1977	92	-450	1,534	12	-411	-417	-400	-400	0	0	8	-3,361	1,870	0	-90
1978	-89	222	-53	216	0	939	0	0	0	130	18	1,340	1,186	-79	231
1979	-578	-354	-262	162	-2	939	0	0	0	2	-1,358	1,507	1,113	938	131
1980	101	-383	1,484	0	279	68	-4	0	0	-2	6	1,061	672	-349	180
1981	-144	-700	-172	1,112	627	961	-2	0	0	0	25	607	-336	113	126
1982	75	1,820	1,499	-1	0	939	911	0	0	909	671	949	1,630	1,320	596
1983	1,820	1,403	-1,844	-15	0	0	0	0	0	0	0	1,320	1,574	1,902	372
1984	1,820	-638	-1,039	0	0	939	-58	-58	0	0	-80	930	809	871	218
1985	206	1,820	1,461	1	-4	-106	2	0	0	-2	15	1,320	1,719	264	408
1986	-893	-51	487	1,093	0	939	2	0	0	4	-16	87	1,024	-166	155
1987	-631	-351	-255	620	-30	-1,078	-77	0	-136	-136	833	1,320	719	-162	49
1988	-114	-14	-247	1,394	-2	-4	0	0	0	-48	-90	103	-523	349	50
1989	-374	-216	163	-103	3	1,171	0	0	0	0	761	753	270	-12	148
1990	-378	-65	-91	744	0	111	0	0	0	-4	1,025	660	-417	-26	94
1991	-15	-86	0	1	59	550	0	0	0	0	0	354	-445	-428	0
1992	-108	-898	0	34	834	1	0	0	0	0	209	-185	-107	9	-17
1993	13	287	2	0	57	1,083	911	0	0	911	296	1,320	0	494	272
1994	-71	-1,351	-708	-898	2,202	-13	4	0	0	0	0	1,320	820	888	123
Avg	260	129	347	191	162	378	165	-11	-6	124	171	519	703	329	202
Min	-1,730	-2,695	-4,429	-3,571	-1,409	-1,512	-1,888	-484	-275	-2,362	-1,358	-3,361	-1,981	-950	-90
Max	1,820	1,820	1,694	1,394	2,202	1,547	911	124	0	911	1,820	1,507	3,069	1,902	628

Table I-31a. CALSIM Simulated SWP Banks Pumping, 2020 Scenario A Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	5,335	3,336	4,815	7,919	8,500	8,500	5,724	1,500	1,500	6,549	8,500	3,860	6,442	5,610	4,246
1923	7,516	5,361	6,318	8,500	3,578	3,163	5,933	700	700	4,188	5,169	6,643	7,903	6,445	4,023
1924	4,081	2,445	5,355	4,604	3,381	300	300	300	300	300	300	3,901	1,977	1,312	1,709
1925	1,954	2,381	3,948	3,154	5,792	300	5,359	1,125	1,125	3,615	3,033	2,545	4,875	3,965	2,253
1926	2,426	1,177	2,887	4,759	5,296	1,319	4,964	700	700	3,035	2,501	6,093	4,340	2,476	2,288
1927	2,034	8,500	4,810	8,500	8,500	8,366	6,551	1,500	1,500	5,499	5,733	4,958	7,486	5,034	4,301
1928	5,297	6,788	7,597	8,500	6,401	8,500	5,903	700	700	700	3,238	4,400	7,022	4,897	4,024
1929	3,115	3,464	4,274	4,420	3,534	1,647	966	700	300	300	1,176	3,893	300	1,296	1,703
1930	1,130	977	5,595	6,322	3,893	8,500	2,997	700	700	2,740	2,150	7,359	4,422	4,483	2,937
1931	1,027	2,570	3,353	4,296	2,357	1,046	300	300	300	300	2,061	2,731	4,098	1,522	1,551
1932	1,130	913	4,808	8,500	5,701	4,838	1,650	1,125	1,125	3,355	300	2,029	5,441	3,423	2,460
1933	2,623	2,665	5,355	2,036	5,267	2,438	1,401	700	700	1,948	300	2,496	302	1,466	1,651
1934	1,646	643	4,908	4,525	5,639	1,174	300	300	300	300	300	2,907	3,219	1,649	1,634
1935	1,662	2,787	3,204	4,810	4,157	8,500	6,551	1,500	324	324	5,958	7,326	7,772	3,962	3,293
1936	5,683	2,609	3,638	8,500	8,500	8,307	5,564	700	700	4,253	5,401	7,503	6,870	5,344	4,100
1937	3,531	2,369	3,407	6,219	8,500	8,500	6,039	1,500	1,500	5,156	5,049	6,282	8,075	5,177	3,870
1938	3,429	8,500	3,965	8,500	7,793	7,600	6,608	700	700	6,598	8,500	8,500	7,961	8,304	4,844
1939	8,500	4,786	6,743	4,736	3,041	2,825	2,704	1,125	1,125	1,125	2,760	7,886	6,885	5,535	3,442
1940	3,626	2,802	300	6,319	8,500	8,500	6,551	1,500	1,500	4,565	4,688	7,260	7,787	7,244	3,857
1941	6,073	3,779	8,500	8,500	8,500	8,500	6,608	700	700	6,598	1,369	8,500	8,368	8,500	4,712
1942	8,500	4,331	8,500	8,500	7,983	3,423	6,551	1,500	1,500	6,549	7,951	3,179	7,767	7,968	4,593
1943	7,963	7,638	8,500	8,500	4,188	8,500	6,475	700	700	700	5,100	4,752	7,998	6,209	4,459
1944	4,510	1,631	3,389	5,115	5,166	4,697	2,861	1,500	1,500	3,240	3,973	8,500	8,175	5,331	3,330
1945	4,149	6,946	4,586	4,964	8,500	6,245	3,831	700	700	3,804	5,363	6,823	8,016	5,360	3,940
1946	5,972	5,066	6,320	8,500	877	6,153	3,450	1,500	1,500	3,753	4,147	8,500	8,500	7,094	4,033
1947	4,522	4,075	5,809	3,069	4,064	4,061	3,145	700	300	300	3,716	8,500	5,808	5,353	3,095
1948	4,281	3,806	2,772	3,883	2,099	3,292	5,989	700	700	6,084	5,532	8,500	7,716	7,016	3,375
1949	3,316	1,904	4,077	4,264	2,922	6,315	3,233	700	700	1,946	4,534	6,505	3,255	4,042	2,691
1950	682	1,668	1,942	4,814	8,500	4,477	4,654	700	700	4,147	5,689	7,970	8,001	6,294	3,312
1951	5,211	8,500	5,979	8,500	8,013	6,659	3,668	700	700	4,558	4,854	6,109	7,517	6,224	4,365
1952	5,407	4,629	8,500	8,500	8,500	8,500	6,551	1,500	1,500	6,549	6,100	5,507	6,707	8,500	4,761
1953	8,500	5,701	8,500	7,011	2,918	7,492	4,159	1,125	1,125	5,512	6,794	4,903	7,441	8,500	4,474
1954	8,500	5,897	2,895	8,500	8,500	8,500	6,551	1,125	1,125	5,172	2,660	6,418	6,418	6,944	4,357
1955	6,120	5,381	8,500	8,500	1,782	2,191	1,414	700	700	2,980	3,136	5,788	4,252	3,549	3,170
1956	1,478	3,486	4,811	8,500	8,500	8,500	4,726	700	700	6,598	6,644	4,851	6,182	7,453	4,021
1957	8,500	3,817	3,086	6,085	8,500	8,500	4,470	1,125	1,125	1,125	3,983	5,334	7,183	6,485	3,938
1958	7,847	4,563	8,500	8,500	8,500	8,500	6,551	1,500	1,500	6,549	8,414	4,679	8,310	8,500	5,092
1959	8,500	5,114	5,149	8,500	6,012	948	2,539	1,125	1,125	3,192	4,024	7,490	7,608	5,858	3,820
1960	3,915	2,067	5,195	3,628	8,500	5,061	300	300	700	2,707	3,218	5,927	3,336	2,732	2,738
1961	2,293	3,614	5,734	3,632	6,319	4,016	2,676	700	300	300	1,818	7,510	6,597	5,108	2,929
1962	3,294	3,450	6,203	2,288	8,500	7,094	3,291	1,125	303	303	3,107	6,022	8,310	6,441	3,439
1963	8,500	6,235	6,319	7,767	8,500	7,777	6,608	700	700	6,598	3,885	5,053	8,500	5,873	4,573
1964	7,956	8,500	5,574	8,500	1,843	1,696	3,704	700	700	700	3,644	8,500	6,572	4,775	3,670
1965	3,801	5,374	6,321	8,500	8,500	4,272	6,551	1,500	1,500	2,277	3,297	4,734	8,129	5,452	3,868
1966	4,043	8,500	8,500	8,500	6,577	6,917	1,125	1,125	1,125	3,249	3,795	6,446	6,899	6,580	4,233
1967	4,958	6,493	4,814	8,500	8,500	7,231	6,608	700	700	6,598	8,500	8,500	8,500	8,500	4,932
1968	8,500	6,755	8,044	8,500	3,984	8,500	300	300	1,125	2,811	3,723	6,555	7,682	6,915	4,336
1969	3,627	4,497	8,500	4,817	8,500	8,500	6,551	1,500	1,500	6,549	6,061	5,285	7,794	6,673	4,359
1970	8,500	6,523	7,162	6,250	3,232	8,500	3,886	700	700	700	4,543	5,719	8,500	6,122	4,127
1971	5,784	8,375	8,500	8,500	1,334	8,500	4,969	1,125	1,125	1,125	5,346	6,009	8,500	8,500	4,464
1972	8,500	4,310	8,239	7,874	5,455	8,500	700	700	700	2,810	2,909	6,168	6,283	4,342	3,945
1973	3,675	8,500	8,500	6,940	8,500	8,500	4,350	1,500	1,500	4,418	5,258	4,986	7,471	7,309	4,550
1974	6,613	8,500	8,500	7,144	8,500	8,500	6,608	700	700	5,615	6,574	4,562	8,310	8,500	4,975
1975	8,500	3,527	7,811	5,272	8,500	8,500	5,689	1,500	1,500	6,338	6,466	4,914	8,158	8,500	4,687
1976	8,500	8,423	7,820	5,139	3,113	2,805	2,153	700	700	1,799	2,348	6,477	5,671	4,150	3,463
1977	3,216	2,977	1,792	1,788	1,113	1,191	525	525	700	700	1,416	4,196	1,750	1,532	1,346
1978	797	1,263	4,529	4,809	6,786	6,104	6,608	700	700	5,798	6,960	2,901	6,310	7,232	3,284
1979	4,569	2,774	6,884	8,500	6,313	8,500	4,436	1,500	1,500	4,197	4,219	4,761	6,404	6,420	3,940
1980	5,048	4,514	8,500	4,815	8,500	7,862	4,681	700	700	4,281	5,465	4,599	6,891	6,905	4,114
1981	6,216	1,637	5,433	8,500	4,229	4,354	3,510	1,125	1,125	2,696	2,892	8,473	7,129	5,939	3,582
1982	4,199	8,500	4,814	8,500	8,500	8,500	6,551	1,500	1,500	6,549	7,043	8,500	8,500	8,500	5,041
1983	8,500	6,960	6,028	3,484	3,548	3,555	6,608	700	700	700	3,877	8,500	8,467	8,466	3,977
1984	8,500	6,158	2,292	2,890	8,500	3,381	4,151	1,500	1,500	1,500	4,501	5,528	8,086	7,086	3,676
1985	7,036	8,500	8,500	6,355	3,553	2,690	700	700	700	2,984	3,753	8,500	8,500	7,282	4,075
1986	5,397	4,194	4,681	8,500	8,500	8,500	5,738	700	700	4,095	5,307	1,592	7,978	6,749	4,036
1987	5,812	1,604	3,761	7,704	4,229	3,300	2,886	700	300	300	4,721	8,500	7,290	3,879	3,204
1988	2,686	1,977	5,747	6,321	1,245	599	2,266	700	700	878	300	4,179	607	776	1,626
1989	300	2,789	3,477	3,316	778	6,321	4,171	700	700	2,856	3,989	8,500	7,769	5,484	2,855
1990	3,719	1,707	3,842	8,181	2,108	3,063	300	300	700	2,124	330	4,650	490	1,769	1,922
1991	1,298	300	1,723	1,358	1,095	6,023	700	700	700	700	1,226	2,867	300	938	1,127
1992	1,287	533	1,948	2,462	6,319	3,420	2,674	700	300	300	828	3,409	2,243	2,954	1,635
1993	901	1,856	6,610	4,812	8,500	8,500	6,551	1,125	1,125	6,550	7,067	8,500	7,451	5,637	4,070
1994	6,462	1,594	5,984	4,625	6,117	1,148	2,341	700	700	1,921	3,855	8,267	8,000	5,523	3,286
Avg	4,831	4,335	5,355	6,253	5,762	5,639	4,045	921	891	3,263	4,155	5,906	6,408	5,532	3,559
Min	300	300	300	1,358	778	300	300	300	300	300	300	1,592	300	776	1,127
Max	8,500	8,500	8,500	8,500	8,500	8,500	6,608	1,500	1,500	6,598	8,500	8,500			

Table I-31b. CALSIM Simulated SWP Banks Pumping, 2020 Scenario A minus 2020 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	500	307	0	939	84	0	0	909	1,820	-3,320	-307	-260	8
1923	836	-292	893	430	-289	-613	236	0	0	2	-12	-42	1,014	284	145
1924	45	-59	774	-211	-127	0	-20	-20	-400	-400	0	45	-30	-13	1
1925	19	4	8	4	141	0	2	0	0	-4	-5	95	33	-18	16
1926	64	0	11	55	1,005	-40	0	0	0	2	2,201	-331	-110	314	184
1927	-596	1,820	547	1,231	284	1,083	911	0	0	0	9	558	306	-6	344
1928	515	108	533	1,099	-60	1,316	206	0	0	0	-130	1,787	-158	17	316
1929	98	-518	149	-89	18	-1	-24	0	0	0	-34	-230	-2,186	-126	-179
1930	280	676	477	1,050	56	1,530	66	0	0	87	-142	554	-917	1	223
1931	-10	1,382	754	-1	3	3	0	0	-400	-400	-257	5	-283	0	71
1932	-11	-85	467	676	-974	21	90	0	0	0	0	-22	-98	-203	-5
1933	-169	-1	36	-32	24	0	2	0	0	-2	0	0	0	-9	-9
1934	38	28	-12	540	-5	1	0	0	0	0	0	167	1,360	70	134
1935	-121	-192	205	533	-123	1,246	911	0	0	0	-11	146	714	-922	121
1936	289	-200	154	1,198	63	746	0	0	0	-2	3	323	800	-36	205
1937	453	-43	130	10	0	939	399	0	0	-23	3	474	1,481	-203	211
1938	-78	1,820	378	220	-707	39	911	0	0	911	1,820	1,320	1,212	1,124	490
1939	1,820	-648	-325	-767	-63	-2	-300	0	200	200	-261	706	398	67	62
1940	-377	228	-765	355	130	939	911	0	0	6	246	80	1,244	1,298	231
1941	31	-404	1,306	189	0	939	911	0	0	911	-617	1,320	1,619	1,320	406
1942	1,820	-2,034	1,025	0	57	55	911	0	0	909	1,271	-2,589	587	788	116
1943	1,283	958	1,225	0	138	939	778	0	0	0	2	1,191	818	-469	396
1944	-110	-157	43	186	296	-110	13	0	0	207	0	1,320	995	-271	141
1945	-151	266	324	181	0	7	2	0	0	0	-5	12	1,917	21	158
1946	-270	-252	819	231	-1,969	604	0	0	0	-16	-1	1,320	1,474	584	167
1947	-562	-159	554	333	1	161	77	0	-400	-592	-1	1,320	-1,372	213	2
1948	-6	463	198	-277	2	0	291	0	0	397	2	1,320	536	338	178
1949	-795	-67	86	252	-34	1,046	-9	0	0	-1,273	0	114	-673	-41	-47
1950	-46	119	-551	432	911	1	-6	0	0	157	-46	790	821	-168	139
1951	-41	1,820	274	0	-487	-277	0	0	0	2	2	369	768	24	150
1952	8	8	1,305	0	124	939	911	0	0	909	0	1,109	808	1,320	398
1953	1,820	-27	1,343	-1,489	-24	308	0	0	0	0	114	939	261	1,320	278
1954	1,820	-783	-884	1,258	1,069	1,398	911	0	0	21	0	508	228	564	340
1955	-11	301	1,525	1,204	4	-1	-182	0	0	-12	3	551	3,091	188	415
1956	43	-296	308	0	63	939	0	0	0	911	3	-2,329	-567	273	-68
1957	1,820	-801	-171	1,460	1,010	1,156	4	0	0	0	3	992	150	332	361
1958	1,167	-1,711	3,888	1,160	682	939	911	0	0	909	1,734	1,096	1,630	1,320	781
1959	1,820	-391	-387	1,095	326	-2	-2	0	0	333	44	810	428	-194	228
1960	319	91	-301	2	1,125	-10	0	0	0	-10	827	-270	-530	156	78
1961	1,148	422	-268	-17	1,021	-434	0	0	0	0	14	575	151	152	163
1962	-57	83	-303	8	0	15	36	0	-822	-1,397	0	569	1,152	-9	22
1963	1,820	-445	1,178	471	732	654	911	0	0	911	48	240	1,320	16	424
1964	1,276	1,820	-1,422	1,265	-19	-25	-227	0	0	0	-7	1,320	-108	2	242
1965	30	20	906	0	0	-10	911	0	0	-260	0	112	949	-1,075	78
1966	98	1,820	907	245	1	-18	0	0	0	-10	-1	705	446	376	277
1967	246	136	488	747	767	-305	911	0	0	911	1,820	1,320	1,320	1,320	528
1968	1,820	75	1,013	1,132	-740	1,297	0	0	0	105	24	985	525	450	411
1969	-6	454	1,466	1	0	939	911	0	0	909	-13	1,039	1,114	-497	333
1970	1,820	-157	-155	-2,250	-93	939	-19	0	0	0	5	1,608	1,320	-534	155
1971	126	1,695	1,379	1,035	-660	1,440	-19	0	0	0	3	-671	1,320	1,320	427
1972	1,820	-1,244	1,232	623	-429	1,559	0	0	0	89	88	-379	135	138	225
1973	592	1,820	1,547	-541	115	939	0	0	0	2	2	884	791	629	411
1974	-67	1,820	1,446	-1,356	252	939	911	0	0	0	-1	911	1,630	1,320	443
1975	1,820	-3,153	779	-1,738	29	1,575	49	0	0	698	3	948	1,478	1,320	215
1976	1,820	1,743	809	-360	207	-1	6	0	0	0	151	2,425	-431	-17	386
1977	151	3	-165	-36	18	9	115	115	0	0	-9	2,415	-1,993	0	31
1978	211	-160	299	216	-1,385	-31	911	0	0	110	280	-49	-370	365	0
1979	16	-261	570	555	-1	939	-2	0	0	0	467	70	-252	-79	124
1980	-216	-5	1,483	0	63	301	-2	0	0	-2	13	838	211	245	179
1981	-426	182	341	1,112	-249	-40	9	0	0	143	4	1,293	391	-611	130
1982	-425	1,820	562	0	0	939	911	0	0	909	363	1,320	1,751	1,320	520
1983	1,820	280	-1,650	-437	-62	0	911	0	0	0	0	1,320	1,287	2,929	359
1984	1,820	-522	-1,275	0	63	41	-21	0	0	0	3	712	2,164	475	213
1985	356	1,820	1,460	1	-14	-133	0	0	0	0	30	1,320	1,668	605	433
1986	-283	-438	430	1,093	0	939	41	0	0	0	5	-5,588	1,229	63	-155
1987	-754	102	308	3,127	-3	-483	2,586	400	-279	-279	75	1,320	227	-1,252	238
1988	8	31	616	1,047	-5	31	-2	0	0	-1,244	0	128	238	-25	88
1989	-308	-1	-85	25	0	1,172	0	0	0	10	157	1,320	1,089	456	234
1990	-651	-250	151	1,106	0	-20	0	0	0	-4	-3	660	-404	-32	35
1991	56	-557	-3	0	36	781	0	0	0	0	1	91	-163	-132	8
1992	-161	-396	68	-21	833	1	-75	0	0	0	256	-171	715	11	63
1993	246	269	-103	0	70	1,073	911	0	0	911	387	1,320	702	-15	297
1994	-2	-1,347	-723	-447	1,879	-194	4	0	0	6	1	1,414	893	-533	51
Avg	395	115	413	266	70	438	282	7	-29	104	174	473	547	242	202
Min	-795	-3,153	-1,650	-2,250	-1,969	-613	-300	-20	-822	-1,397	-617	-5,588	-2,186	-1,252	-179
Max	1,820	1,820	3,888	3,127	1,879	1,575	2,586	400	200	911	2,201	2,425	3,091	2,929	781

Table I-32a. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario A Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-	VAMP	VAMP	Post-	Jun	Jul	Aug	Sep	taf/yr
							VAMP	4/16-	5/1-	VAMP					
							4/1-4/15	4/30	5/15	5/16-5/31					
1922	9,566	7,279	10,545	11,860	12,754	11,967	10,283	3,000	3,000	8,049	11,500	8,556	11,933	10,719	7,167
1923	10,671	9,852	11,507	8,616	6,812	5,696	10,382	1,500	1,500	5,017	7,327	10,726	11,890	10,604	6,225
1924	7,916	4,974	6,467	7,464	6,850	1,100	1,100	1,100	1,404	1,404	1,355	3,514	5,723	4,066	3,131
1925	4,374	3,433	7,306	6,948	9,593	1,100	9,754	2,250	2,250	6,691	5,512	5,797	9,983	8,367	4,384
1926	7,132	3,924	3,509	9,904	12,734	3,976	9,469	1,500	1,500	1,500	3,577	7,778	5,960	7,096	4,348
1927	6,573	12,719	7,802	7,806	12,725	12,801	11,151	3,000	3,000	7,100	8,693	9,070	12,450	10,588	6,822
1928	7,800	11,284	11,712	12,731	10,619	12,775	10,438	1,500	1,500	1,500	5,635	8,748	11,719	9,163	6,617
1929	6,106	6,832	7,936	8,314	6,952	2,392	1,500	1,500	1,100	1,100	2,744	6,592	5,857	4,552	3,672
1930	3,653	2,438	9,142	10,535	7,415	10,921	5,473	1,500	1,500	5,084	3,734	8,780	6,623	8,194	4,734
1931	4,990	4,309	4,247	8,188	4,290	2,092	1,100	1,100	1,500	1,500	3,495	3,588	5,178	4,005	2,838
1932	3,570	2,705	10,532	7,800	8,518	6,077	3,352	2,126	2,250	4,296	2,295	9,450	3,560	7,456	4,102
1933	6,882	3,492	6,230	2,531	6,168	3,594	2,134	1,500	1,500	3,670	1,100	3,671	1,283	4,149	2,620
1934	4,571	1,557	8,552	5,688	6,237	1,989	1,100	1,100	1,100	1,100	1,100	4,356	4,805	4,036	2,721
1935	3,304	6,886	6,044	7,803	5,100	10,880	8,981	3,000	1,124	1,124	8,603	9,331	12,512	8,597	5,210
1936	8,233	4,534	5,070	11,499	11,061	10,641	6,300	1,500	1,500	5,003	7,784	11,584	11,400	9,675	5,953
1937	8,043	5,302	5,113	9,049	12,735	11,226	7,387	2,859	3,000	6,546	4,650	10,021	11,514	9,659	5,857
1938	9,149	11,639	9,299	4,788	7,468	8,130	7,408	1,500	1,500	7,398	11,387	9,413	12,226	12,994	6,363
1939	12,891	9,691	11,222	9,331	6,022	5,740	1,441	1,441	2,250	2,250	5,718	11,489	10,038	9,024	5,747
1940	5,837	5,643	484	10,541	12,734	12,767	11,151	3,000	3,000	7,582	7,015	12,227	12,098	10,211	6,138
1941	9,833	6,145	12,722	12,726	12,744	12,197	11,151	1,500	1,500	7,398	7,412	8,954	12,677	12,983	7,194
1942	12,091	9,301	12,725	9,913	5,409	10,788	11,151	3,000	3,000	8,049	11,120	9,245	11,592	12,994	7,136
1943	12,891	12,024	12,727	12,732	6,384	12,821	10,817	1,500	1,500	3,701	7,184	9,533	12,610	11,844	7,241
1944	9,603	6,350	7,041	9,510	9,116	8,668	2,516	2,516	3,000	4,484	6,352	13,018	12,196	10,034	5,933
1945	6,756	10,549	7,515	10,461	12,736	10,723	7,299	1,500	1,500	6,805	7,604	11,240	12,185	10,538	6,559
1946	10,249	9,437	10,544	12,730	4,909	9,041	6,874	3,000	3,000	6,799	6,559	12,522	12,384	11,218	6,641
1947	8,025	7,238	11,368	6,220	8,032	6,954	5,996	1,500	1,225	1,225	5,769	13,028	11,941	9,451	5,620
1948	6,504	6,811	5,476	8,112	6,345	6,446	10,333	1,500	1,500	9,033	8,738	13,074	12,430	11,460	5,844
1949	7,455	4,995	9,026	5,896	6,034	10,557	6,270	1,500	1,500	3,422	6,641	11,773	7,089	8,512	5,105
1950	4,662	6,598	5,300	7,819	12,427	8,364	5,415	1,500	1,500	4,745	8,256	12,424	12,347	11,080	5,767
1951	8,641	12,728	10,536	10,725	7,837	6,687	7,243	1,500	1,500	5,449	5,748	10,637	13,056	11,361	6,397
1952	9,351	9,167	11,505	11,509	12,748	12,806	3,000	3,000	3,000	8,049	9,277	11,891	11,618	12,994	7,327
1953	12,891	9,832	12,727	5,622	6,720	8,434	8,014	2,250	2,250	8,382	10,621	9,289	12,092	12,994	6,758
1954	12,883	10,121	6,777	12,732	12,754	10,588	11,151	2,250	2,250	7,617	5,701	10,929	10,996	11,513	7,035
1955	10,104	9,110	12,727	12,732	5,315	4,584	4,239	1,500	1,500	3,786	6,137	9,939	9,175	7,443	5,626
1956	4,639	6,497	7,808	11,501	12,733	12,805	9,017	1,500	1,500	9,550	9,727	9,343	12,554	12,994	6,714
1957	12,891	8,733	8,993	9,467	12,754	11,962	9,013	2,250	2,250	7,098	5,709	10,919	12,037	11,327	6,946
1958	11,670	9,881	10,545	11,510	12,751	12,802	11,151	3,000	3,000	8,049	11,493	10,325	12,888	12,994	7,809
1959	12,430	8,918	9,821	12,732	7,682	2,884	2,250	2,250	2,250	5,586	7,323	11,982	12,379	11,399	6,277
1960	9,205	3,565	3,573	7,980	12,442	8,600	1,100	1,100	1,500	3,455	4,756	11,632	9,767	8,184	5,015
1961	4,320	7,286	8,262	6,854	9,735	5,471	5,353	1,500	1,100	2,644	5,170	10,733	10,737	8,398	4,955
1962	6,262	6,195	10,726	5,611	12,745	11,201	6,240	2,250	2,024	3,900	6,878	11,122	12,743	10,591	6,100
1963	12,861	12,037	10,543	11,869	12,748	11,392	11,151	1,500	1,500	7,398	6,269	9,512	12,422	11,490	7,357
1964	10,473	12,761	9,396	12,730	4,740	4,818	1,351	1,351	1,500	5,859	5,665	13,017	12,149	9,836	6,106
1965	6,334	8,943	10,539	12,721	12,736	8,445	11,151	3,000	3,000	5,908	6,366	10,009	12,749	10,224	6,664
1966	9,575	12,765	12,727	12,732	9,066	11,481	6,647	2,250	2,250	2,250	6,527	11,159	11,699	11,797	7,024
1967	8,322	10,302	11,505	11,509	12,749	8,935	7,408	1,500	1,500	7,398	11,473	13,100	11,912	12,987	7,337
1968	12,850	10,317	12,109	12,730	7,348	7,406	1,425	1,425	2,250	5,385	6,652	10,076	12,166	11,887	6,590
1969	7,973	8,242	11,505	11,509	12,749	12,818	3,000	3,000	3,000	8,049	9,230	9,851	9,277	12,994	6,916
1970	12,891	10,332	9,462	6,867	8,100	8,559	7,633	1,500	1,500	3,992	6,348	9,545	13,057	11,286	6,271
1971	9,808	11,911	12,725	12,729	6,312	12,794	9,462	2,250	2,250	2,250	9,020	9,356	13,073	12,991	7,192
1972	12,885	7,100	12,726	12,595	8,304	12,783	5,456	1,500	1,500	5,259	5,276	11,502	10,511	8,366	6,604
1973	7,304	12,750	12,722	10,544	12,745	10,134	8,404	3,000	3,000	6,021	8,017	11,332	12,532	12,022	7,251
1974	10,213	12,762	12,726	7,933	12,752	12,799	11,151	1,500	1,500	6,336	9,937	10,797	12,881	12,990	7,597
1975	12,884	11,011	12,208	10,234	12,753	6,370	10,174	3,000	3,000	7,964	10,116	8,943	12,880	12,990	7,380
1976	12,882	12,762	11,713	10,572	6,418	4,623	1,500	1,500	1,500	2,562	3,796	6,142	9,542	8,373	5,468
1977	6,096	4,180	4,977	2,530	1,452	1,541	1,100	1,100	1,500	1,500	2,918	4,575	6,138	4,336	2,509
1978	3,602	2,877	7,166	7,800	12,718	12,800	1,500	1,500	1,500	6,617	9,498	9,023	12,444	11,595	5,727
1979	10,350	6,009	5,569	12,732	10,565	12,781	3,000	3,000	3,000	7,189	6,124	11,207	12,355	11,654	6,496
1980	9,801	8,265	12,725	12,730	12,749	5,086	8,931	1,500	1,500	4,937	7,979	9,968	11,930	11,325	6,689
1981	10,927	6,136	8,569	12,732	8,689	12,524	6,694	2,250	2,250	2,250	5,750	11,075	10,476	10,675	6,308
1982	8,105	12,749	11,502	7,821	12,744	12,810	11,151	3,000	3,000	8,049	10,351	9,423	12,888	12,994	7,469
1983	12,891	12,348	9,745	5,621	4,630	4,240	6,103	1,500	1,500	1,500	7,126	13,100	13,078	12,994	6,117
1984	12,891	10,307	4,348	5,244	6,192	12,801	2,847	2,847	3,000	3,000	6,829	9,920	12,390	11,957	5,972
1985	9,985	12,765	12,727	10,617	7,030	5,956	3,651	1,500	1,500	3,715	5,645	13,039	12,924	11,395	6,493
1986	8,989	6,502	7,737	12,723	12,739	12,769	10,179	1,500	1,500	4,844	7,695	4,794	12,215	11,473	6,424
1987	10,372	6,442	6,506	9,539	6,306	4,810	5,799	1,500	1,100	2,152	5,773	10,172	9,137	8,270	4,996
1988	5,080	4,801	5,776	12,719	4,077	1,248	1,500	1,500	1,500	3,976	3,676	5,910	4,302	4,127	3,392
1989	3,439	4,624	5,080	6,104	1,565	10,538	8,121	1,500	1,500	3,656	6,039	11,939	10,674	9,649	4,681
1990	7,380	2,650	6,386	10,819	5,781	5,486	1,100	1,100	1,500	2,790	2,737	5,921	1,979	4,306	3,432
1991	4,137	1,100	3,536	2,801	2,733	10,023	1,500	1,500	1,500	1,500	1,520	5,341	3,713	5,178	2,615
1992	3,866	2,203	3,539	4,846	10,542	6,706	1,500	1,500	1,100	1,100	1,341	4,076	3,448	4,	

Table I-32b. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario A Conditions minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	1,001	16	0	723	674	0	0	909	1,820	278	700	-442	298
1923	-375	575	979	-849	2	-8	141	0	0	2	-12	879	1,887	-541	160
1924	-291	-301	-31	-3	-2	0	0	0	-2	-2	-287	-1,060	1,793	1	-10
1925	57	-35	-102	2	-276	0	0	0	0	0	50	27	-135	1	-24
1926	58	-17	-1	403	1,181	-2	0	0	0	0	418	564	-693	-2	110
1927	91	1,822	547	462	283	2,162	911	0	0	0	12	1,115	727	-565	432
1928	-692	351	425	1,102	6	935	197	0	0	0	0	-34	211	-157	137
1929	-754	-881	-548	-159	-12	-4	0	0	0	0	0	710	5	-29	-101
1930	-355	367	-187	1,050	-20	716	0	0	0	0	258	544	-513	2	113
1931	-248	735	492	-2	2	2	0	0	0	0	-196	4	8	-4	48
1932	-96	570	936	253	65	9	-137	124	0	-132	-17	221	-868	-693	19
1933	47	-125	-3	-566	-2	-4	4	0	0	238	0	-131	1	0	-40
1934	-6	25	-129	-2	3	5	0	0	0	0	0	891	228	6	63
1935	-84	71	-26	229	-42	1,447	934	0	0	0	-26	173	1,763	-554	211
1936	-637	-730	502	1,197	547	937	0	0	0	-2	3	659	1,097	-528	187
1937	-209	-529	-19	36	0	25	402	14	0	-2	-1,296	719	257	31	-45
1938	-104	736	829	0	0	0	911	0	0	911	1,707	-2,367	901	1,321	234
1939	1,822	-1,253	-52	-770	-10	0	12	12	0	0	-153	1,239	127	-604	26
1940	-386	-71	-167	353	62	954	911	0	0	0	-227	511	1,845	610	240
1941	228	-1,071	1,309	61	5	1,403	911	0	0	911	-39	199	1,466	1,334	357
1942	1,068	-804	924	1,313	416	455	911	0	0	909	1,440	1,056	354	1,331	514
1943	1,841	1,085	1,162	3	110	1,396	576	0	0	2	4	989	878	684	514
1944	-418	669	-421	551	298	3	-1,888	-484	0	8	-3	1,311	898	-414	80
1945	-46	-278	253	-536	-1	0	4	0	0	2	0	165	1,388	-565	25
1946	-3	-1,425	618	252	-26	-5	-9	0	0	0	-607	768	1,719	631	121
1947	89	-786	66	140	-8	-52	4	0	-275	-2,362	258	1,310	693	-26	22
1948	-930	71	116	-132	1	32	92	0	0	393	2	1,329	728	316	109
1949	-2,114	-1,508	-226	-156	204	1,045	-26	0	0	31	-2	427	196	-40	-132
1950	-198	2,021	-192	433	914	-13	-4	0	0	19	-8	756	700	34	264
1951	-37	1,818	616	-1,994	-3,766	354	0	0	0	0	0	-480	1,779	418	-61
1952	27	932	1,308	3	69	953	0	0	0	909	0	1,208	360	1,320	404
1953	1,820	545	1,337	-1,844	-71	2	4	0	0	0	941	860	359	1,333	320
1954	1,838	-816	-4,426	1,260	1,072	1,055	911	0	0	-535	1	1,110	649	407	137
1955	236	301	1,529	1,208	649	16	26	0	0	23	2	-446	2,109	73	346
1956	-45	-7	305	-2	59	958	0	0	0	911	47	736	1,318	1,332	315
1957	1,843	-385	6	-1,095	1,479	2,645	9	0	0	0	3	757	1,613	165	424
1958	622	-1,057	1,127	1,160	681	952	911	0	0	909	1,813	1,215	1,639	1,325	631
1959	1,369	-724	-152	1,096	-1,245	98	0	0	0	-27	69	728	667	869	177
1960	-40	-60	-617	0	1,130	1	0	0	0	4	954	32	-123	-918	16
1961	-174	190	38	-6	606	-10	0	0	0	8	1,686	-196	-322	-380	82
1962	-512	-1,575	380	359	0	11	0	0	-4	-4	0	1,318	1,353	339	105
1963	1,837	1,107	1,180	348	735	1,050	911	0	0	911	383	1,090	705	809	616
1964	-556	1,829	-1,701	1,269	385	12	7	7	0	-132	23	1,466	1,175	-528	199
1965	-106	-391	808	-1	0	-67	911	0	0	-4	0	820	1,007	-941	99
1966	301	1,825	863	222	2	5	0	0	0	0	-7	702	312	647	295
1967	164	-146	1,301	750	769	-21	911	0	0	911	1,793	1,335	192	1,333	505
1968	1,818	-532	855	1,135	-192	104	0	0	0	0	12	72	445	947	287
1969	-649	-443	1,469	1	2	949	0	0	0	909	-32	506	-1,981	1,320	97
1970	1,820	-149	-15	-326	0	215	13	0	0	2	31	1,222	1,348	138	264
1971	0	982	1,382	1,038	445	1,286	39	0	0	0	1	-511	1,346	1,333	443
1972	1,846	-2,687	1,496	1,116	-84	1,555	116	0	0	-8	-366	1,132	-297	21	239
1973	-21	1,823	1,549	765	2	-1,563	4	0	0	0	-4	925	1,310	886	344
1974	-395	1,829	1,450	-3,568	245	945	911	0	0	0	405	840	1,157	1,334	279
1975	1,848	77	954	-748	6	106	2	0	0	823	436	754	1,657	1,335	418
1976	1,847	1,828	479	938	256	21	0	0	0	0	15	-2,154	1,278	510	302
1977	236	-777	1,534	12	-411	-417	-400	-400	0	0	16	-3,493	1,511	0	-130
1978	-298	632	-53	216	0	934	0	0	0	130	17	1,340	1,207	-68	244
1979	-556	-667	71	165	2	965	0	0	0	2	-1,358	1,517	1,131	947	139
1980	119	-377	1,485	2	282	865	251	0	0	-2	8	1,061	693	-338	241
1981	-122	-662	-170	1,115	1,958	2,627	-4	0	0	0	50	579	-575	102	291
1982	-19	1,814	1,497	-3	-4	963	911	0	0	909	671	949	1,641	1,326	592
1983	1,832	1,407	-829	-35	-100	0	0	0	0	0	0	1,320	1,574	1,902	429
1984	1,820	-638	-2,078	0	0	948	-58	-58	0	0	-58	932	837	886	159
1985	235	1,829	1,464	4	-8	-212	2	0	0	-2	20	1,334	1,729	287	407
1986	-1,346	-1,944	488	1,094	2	934	120	0	0	4	-21	49	1,002	-177	13
1987	-653	-358	-257	-99	-2,046	-2,140	-154	0	-136	-51	905	1,405	831	-183	-158
1988	-253	89	-494	1,395	-1	-4	0	0	0	-97	45	126	-630	-985	-45
1989	453	-551	326	-99	3	1,171	0	0	0	0	278	1,183	230	-20	183
1990	-1,070	-845	-415	744	0	118	0	0	0	-4	1,530	1,074	-936	-35	9
1991	-10	-86	0	2	54	550	0	0	0	0	0	371	176	-428	39
1992	-25	-48	0	68	834	2	0	0	0	0	209	-185	-173	-4	36
1993	20	287	4	-2	54	1,093	911	0	0	911	296	1,359	42	517	279
1994	-29	-1,337	-703	-893	4,078	333	9	0	0	0	0	1,320	814	549	232
Avg	197	43	321	157	159	446	175	-11	-6	127	191	555	692	286	194
Min	-2,114	-2,687	-4,426	-3,568	-3,766	-2,140	-1,888	-484	-275	-2,362	-1,358	-3,493	-1,981	-985	-158
Max	1,848	2,021	1,549	1,395	4,078	2,645	934	124	0	911	1,820	1,517	2,109	1,902	631

Table I-33a. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario A Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	9,726	7,601	7,822	12,151	12,754	12,801	10,324	3,000	3,000	8,049	11,500	8,460	11,016	10,102	7,000
1923	11,902	9,625	10,545	11,512	7,156	6,379	10,476	1,500	1,500	4,988	7,425	10,753	12,412	10,902	6,526
1924	8,402	4,942	6,788	8,828	6,762	1,100	1,100	1,100	1,100	1,100	1,100	5,122	3,761	4,192	3,209
1925	4,615	3,724	7,896	6,145	10,010	1,100	9,959	2,250	2,250	4,740	5,010	5,729	7,165	8,345	4,161
1926	6,215	3,992	5,982	8,979	9,529	4,712	5,764	1,500	1,500	5,974	3,956	6,893	5,444	5,488	4,131
1927	5,622	12,719	7,802	11,495	12,725	12,667	11,151	3,000	3,000	6,999	8,644	9,558	12,058	9,524	6,919
1928	9,463	11,051	11,823	12,731	10,652	12,765	10,446	1,500	1,500	1,500	5,051	8,937	11,526	9,346	6,690
1929	6,575	7,076	8,493	8,643	7,068	2,447	1,766	1,500	1,100	1,100	2,277	5,014	3,158	4,321	3,483
1930	4,192	2,213	9,806	10,536	7,538	12,301	5,814	1,500	1,500	5,301	3,529	8,495	6,243	8,824	4,888
1931	4,530	5,575	4,153	8,514	4,714	2,438	1,100	1,100	1,100	1,100	3,494	3,531	5,246	3,856	2,912
1932	3,319	3,104	7,797	12,711	9,076	6,381	4,307	2,250	2,250	4,480	2,372	5,195	8,981	7,707	4,423
1933	5,809	3,836	6,289	2,744	6,282	3,685	2,201	1,500	1,500	3,804	1,100	3,296	1,200	4,005	2,573
1934	4,645	1,517	9,117	6,408	6,280	2,341	1,100	1,100	1,100	1,100	1,100	3,707	4,512	3,868	2,758
1935	3,465	6,868	7,229	7,803	5,335	10,517	9,176	3,000	1,124	1,124	8,480	9,885	12,238	8,327	5,282
1936	7,964	4,566	5,671	11,499	10,897	10,372	6,364	1,500	1,500	5,053	7,735	10,765	11,346	9,730	5,899
1937	7,248	6,033	4,648	9,219	12,733	10,157	7,539	3,000	3,000	6,656	7,732	10,017	12,529	9,514	6,017
1938	7,694	10,849	4,706	9,246	8,593	9,266	7,408	1,500	1,500	7,398	11,500	13,100	12,539	12,798	6,592
1939	12,891	9,051	10,970	8,968	6,082	5,260	5,357	2,250	2,250	2,250	5,520	11,188	9,791	9,330	5,758
1940	5,735	5,010	1,100	10,542	12,737	12,762	11,151	3,000	3,000	7,565	7,688	11,821	12,309	11,708	6,249
1941	10,407	7,279	12,721	12,725	12,743	12,794	11,151	1,500	1,500	9,550	4,369	13,100	12,939	12,990	7,492
1942	12,884	8,594	12,726	12,731	12,236	6,846	11,151	3,000	3,000	8,049	10,951	7,779	12,345	12,462	7,368
1943	12,354	11,903	12,727	12,732	8,376	12,809	11,019	1,500	1,500	1,500	7,333	9,352	12,556	10,692	7,172
1944	8,716	5,798	7,614	9,344	9,110	8,676	4,361	3,000	3,000	4,740	6,297	12,049	11,354	9,713	5,815
1945	6,421	11,178	7,582	7,964	12,733	10,513	7,547	1,500	1,500	4,604	7,684	11,392	12,544	9,828	6,345
1946	10,312	9,295	10,542	12,726	2,910	9,124	6,898	3,000	3,000	6,753	7,147	13,100	13,052	11,574	6,662
1947	8,158	8,332	10,033	7,298	8,128	7,980	6,028	1,500	1,100	1,100	5,565	11,952	9,045	9,735	5,500
1948	6,376	6,998	5,491	7,766	6,331	6,584	10,532	1,500	1,500	9,037	8,532	13,087	12,258	11,491	5,821
1949	7,135	5,728	8,154	8,492	5,844	10,553	6,364	1,500	1,500	2,746	6,579	11,050	7,765	8,500	5,198
1950	4,210	5,428	4,672	7,818	12,425	8,439	5,454	1,500	1,500	4,947	8,119	12,435	12,450	10,621	5,614
1951	8,507	12,724	10,193	9,206	9,401	9,573	7,221	1,500	1,500	5,358	7,005	10,709	12,073	10,706	6,514
1952	9,775	8,671	12,725	11,509	12,748	12,810	11,151	3,000	3,000	8,049	9,100	10,107	11,285	12,994	7,500
1953	12,891	9,966	12,727	11,243	5,899	8,378	8,319	2,250	2,250	8,512	9,794	9,503	12,006	12,987	7,034
1954	12,877	10,158	5,790	12,730	12,751	12,785	11,151	2,250	2,250	8,173	5,660	11,018	10,992	11,436	7,127
1955	10,506	9,645	12,727	12,731	5,417	4,382	4,187	1,500	1,500	5,888	6,136	7,675	6,397	7,511	5,435
1956	4,300	7,574	7,807	11,499	12,731	12,800	9,270	1,500	1,500	9,550	9,644	9,451	10,760	11,947	6,594
1957	12,891	8,082	7,313	10,317	12,754	12,793	8,938	2,250	2,250	2,250	6,983	9,934	11,739	10,967	6,726
1958	12,215	8,821	12,725	11,509	12,750	12,802	11,151	3,000	3,000	8,049	11,414	9,279	12,888	12,994	7,844
1959	12,891	9,379	9,376	12,732	10,266	4,718	5,085	2,250	2,250	5,999	7,024	12,082	12,154	10,335	6,571
1960	6,150	4,013	6,259	6,636	12,442	9,006	1,100	1,100	1,500	3,507	4,970	10,333	7,694	5,796	4,626
1961	4,761	7,812	9,719	7,264	10,542	7,240	5,237	1,500	1,100	1,100	3,510	12,066	11,115	9,047	5,274
1962	6,288	5,650	10,424	6,188	12,742	11,369	6,544	2,250	1,428	3,304	6,107	10,620	12,860	10,920	6,018
1963	12,862	10,491	10,543	11,996	12,748	12,068	11,151	1,500	1,500	9,550	6,885	9,653	13,078	10,367	7,401
1964	12,347	12,765	9,801	12,732	4,730	4,024	7,635	1,500	1,500	1,500	5,192	11,305	10,954	9,153	6,002
1965	5,883	9,605	10,537	12,719	12,733	7,788	11,151	3,000	3,000	5,277	6,297	9,334	12,699	9,941	6,550
1966	8,425	12,762	12,726	12,731	10,829	11,208	2,250	2,250	2,250	6,249	6,490	11,041	11,447	11,058	6,961
1967	8,501	10,748	7,818	11,508	12,433	11,267	7,408	1,500	1,500	7,398	11,500	13,100	13,059	12,984	7,346
1968	12,871	11,014	12,269	12,730	6,786	11,333	1,425	1,425	2,250	5,517	6,723	11,155	12,251	11,404	6,904
1969	7,327	8,266	11,506	7,828	12,752	12,815	8,051	3,000	3,000	8,049	9,061	9,885	12,372	11,167	6,875
1970	12,891	10,788	11,389	8,171	5,484	11,198	7,659	1,500	1,500	1,500	6,591	10,311	13,046	10,599	6,456
1971	10,142	12,630	12,724	12,728	5,581	12,794	9,569	2,250	2,250	2,250	8,346	10,609	13,073	12,991	7,254
1972	12,885	8,573	12,465	12,105	9,170	12,782	1,500	1,500	1,500	5,433	5,909	10,718	10,797	8,684	6,608
1973	7,381	12,745	12,720	9,945	12,741	12,799	8,700	3,000	3,000	5,918	8,011	9,586	12,041	11,798	7,236
1974	10,995	12,762	12,726	10,155	12,752	12,795	11,151	1,500	1,500	6,415	9,299	9,162	12,877	12,988	7,645
1975	12,879	7,541	12,037	9,502	12,752	12,790	10,289	3,000	3,000	7,838	9,466	9,514	12,728	12,990	7,499
1976	12,882	12,685	12,046	9,370	6,226	4,997	2,953	1,500	1,500	2,599	3,830	8,097	8,197	7,610	5,460
1977	5,675	4,627	2,592	2,621	1,913	1,991	1,325	1,325	1,500	1,500	2,882	7,317	4,811	4,335	2,520
1978	3,849	2,374	7,518	7,801	10,690	8,130	7,408	1,500	1,500	6,598	9,915	7,501	10,868	11,715	5,350
1979	8,939	6,459	9,275	12,729	10,563	12,769	8,874	3,000	3,000	7,197	7,219	9,328	10,931	10,887	6,654
1980	9,387	8,763	12,722	7,821	12,742	11,449	9,225	1,500	1,500	5,081	7,820	9,199	11,469	11,399	6,715
1981	10,607	5,523	9,660	12,732	8,458	7,581	7,016	2,250	2,250	5,249	5,784	13,051	11,664	10,410	6,288
1982	8,102	12,751	7,817	11,507	12,745	12,802	11,151	3,000	3,000	8,049	10,043	13,100	13,078	12,994	7,688
1983	12,891	11,225	9,758	5,137	5,484	5,225	7,408	1,500	1,500	1,500	6,877	13,100	13,045	12,960	6,149
1984	12,891	10,423	4,584	5,780	12,752	6,762	8,325	3,000	3,000	3,000	7,001	10,128	12,656	11,576	6,203
1985	11,419	12,763	12,726	10,586	7,106	5,380	1,500	1,500	1,500	3,784	5,546	13,047	13,012	11,741	6,507
1986	8,816	6,462	7,681	11,504	12,741	12,760	10,281	1,500	1,500	4,895	7,609	5,384	12,472	11,175	6,366
1987	10,117	5,842	7,325	9,084	6,165	5,012	3,686	1,500	1,100	1,947	6,248	9,922	8,830	7,114	4,827
1988	4,644	4,993	9,961	10,538	2,662	1,399	4,419	1,500	1,500	2,905	2,521	6,360	4,252	4,901	3,485
1989	3,393	5,025	5,706	6,311	1,578	10,538	8,226	1,500	1,500	3,656	5,852	11,393	11,183	9,832	4,755
1990	7,508	2,991	6,645	11,179	6,023	5,433	1,100	1,100	1,500	2,924	1,453	5,517	2,547	4,281	3,445
1991	4,219	1,100	3,573	2,981	2,538	10,254	1,500	1,500	1,500	1,500	2,502	4,123	2,314	5,185	2,535
1992	4,229	1,959	3,933	4,924	10,541	6,840	5,308	1,500	1,100	1,100	1,628	4,209	5,420	4,139	3,133
1993	3,589	3,143	9,605	7,811	12,731	12,772	11,151	2,250	2,250	7,675	10,067				

Table I-33b. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario A minus 2020 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	500	307	0	953	84	0	0	909	1,820	-3,313	-280	-245	12
1923	863	-283	896	668	0	1	236	0	0	2	-16	-500	996	274	185
1924	27	-475	695	-213	-254	0	-20	-20	-400	-400	0	22	-41	0	-38
1925	8	14	16	4	141	0	2	0	0	-4	-36	103	-101	-1	8
1926	66	-44	27	56	1,007	-87	0	0	0	2	2,397	-388	-174	-1	165
1927	-92	1,820	547	1,231	284	1,180	911	0	0	0	12	570	335	9	384
1928	326	117	536	1,102	-54	1,307	206	0	0	0	-84	1,771	-170	5	305
1929	15	-776	147	-91	36	-1	-24	0	0	0	-393	-946	-2,951	-121	-311
1930	280	-153	477	1,050	-35	2,282	66	0	0	89	53	172	-1,441	3	171
1931	-3	1,068	572	0	6	5	0	0	-400	-400	-3	5	-196	0	63
1932	56	171	467	676	42	3	34	0	0	0	0	-26	-297	-208	55
1933	1	-11	23	-52	-1	0	2	0	0	-2	0	0	0	0	-2
1934	0	0	-12	603	-5	2	0	0	0	0	0	167	-4	-67	42
1935	15	-131	231	1,343	-2	1,742	932	0	0	0	-12	145	714	-921	222
1936	210	-456	586	1,198	-134	747	0	0	0	-2	4	324	800	-36	201
1937	-1	-30	18	10	0	531	399	0	0	-23	4	484	1,485	-196	153
1938	-75	1,061	396	251	-705	39	911	0	0	911	1,820	1,320	1,212	1,124	449
1939	1,821	-648	-325	-767	-126	-394	-651	0	200	200	-54	1,161	618	12	75
1940	68	221	-765	358	135	949	911	0	0	6	246	106	1,263	1,316	263
1941	50	-831	1,308	191	4	1,518	911	0	0	911	-617	1,320	1,638	1,330	420
1942	1,840	-2,028	1,027	2	61	465	911	0	0	909	1,271	-2,589	607	799	145
1943	1,304	964	1,227	3	276	940	778	0	0	0	2	1,191	824	-466	406
1944	-268	-247	44	186	297	-111	13	0	0	207	0	1,435	462	-269	100
1945	-57	266	324	181	0	2	4	0	0	0	-7	33	1,933	30	166
1946	-254	-267	821	233	-2,278	564	-2	0	0	-16	-1	1,342	1,491	593	150
1947	-1,273	-153	555	335	2	-40	6	0	-400	-592	12	880	-1,755	189	-107
1948	-438	335	400	-554	0	0	291	0	0	397	2	1,343	554	347	142
1949	-1,038	168	172	254	-68	1,044	-4	0	0	-1,273	0	116	-671	-40	-44
1950	-141	253	-539	432	911	0	-6	0	0	157	-61	787	819	-173	140
1951	101	1,819	274	-2,707	-516	-7	0	0	0	2	2	401	797	39	12
1952	37	-102	1,308	3	130	948	911	0	0	909	0	1,109	808	1,320	395
1953	1,820	-27	1,343	-1,489	-53	0	0	0	0	0	114	953	284	1,332	261
1954	1,843	-775	-1,768	1,260	1,073	1,409	911	0	0	21	0	525	263	583	293
1955	224	312	1,529	1,208	523	-2	-176	0	0	-2	3	-11	1,353	-171	297
1956	31	491	307	-1	62	949	0	0	0	911	3	-2,329	-545	285	-19
1957	1,843	-794	-169	1,463	1,014	1,395	6	0	0	0	3	1,006	165	340	380
1958	1,182	-1,706	3,890	1,161	685	957	911	0	0	909	1,734	1,096	1,645	1,328	786
1959	1,835	-386	-385	1,097	329	1,101	2	0	0	281	44	812	430	-193	296
1960	-1,625	814	-266	2	1,126	-17	0	0	0	-10	908	-287	-542	3	-3
1961	430	403	-368	-34	1,020	-79	0	0	0	0	14	570	146	134	130
1962	-266	-241	-303	445	-1	13	34	0	-822	-1,397	0	589	1,167	-1	19
1963	1,835	-440	1,179	473	735	665	911	0	0	911	48	244	1,349	31	429
1964	1,306	1,829	-1,419	1,269	-17	-21	-114	0	0	0	0	1,870	-16	11	289
1965	55	21	906	0	1	-217	911	0	0	-260	0	112	957	-1,072	68
1966	105	1,822	908	246	2	2	0	0	0	-10	-1	743	475	391	284
1967	766	145	491	750	773	-305	911	0	0	911	1,820	1,334	1,338	1,330	564
1968	1,838	81	1,015	1,135	-2,183	582	0	0	0	105	24	992	548	462	292
1969	138	-32	1,468	4	4	949	911	0	0	909	-13	1,039	1,117	-495	314
1970	1,823	-156	-155	-4,560	-1,166	-646	-39	0	0	0	7	1,630	1,337	-525	-141
1971	143	1,701	1,381	1,037	-657	1,454	-19	0	0	0	3	-665	1,346	1,333	433
1972	1,846	-1,236	1,234	626	-960	1,567	0	0	0	85	88	-387	129	17	191
1973	39	1,818	1,546	-541	114	952	0	0	0	2	3	896	819	643	381
1974	-39	1,828	1,449	-1,353	257	945	911	0	0	0	-1	921	1,653	1,332	449
1975	1,843	-3,393	782	-1,736	34	2,441	49	0	0	698	3	960	1,505	1,335	260
1976	1,847	1,751	812	-357	1,359	-31	6	0	0	0	159	2,690	-1,358	-485	382
1977	156	-143	-165	-86	18	9	115	115	0	0	-18	2,647	-1,539	0	61
1978	228	-435	299	216	-1,385	-562	911	0	0	110	304	-23	-344	378	-43
1979	42	-430	206	558	4	2,279	-2	0	0	0	467	51	-266	-86	174
1980	-230	-9	1,482	-2	60	-410	-2	0	0	-2	17	838	232	256	136
1981	-404	393	343	1,115	-270	139	13	0	0	143	8	1,289	388	-613	154
1982	-479	1,819	562	0	-1	953	911	0	0	909	363	1,320	1,777	1,334	519
1983	1,847	288	-924	275	235	0	911	0	0	0	0	1,320	1,287	2,929	466
1984	1,820	-522	-2,550	0	63	82	-19	0	0	0	4	725	2,192	490	141
1985	385	1,830	1,463	4	-28	-266	0	0	0	0	49	1,334	1,679	622	430
1986	-543	-848	431	1,094	3	935	41	0	0	0	6	-5,616	1,216	33	-199
1987	-768	98	-348	283	-1,477	-528	2,089	400	-279	-252	93	1,337	289	-1,333	-76
1988	-435	-2	616	1,047	-1,179	31	-4	0	0	-1,246	187	332	306	20	24
1989	-122	88	-81	25	0	1,172	-2	0	0	10	210	696	1,041	455	213
1990	-867	-1,199	-73	1,106	0	-17	0	0	0	-4	320	720	-801	-37	-50
1991	56	-557	-4	0	57	781	0	0	0	0	2	58	265	-134	33
1992	-160	202	109	-42	833	2	-75	0	0	0	256	-171	203	-2	68
1993	-113	228	-104	-1	69	1,080	911	0	0	911	387	1,358	731	0	278
1994	27	-1,194	-720	-443	3,408	-112	0	0	0	6	1	1,414	886	-1,250	109
Avg	339	70	382	186	50	469	270	7	-29	103	192	459	471	214	184
Min	-1,625	-3,393	-2,550	-4,560	-2,278	-646	-651	-20	-822	-1,397	-617	-5,616	-2,951	-1,333	-311
Max	1,847	1,830	3,890	1,463	3,408	2,441	2,089	400	200	911	2,397	2,690	2,192	2,929	786

Table I-34a. CALSIM Simulated CVP Tracy Pumping, for 2001 Scenario B Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre- VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post- VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	4,391	4,265	4,227	4,232	4,254	3,678	3,969	1,500	1,500	1,500	3,000	4,600	4,553	4,481	2,770
1923	4,366	4,257	3,005	3,009	3,405	2,847	4,544	800	800	800	2,234	4,562	4,523	4,465	2,422
1924	4,335	2,652	2,792	4,225	3,426	800	800	800	800	800	800	1,586	1,509	2,693	1,591
1925	2,569	1,139	3,699	3,473	4,155	800	4,600	1,125	1,125	3,001	2,027	3,198	4,143	4,393	2,080
1926	4,027	3,006	800	4,220	4,234	2,035	4,544	800	800	800	1,133	800	800	3,713	1,691
1927	3,562	4,218	2,992	2,995	4,224	3,021	4,600	1,500	1,500	1,500	2,920	4,588	4,543	4,475	2,534
1928	4,355	4,254	4,223	4,228	4,245	4,284	4,544	800	800	800	1,809	4,573	4,531	4,469	2,682
1929	3,567	4,155	4,222	4,226	3,481	800	800	800	800	800	1,497	1,811	3,513	3,431	1,946
1930	3,031	1,735	4,211	4,213	3,394	3,044	2,677	800	800	2,495	1,334	1,420	1,626	4,348	1,916
1931	3,490	2,673	1,086	4,080	2,125	1,202	800	800	800	800	1,393	800	1,043	2,349	1,316
1932	2,577	2,028	4,209	2,991	3,472	1,432	2,338	1,125	1,125	1,125	1,996	2,554	3,455	4,259	1,917
1933	1,958	1,112	679	592	871	1,247	800	800	800	1,788	800	800	962	2,911	847
1934	3,017	838	4,209	1,402	641	866	800	800	800	800	800	800	1,890	2,204	1,110
1935	1,994	3,907	3,173	2,993	1,030	2,291	2,430	1,500	800	800	2,557	2,116	4,469	4,371	1,916
1936	3,132	2,214	1,458	2,999	2,066	2,143	800	800	800	800	2,345	3,747	4,483	4,402	1,850
1937	4,294	3,543	1,833	3,001	4,235	2,520	1,345	1,345	1,500	1,500	2,488	3,168	4,463	4,359	2,212
1938	4,275	3,022	792	800	800	1,666	800	800	800	800	3,000	4,600	4,576	4,493	1,795
1939	4,389	4,264	4,227	4,232	3,012	2,870	1,125	1,125	1,125	1,125	3,000	3,412	3,265	3,867	2,343
1940	2,193	2,385	17	4,220	4,233	4,253	4,600	1,500	1,500	3,000	3,000	4,539	4,505	4,452	2,355
1941	4,317	3,993	4,219	4,223	4,239	3,500	4,544	800	800	800	3,000	4,573	4,531	4,469	2,686
1942	4,343	4,250	4,222	1,489	2,053	2,772	4,600	1,500	1,500	1,500	3,000	4,600	4,558	4,483	2,438
1943	4,370	4,259	4,225	4,229	3,130	3,089	4,544	800	800	800	2,195	4,600	4,552	4,480	2,574
1944	4,364	3,819	4,224	4,229	3,943	4,272	1,500	1,500	1,500	1,500	2,338	4,526	4,404	4,430	2,631
1945	2,618	4,239	2,999	4,222	4,237	4,279	3,575	800	800	2,953	2,856	4,594	4,548	4,478	2,603
1946	4,360	4,255	4,224	4,228	1,563	2,758	3,480	1,500	1,500	3,000	3,000	4,575	4,533	4,470	2,591
1947	4,072	3,218	4,222	3,042	4,170	3,537	2,939	800	800	800	1,801	4,547	4,512	4,459	2,428
1948	2,660	2,917	2,675	4,036	4,239	3,203	4,544	800	800	2,953	3,000	4,566	4,526	4,466	2,463
1949	4,338	3,284	4,222	2,947	3,016	4,245	3,078	800	800	800	2,060	4,546	4,511	4,458	2,441
1950	3,622	3,675	2,734	3,004	3,925	3,968	800	800	800	800	2,466	4,485	4,464	4,361	2,310
1951	3,173	4,229	4,215	4,219	1,639	2,644	3,564	800	800	800	3,000	4,568	4,528	4,467	2,402
1952	4,340	3,595	3,002	3,006	4,242	4,292	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,542
1953	4,391	4,265	4,227	2,811	3,694	1,252	4,005	1,125	1,125	3,001	3,000	4,600	4,553	4,481	2,529
1954	4,365	4,257	4,224	4,229	4,249	4,276	4,600	1,125	1,125	3,001	2,850	4,600	4,552	4,480	2,839
1955	4,364	4,257	4,224	4,229	3,082	2,289	2,716	800	800	800	1,934	4,525	4,368	4,299	2,425
1956	3,133	3,459	2,999	3,002	4,236	4,280	4,451	800	800	2,953	3,000	4,600	4,556	4,482	2,548
1957	4,368	4,258	4,225	4,229	3,294	2,636	4,498	1,125	1,125	3,001	2,710	4,600	4,555	4,482	2,674
1958	4,368	4,258	4,225	3,009	4,249	4,290	4,600	1,500	1,500	1,500	3,000	4,600	4,569	4,489	2,750
1959	4,381	4,262	4,226	4,231	3,798	1,863	1,125	1,125	1,125	2,811	3,000	4,586	4,541	4,475	2,565
1960	3,150	1,914	848	3,008	3,941	4,225	800	800	800	800	1,659	4,445	4,404	4,295	2,019
1961	3,143	3,742	4,115	3,430	4,225	2,380	2,619	800	800	2,336	2,039	4,576	4,534	4,010	2,381
1962	3,172	4,241	4,222	3,231	4,245	4,276	3,120	1,125	1,125	3,001	2,766	4,574	4,532	4,470	2,651
1963	4,344	4,250	4,222	4,226	4,245	3,595	4,544	800	800	800	3,000	4,581	4,537	4,472	2,710
1964	4,349	4,252	4,223	4,227	2,206	2,397	800	800	800	2,922	2,390	4,537	4,504	4,448	2,437
1965	2,586	4,241	4,219	4,223	4,239	4,277	4,600	1,500	1,500	3,000	3,000	4,600	4,562	4,485	2,760
1966	4,374	4,260	4,225	4,230	4,251	4,279	3,324	1,125	1,125	1,125	3,000	4,584	4,540	4,474	2,750
1967	3,484	4,253	3,003	3,008	4,246	4,036	800	800	800	800	3,000	4,582	4,538	4,473	2,424
1968	4,351	4,252	4,223	4,227	3,555	3,651	1,125	1,125	1,125	2,692	3,000	4,586	4,541	4,403	2,650
1969	3,814	4,253	3,003	3,008	4,247	4,308	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,550
1970	4,391	4,265	1,747	1,921	2,252	2,622	3,753	800	800	800	1,979	4,570	4,529	4,468	2,164
1971	4,341	4,249	4,222	4,226	4,244	4,280	4,600	1,125	1,125	1,125	3,000	4,594	4,547	4,478	2,785
1972	4,359	3,932	4,224	4,228	4,246	4,274	2,619	800	800	2,588	3,000	4,577	4,534	4,471	2,733
1973	4,182	4,251	4,222	4,227	4,245	4,253	4,202	1,500	1,500	1,500	2,755	4,587	4,542	4,475	2,781
1974	4,354	4,253	4,223	3,008	4,247	4,289	4,544	800	800	800	2,885	4,590	4,544	4,476	2,674
1975	4,356	4,254	4,223	4,228	3,260	2,643	4,600	1,500	1,500	1,500	3,000	4,588	4,543	4,475	2,665
1976	4,355	4,254	4,223	4,228	2,673	1,873	800	800	800	800	1,513	2,040	2,822	3,499	1,999
1977	2,584	1,737	800	800	800	800	800	800	800	800	1,475	3,190	3,016	2,810	1,188
1978	3,052	1,266	2,989	2,991	4,218	4,300	800	800	800	800	2,943	4,600	4,557	4,483	2,232
1979	4,369	4,043	3,667	4,229	4,250	4,281	1,500	1,500	1,500	3,000	3,000	4,592	4,546	4,477	2,731
1980	4,358	4,255	4,224	4,228	4,246	2,528	4,154	800	800	800	2,393	4,600	4,557	4,483	2,602
1981	4,369	4,203	4,225	3,370	2,728	2,624	3,347	1,125	1,125	1,125	2,849	4,595	4,548	4,478	2,500
1982	3,994	4,255	3,004	3,008	4,248	4,286	4,600	1,500	1,500	1,500	3,000	4,600	4,559	4,484	2,651
1983	4,372	4,259	3,431	2,520	1,725	1,670	800	800	800	800	3,000	4,600	4,578	4,494	2,194
1984	4,391	4,265	2,174	2,622	3,096	4,292	1,500	1,500	1,500	1,500	2,525	4,600	4,554	4,481	2,416
1985	4,366	4,257	4,225	4,229	3,520	3,059	800	800	800	800	1,809	4,524	4,494	4,427	2,448
1986	2,972	4,078	2,999	4,222	4,237	4,273	4,544	800	800	800	2,326	3,341	4,530	4,469	2,465
1987	4,342	4,250	4,222	4,226	4,149	2,626	2,945	800	800	1,848	1,716	1,665	1,799	3,279	2,136
1988	2,634	2,917	2,211	4,218	2,877	800	800	800	800	1,939	2,267	1,800	3,862	2,977	1,733
1989	2,481	2,350	2,352	2,887	800	4,217	4,006	800	800	800	1,784	4,393	4,177	4,362	2,004
1990	3,943	1,623	2,947	2,999	3,916	2,325	800	800	800	800	979	856	2,234	2,538	1,562
1991	2,912	802	1,826	1,553	1,386	4,230	800	800	800	800	1,220	851	2,565	4,269	1,405
1992	2,848	1,047	1,827	2,394	4,222	3,352	800	800	800	800	800	800	1,706	1,402	1,320
1993	2,980	800	3,963	2,999	4,231	4,272	4,600	1,125	1,125	1,125	3,000	4,552	4,515	4,461	2,398
1994	4,327	4,245	4,220	3,568	2,208	2,576	2,210	800	800	1,775	2,241	4,600	4,569	4,489	2,413
Avg	3,752	3,482	3,344	3,434	3,366	3,060	2,736	1,019	1,011	1,510	2,379	3,816	4,020	4,165	2,291
Min	1,958	800	17	592	641	800	800	800	800	800	800	800	800	1,402	847
Max	4,391	4,265	4,227	4,232	4,254	4,308	4,600	1,500	1,500	3,001	3,000	4,600	4,578	4,494	2,839

Table I-34b. CALSIM Simulated CVP Tracy Pumping, 2001 Scenario B minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	0	0	0	-5	0	0	0	0	0	0	0	0	0
1923	0	0	0	0	0	-5	0	0	0	0	-1	0	0	0	0
1924	0	-306	-97	0	0	0	0	0	0	0	0	499	7	172	17
1925	-16	0	-5	0	-63	0	0	0	0	0	40	7	-166	4	-12
1926	0	-12	0	0	0	46	0	0	0	0	333	0	-68	2	18
1927	462	1	0	0	0	-332	0	0	0	0	0	0	0	0	8
1928	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
1929	-1	-65	0	0	-1	0	0	0	0	0	0	28	152	6	7
1930	0	-36	0	0	-5	-189	-2	0	0	0	9	-2	-247	0	-29
1931	-1	-209	4	-15	-19	-38	0	0	0	0	-27	0	-20	-2	-20
1932	27	658	0	0	-160	-95	-274	0	0	0	-16	-17	-312	-22	-5
1933	-165	-51	-64	-99	-123	0	0	0	0	217	0	0	-20	-1	-24
1934	218	38	0	-395	0	3	0	0	0	0	0	0	-231	12	-22
1935	378	-159	138	0	-1	115	24	0	0	0	0	-1	0	1	30
1936	-177	-217	54	0	-11	0	0	0	0	0	0	2	-1	-2	-21
1937	-2	96	-403	0	0	-1,120	0	0	0	0	-23	4	0	0	-89
1938	0	-1,201	0	0	0	0	0	0	0	0	0	0	0	0	-71
1939	0	0	0	0	-4	0	0	0	0	0	490	342	277	1	67
1940	-84	1	-334	-1	-2	1	0	0	0	0	0	3	1	4	-25
1941	2	-206	0	0	0	-185	0	0	0	0	0	0	0	0	-24
1942	0	0	0	-1,678	0	0	0	0	0	0	0	0	0	0	-103
1943	0	0	0	0	-7	-775	0	0	0	0	0	0	0	0	-48
1944	0	-85	0	0	0	0	0	0	0	0	-1	-1	-88	-1	-11
1945	-2	0	0	0	0	1	-15	0	0	0	-1	10	9	5	1
1946	9	2	1	1	-2,541	40	39	0	0	0	0	1	1	0	-137
1947	-189	-1,032	0	2	150	34	0	0	0	0	23	9	7	9	-60
1948	-265	-148	-5	-86	1	-4	0	0	0	0	0	1	1	0	-31
1949	1	-964	1	-79	101	4	-13	0	0	0	-1	6	4	4	-56
1950	-1	557	82	0	1	0	0	0	0	0	0	-3	-3	-5	38
1951	-76	-1	0	0	-2,243	0	0	0	0	0	0	0	0	0	-129
1952	0	-255	0	0	0	0	0	0	0	0	0	0	0	0	-15
1953	0	0	0	-922	15	11	0	0	0	0	0	0	0	0	-55
1954	0	0	0	0	0	3	0	0	0	0	0	10	7	4	1
1955	7	3	0	1	90	5	-13	0	0	0	0	-8	-133	19	-2
1956	-16	47	0	-1	-1	-6	0	0	0	0	0	0	0	0	1
1957	0	0	0	0	-429	-27	-4	0	0	0	-1	0	0	0	-26
1958	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	-454	-2	0	0	0	0	4	0	12	9	-24
1960	-542	85	-345	1	2	0	0	0	0	0	-19	-2	-6	-2	-51
1961	-14	1	3	0	0	74	0	0	0	0	0	-1	-1	-118	-3
1962	-223	-10	0	158	0	0	0	0	0	0	0	0	0	0	-5
1963	0	0	0	0	0	173	0	0	0	0	0	0	0	0	11
1964	0	0	0	0	-259	-6	0	0	0	-27	23	166	254	30	13
1965	131	4	1	1	3	-1	0	0	0	0	0	0	0	0	9
1966	0	0	0	0	0	6	0	0	0	0	0	10	8	4	2
1967	-251	3	1	1	1	0	0	0	0	0	0	-3	-2	-1	-15
1968	-1	-1	0	0	-215	0	0	0	0	0	0	0	0	-71	-16
1969	-539	0	0	0	0	0	0	0	0	0	0	0	0	0	-33
1970	0	0	-2,185	0	0	0	0	0	0	0	0	0	0	0	-134
1971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	-323	0	0	52	-1	6	0	0	2	0	16	12	7	-14
1973	23	4	1	2	2	117	2	0	0	0	0	0	0	0	9
1974	0	0	0	0	0	-4	0	0	0	0	33	0	0	0	2
1975	0	0	0	0	-987	-489	0	0	0	0	0	0	0	0	-85
1976	0	0	0	0	-408	10	0	0	0	0	2	22	70	-76	-21
1977	-4	9	0	0	0	0	0	0	0	0	-1	-24	28	0	0
1978	0	15	0	0	0	-5	0	0	0	0	1	0	0	0	1
1979	0	-215	-226	0	0	26	0	0	0	0	0	2	2	1	-25
1980	2	1	0	0	0	782	0	0	0	0	0	0	0	0	48
1981	0	-24	0	-859	-195	0	-2	0	0	0	-1	0	0	0	-65
1982	80	0	0	0	0	0	0	0	0	0	0	0	-8	-4	4
1983	-7	-2	219	-491	-311	0	0	0	0	0	0	0	0	0	-35
1984	0	0	-1,039	0	0	0	0	0	0	0	-15	2	4	2	-64
1985	4	1	1	0	1	-25	0	0	0	0	3	-1	-1	-1	-1
1986	-992	-160	0	0	0	-1	118	0	0	0	-3	41	-3	-1	-65
1987	-3	-1	0	-1	-27	-173	26	0	0	81	70	78	83	-4	5
1988	-33	21	-924	0	0	0	0	0	0	-50	118	-168	144	-1,298	-131
1989	218	53	-25	2	0	0	2	0	0	0	50	817	413	-2	94
1990	-64	-242	-67	0	0	1	0	0	0	0	72	-1	186	7	-6
1991	0	2	0	0	-3	0	0	0	0	0	0	4	-26	0	-1
1992	-1	-6	0	5	0	0	0	0	0	0	0	0	-409	-8	-26
1993	-18	0	-3	-1	-1	-1	0	0	0	0	0	-9	-7	-3	-3
1994	-7	-2	-1	-657	-167	0	2	0	0	0	-175	0	0	0	-61
Avg	-29	-59	-71	-70	-113	-28	-1	0	0	3	14	26	-1	-18	-21
Min	-992	-1,201	-2,185	-1,678	-2,541	-1,120	-274	0	0	-50	-175	-168	-409	-1,298	-137
Max	462	658	219	158	150	782	118	0	0	217	490	817	413	172	94

Table I-35a. CALSIM Simulated CVP Tracy Pumping, for 2020 Scenario B Conditions (cfs)

Year	Pre-VAMP						VAMP	VAMP	Post-VAMP				Jun	Jul	Aug	Sep	taf/yr
	Oct	Nov	Dec	Jan	Feb	Mar	4/1-4/15	4/16-4/30	5/1-5/15	5/16-5/31							
1922	4,391	4,265	3,007	4,232	4,254	4,287	4,600	1,500	1,500	1,500	1,500	3,000	4,593	4,547	4,477	2,750	
1923	4,359	4,255	4,224	3,008	3,580	3,314	4,544	800	800	800	800	2,261	4,560	4,522	4,464	2,536	
1924	4,334	2,608	1,510	4,225	3,485	800	800	800	800	800	800	800	1,248	1,746	2,860	1,516	
1925	2,665	1,312	3,963	2,991	4,218	800	4,600	1,125	1,125	1,125	1,125	1,953	3,180	2,308	4,372	1,907	
1926	3,788	2,822	3,082	4,219	4,232	3,435	800	800	800	2,939	1,321	800	1,201	3,326	1,861		
1927	2,930	4,219	2,992	2,995	4,225	4,255	4,600	1,500	1,500	1,500	1,500	2,908	4,588	4,543	4,475	2,571	
1928	4,355	4,254	4,223	4,228	4,245	4,271	4,544	800	800	800	800	1,745	4,559	4,521	4,464	2,676	
1929	3,564	3,935	4,221	4,225	3,518	800	800	800	800	800	800	1,460	1,692	3,585	3,026	1,906	
1930	3,062	1,948	4,211	4,213	3,748	2,847	2,816	800	800	800	2,561	1,167	1,519	2,315	4,338	1,982	
1931	3,497	3,320	918	4,217	2,355	1,391	800	800	800	800	800	1,239	800	1,062	2,333	1,369	
1932	1,984	1,925	2,989	4,211	2,575	1,568	2,732	1,125	1,125	1,125	1,125	2,072	3,171	3,786	4,290	1,909	
1933	3,003	1,185	772	735	1,048	1,247	800	800	800	1,856	800	800	898	2,529	916		
1934	3,037	902	4,209	1,820	641	1,167	800	800	800	800	800	800	800	2,653	2,356	1,216	
1935	1,693	4,005	3,999	2,169	1,060	1,521	2,601	1,500	800	800	2,523	2,559	4,466	4,364	1,888		
1936	2,313	2,289	1,366	2,999	2,716	2,064	800	800	800	800	2,332	3,261	4,476	4,386	1,797		
1937	4,228	2,939	1,669	3,000	4,233	1,657	1,500	1,500	1,500	1,500	2,683	3,739	4,455	4,341	2,163		
1938	4,267	2,185	749	761	800	1,666	800	800	800	800	3,000	4,600	4,578	4,494	1,740		
1939	4,390	4,265	4,227	4,232	3,040	2,827	2,674	1,125	1,125	1,125	2,806	3,537	3,119	3,788	2,371		
1940	1,936	2,199	682	4,221	4,235	4,250	4,600	1,500	1,500	3,000	3,000	4,531	4,500	4,439	2,368		
1941	4,311	4,018	4,219	4,223	4,238	3,245	4,544	800	800	2,953	3,000	4,600	4,552	4,480	2,743		
1942	4,364	4,257	4,224	4,229	4,249	3,210	4,600	1,500	1,500	1,500	3,000	4,600	4,558	4,483	2,758		
1943	4,370	4,259	4,225	4,229	3,765	3,307	4,544	800	800	800	2,233	4,600	4,552	4,480	2,625		
1944	4,364	3,800	4,224	4,229	3,943	3,980	1,500	1,500	1,500	1,500	2,324	3,515	3,577	4,383	2,495		
1945	2,234	4,232	2,997	3,000	4,233	4,273	3,716	800	800	800	2,322	4,547	4,512	4,459	2,400		
1946	4,324	4,244	4,220	4,224	800	3,050	3,450	1,500	1,500	3,000	3,000	4,586	4,541	4,474	2,563		
1947	4,142	3,731	4,223	4,227	4,066	4,249	2,954	800	800	800	1,860	4,341	3,907	4,419	2,526		
1948	2,318	3,343	2,684	4,048	4,235	3,293	4,544	800	800	2,953	3,000	4,562	4,523	4,465	2,473		
1949	3,822	2,892	3,957	4,225	2,997	4,242	3,127	800	800	800	2,044	4,545	4,510	4,458	2,448		
1950	3,644	3,641	2,730	3,004	3,925	3,963	800	800	800	800	2,444	4,467	4,451	4,332	2,304		
1951	3,062	4,225	4,214	2,772	1,412	2,644	3,554	800	800	800	2,151	4,568	4,527	4,467	2,243		
1952	4,339	4,249	4,222	3,006	4,242	4,302	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,749		
1953	4,391	4,265	4,227	4,232	3,024	1,197	4,159	1,125	1,125	3,001	3,000	4,587	4,542	4,475	2,578		
1954	4,354	4,253	2,818	4,228	4,247	4,274	4,600	1,125	1,125	3,001	3,000	4,579	4,536	4,472	2,758		
1955	4,213	4,252	4,223	4,227	2,912	2,195	2,767	800	800	2,894	3,000	3,209	2,965	4,339	2,367		
1956	3,156	3,333	2,997	3,001	4,233	4,279	4,544	800	800	2,953	3,000	4,600	4,556	4,482	2,545		
1957	4,368	4,258	4,225	4,229	4,250	2,849	4,459	1,125	1,125	1,125	3,000	4,600	4,552	4,480	2,697		
1958	4,364	4,257	4,224	3,009	4,249	4,284	4,600	1,500	1,500	1,500	3,000	4,600	4,559	4,484	2,749		
1959	4,371	4,259	4,225	4,230	4,048	3,048	2,541	1,125	1,125	2,846	3,000	4,589	4,543	4,476	2,705		
1960	3,219	1,262	1,037	3,008	3,941	3,952	800	800	800	800	1,656	4,422	4,370	3,215	1,911		
1961	3,136	4,217	4,087	3,649	4,224	2,896	2,561	800	800	800	1,704	4,561	4,523	3,960	2,377		
1962	3,087	2,407	4,221	3,851	4,243	4,276	3,255	1,125	1,125	3,001	3,000	4,578	4,535	4,471	2,593		
1963	4,347	4,251	4,223	4,227	4,245	4,280	4,544	800	800	2,953	3,000	4,597	4,549	4,479	2,823		
1964	4,361	4,256	4,224	4,228	2,627	2,325	3,856	800	800	800	1,502	2,482	4,479	4,394	2,297		
1965	2,041	4,234	4,217	4,220	4,234	4,035	4,600	1,500	1,500	3,000	3,000	4,600	4,563	4,486	2,710		
1966	4,375	4,260	4,225	4,230	4,251	4,274	1,125	1,125	1,125	3,001	2,695	4,563	4,524	4,410	2,719		
1967	3,032	4,248	3,002	3,006	3,928	4,036	800	800	800	800	3,000	4,584	4,540	4,474	2,378		
1968	4,352	4,253	4,223	4,002	2,435	2,634	1,125	1,125	1,125	2,706	3,000	4,598	4,551	4,479	2,518		
1969	3,467	4,256	3,004	3,009	4,248	4,305	1,500	1,500	1,500	1,500	3,000	4,600	4,565	4,487	2,528		
1970	4,377	4,261	4,226	4,230	3,194	3,366	3,761	800	800	800	2,035	4,570	4,529	4,468	2,559		
1971	4,341	4,249	4,222	4,226	4,244	4,280	4,600	1,125	1,125	1,125	3,000	4,594	4,547	4,478	2,785		
1972	4,359	4,255	4,224	4,228	4,246	4,275	800	800	800	2,627	3,000	4,561	4,522	4,464	2,698		
1973	4,220	4,247	4,221	3,006	4,243	4,281	4,350	1,500	1,500	1,500	1,500	2,752	4,585	4,541	4,474	2,714	
1974	4,353	4,253	4,223	3,008	4,246	4,282	4,544	800	800	800	2,724	4,573	4,531	4,469	2,661		
1975	4,343	4,032	4,222	4,226	2,870	2,643	4,600	1,500	1,500	1,500	3,000	4,588	4,543	4,475	2,629		
1976	4,355	4,254	4,223	4,228	1,995	2,207	800	800	800	800	1,471	800	2,714	3,408	1,891		
1977	2,426	1,675	800	835	800	800	800	800	800	800	1,471	2,445	2,910	2,803	1,124		
1978	3,053	1,087	2,989	2,992	3,904	2,456	800	800	800	800	2,961	4,574	4,532	4,470	2,087		
1979	4,344	3,805	2,656	4,226	4,245	3,251	4,438	1,500	1,500	3,000	3,000	4,585	4,540	4,474	2,675		
1980	4,352	4,253	4,223	3,008	4,245	4,295	4,544	800	800	800	2,350	4,600	4,557	4,483	2,644		
1981	4,369	3,408	4,225	3,862	2,728	2,561	3,506	1,125	1,125	2,553	2,887	4,595	4,548	4,478	2,531		
1982	3,984	4,255	3,004	3,008	4,248	4,286	4,600	1,500	1,500	1,500	3,000	4,596	4,548	4,478	2,649		
1983	4,361	4,256	3,688	800	1,603	1,670	800	800	800	800	3,000	4,600	4,578	4,494	2,097		
1984	4,391	4,265	2,534	2,890	4,252	3,340	4,161	1,500	1,500	1,500	2,499	4,587	4,542	4,475	2,536		
1985	4,354	4,253	4,223	4,228	3,562	2,957	800	800	800	800	1,783	4,532	4,500	4,440	2,443		
1986	3,024	2,027	2,999	3,003	4,238	4,261	4,544	800	800	800	2,302	3,807	4,501	4,442	2,294		
1987	4,313	4,241	4,219	4,223	2,857	1,792	2,799	800	800	1,666	1,559	1,455	2,002	2,941	1,970		
1988	1,917	2,997	2,132	4,218	4,229	800	2,150	800	800	2,034	1,164	2,814	3,074	4,031	1,818		
1989	3,031	2,234	2,225	2,995	800	4,217	4,057	800	800	800	1,804	3,746	4,070	4,346	1,985		
1990	3,755	1,122	2,805	2,998	3,915	2,370	800	800	800	800	1,161	910	2,805	2,526	1,563		
1991	2,921	800	1,855	1,623	1,407	4,231	800	800	800	800	1,275	1,286	1,615	4,249	1,384		
1992	2,941	857	1,945	2,485	4,222	3,419	2,634	800	800	800	800	800	3,525	1,193	1,485		
1993	3,032	1,374	2,996	2,999	4,231	4,266	4,600	1,125	1,125	1,125	3,000	4,545	4,510	4,458	2,375		
1994	4,322	3,744	4,220	3,034	2,148	2,576	2,225	800	800	1,821	833	4,600	4,562	4,470	2,263		
Avg	3,684	3,403	3,368	3,470	3,404	3,095	2,911	1,021	1,011	1,543	2,324	3,750	3,991	4,138	2,286		
Min	1,693	800	682	735	641	800	800	800	800	800	800	800	898	1,193	916		
Max	4,391	4,265															

Table I-35b. CALSIM Simulated CVP Tracy Pumping, 2020 Scenario B minus 2020 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1923	0	0	0	234	291	712	0	0	0	0	1	-8	-5	-3	73
1924	-5	-305	-2	-1	-23	0	0	0	0	0	0	4	-49	-7	-23
1925	-7	-21	23	0	0	0	0	0	0	0	-55	4	-116	9	-10
1926	1	-37	3	0	1	-5	0	0	0	0	62	-57	33	-1	0
1927	-154	0	0	0	0	51	0	0	0	0	0	0	0	0	-6
1928	0	0	0	0	0	-3	0	0	0	0	-22	6	5	3	-1
1929	21	65	0	0	2	0	0	0	0	0	0	-145	-38	6	-6
1930	0	-117	0	-1	12	-202	0	0	0	2	-17	1	-30	-1	-22
1931	1	1	-64	0	1	1	0	0	0	0	60	0	1	-1	0
1932	-138	-10	0	0	216	7	19	0	0	0	0	1	47	1	7
1933	-13	4	5	7	8	0	0	0	0	0	0	0	0	-1	1
1934	0	0	0	0	0	1	0	0	0	0	0	0	-4	0	0
1935	26	-15	0	-14	3	0	-2	0	0	0	0	-1	0	0	0
1936	-47	76	-235	0	122	0	0	0	0	0	-1	0	0	0	-6
1937	57	-712	316	0	0	-408	0	0	0	0	1	14	5	11	-43
1938	5	-923	26	46	2	0	0	0	0	0	0	0	0	0	-50
1939	0	0	0	0	-64	0	-330	0	0	0	253	690	433	-62	67
1940	272	-16	-118	1	3	-2	0	0	0	0	0	-4	-3	-7	8
1941	-4	91	0	0	-1	-470	0	0	0	0	0	0	0	0	-24
1942	0	0	0	0	0	197	0	0	0	0	0	0	0	0	12
1943	0	0	0	0	-285	-1,001	0	0	0	0	0	0	0	0	-77
1944	0	-457	0	0	0	0	0	0	0	0	0	81	-135	3	-30
1945	56	0	1	0	0	0	2	0	0	0	-1	-1	0	0	3
1946	0	0	0	0	-1,542	39	0	0	0	0	0	8	6	3	-82
1947	-205	-520	0	0	3	129	0	0	0	0	24	449	287	13	12
1948	-209	23	167	-112	1	1	0	0	0	0	0	-2	-1	-1	-8
1949	-240	-697	-34	-1	41	2	0	0	0	0	-1	2	2	1	-56
1950	21	15	12	0	0	0	0	0	0	0	-1	-1	0	0	3
1951	-92	0	0	-641	-5	0	0	0	0	0	0	0	0	0	-45
1952	0	97	0	0	0	1	0	0	0	0	0	0	0	0	6
1953	0	0	0	0	14	3	0	0	0	0	0	1	0	0	1
1954	0	0	-961	0	0	0	0	0	0	0	0	-4	-3	-1	-60
1955	62	-1	0	0	-204	3	0	0	0	-4	0	760	-918	18	-16
1956	322	32	0	1	1	-11	0	0	0	0	0	0	0	0	21
1957	0	0	0	0	0	-1,205	-6	0	0	0	0	14	11	6	-72
1958	11	4	1	1	2	0	0	0	0	0	0	0	-4	-2	1
1959	-5	-1	0	0	-1	381	0	0	0	-14	0	-1	-1	0	22
1960	-960	39	8	0	0	0	0	0	0	0	-15	-1	0	-2	-57
1961	-50	0	2	0	0	27	0	0	0	0	12	0	0	3	0
1962	-116	-117	0	388	0	-1	0	0	0	0	0	0	0	0	10
1963	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
1964	0	0	0	0	-258	1	39	0	0	0	-39	227	189	25	12
1965	-16	4	1	1	2	312	0	0	0	0	0	0	1	0	19
1966	0	0	0	0	0	3	0	0	0	0	0	6	5	-53	-2
1967	9	2	1	1	1	0	0	0	0	0	0	-2	-1	0	1
1968	-1	0	0	-225	-1,810	-914	0	0	0	0	0	5	5	2	-170
1969	-89	1	0	1	0	0	0	0	0	0	0	0	-10	-5	-6
1970	-11	-3	-1	-1	-131	-917	-30	0	0	0	-11	0	0	0	-66
1971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	1	0	0	0	0	0	3	2	1	0
1973	-39	0	0	1	1	-5	0	0	0	0	0	-3	-1	-1	-3
1974	-1	-1	0	0	-1	-7	0	0	0	0	-1	-17	-13	-7	-3
1975	-13	-222	-1	-2	-1,377	-781	0	0	0	0	0	0	0	0	-139
1976	0	0	0	0	34	-15	0	0	0	0	-3	-555	-739	-520	-110
1977	-28	-121	0	-48	0	0	0	0	0	0	-4	-444	303	0	-21
1978	18	-299	0	0	0	-101	0	0	0	0	30	0	0	0	-21
1979	0	-49	-99	0	0	322	0	0	0	0	0	-1	-1	0	11
1980	-1	0	0	0	0	-3	0	0	0	0	-1	0	0	0	0
1981	0	-267	0	-367	-1,522	-487	4	0	0	0	-1	13	10	5	-151
1982	27	3	1	1	2	-2	0	0	0	0	0	-4	-4	-2	1
1983	-3	-1	684	-141	-36	0	0	0	0	0	0	0	0	0	31
1984	0	0	-1,033	0	0	0	-11	0	0	0	0	0	0	0	-64
1985	0	0	0	0	-5	134	0	0	0	0	9	-1	-1	-2	8
1986	-655	-651	0	0	0	-3	0	0	0	0	1	-13	-6	-14	-81
1987	-6	-1	-1	-1	-553	35	1,502	0	0	47	50	50	524	-375	33
1988	-484	-52	-2,082	1	1,638	0	-4	0	0	6	-870	837	-503	-49	-104
1989	124	87	0	0	0	0	0	0	0	0	-6	229	608	-3	64
1990	-250	-1,111	-222	0	0	3	0	0	0	0	361	103	351	9	-45
1991	0	0	4	0	-15	0	0	0	0	0	0	-3	29	0	1
1992	0	29	1	2	0	0	0	0	0	0	0	0	-164	-5	-8
1993	-15	46	0	-1	-1	1	0	0	0	0	0	-7	-5	-3	1
1994	-5	16	0	-1,190	-570	0	2	0	0	0	33	0	1	6	-102
Avg	-39	-84	-49	-28	-83	-57	16	0	0	1	-2	30	1	-14	-19
Min	-960	-1,111	-2,082	-1,190	-1,810	-1,205	-330	0	0	-14	-870	-555	-918	-520	-170
Max	322	97	684	388	1,638	712	1,502	0	0	47	361	837	608	25	73

Table I-36a. CALSIM Simulated SWP Banks Pumping, 2001 Scenario B Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	5,175	3,014	5,328	7,180	7,180	7,180	5,683	1,500	1,500	5,890	7,180	3,925	8,307	6,440	4,116
1923	6,134	4,982	7,180	5,832	3,405	2,847	5,839	700	700	4,215	5,102	5,818	6,404	6,440	3,626
1924	3,583	2,581	3,581	3,234	3,426	300	300	300	609	609	612	1,929	4,203	1,372	1,552
1925	1,800	2,299	3,699	3,473	4,231	300	5,154	1,125	1,125	3,690	3,481	2,603	5,840	3,972	2,242
1926	3,104	921	2,711	5,330	7,180	2,035	4,926	700	700	700	738	7,227	5,464	2,316	2,437
1927	3,076	8,500	4,314	4,316	7,180	7,180	5,891	1,500	1,500	5,600	5,761	3,185	7,359	6,553	3,890
1928	3,538	6,951	7,180	7,180	6,368	6,468	5,892	700	700	700	3,826	2,514	8,214	4,937	3,687
1929	3,363	3,743	4,080	4,431	3,481	1,596	700	700	300	300	1,247	4,877	1,835	1,150	1,860
1930	951	300	5,251	5,332	4,039	7,180	2,791	700	700	2,589	2,138	7,454	4,659	3,846	2,701
1931	1,903	629	2,139	4,080	2,125	849	300	300	700	700	2,305	2,747	4,135	1,656	1,427
1932	1,090	509	5,333	4,314	5,052	4,636	1,008	1,008	1,125	3,171	300	6,662	300	3,179	2,086
1933	4,931	2,394	5,553	1,896	5,296	2,313	1,339	700	700	1,882	300	2,862	319	1,237	1,769
1934	1,555	718	4,344	3,744	5,596	1,122	300	300	300	300	300	2,683	1,840	1,826	1,457
1935	1,659	2,577	3,173	4,315	4,111	7,180	5,891	1,500	324	324	6,072	7,214	6,848	4,735	3,134
1936	5,612	2,774	3,224	7,180	7,180	7,180	5,502	700	700	4,205	5,435	7,654	6,927	5,257	3,863
1937	3,728	2,288	3,247	6,023	7,180	7,180	5,891	1,500	1,500	5,051	3,187	6,678	8,332	4,860	3,603
1938	4,690	8,500	7,180	3,492	6,668	6,464	5,948	700	700	5,937	7,180	4,813	8,310	8,500	4,366
1939	8,500	4,549	6,998	5,064	3,012	2,870	316	316	1,125	1,125	2,604	7,698	7,174	5,157	3,344
1940	3,717	3,352	300	5,330	7,180	7,180	5,891	1,500	1,500	4,581	4,600	7,027	6,418	5,451	3,450
1941	6,320	3,082	7,180	7,180	7,180	7,180	5,948	700	700	5,937	4,440	4,182	8,310	8,500	4,241
1942	7,834	4,904	6,687	5,149	2,940	7,180	5,891	1,500	1,500	5,890	7,180	4,280	8,309	8,500	4,266
1943	8,500	7,342	7,099	7,180	3,130	7,180	5,948	700	700	2,897	4,985	3,985	8,209	6,832	4,217
1944	5,236	1,630	2,841	4,947	4,671	4,393	1,153	1,153	1,500	2,978	4,015	8,500	8,055	5,844	3,241
1945	4,141	6,064	4,317	6,531	7,180	4,588	3,689	700	700	3,754	4,745	6,911	7,162	6,515	3,770
1946	5,289	5,100	5,329	7,180	328	6,313	3,480	1,500	1,500	3,798	4,166	8,500	8,087	6,336	3,763
1947	4,672	3,809	7,053	3,042	4,170	3,537	3,053	700	486	486	3,777	8,297	7,085	4,983	3,193
1948	3,357	3,914	2,675	4,036	2,105	3,203	5,856	700	700	5,937	5,737	8,384	7,725	6,715	3,302
1949	3,407	2,377	4,937	2,947	3,016	5,324	3,192	700	700	2,589	4,580	5,778	2,351	4,073	2,565
1950	1,273	2,357	2,628	4,319	7,180	4,413	4,621	700	700	3,926	5,797	8,186	8,336	6,003	3,338
1951	5,187	8,500	5,331	7,180	6,483	3,689	3,679	700	700	4,649	2,748	6,146	7,685	6,472	3,880
1952	4,874	4,331	7,180	7,180	7,180	7,180	1,500	1,500	1,500	5,890	6,277	6,899	7,040	8,500	4,339
1953	8,500	5,673	7,180	2,811	3,124	7,180	4,005	1,125	1,125	5,382	7,180	3,792	8,373	8,500	4,129
1954	8,500	5,884	2,940	7,180	7,180	5,316	5,891	1,125	1,125	4,684	2,850	5,654	6,418	6,945	3,938
1955	5,260	4,413	7,180	7,180	1,672	2,289	1,542	700	700	2,971	4,201	5,653	2,584	3,108	2,827
1956	1,521	3,109	4,317	7,180	7,180	7,180	4,566	700	700	5,937	6,719	4,728	8,310	8,500	3,900
1957	8,500	4,837	4,439	5,372	7,180	6,168	4,498	1,125	1,125	4,097	2,994	6,257	6,905	6,697	3,910
1958	8,222	5,794	5,329	7,180	7,180	7,180	5,891	1,500	1,500	5,890	7,180	5,552	8,310	8,500	4,698
1959	7,713	4,744	5,589	7,180	3,798	1,000	1,125	1,125	1,125	2,811	4,296	6,876	7,007	6,660	3,510
1960	5,830	2,029	2,856	4,972	7,180	4,375	300	300	700	2,651	1,928	7,775	5,180	4,808	2,949
1961	1,131	3,334	4,115	3,430	5,329	3,174	2,734	700	300	300	1,440	6,354	6,515	4,766	2,505
1962	3,301	3,272	6,107	2,175	7,180	6,922	3,120	1,125	903	903	4,112	6,655	6,801	5,829	3,333
1963	8,500	7,333	5,329	7,180	7,180	6,933	5,948	700	700	5,937	3,250	3,734	7,080	7,248	4,251
1964	7,599	8,500	5,218	7,180	1,842	2,397	551	551	700	3,015	3,378	8,035	7,329	5,413	3,603
1965	4,235	5,141	5,330	7,180	7,180	4,907	5,891	1,500	1,500	2,885	3,362	5,411	8,310	6,586	3,829
1966	3,904	8,500	7,180	7,180	4,811	7,169	3,324	1,125	1,125	1,125	3,524	6,559	6,768	7,268	4,001
1967	4,293	5,944	7,180	7,180	7,180	6,073	5,948	700	700	5,937	7,180	8,500	7,334	8,322	4,577
1968	8,500	6,065	7,180	7,180	3,555	3,651	300	300	1,125	2,692	3,662	6,672	7,162	6,702	3,794
1969	3,670	4,023	7,180	7,180	7,180	7,180	1,500	1,500	1,500	5,890	6,260	5,057	8,296	8,500	4,210
1970	8,500	5,350	4,046	4,946	5,848	5,722	3,867	700	700	3,190	4,338	4,322	6,982	6,740	3,684
1971	5,467	7,947	7,180	7,180	1,260	7,180	4,824	1,125	1,125	1,125	6,019	5,480	8,500	8,500	4,174
1972	8,500	2,719	7,180	7,180	4,293	7,180	2,734	700	700	2,682	2,647	6,850	6,611	3,870	3,672
1973	3,081	8,500	7,180	5,328	7,180	6,992	4,202	1,500	1,500	4,519	5,266	6,527	6,598	6,998	4,189
1974	5,877	8,500	7,180	6,439	7,180	7,180	5,948	700	700	5,536	7,054	6,200	8,310	8,500	4,758
1975	7,558	6,748	7,180	6,766	6,184	3,110	5,571	1,500	1,500	5,890	7,111	6,135	8,349	8,500	4,521
1976	8,500	6,788	6,726	5,405	2,943	2,737	700	700	700	1,762	2,271	6,298	5,162	4,240	3,216
1977	3,250	2,939	2,645	1,718	1,048	1,153	700	700	700	700	1,425	4,775	1,639	1,526	1,427
1978	838	1,002	4,313	4,314	7,180	7,180	700	700	700	5,827	6,546	3,083	8,307	7,448	3,263
1979	5,979	2,134	1,131	7,180	5,323	7,180	1,500	1,500	1,500	4,187	4,691	5,956	7,033	6,232	3,459
1980	5,028	4,351	7,180	7,180	2,720	7,180	4,527	700	700	4,139	5,578	5,123	8,107	6,568	3,862
1981	6,556	1,866	4,358	7,180	3,748	7,180	3,347	1,125	1,125	1,125	2,849	6,611	7,141	6,016	3,449
1982	4,386	8,500	7,180	4,321	7,180	7,180	5,891	1,500	1,500	5,890	7,180	4,688	8,310	8,500	4,508
1983	8,500	8,500	5,296	2,599	2,694	2,570	5,303	700	700	700	4,126	8,500	8,500	8,500	3,841
1984	8,500	6,042	2,174	2,622	3,096	7,180	1,428	1,428	1,500	1,500	4,308	5,148	6,883	7,247	3,396
1985	5,569	8,500	7,180	6,388	3,520	3,059	2,849	700	700	2,917	3,828	8,091	7,651	6,197	3,851
1986	5,090	3,820	4,317	7,180	7,180	7,180	5,633	700	700	4,040	5,379	7,748	8,025	7,374	4,155
1987	6,027	2,051	2,379	5,299	4,149	3,237	3,059	700	365	365	1,303	7,775	6,275	2,896	2,643
1988	2,563	1,861	2,211	7,180	1,197	454	700	700	700	2,033	1,404	4,226	1,810	1,262	1,597
1989	300	2,908	2,352	3,318	764	5,331	4,120	700	700	2,856	3,957	8,054	6,738	4,787	2,596
1990	3,941	1,516	3,769	7,180	1,868	3,058	300	300	700	1,994	300	4,592	304	1,768	1,824
1991	1,180	300	1,710	1,246	1,279	5,327	700	700	700	700	300	4,300	689	1,270	1,156
1992	1,035	1,196	1,712	2,394	5,330	3,352	700	700	300	300	320	3,411	1,433	2,911	1,440
1993	1,329	706	3,963	4,317	7,180	7,180	5,891	1,125	1,125	5,889	7,014	8,500	8,143	7,007	3,761
1994	6,601	2,059	3,822	5,859	4,020	1,009	2,324	700	700	1,868	2,593	7,768	7,768	5,838	3,037
Avg	4,816	4,252	4,892	5,401	4,934	4,890	3,455	903	912	3,221	4,002	5,877	6,373	5,660	3,345
Min	300	300	300	1,246	328	300	300	300	300	300	300	1,929	300	1,150	1,156
Max	8,500	8,500	7,180	7,180	7,180	7,180	5,948	1,500	1,500	5,937	7,180	8,500	8,5		

Table I-36b. CALSIM Simulated SWP Banks Pumping, 2001 Scenario B minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	11	-432	-1,320	-381	43	0	0	250	500	247	1,627	-240	17
1923	-546	-38	-343	-624	0	-5	141	0	0	0	-2	533	924	-240	-16
1924	-289	264	-28	-8	0	0	0	0	3	3	-230	-1,558	1,775	-172	-15
1925	68	-30	-5	0	-1,420	0	0	0	0	0	6	24	31	-5	-73
1926	57	-2	1	49	-139	46	0	0	0	0	-1,621	813	-321	-1,071	-128
1927	-306	1,820	51	-33	-1,038	-106	251	0	0	0	0	-182	179	-125	26
1928	-599	272	116	-221	0	-1,093	195	0	0	0	0	-1,695	1,237	86	-112
1929	71	250	-182	184	-1	0	0	0	0	0	0	778	-656	-6	26
1930	-26	0	133	60	3	208	-2	0	0	0	-13	640	-604	2	25
1931	156	-63	-534	-15	-19	-1	0	0	0	0	34	-37	28	-2	-28
1932	-26	-256	-54	-242	231	95	131	131	0	-132	0	4	-361	-689	-76
1933	219	-60	63	-510	120	-38	9	0	0	21	0	-140	19	0	-20
1934	-223	-14	-128	-149	3	1	0	0	0	0	0	18	-616	-12	-69
1935	-113	-172	138	-266	0	-77	251	0	0	0	0	173	568	-46	21
1936	51	-59	60	-123	-1,257	-381	2	0	0	0	-1	474	1,108	-542	-32
1937	-228	-96	351	11	-1,320	-381	251	0	0	4	-248	540	1,538	-409	2
1938	-288	1,820	-498	-496	0	0	251	0	0	250	500	-2,367	1,561	1,320	104
1939	1,820	-2,131	-49	-805	-4	0	12	12	0	0	-757	518	251	-605	-101
1940	-229	22	0	-637	-1,257	-381	251	0	0	-2	358	-153	669	298	-67
1941	1,030	65	-14	-1,262	-1,320	71	251	0	0	250	-11	0	1,630	1,320	113
1942	1,154	-951	-892	-284	0	-381	251	0	0	250	500	691	1,629	1,320	185
1943	1,820	662	-241	-1,320	-7	-381	251	0	0	-2	0	41	1,029	152	114
1944	-421	-147	-397	217	-204	0	-1,751	-347	0	2	-1	1,320	1,249	-173	28
1945	-41	-524	54	-244	-1,320	-1,857	-15	0	0	-97	-2	420	904	-115	-162
1946	-612	-1,509	-374	-1,071	-503	-15	39	0	0	-2	0	1,320	1,954	219	-30
1947	997	35	-27	2	150	34	0	0	-214	-2,301	44	1,117	342	-44	83
1948	-1,152	239	-5	-86	-1	-4	159	0	0	250	1	1,204	548	37	60
1949	-1,825	122	-94	-79	101	53	-13	0	0	-2	-2	-1,028	-35	-25	-174
1950	36	898	-212	-63	-409	4	2	0	0	0	-1	1,006	1,156	-677	109
1951	-242	1,820	-374	-1,320	-1,238	0	0	0	0	0	0	-403	936	-4	-47
1952	-110	-54	-15	-1,320	-1,257	-381	0	0	0	250	0	816	360	1,320	-27
1953	1,820	651	17	-922	12	-11	0	0	0	0	500	-37	1,193	1,320	274
1954	1,820	-796	-4,039	-63	-253	56	251	0	0	-467	0	425	616	315	-123
1955	-251	-142	206	-116	-2	5	58	0	0	8	0	-199	19	18	-26
1956	-14	17	-187	-1,320	-1,257	-381	0	0	0	250	39	721	1,630	1,320	48
1957	1,820	-23	-323	-961	-372	-486	-4	0	0	0	-1	695	1,036	17	88
1958	1,542	-886	136	-161	-641	-381	251	0	0	250	500	1,042	1,630	1,320	270
1959	1,033	-636	-158	-225	-877	79	0	0	0	4	42	196	-173	600	-2
1960	277	233	-141	-1	-193	1	0	0	0	0	-196	622	-300	3	20
1961	-206	-21	3	0	425	-1	0	0	0	0	-5	2	-9	116	16
1962	-78	-247	-17	-4	-1,320	8	0	0	0	0	0	1,425	-57	47	-7
1963	1,820	653	188	-115	-588	13	251	0	0	250	364	-107	-100	1,039	210
1964	919	1,820	-1,656	-54	-48	-6	7	7	0	-27	103	855	605	-533	120
1965	250	44	-183	-1,320	-1,320	673	251	0	0	-27	-4	822	1,130	-94	14
1966	-996	1,820	-459	-1,100	-2	-34	0	0	0	0	-10	676	-87	588	20
1967	-130	-254	-22	-572	-555	1,153	251	0	0	250	500	1,320	154	1,142	184
1968	1,820	-531	149	-188	-215	0	0	0	0	0	22	1,254	-18	236	157
1969	-599	-409	147	-1,320	-1,320	-381	0	0	0	250	-2	312	1,616	1,320	-25
1970	1,820	-866	-1,499	-326	0	0	0	0	0	0	0	569	-198	60	-25
1971	0	1,267	59	-285	-363	-48	0	0	0	0	0	207	1,320	1,320	211
1972	1,820	-2,813	174	-71	99	227	6	0	0	2	5	1,041	325	-11	54
1973	-85	1,820	228	-226	-1,320	-569	2	0	0	-2	0	707	-82	337	53
1974	-377	1,820	127	-2,054	-1,080	-381	251	0	0	0	374	833	1,130	1,320	112
1975	878	68	149	12	-2,316	-22	0	0	0	250	431	2,534	1,669	1,320	309
1976	1,820	108	-285	-1	-138	-2	0	0	0	0	1	20	-350	-48	70
1977	-22	-290	2	0	-15	-5	0	0	0	0	-1	-79	0	0	-25
1978	-10	8	83	-279	-1,320	-381	0	0	0	140	7	0	1,627	268	12
1979	-558	-284	-474	-1,158	-990	-381	0	0	0	0	209	856	353	1	-143
1980	-298	-37	164	-1,320	-1,041	245	0	0	0	0	0	816	1,427	-612	-33
1981	-124	-705	-156	-208	-60	-93	-2	0	0	0	-1	710	638	-79	-3
1982	176	1,820	179	-495	-1,320	-381	251	0	0	250	500	814	1,630	1,320	277
1983	1,820	1,820	-2,066	-46	0	0	0	0	0	0	0	1,320	1,574	1,902	382
1984	1,820	-638	-1,039	0	0	-381	23	23	0	0	-39	758	-120	655	64
1985	181	1,820	141	4	1	-25	0	0	0	0	9	911	951	-483	213
1986	-1,281	-388	67	-227	-1,320	-381	0	0	0	0	-8	6,303	1,345	194	273
1987	-653	-498	-162	-112	-27	-914	26	0	-71	-71	-1,919	595	-315	-2,274	-380
1988	-103	45	-924	74	-4	2	0	0	0	-50	-78	410	596	425	25
1989	-423	30	-25	0	2	181	2	0	0	0	-70	874	58	-518	8
1990	-502	-114	-18	104	3	14	0	0	0	0	0	602	-563	-42	-31
1991	-55	-86	0	0	-11	84	0	0	0	0	0	177	-257	-67	-13
1992	-7	-2	0	5	-156	0	0	0	0	0	-12	-50	-73	6	-17
1993	139	-274	-3	-495	-1,263	-237	251	0	0	250	334	1,320	1,394	327	99
1994	-79	-1,304	-859	-242	-90	-8	2	0	0	0	177	1,088	588	-114	-49
Avg	233	80	-218	-368	-475	-116	42	-2	-4	7	11	527	606	203	33
Min	-1,825	-2,813	-4,039	-2,054	-2,316	-1,857	-1,751	-347	-214	-2,301	-1,919	-2,367	-656	-2,274	-380
Max	1,820	1,820	351	217	425	1,153	251	131	3	250	500	6,303	1,954	1,902	382

Table I-37a. CALSIM Simulated SWP Banks Pumping, for 2020 Scenario B Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre- VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post- VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	5,335	3,336	4,320	7,180	7,180	7,180	5,724	1,500	1,500	5,890	7,180	7,412	8,283	5,864	4,263
1923	7,423	5,342	5,329	7,180	3,580	3,065	5,772	700	700	4,122	5,183	7,090	6,984	6,319	3,826
1924	3,705	2,425	3,807	4,703	3,485	300	306	306	700	700	300	4,309	2,017	1,332	1,655
1925	1,954	2,376	3,963	3,154	5,330	300	5,359	1,125	1,125	3,617	3,027	2,498	4,867	3,976	2,225
1926	2,426	1,166	2,878	4,750	4,432	1,354	4,973	700	700	3,033	300	6,565	4,317	2,163	2,119
1927	2,736	8,500	4,315	7,180	7,180	7,180	5,891	1,500	1,500	5,501	5,724	4,546	7,641	5,040	4,051
1928	4,799	6,824	7,180	7,180	6,465	7,180	5,899	700	700	700	3,232	2,480	7,927	4,879	3,748
1929	2,695	3,975	4,225	4,671	3,518	1,650	1,011	700	300	300	1,210	4,884	1,046	1,441	1,838
1930	938	300	5,332	5,332	3,830	7,180	2,931	700	700	2,655	2,309	7,443	4,699	4,484	2,750
1931	1,020	1,163	2,964	4,296	2,355	1,045	300	300	700	700	2,262	2,726	4,382	1,523	1,497
1932	1,279	1,001	4,313	7,180	6,450	4,811	1,541	1,125	1,125	3,355	300	2,060	5,563	3,674	2,424
1933	2,793	2,676	5,478	2,069	5,235	2,435	1,399	700	700	1,950	300	2,496	302	1,476	1,659
1934	1,608	614	4,921	4,009	5,644	1,174	300	300	300	300	300	2,722	1,850	1,513	1,496
1935	1,771	2,969	3,020	4,006	4,309	7,180	5,891	1,500	324	324	5,969	7,459	7,731	5,354	3,247
1936	5,298	2,871	3,457	7,180	7,180	7,180	5,564	700	700	4,255	5,396	7,500	6,978	5,849	3,894
1937	2,677	2,315	3,138	6,077	7,180	7,180	5,891	1,500	1,500	5,172	5,049	6,352	7,441	5,201	3,597
1938	3,473	8,500	3,474	7,180	7,180	7,180	5,948	700	700	5,937	7,180	8,500	8,500	8,304	4,590
1939	8,500	4,783	6,138	4,573	3,040	2,827	1,079	1,079	1,125	1,125	2,806	7,808	6,946	5,545	3,347
1940	3,684	2,978	300	5,330	7,180	7,180	5,891	1,500	1,500	4,559	4,955	6,951	7,814	6,156	3,569
1941	6,147	3,970	7,180	7,180	7,180	7,180	5,948	700	700	5,937	2,514	8,500	8,388	8,500	4,439
1942	8,003	4,274	7,180	7,180	7,180	3,368	5,891	1,500	1,500	5,890	7,180	4,109	8,024	7,446	4,304
1943	7,744	6,369	7,180	7,180	3,765	7,180	5,948	700	700	700	5,100	3,213	7,988	6,380	4,002
1944	4,484	1,551	3,383	4,801	4,671	4,695	2,848	1,500	1,500	3,031	3,973	8,500	8,189	5,331	3,270
1945	4,187	7,052	4,316	4,756	7,180	6,233	3,831	700	700	3,804	5,366	6,687	6,687	5,451	3,760
1946	6,228	5,291	5,330	7,180	3,384	5,360	3,450	1,500	1,500	3,792	4,147	8,500	8,005	6,427	3,942
1947	4,240	3,928	5,299	3,002	4,066	3,975	3,068	700	700	1,037	3,734	8,500	5,987	5,314	3,071
1948	4,354	3,398	2,684	4,048	2,095	3,293	5,948	700	700	5,937	5,530	8,120	7,582	6,899	3,316
1949	2,913	2,395	3,957	3,931	2,997	5,324	3,241	700	700	3,213	4,533	5,858	2,824	4,079	2,587
1950	790	1,549	2,509	4,319	7,180	4,476	4,660	700	700	4,002	5,731	8,214	8,500	5,575	3,243
1951	5,386	8,500	5,332	7,180	7,180	7,180	3,668	700	700	4,556	4,852	6,283	8,192	6,229	4,292
1952	5,393	4,391	7,180	7,180	7,180	7,180	5,891	1,500	1,500	5,890	6,100	5,213	6,560	8,500	4,361
1953	8,500	5,710	7,180	7,180	2,953	7,180	4,159	1,125	1,125	5,512	6,791	4,752	8,003	8,500	4,412
1954	8,500	5,596	2,818	7,180	7,180	7,180	5,891	1,125	1,125	5,157	2,660	6,418	6,048	6,838	4,049
1955	6,106	4,867	7,180	7,180	1,770	2,195	1,606	700	700	2,988	3,134	5,246	712	3,165	2,707
1956	1,533	3,300	4,316	7,180	7,180	7,180	4,726	700	700	5,937	6,641	4,609	7,892	7,574	3,824
1957	8,500	3,904	2,227	5,709	7,180	7,180	4,459	1,125	1,125	1,125	3,972	4,656	7,688	6,040	3,674
1958	7,836	4,158	7,180	7,180	7,180	7,180	5,891	1,500	1,500	5,890	7,180	4,682	8,310	8,500	4,637
1959	8,500	5,263	5,130	7,180	4,659	1,013	2,541	1,125	1,125	2,846	3,963	6,667	7,527	5,903	3,607
1960	3,705	2,085	5,265	3,625	7,180	5,069	300	300	700	2,717	2,228	6,242	3,531	2,580	2,622
1961	1,109	3,289	5,909	3,649	5,329	4,420	2,676	700	300	300	1,803	7,389	7,128	5,088	2,842
1962	3,319	3,403	6,339	2,290	7,180	7,086	3,255	1,125	1,125	1,702	3,106	6,175	7,661	5,941	3,379
1963	8,500	6,212	5,329	7,180	7,180	7,180	5,948	700	700	5,937	3,838	5,073	7,341	5,865	4,251
1964	8,204	8,500	5,685	7,180	1,838	1,710	3,970	700	700	700	3,736	8,500	6,409	4,756	3,613
1965	3,559	5,486	5,331	7,180	7,180	4,398	5,891	1,500	1,500	2,686	3,294	5,463	8,310	6,157	3,744
1966	3,965	7,859	7,180	7,180	6,569	6,931	1,125	1,125	1,125	3,258	3,799	6,447	5,938	6,738	3,979
1967	4,619	6,334	4,318	7,180	7,180	7,180	5,948	700	700	5,937	7,180	8,500	8,500	8,500	4,595
1968	8,281	6,756	7,057	6,626	3,900	7,180	300	300	1,125	2,706	3,713	6,005	7,302	6,048	3,948
1969	3,572	4,840	7,180	4,321	7,180	7,180	5,891	1,500	1,500	5,890	6,083	5,052	8,310	7,274	4,124
1970	8,500	5,332	7,180	7,180	3,194	7,180	3,876	700	700	700	4,504	5,319	7,757	6,055	3,954
1971	5,525	7,515	7,180	7,180	1,168	7,180	4,984	1,125	1,125	1,125	5,343	8,310	8,500	8,500	4,286
1972	8,500	3,451	7,180	7,058	4,793	7,180	700	700	700	2,721	2,598	7,053	7,009	4,216	3,731
1973	3,135	8,500	7,180	7,180	7,180	7,180	4,350	1,500	1,500	4,416	5,255	3,654	6,949	7,018	4,164
1974	6,619	8,500	7,180	7,180	7,180	7,180	5,948	700	700	5,614	6,573	4,420	8,310	8,500	4,714
1975	8,500	3,556	7,180	6,344	6,941	6,888	5,687	1,500	1,500	5,890	6,462	4,574	8,310	8,500	4,504
1976	8,500	8,500	7,180	5,540	2,917	2,808	2,149	700	700	1,799	2,156	7,140	5,587	4,274	3,474
1977	3,291	2,945	1,792	1,790	1,161	1,238	700	700	700	700	1,421	4,782	1,750	1,532	1,401
1978	843	1,245	4,313	4,314	7,180	5,900	5,948	700	700	5,805	7,029	2,918	8,059	7,229	3,345
1979	4,418	2,856	5,233	7,180	5,324	7,180	4,438	1,500	1,500	4,197	4,016	4,874	6,988	6,498	3,652
1980	5,087	4,490	7,180	4,320	7,180	7,180	4,684	700	700	4,282	5,451	4,559	8,122	6,957	3,963
1981	5,993	1,484	4,719	7,180	4,216	4,098	3,506	1,125	1,125	2,553	2,887	8,460	7,447	6,138	3,443
1982	4,480	8,500	4,319	7,180	7,180	7,180	5,891	1,500	1,500	5,890	7,068	8,500	8,500	8,500	4,753
1983	8,500	6,745	6,028	3,440	3,548	3,555	5,948	700	700	700	3,877	8,500	8,497	8,497	3,945
1984	8,500	6,158	2,534	2,890	7,180	3,340	4,161	1,500	1,500	1,500	4,498	5,129	6,418	6,724	3,466
1985	6,593	8,500	7,180	6,076	3,562	2,957	700	700	700	2,986	3,749	8,500	8,039	6,781	3,908
1986	5,354	4,161	4,317	7,180	7,180	7,180	5,740	700	700	4,096	5,305	7,982	8,004	7,228	4,196
1987	5,326	1,402	2,514	4,931	4,214	3,203	2,914	700	300	300	2,876	7,712	6,227	2,824	2,623
1988	2,582	1,998	2,132	5,331	1,830	831	2,264	700	700	2,128	1,003	4,184	1,525	817	1,526
1989	300	2,785	3,478	3,315	778	5,331	4,171	700	700	2,853	3,812	8,500	7,001	5,205	2,720
1990	4,037	1,535	3,822	7,180	2,109	3,066	300	300	700	2,122	330	4,766	338	1,755	1,866
1991	1,121	947	1,731	1,359	1,034	5,327	700	700	700	700	1,225	2,779	402	939	1,110
1992	1,441	903	1,882	2,485	5,329	3,419	2,749	700	300	300	546	3,511	1,356	2,946	1,546
1993	782	1,345	6,709	4,317	7,180	7,180	5,891	1,125	1,125	5,889	7,075	8,500	7,466	5,655	3,816
1994	6,447	2,091	6,023	5,886	3,998	1,514	2,339	700	700	1,915	3,822	7,768	7,768	4,843	3,212
Avg	4,749	4,244	4,957	5,622	5,167	5,092	3,854	923	918	3,212	4,024	5,997	6,372	5,477	3,393
Min	300	300	300	1,359	778	300	300	300	300	300	300	2,060	302	817	1,110
Max	8,500	8,500	7,180	7,180	7,180	7,180	5,948	1,500	1,500	5,					

Table I-37b. CALSIM Simulated SWP Banks Pumping, 2020 Scenario B minus 2020 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	5	-432	-1,320	-381	84	0	0	250	500	232	1,534	-6	25
1923	743	-311	-96	-890	-287	-711	75	0	0	-64	2	405	95	158	-53
1924	-331	-79	-774	-112	-23	0	-14	-14	0	0	0	453	10	7	-53
1925	19	-1	23	4	-321	0	2	0	0	-2	-11	48	25	-7	-12
1926	64	-11	2	46	141	-5	9	0	0	0	0	141	-133	1	15
1927	106	1,820	52	-89	-1,036	-103	251	0	0	2	0	146	461	0	94
1928	17	144	116	-221	4	-4	201	0	0	0	-136	-133	747	-1	39
1929	-322	-7	100	162	2	2	21	0	0	0	0	761	-1,440	19	-44
1930	88	-1	214	60	-7	210	0	0	0	2	17	638	-640	2	36
1931	-17	-25	365	-1	1	2	0	0	0	0	-56	0	1	1	17
1932	138	3	-28	-644	-225	-6	-19	0	0	0	0	9	24	48	-41
1933	1	10	-21	1	-8	-3	0	0	0	0	0	0	0	1	-1
1934	0	-1	1	24	0	1	0	0	0	0	0	-18	-9	-66	-4
1935	-12	-10	21	-271	29	-74	251	0	0	0	0	279	673	470	74
1936	-96	62	-27	-122	-1,257	-381	0	0	0	0	-2	320	908	469	-1
1937	-401	-97	-139	-132	-1,320	-381	251	0	0	-8	3	544	847	-179	-62
1938	-34	1,820	-113	-1,100	-1,320	-381	251	0	0	250	500	1,320	1,751	1,124	236
1939	1,820	-651	-930	-930	-64	0	-1,925	-46	200	200	-215	628	459	77	-32
1940	-319	404	-765	-634	-1,190	-381	251	0	0	0	513	-229	1,271	210	-57
1941	105	-213	-14	-1,131	-1,320	-381	251	0	0	250	528	1,320	1,639	1,320	134
1942	1,323	-2,091	-295	-1,320	-746	0	251	0	0	250	500	-1,659	844	266	-173
1943	1,064	-311	-95	-1,320	-285	-381	251	0	0	0	2	-348	808	-298	-61
1944	-136	-237	37	-128	-199	-112	0	0	0	-2	0	1,320	1,009	-271	81
1945	-113	372	54	-27	-1,320	-5	2	0	0	0	-2	-124	588	112	-22
1946	-14	-27	-171	-1,089	538	-189	0	0	0	23	-1	1,320	979	-83	75
1947	-844	-306	44	266	3	75	0	0	0	145	17	1,320	-1,193	174	-22
1948	67	55	110	-112	-2	1	251	0	0	250	0	940	402	221	118
1949	-1,198	424	-34	-81	41	55	0	0	0	-6	-1	-533	-1,104	-4	-151
1950	62	0	16	-63	-409	0	0	0	0	12	-4	1,034	1,320	-887	70
1951	134	1,820	-373	-1,320	-1,320	244	0	0	0	0	0	543	1,443	29	78
1952	-6	-230	-15	-1,320	-1,196	-381	251	0	0	250	0	815	661	1,320	-1
1953	1,820	-18	23	-1,320	11	-4	0	0	0	0	111	788	823	1,320	216
1954	1,820	-1,084	-961	-62	-251	78	251	0	0	6	0	508	-142	458	33
1955	-25	-213	205	-116	-8	3	11	0	0	-4	1	9	-449	-196	-47
1956	98	-482	-187	-1,320	-1,257	-381	0	0	0	250	0	-2,571	1,143	394	-265
1957	1,820	-714	-1,030	1,084	-310	-164	-6	0	0	0	-8	314	655	-113	98
1958	1,156	-2,116	2,568	-160	-638	-381	251	0	0	250	500	1,099	1,630	1,320	326
1959	1,820	-242	-406	-225	-1,027	63	0	0	0	-14	-17	-13	347	-149	16
1960	109	109	-231	-1	-195	-2	0	0	0	0	-163	45	-335	4	-39
1961	-36	97	-93	0	31	-30	0	0	0	0	-1	454	682	132	75
1962	-32	36	-167	10	-1,320	7	0	0	0	2	-1	722	503	-509	-37
1963	1,820	-468	188	-116	-588	57	251	0	0	250	1	260	161	8	101
1964	1,524	1,820	-1,311	-55	-24	-11	39	0	0	0	85	1,320	-271	-17	186
1965	-212	132	-84	-1,320	-1,320	116	251	0	0	149	-3	841	1,130	-370	-47
1966	20	1,179	-413	-1,075	-7	-4	0	0	0	0	3	706	-515	534	23
1967	-93	-23	-8	-573	-553	-356	251	0	0	250	500	1,320	1,320	1,320	191
1968	1,601	76	26	-742	-824	-23	0	0	0	0	14	435	145	-417	23
1969	-61	797	146	-495	-1,320	-381	251	0	0	250	9	806	1,630	104	97
1970	1,820	-1,348	-137	-1,320	-131	-381	-30	0	0	0	-34	1,208	577	-601	-18
1971	-133	835	59	-285	-826	120	-4	0	0	0	0	1,630	1,320	1,320	249
1972	1,820	-2,103	173	-193	-1,091	239	0	0	0	0	-223	506	861	12	11
1973	52	1,820	227	-301	-1,205	-381	0	0	0	0	-1	-448	269	338	26
1974	-61	1,820	126	-1,320	-1,068	-381	251	0	0	-2	-2	769	1,630	1,320	182
1975	1,820	-3,124	148	-666	-1,530	-37	47	0	0	250	-1	608	1,630	1,320	32
1976	1,820	1,820	169	41	11	2	2	0	0	0	-41	3,088	-515	107	396
1977	226	-29	-165	-34	66	56	290	290	0	0	-4	3,001	-1,993	0	86
1978	257	-178	83	-279	-991	-235	251	0	0	118	349	-32	1,379	362	60
1979	-135	-179	-1,081	-765	-990	-381	0	0	0	0	264	183	332	-1	-164
1980	-177	-29	163	-495	-1,257	-381	0	0	0	0	-1	798	1,442	297	29
1981	-649	29	-373	-208	-262	-296	4	0	0	0	-1	1,280	709	-412	-9
1982	-144	1,820	67	-1,320	-1,320	-381	251	0	0	250	388	1,320	1,751	1,320	232
1983	1,820	65	-1,650	-481	-62	0	251	0	0	0	0	1,320	1,317	2,960	327
1984	1,820	-522	-1,033	0	-1,257	0	-11	0	0	0	0	313	496	113	4
1985	-87	1,820	140	-278	-5	134	0	0	0	2	26	1,320	1,207	104	266
1986	-326	-471	66	-227	-1,320	-381	43	0	0	2	3	802	1,255	542	6
1987	-1,240	-100	-939	354	-18	-580	2,614	400	-279	-279	-1,770	532	-836	-2,307	-344
1988	-96	52	-2,999	57	580	263	-4	0	0	6	703	133	1,156	16	-13
1989	-308	-5	-84	24	0	182	0	0	0	6	-20	1,320	321	177	99
1990	-333	-422	131	105	1	-17	0	0	0	-6	-3	776	-556	-46	-22
1991	-121	90	5	1	-25	85	0	0	0	0	0	3	-61	-131	-9
1992	-7	-26	2	2	-157	0	0	0	0	0	-26	-69	-172	3	-27
1993	127	-242	-4	-495	-1,250	-247	251	0	0	250	395	1,320	717	3	42
1994	-17	-850	-684	814	-240	172	2	0	0	0	-32	915	661	-1,213	-24
Avg	313	24	-165	-365	-525	-109	92	9	-1	52	43	564	511	187	37
Min	-1,240	-3,124	-2,999	-1,320	-1,530	-711	-1,925	-46	-279	-279	-1,770	-2,571	-1,993	-2,307	-344
Max	1,820	1,820	2,568	1,084	580	263	2,614	400	200	250	703	3,088	1,751	2,960	396

Table I-38a. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario B Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre- VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post- VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	9,566	7,279	9,555	11,412	11,434	10,858	9,651	3,000	3,000	7,390	10,180	8,525	12,860	10,921	6,886
1923	10,500	9,239	10,185	8,841	6,810	5,694	10,382	1,500	1,500	5,015	7,336	10,380	10,927	10,905	6,048
1924	7,918	5,233	6,373	7,459	6,852	1,100	1,100	1,100	1,409	1,409	1,412	3,515	5,712	4,065	3,143
1925	4,369	3,438	7,398	6,946	8,386	1,100	9,754	2,250	2,250	6,691	5,508	5,801	9,983	8,365	4,322
1926	7,131	3,927	3,511	9,550	11,414	4,070	9,469	1,500	1,500	1,500	1,871	8,027	6,264	6,029	4,128
1927	6,638	12,718	7,306	7,311	11,404	10,201	10,491	3,000	3,000	7,100	8,681	7,773	11,902	11,028	6,424
1928	7,893	11,205	11,403	11,408	10,613	10,752	10,436	1,500	1,500	1,500	5,635	7,087	12,745	9,406	6,369
1929	6,930	7,898	8,302	8,657	6,962	2,396	1,500	1,500	1,100	1,100	2,744	6,688	5,348	4,581	3,807
1930	3,982	2,035	9,462	9,545	7,433	10,224	5,469	1,500	1,500	5,084	3,472	8,874	6,285	8,194	4,617
1931	5,393	3,302	3,225	8,160	4,250	2,051	1,100	1,100	1,500	1,500	3,698	3,547	5,178	4,005	2,744
1932	3,667	2,537	9,542	7,305	8,524	6,068	3,346	2,133	2,250	4,296	2,296	9,216	3,755	7,438	4,003
1933	6,889	3,506	6,232	2,488	6,167	3,560	2,139	1,500	1,500	3,670	1,100	3,662	1,281	4,148	2,616
1934	4,572	1,556	8,553	5,146	6,237	1,988	1,100	1,100	1,100	1,100	1,100	3,483	3,730	4,030	2,567
1935	3,653	6,484	6,346	7,308	5,141	9,471	8,321	3,000	1,124	1,124	8,629	9,330	11,317	9,106	5,050
1936	8,744	4,988	4,682	10,179	9,246	9,323	6,302	1,500	1,500	5,005	7,780	11,401	11,410	9,659	5,712
1937	8,022	5,831	5,080	9,024	11,415	9,700	7,236	2,845	3,000	6,551	5,675	9,846	12,795	9,219	5,815
1938	8,965	11,522	7,972	4,292	7,468	8,130	6,748	1,500	1,500	6,737	10,180	9,413	12,886	12,993	6,161
1939	12,889	8,813	11,225	9,296	6,024	5,740	1,441	1,441	2,250	2,250	5,604	11,110	10,439	9,024	5,687
1940	5,910	5,737	317	9,550	11,413	11,433	10,491	3,000	3,000	7,580	7,600	11,566	10,923	9,903	5,805
1941	10,637	7,075	11,399	11,403	11,419	10,680	10,491	1,500	1,500	6,737	7,440	8,755	12,841	12,969	6,927
1942	12,177	9,154	10,909	6,638	4,993	9,952	10,491	3,000	3,000	7,390	10,180	8,880	12,867	12,983	6,704
1943	12,870	11,601	11,324	11,409	6,260	10,269	10,491	1,500	1,500	3,697	7,180	8,585	12,761	11,312	6,792
1944	9,600	5,449	7,065	9,176	8,614	8,665	2,653	2,653	3,000	4,478	6,353	13,026	12,459	10,274	5,872
1945	6,759	10,303	7,316	10,753	11,417	8,867	7,264	1,500	1,500	6,706	7,601	11,505	11,710	10,993	6,373
1946	9,649	9,355	9,553	11,408	1,891	9,071	6,960	3,000	3,000	6,798	7,166	13,075	12,620	10,806	6,354
1947	8,744	7,027	11,275	6,084	8,340	7,074	5,991	1,500	1,286	1,286	5,578	12,844	11,597	9,442	5,621
1948	6,017	6,831	5,350	8,072	6,344	6,406	10,399	1,500	1,500	8,890	8,737	12,950	12,251	11,181	5,765
1949	7,745	5,661	9,159	5,894	6,032	9,569	6,270	1,500	1,500	3,389	6,640	10,324	6,862	8,531	5,006
1950	4,895	6,032	5,362	7,323	11,105	8,381	5,421	1,500	1,500	4,726	8,263	12,671	12,800	10,364	5,649
1951	8,360	12,729	9,546	11,399	8,122	6,333	7,243	1,500	1,500	5,449	5,748	10,714	12,213	10,939	6,282
1952	9,214	7,926	10,182	10,186	11,422	11,472	3,000	3,000	3,000	7,390	9,277	11,499	11,618	12,994	6,881
1953	12,891	9,938	11,407	5,622	6,818	8,432	8,010	2,250	2,250	8,382	10,180	8,392	12,926	12,981	6,657
1954	12,865	10,141	7,164	11,409	11,429	9,592	10,491	2,250	2,250	7,685	5,700	10,254	10,970	11,425	6,777
1955	9,624	8,670	11,404	11,409	4,754	4,578	4,258	1,500	1,500	3,771	6,135	10,178	6,952	7,407	5,252
1956	4,654	6,568	7,316	10,182	11,416	11,460	9,017	1,500	1,500	8,890	9,719	9,328	12,866	12,982	6,448
1957	12,868	9,095	8,664	9,601	10,474	8,804	8,996	2,250	2,250	7,098	5,704	10,857	11,460	11,179	6,584
1958	12,590	10,052	9,554	10,189	11,429	11,470	10,491	3,000	3,000	7,390	10,180	10,152	12,879	12,989	7,448
1959	12,094	9,006	9,815	11,411	7,596	2,863	2,250	2,250	2,250	5,621	7,296	11,462	11,548	11,135	6,075
1960	8,980	3,943	3,704	7,980	11,121	8,600	1,100	1,100	1,500	3,451	3,587	12,220	9,584	9,103	4,968
1961	4,274	7,076	8,230	6,860	9,554	5,554	5,353	1,500	1,100	2,636	3,479	10,930	11,049	8,776	4,886
1962	6,473	7,513	10,329	5,406	11,425	11,198	6,240	2,250	2,028	3,904	6,878	11,229	11,333	10,299	5,983
1963	12,844	11,583	9,551	11,406	11,425	10,528	10,491	1,500	1,500	6,737	6,250	8,315	11,617	11,720	6,961
1964	11,948	12,752	9,441	11,407	4,048	4,794	1,351	1,351	1,500	5,937	5,768	12,572	11,833	9,861	6,041
1965	6,821	9,382	9,549	11,403	11,419	9,184	10,491	3,000	3,000	5,885	6,362	10,011	12,872	11,071	6,588
1966	8,278	12,760	11,405	11,410	9,062	11,448	6,647	2,250	2,250	2,250	6,524	11,143	11,308	11,742	6,751
1967	7,777	10,197	10,183	10,188	11,426	10,109	6,748	1,500	1,500	6,737	10,180	13,082	11,872	12,795	7,001
1968	12,851	10,317	11,403	11,407	7,110	7,302	1,425	1,425	2,250	5,385	6,662	11,258	11,703	11,105	6,444
1969	7,484	8,276	10,183	10,188	11,427	11,488	3,000	3,000	3,000	7,390	9,260	9,657	12,874	12,994	6,760
1970	12,891	9,615	5,793	6,867	8,100	8,344	7,620	1,500	1,500	3,990	6,317	8,892	11,511	11,208	5,848
1971	9,808	12,196	11,402	11,406	5,504	11,460	9,424	2,250	2,250	2,250	9,019	10,074	13,047	12,978	6,960
1972	12,859	6,651	11,404	11,408	8,539	11,454	5,353	1,500	1,500	5,270	5,647	11,427	11,145	8,341	6,405
1973	7,263	12,751	11,402	9,555	11,425	11,245	8,404	3,000	3,000	6,019	8,021	11,114	11,140	11,473	6,970
1974	10,231	12,753	11,403	9,447	11,427	11,469	10,491	1,500	1,500	6,336	9,939	10,790	12,854	12,976	7,432
1975	11,914	11,002	11,403	10,994	9,444	5,753	10,171	3,000	3,000	7,390	10,111	10,723	12,892	12,975	7,186
1976	12,855	11,042	10,949	9,633	5,616	4,610	1,500	1,500	1,500	2,562	3,784	8,338	7,984	7,739	5,214
1977	5,834	4,676	3,445	2,518	1,848	1,953	1,500	1,500	1,500	1,500	2,900	7,965	4,655	4,336	2,615
1978	3,890	2,268	7,302	7,305	11,398	11,480	1,500	1,500	1,500	6,627	9,489	7,683	12,864	11,931	5,495
1979	10,348	6,177	4,798	11,409	9,573	11,461	3,000	3,000	3,000	7,187	7,691	10,548	11,579	10,709	6,190
1980	9,386	8,606	11,404	11,408	11,426	5,248	8,681	1,500	1,500	4,939	7,971	9,723	12,664	11,051	6,464
1981	10,925	6,069	8,583	10,550	6,476	9,804	6,694	2,250	2,250	2,250	5,698	11,206	11,689	10,494	5,949
1982	8,380	12,755	10,184	7,329	11,428	11,466	10,491	3,000	3,000	7,390	10,180	9,288	12,869	12,984	7,159
1983	12,872	12,759	8,727	5,119	4,419	4,240	6,103	1,500	1,500	1,500	7,126	13,100	13,078	12,994	6,035
1984	12,891	10,307	4,348	5,244	6,192	11,472	2,928	2,928	3,000	3,000	6,833	9,748	11,437	11,728	5,812
1985	9,935	12,757	11,405	10,617	7,040	6,118	3,649	1,500	1,500	3,717	5,637	12,615	12,145	10,624	6,299
1986	8,062	7,898	7,316	11,402	11,417	11,453	10,176	1,500	1,500	4,840	7,705	11,089	12,555	11,843	6,619
1987	10,369	6,301	6,601	9,525	8,298	5,863	6,004	1,500	1,165	2,213	3,019	9,440	8,074	6,175	4,779
1988	5,197	4,778	4,422	11,398	4,074	1,254	1,500	1,500	1,500	3,972	3,671	6,026	5,672	4,239	3,331
1989	2,781	5,258	4,704	6,205	1,564	9,548	8,126	1,500	1,500	3,656	5,741	12,447	10,915	9,149	4,599
1990	7,884	3,139	6,716	10,179	5,784	5,383	1,100	1,100	1,500	2,794	1,279	5,448	2,538	4,306	3,386
1991	4,092	1,102	3,536	2,799	2,665	9,557	1,500	1,500	1,500	1,500	1,520	5,151	3,254	5,539	2,561
1992	3,883	2,243	3,539	4,788	9,552	6,704	1,500	1,500	1,100	1,100	1,120	4,211	3,139	4,313	2,760
1993	4,309	1,506	7,926	7,316	11,411	11,452	10,491	2,250	2,250	7,014	10,014	13,052			

Table I-38b. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario B minus 2002 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	11	-432	-1,320	-386	43	0	0	250	500	247	1,627	-240	17
1923	-546	-38	-343	-624	0	-10	141	0	0	0	-3	533	924	-240	-17
1924	-289	-42	-125	-8	0	0	0	0	3	3	-230	-1,059	1,782	0	3
1925	52	-30	-10	0	-1,483	0	0	0	0	0	46	31	-135	-1	-85
1926	57	-14	1	49	-139	92	0	0	0	0	-1,288	813	-389	-1,069	-111
1927	156	1,821	51	-33	-1,038	-438	251	0	0	0	0	-182	179	-125	34
1928	-599	272	116	-221	0	-1,088	195	0	0	0	0	-1,695	1,237	86	-111
1929	70	185	-182	184	-2	0	0	0	0	0	0	806	-504	0	34
1930	-26	-36	133	60	-2	19	-4	0	0	0	-4	638	-851	2	-4
1931	155	-272	-530	-30	-38	-39	0	0	0	0	7	-37	8	-4	-47
1932	1	402	-54	-242	71	0	-143	131	0	-132	-16	-13	-673	-711	-80
1933	54	-111	-1	-609	-3	-38	9	0	0	238	0	-140	-1	-1	-44
1934	-5	24	-128	-544	3	4	0	0	0	0	0	18	-847	0	-91
1935	265	-331	276	-266	-1	38	274	0	0	0	0	172	568	-45	50
1936	-126	-276	114	-123	-1,268	-381	2	0	0	0	-1	476	1,107	-544	-54
1937	-230	0	-52	11	-1,320	-1,501	251	0	0	4	-271	544	1,538	-409	-87
1938	-288	619	-498	-496	0	0	251	0	0	250	500	-2,367	1,561	1,320	32
1939	1,820	-2,131	-49	-805	-8	0	12	12	0	0	-267	860	528	-604	-34
1940	-313	23	-334	-638	-1,259	-380	251	0	0	-2	358	-150	670	302	-92
1941	1,032	-141	-14	-1,262	-1,320	-114	251	0	0	250	-11	0	1,630	1,320	90
1942	1,154	-951	-892	-1,962	0	-381	251	0	0	250	500	691	1,629	1,320	82
1943	1,820	662	-241	-1,320	-14	-1,156	251	0	0	-2	0	41	1,029	152	66
1944	-421	-232	-397	217	-204	0	-1,751	-347	0	2	-2	1,319	1,161	-174	18
1945	-43	-524	54	-244	-1,320	-1,856	-30	0	0	-97	-3	430	913	-110	-161
1946	-603	-1,507	-373	-1,070	-3,044	25	77	0	0	-2	0	1,321	1,955	219	-166
1947	808	-997	-27	4	300	68	0	0	-214	-2,301	67	1,126	349	-35	23
1948	-1,417	91	-10	-172	0	-8	159	0	0	250	1	1,205	549	37	29
1949	-1,824	-842	-93	-158	202	57	-26	0	0	-2	-3	-1,022	-31	-21	-230
1950	35	1,455	-130	-63	-408	4	2	0	0	0	-1	1,003	1,153	-682	146
1951	-318	1,819	-374	-1,320	-3,481	0	0	0	0	0	0	-403	936	-4	-176
1952	-110	-309	-15	-1,320	-1,257	-381	0	0	0	250	0	816	360	1,320	-42
1953	1,820	651	17	-1,844	27	0	0	0	0	0	500	-37	1,193	1,320	219
1954	1,820	-796	-4,039	-63	-253	59	251	0	0	-467	0	435	623	319	-121
1955	-244	-139	206	-115	88	10	45	0	0	8	0	-207	-114	37	-28
1956	-30	64	-187	-1,321	-1,258	-387	0	0	0	250	39	721	1,630	1,320	49
1957	1,820	-23	-323	-961	-801	-513	-9	0	0	0	-2	695	1,036	17	63
1958	1,542	-886	136	-161	-641	-380	251	0	0	250	500	1,042	1,630	1,320	270
1959	1,033	-636	-158	-225	-1,331	77	0	0	0	8	42	208	-164	605	-26
1960	-265	318	-486	0	-191	1	0	0	0	0	-215	620	-306	1	-31
1961	-220	-20	6	0	425	73	0	0	0	0	-5	1	-10	-2	13
1962	-301	-257	-17	154	-1,320	8	0	0	0	0	0	1,425	-57	47	-11
1963	1,820	653	188	-115	-588	186	251	0	0	250	364	-107	-100	1,039	220
1964	919	1,820	-1,656	-54	-307	-12	7	7	0	-54	126	1,021	859	-503	134
1965	381	48	-182	-1,319	-1,317	672	251	0	0	-27	-4	822	1,130	-94	23
1966	-996	1,820	-459	-1,100	-2	-28	0	0	0	0	-10	686	-79	592	21
1967	-381	-251	-21	-571	-554	1,153	251	0	0	250	500	1,317	152	1,141	169
1968	1,819	-532	149	-188	-430	0	0	0	0	0	22	1,254	-18	165	141
1969	-1,138	-409	147	-1,320	-1,320	-381	0	0	0	250	-2	312	1,616	1,320	-58
1970	1,820	-866	-3,684	-326	0	0	0	0	0	0	0	569	-198	60	-160
1971	0	1,267	59	-285	-363	-48	0	0	0	0	0	207	1,320	1,320	211
1972	1,820	-3,136	174	-71	151	226	13	0	0	4	5	1,057	337	-4	40
1973	-62	1,824	229	-224	-1,318	-452	4	0	0	-2	0	707	-82	337	63
1974	-377	1,820	127	-2,054	-1,080	-385	251	0	0	0	407	833	1,130	1,320	114
1975	878	68	149	12	-3,303	-511	0	0	0	250	431	2,534	1,669	1,320	224
1976	1,820	108	-285	-1	-546	8	0	0	0	0	3	42	-280	-124	49
1977	-26	-281	2	0	-15	-5	0	0	0	0	-2	-103	28	0	-24
1978	-10	23	83	-279	-1,320	-386	0	0	0	140	8	0	1,627	268	13
1979	-558	-499	-700	-1,158	-990	-355	0	0	0	0	209	858	355	2	-168
1980	-296	-36	164	-1,320	-1,041	1,027	0	0	0	0	0	816	1,427	-612	15
1981	-124	-729	-156	-1,067	-255	-93	-4	0	0	0	-2	710	638	-79	-68
1982	256	1,820	179	-495	-1,320	-381	251	0	0	250	500	814	1,622	1,316	281
1983	1,813	1,818	-1,847	-537	-311	0	0	0	0	0	0	1,320	1,574	1,902	347
1984	1,820	-638	-2,078	0	0	-381	23	23	0	0	-54	760	-116	657	0
1985	185	1,821	142	4	2	-50	0	0	0	0	12	910	950	-484	212
1986	-2,273	-548	67	-227	-1,320	-382	118	0	0	0	-11	6,344	1,342	193	208
1987	-656	-499	-162	-113	-54	-1,087	51	0	-71	10	-1,849	673	-232	-2,278	-376
1988	-136	66	-1,848	74	-4	2	0	0	0	-101	40	242	740	-873	-106
1989	-205	83	-50	2	2	181	4	0	0	0	-20	1,691	471	-520	102
1990	-566	-356	-85	104	3	15	0	0	0	0	72	601	-377	-35	-38
1991	-55	-84	0	0	-14	84	0	0	0	0	0	181	-283	-67	-14
1992	-8	-8	0	10	-156	0	0	0	0	0	-12	-50	-482	-2	-43
1993	121	-274	-6	-496	-1,264	-238	251	0	0	250	334	1,311	1,387	324	96
1994	-86	-1,306	-860	-899	-257	-8	4	0	0	0	2	1,088	588	-114	-109
Avg	203	20	-290	-438	-588	-144	41	-2	-4	10	25	553	605	185	12
Min	-2,273	-3,136	-4,039	-2,054	-3,481	-1,856	-1,751	-347	-214	-2,301	-1,849	-2,367	-851	-2,278	-376
Max	1,820	1,824	276	217	425	1,153	274	131	3	250	500	6,344	1,955	1,902	347

Table I-39a. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, for 2020 Scenario B Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	9,726	7,601	7,327	11,412	11,434	11,467	10,324	3,000	3,000	7,390	10,180	12,005	12,830	10,341	7,013
1923	11,782	9,597	9,553	10,188	7,160	6,379	10,316	1,500	1,500	4,922	7,444	11,650	11,506	10,783	6,362
1924	8,039	5,033	5,317	8,928	6,970	1,100	1,106	1,106	1,500	1,500	1,100	5,557	3,763	4,192	3,171
1925	4,619	3,688	7,926	6,145	9,548	1,100	9,959	2,250	2,250	4,742	4,980	5,678	7,175	8,348	4,132
1926	6,214	3,988	5,960	8,969	8,664	4,789	5,773	1,500	1,500	5,972	1,621	7,365	5,518	5,489	3,980
1927	5,666	12,719	7,307	10,175	11,405	11,435	10,491	3,000	3,000	7,001	8,632	9,134	12,184	9,515	6,622
1928	9,154	11,078	11,403	11,408	10,710	11,451	10,442	1,500	1,500	1,500	4,977	7,039	12,448	9,343	6,423
1929	6,259	7,910	8,446	8,896	7,036	2,450	1,811	1,500	1,100	1,100	2,670	6,576	4,631	4,467	3,744
1930	4,000	2,248	9,543	9,545	7,578	10,027	5,747	1,500	1,500	5,216	3,476	8,962	7,014	8,822	4,732
1931	4,517	4,483	3,882	8,513	4,710	2,436	1,100	1,100	1,500	1,500	3,501	3,526	5,444	3,856	2,866
1932	3,263	2,926	7,302	11,391	9,025	6,379	4,273	2,250	2,250	4,480	2,372	5,231	9,349	7,964	4,333
1933	5,796	3,861	6,250	2,804	6,283	3,682	2,199	1,500	1,500	3,806	1,100	3,296	1,200	4,005	2,575
1934	4,645	1,516	9,130	5,829	6,285	2,341	1,100	1,100	1,100	1,100	1,100	3,522	4,503	3,869	2,712
1935	3,464	6,974	7,019	6,175	5,369	8,701	8,492	3,000	1,124	1,124	8,492	10,018	12,197	9,718	5,134
1936	7,611	5,160	4,823	10,179	9,896	9,244	6,364	1,500	1,500	5,055	7,728	10,761	11,454	10,235	5,691
1937	6,905	5,254	4,807	9,077	11,413	8,837	7,391	3,000	3,000	6,672	7,732	10,091	11,896	9,542	5,760
1938	7,740	10,685	4,223	7,941	7,980	8,846	6,748	1,500	1,500	6,737	10,180	13,100	13,078	12,798	6,329
1939	12,890	9,048	10,365	8,805	6,080	5,654	3,753	2,204	2,250	2,250	5,612	11,345	10,065	9,333	5,718
1940	5,620	5,177	982	9,551	11,415	11,430	10,491	3,000	3,000	7,559	7,955	11,482	12,314	10,595	5,937
1941	10,458	7,988	11,399	11,403	11,418	10,425	10,491	1,500	1,500	8,890	5,514	13,100	12,940	12,980	7,183
1942	12,367	8,531	11,404	11,409	11,429	6,578	10,491	3,000	3,000	7,390	10,180	8,709	12,582	11,929	7,062
1943	12,114	10,628	11,405	11,409	7,530	10,487	10,491	1,500	1,500	1,500	7,333	7,813	12,540	10,860	6,628
1944	8,848	5,351	7,607	9,030	8,614	8,675	4,348	3,000	3,000	4,531	6,297	12,015	11,766	9,714	5,765
1945	6,421	11,284	7,313	7,756	11,413	10,506	7,547	1,500	1,500	4,604	7,688	11,234	11,199	9,910	6,161
1946	10,552	9,535	9,550	11,404	4,184	8,410	6,900	3,000	3,000	6,792	7,147	13,086	12,546	10,901	6,505
1947	8,382	7,659	9,522	7,229	8,132	8,224	6,021	1,500	1,500	1,837	5,594	12,841	9,894	9,733	5,597
1948	6,672	6,741	5,368	8,096	6,330	6,586	10,491	1,500	1,500	8,890	8,530	12,682	12,105	11,364	5,789
1949	6,735	5,287	7,914	8,156	5,994	9,566	6,369	1,500	1,500	4,013	6,577	10,403	7,334	8,537	5,035
1950	4,434	5,190	5,239	7,323	11,105	8,439	5,460	1,500	1,500	4,802	8,175	12,681	12,951	9,907	5,547
1951	8,448	12,725	9,546	9,952	8,592	9,824	7,221	1,500	1,500	5,356	7,003	10,851	12,719	10,696	6,535
1952	9,732	8,640	11,402	10,186	11,422	11,482	10,491	3,000	3,000	7,390	9,100	9,813	11,138	12,994	7,110
1953	12,891	9,975	11,407	11,412	5,977	8,377	8,319	2,250	2,250	8,512	9,791	9,339	12,545	12,975	6,990
1954	12,854	9,849	5,636	11,408	11,427	11,454	10,491	2,250	2,250	8,157	5,660	10,997	10,584	11,310	6,807
1955	10,319	9,119	11,403	11,407	4,682	4,390	4,374	1,500	1,500	5,883	6,134	8,455	3,677	7,504	5,075
1956	4,689	6,633	7,313	10,181	11,413	11,459	9,270	1,500	1,500	8,890	9,641	9,209	12,448	12,056	6,369
1957	12,868	8,162	6,452	9,938	11,430	10,029	8,919	2,250	2,250	2,250	6,972	9,256	12,240	10,520	6,371
1958	12,200	8,415	11,404	10,189	11,429	11,464	10,491	3,000	3,000	7,390	10,180	9,282	12,869	12,984	7,386
1959	12,871	9,522	9,355	11,410	8,909	4,061	5,083	2,250	2,250	5,691	6,963	11,256	12,070	10,379	6,313
1960	6,924	3,347	6,302	6,633	11,121	9,021	1,100	1,100	1,500	3,517	3,884	10,664	7,901	5,795	4,533
1961	4,245	7,506	9,996	7,298	9,553	7,316	5,237	1,500	1,100	1,100	3,507	11,950	11,651	9,048	5,219
1962	6,406	5,810	10,560	6,141	11,423	11,362	6,510	2,250	2,250	4,703	6,106	10,753	12,196	10,412	5,972
1963	12,847	10,463	9,552	11,407	11,425	11,460	10,491	1,500	1,500	8,890	6,838	9,670	11,890	10,344	7,074
1964	12,565	12,756	9,909	11,408	4,465	4,035	7,826	1,500	1,500	1,500	5,238	10,982	10,888	9,150	5,911
1965	5,600	9,720	9,548	11,400	11,414	8,433	10,491	3,000	3,000	5,685	6,294	10,063	12,873	10,643	6,454
1966	8,340	12,119	11,405	11,410	10,820	11,205	2,250	2,250	2,250	6,259	6,494	11,010	10,462	11,148	6,698
1967	7,651	10,582	7,320	10,186	11,108	11,216	6,748	1,500	1,500	6,737	10,180	13,084	13,040	12,974	6,973
1968	12,633	11,009	11,280	10,628	6,335	9,814	1,425	1,425	2,250	5,412	6,713	10,603	11,853	10,527	6,466
1969	7,039	9,096	10,184	7,330	11,428	11,485	7,391	3,000	3,000	7,390	9,083	9,652	12,875	11,761	6,652
1970	12,877	9,593	11,406	11,410	6,388	10,546	7,637	1,500	1,500	1,500	6,539	9,889	12,286	10,523	6,513
1971	9,866	11,764	11,402	11,406	5,412	11,460	9,584	2,250	2,250	2,250	8,343	12,904	13,047	12,978	7,071
1972	12,859	7,706	11,404	11,286	9,039	11,455	1,500	1,500	1,500	5,348	5,598	11,614	11,531	8,680	6,429
1973	7,355	12,747	11,401	10,186	11,423	11,461	8,700	3,000	3,000	5,916	8,007	8,239	11,490	11,492	6,877
1974	10,972	12,753	11,403	10,188	11,426	11,462	10,491	1,500	1,500	6,414	9,297	8,993	12,841	12,969	7,375
1975	12,843	7,588	11,402	10,570	9,811	9,531	10,287	3,000	3,000	7,390	9,462	9,162	12,853	12,975	7,133
1976	12,855	12,754	11,403	9,768	4,912	5,015	2,949	1,500	1,500	2,599	3,627	7,940	8,301	7,682	5,365
1977	5,717	4,620	2,592	2,625	1,961	2,038	1,500	1,500	1,500	1,500	2,892	7,227	4,660	4,335	2,525
1978	3,896	2,332	7,302	7,306	11,084	8,356	6,748	1,500	1,500	6,605	9,990	7,492	12,591	11,699	5,432
1979	8,762	6,661	7,889	11,406	9,569	10,431	8,876	3,000	3,000	7,197	7,016	9,459	11,528	10,972	6,328
1980	9,439	8,743	11,403	7,328	11,425	11,475	9,227	1,500	1,500	5,082	7,801	9,159	12,679	11,440	6,607
1981	10,362	4,892	8,944	11,042	6,944	6,659	7,011	2,250	2,250	5,106	5,774	13,055	11,995	10,616	5,974
1982	8,464	12,755	7,323	10,188	11,428	11,466	10,491	3,000	3,000	7,390	10,068	13,096	13,048	12,978	7,402
1983	12,861	11,001	9,716	4,240	5,151	5,225	6,748	1,500	1,500	1,500	6,877	13,100	13,075	12,991	6,042
1984	12,891	10,423	5,068	5,780	11,432	6,680	8,323	3,000	3,000	3,000	6,997	9,716	10,960	11,199	6,003
1985	10,947	12,753	11,403	10,304	7,124	5,914	1,500	1,500	1,500	3,786	5,532	13,032	12,539	11,221	6,351
1986	8,378	6,188	7,316	10,183	11,418	11,441	10,284	1,500	1,500	4,896	7,607	11,789	12,505	11,670	6,490
1987	9,639	5,643	6,733	9,154	7,071	4,995	5,713	1,500	1,100	1,966	4,435	9,167	8,229	5,765	4,593
1988	4,499	4,995	4,264	9,549	6,059	1,631	4,414	1,500	1,500	4,162	2,167	6,998	4,599	4,848	3,344
1989	3,331	5,019	5,703	6,310	1,578	9,548	8,229	1,500	1,500	3,653	5,616	12,246	11,071	9,551	4,704
1990	7,792	2,657	6,627	10,178	6,024	5,436	1,100	1,100	1,500	2,922	1,491	5,676	3,143	4,281	3,429
1991	4,042	1,747	3,586	2,982	2,441	9,558	1,500	1,500	1,500	1,500	2,500	4,065	2,017	5,188	2,493
1992	4,382	1,760	3,827	4,970	9,551	6,838	5,383	1,500	1,100	1,100	1,346	4,311	4,881	4,139	3,031
1993	3,814	2,719	9,705	7,316	11,411	11,446	10,491	2,250	2,250	7,014	10,075	13,045	11,976	10	

Table I-39b. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario B minus 2002 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	5	-432	-1,320	-381	84	0	0	250	500	232	1,534	-6	25
1923	743	-311	-96	-656	4	1	75	0	0	-64	3	397	90	155	21
1924	-336	-384	-776	-113	-46	0	-14	-14	0	0	0	457	-39	0	-76
1925	12	-22	46	4	-321	0	2	0	0	-2	-66	52	-91	2	-22
1926	65	-48	5	46	142	-10	9	0	0	0	62	84	-100	0	15
1927	-48	1,820	52	-89	-1,036	-52	251	0	0	2	0	146	461	0	87
1928	17	144	116	-221	4	-7	201	0	0	0	-158	-127	752	2	38
1929	-301	58	100	162	4	2	21	0	0	0	0	616	-1,478	25	-49
1930	88	-118	214	59	5	8	0	0	0	4	0	639	-670	1	14
1931	-16	-24	301	-1	2	3	0	0	0	0	4	0	2	0	17
1932	0	-7	-28	-644	-9	1	0	0	0	0	0	10	71	49	-34
1933	-12	14	-16	8	0	-3	0	0	0	0	0	0	0	0	-1
1934	0	-1	1	24	0	2	0	0	0	0	0	-18	-13	-66	-4
1935	14	-25	21	-285	32	-74	249	0	0	0	0	278	673	470	74
1936	-143	138	-262	-122	-1,135	-381	0	0	0	0	-3	320	908	469	-7
1937	-344	-809	177	-132	-1,320	-789	251	0	0	-8	4	558	852	-168	-104
1938	-29	897	-87	-1,054	-1,318	-381	251	0	0	250	500	1,320	1,751	1,124	186
1939	1,820	-651	-930	-930	-128	0	-2,255	-46	200	200	38	1,318	892	15	35
1940	-47	388	-883	-633	-1,187	-383	251	0	0	0	513	-233	1,268	203	-49
1941	101	-122	-14	-1,131	-1,321	-851	251	0	0	250	528	1,320	1,639	1,320	110
1942	1,323	-2,091	-295	-1,320	-746	197	251	0	0	250	500	-1,659	844	266	-161
1943	1,064	-311	-95	-1,320	-570	-1,382	251	0	0	0	2	-348	808	-298	-139
1944	-136	-694	37	-128	-199	-112	0	0	0	-2	0	1,401	874	-268	51
1945	-57	372	55	-27	-1,320	-5	4	0	0	0	-3	-125	588	112	-18
1946	-14	-27	-171	-1,089	-1,004	-150	0	0	0	23	-1	1,328	985	-80	-7
1947	-1,049	-826	44	266	6	204	0	0	0	145	41	1,769	-906	187	-10
1948	-142	78	277	-224	-1	2	251	0	0	250	0	938	401	220	110
1949	-1,438	-273	-68	-82	82	57	0	0	0	-6	-2	-531	-1,102	-3	-207
1950	83	15	28	-63	-409	0	0	0	0	12	-5	1,033	1,320	-887	73
1951	42	1,820	-373	-1,961	-1,325	244	0	0	0	0	0	543	1,443	29	33
1952	-6	-133	-15	-1,320	-1,196	-380	251	0	0	250	0	815	661	1,320	5
1953	1,820	-18	23	-1,320	25	-1	0	0	0	0	111	789	823	1,320	217
1954	1,820	-1,084	-1,922	-62	-251	78	251	0	0	6	0	504	-145	457	-27
1955	37	-214	205	-116	-212	6	11	0	0	-8	1	769	-1,367	-178	-64
1956	420	-450	-187	-1,319	-1,256	-392	0	0	0	250	0	-2,571	1,143	394	-244
1957	1,820	-714	-1,030	1,084	-310	-1,369	-13	0	0	0	-8	328	666	-107	25
1958	1,167	-2,112	2,569	-159	-636	-381	251	0	0	250	500	1,099	1,626	1,318	327
1959	1,815	-243	-406	-225	-1,028	444	0	0	0	-27	-17	-14	346	-149	38
1960	-851	148	-223	-1	-195	-2	0	0	0	0	-178	44	-335	2	-97
1961	-86	97	-91	0	31	-3	0	0	0	0	11	454	682	135	75
1962	-148	-81	-167	398	-1,320	6	0	0	0	2	-1	722	503	-509	-28
1963	1,820	-468	188	-116	-588	57	251	0	0	250	1	261	161	8	101
1964	1,524	1,820	-1,311	-55	-282	-10	77	0	0	0	46	1,547	-82	8	197
1965	-228	136	-83	-1,319	-1,318	428	251	0	0	149	-3	841	1,131	-370	-28
1966	20	1,179	-413	-1,075	-7	-1	0	0	0	0	3	712	-510	481	21
1967	-84	-21	-7	-572	-552	-356	251	0	0	250	500	1,318	1,319	1,320	191
1968	1,600	76	26	-967	-2,634	-937	0	0	0	0	14	440	150	-415	-146
1969	-150	798	146	-494	-1,320	-381	251	0	0	250	9	806	1,620	99	91
1970	1,809	-1,351	-138	-1,321	-262	-1,298	-60	0	0	0	-45	1,208	577	-601	-84
1971	-133	835	59	-285	-826	120	-4	0	0	0	0	1,630	1,320	1,320	249
1972	1,820	-2,103	173	-193	-1,091	240	0	0	0	0	-223	509	863	13	12
1973	13	1,820	227	-300	-1,204	-386	0	0	0	0	-1	-451	268	337	23
1974	-62	1,819	126	-1,320	-1,069	-388	251	0	0	-2	-3	752	1,617	1,313	179
1975	1,807	-3,346	147	-668	-2,907	-818	47	0	0	250	-1	608	1,630	1,320	-106
1976	1,820	1,820	169	41	45	-13	2	0	0	0	-44	2,533	-1,254	-413	286
1977	198	-150	-165	-82	66	56	290	290	0	0	-8	2,557	-1,690	0	65
1978	275	-477	83	-279	-991	-336	251	0	0	118	379	-32	1,379	362	39
1979	-135	-228	-1,180	-765	-990	-59	0	0	0	0	264	182	331	-1	-153
1980	-178	-29	163	-495	-1,257	-384	0	0	0	0	-2	798	1,442	297	29
1981	-649	-238	-373	-575	-1,784	-783	9	0	0	0	-2	1,293	719	-407	-160
1982	-117	1,823	68	-1,319	-1,318	-383	251	0	0	250	388	1,316	1,747	1,318	233
1983	1,817	64	-966	-622	-98	0	251	0	0	0	0	1,320	1,317	2,960	358
1984	1,820	-522	-2,066	0	-1,257	0	-21	0	0	0	0	313	496	113	-60
1985	-87	1,820	140	-278	-10	268	0	0	0	2	35	1,319	1,206	102	274
1986	-981	-1,122	66	-227	-1,320	-384	43	0	0	2	4	789	1,249	528	-76
1987	-1,246	-101	-940	353	-571	-545	4,116	400	-279	-233	-1,720	582	-312	-2,682	-311
1988	-580	0	-5,081	58	2,218	263	-9	0	0	12	-167	970	653	-33	-117
1989	-184	82	-84	24	0	182	0	0	0	6	-26	1,549	929	174	162
1990	-583	-1,533	-91	105	1	-14	0	0	0	-6	358	879	-205	-37	-67
1991	-121	90	9	1	-40	85	0	0	0	0	0	0	-32	-131	-8
1992	-7	3	3	4	-157	0	0	0	0	0	-26	-69	-336	-2	-35
1993	112	-196	-4	-496	-1,251	-246	251	0	0	250	395	1,313	712	0	43
1994	-22	-834	-684	-376	-810	172	4	0	0	0	1	915	662	-1,207	-125
Avg	274	-59	-214	-394	-608	-166	108	9	-1	52	41	594	513	173	18
Min	-1,438	-3,346	-5,081	-1,961	-2,907	-1,382	-2,255	-46	-279	-233	-1,720	-2,571	-1,690	-2,682	-311
Max	1,820	1,823	2,569	1,084	2,218	444	4,116	400	200	250	528	2,557	1,751	2,960	358

Table I-40a. CALSIM Simulated CVP Tracy Pumping, for 2001 Scenario C Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	4,391	4,265	4,227	4,232	4,254	3,183	3,969	1,500	1,500	1,500	3,000	4,600	4,553	4,481	2,739
1923	4,366	4,257	3,005	3,009	3,405	2,850	4,544	800	800	800	2,234	4,562	4,523	4,465	2,422
1924	4,335	2,639	2,802	4,225	3,426	800	800	800	800	800	800	1,572	1,511	2,697	1,590
1925	2,573	1,135	3,701	3,473	4,163	800	4,600	1,125	1,125	3,001	2,027	3,195	4,142	4,393	2,080
1926	4,028	3,005	800	4,220	4,234	1,990	4,544	800	800	800	1,120	800	800	3,718	1,688
1927	3,365	4,219	2,992	2,995	4,225	3,824	4,600	1,500	1,500	1,500	2,921	4,588	4,543	4,475	2,572
1928	4,355	4,254	4,223	4,228	4,245	4,285	4,544	800	800	800	1,809	4,573	4,531	4,469	2,682
1929	3,638	3,943	4,222	4,226	3,481	800	800	800	800	800	1,497	1,816	3,421	3,432	1,933
1930	3,031	1,742	4,211	4,213	3,396	2,635	2,679	800	800	2,495	1,327	1,424	1,555	4,348	1,886
1931	3,493	2,631	1,087	4,073	2,118	1,186	800	800	800	800	1,385	800	1,034	2,350	1,311
1932	2,574	2,175	4,209	2,991	2,929	1,442	2,368	1,125	1,125	1,125	1,998	2,556	3,517	4,262	1,901
1933	1,964	1,117	686	603	884	1,247	800	800	800	1,788	800	800	967	2,911	850
1934	3,017	895	4,209	1,330	641	868	800	800	800	800	800	800	2,065	2,201	1,120
1935	1,868	4,010	3,083	2,993	1,014	2,196	2,404	1,500	800	800	2,557	2,116	4,469	4,371	1,901
1936	3,222	2,052	1,708	2,999	1,868	2,143	800	800	800	800	2,345	3,749	4,483	4,402	1,850
1937	4,294	3,485	2,251	3,001	4,235	2,625	1,345	1,345	1,500	1,500	2,516	3,162	4,463	4,359	2,242
1938	4,275	2,894	792	800	800	1,666	800	800	800	800	3,000	4,600	4,576	4,493	1,787
1939	4,389	4,264	4,227	4,232	3,102	2,867	1,125	1,125	1,125	1,125	2,972	3,351	3,102	3,885	2,334
1940	1,751	2,380	16	4,219	4,231	4,254	4,600	1,500	1,500	3,000	3,000	4,540	4,507	4,455	2,328
1941	4,319	4,037	4,220	4,223	4,240	3,509	4,544	800	800	800	3,000	4,573	4,531	4,469	2,689
1942	4,343	4,250	4,222	1,489	2,053	2,772	4,600	1,500	1,500	1,500	3,000	4,600	4,558	4,483	2,438
1943	4,370	4,259	4,225	4,229	3,130	2,122	4,544	800	800	800	2,195	4,600	4,552	4,480	2,515
1944	4,364	3,819	4,224	4,229	3,943	4,272	1,500	1,500	1,500	1,500	2,339	4,525	4,376	4,429	2,629
1945	2,640	4,239	2,999	4,222	4,237	4,279	3,592	800	800	2,953	2,857	4,583	4,539	4,473	2,603
1946	4,351	4,253	4,223	4,227	800	2,781	3,491	1,500	1,500	3,000	3,000	4,575	4,533	4,470	2,549
1947	4,262	3,270	4,222	3,040	4,170	3,538	2,939	800	800	800	1,779	4,549	4,513	4,460	2,442
1948	2,779	2,709	3,382	4,224	4,239	3,195	4,544	800	800	2,953	3,000	4,576	4,534	4,470	2,513
1949	4,346	2,906	4,222	2,883	2,984	4,248	3,078	800	800	800	2,060	4,543	4,508	4,457	2,413
1950	3,622	3,627	2,718	3,004	3,925	3,968	800	800	800	800	2,466	4,485	4,465	4,362	2,306
1951	3,097	4,229	4,215	3,484	1,579	2,644	3,564	800	800	800	3,000	4,568	4,528	4,467	2,349
1952	4,340	3,621	3,002	3,006	4,242	4,301	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,544
1953	4,391	4,265	4,227	2,811	3,642	872	4,007	1,125	1,125	3,001	3,000	4,600	4,553	4,481	2,502
1954	4,365	4,257	4,224	4,229	4,249	4,279	4,600	1,125	1,125	3,001	3,000	4,600	4,555	4,482	2,848
1955	4,368	4,203	4,225	4,229	3,254	2,286	2,733	800	800	800	1,934	4,522	4,265	4,290	2,425
1956	3,053	3,420	2,998	3,002	4,236	4,291	4,451	800	800	2,953	3,000	4,600	4,556	4,482	2,542
1957	4,368	4,258	4,225	4,229	4,249	2,698	4,500	1,125	1,125	3,001	2,711	4,600	4,552	4,480	2,731
1958	4,364	4,257	4,224	3,009	4,249	4,297	4,600	1,500	1,500	1,500	3,000	4,600	4,569	4,489	2,750
1959	4,381	4,262	4,226	4,231	3,793	1,855	1,125	1,125	1,125	2,793	3,000	4,588	4,543	4,475	2,564
1960	3,157	1,979	800	3,008	3,941	4,225	800	800	800	800	1,758	4,446	4,405	4,295	2,026
1961	3,148	3,742	4,157	3,431	4,225	2,298	2,619	800	800	2,344	2,217	4,576	4,534	4,028	2,391
1962	3,168	4,251	4,222	3,201	4,245	4,276	3,120	1,125	1,125	3,001	2,766	4,572	4,531	4,469	2,649
1963	4,343	4,250	4,222	4,226	4,244	3,183	4,544	800	800	800	3,000	4,581	4,537	4,472	2,685
1964	4,349	4,252	4,223	4,227	2,114	2,343	800	800	800	2,596	2,419	4,539	4,505	4,452	2,421
1965	2,456	4,183	4,219	4,223	4,239	4,275	4,600	1,500	1,500	3,000	3,000	4,600	4,562	4,486	2,748
1966	4,374	4,260	4,225	4,230	4,251	4,290	3,324	1,125	1,125	1,125	3,000	4,584	4,540	4,474	2,750
1967	3,349	4,253	3,003	3,008	4,246	4,036	800	800	800	800	3,000	4,588	4,543	4,475	2,416
1968	4,355	4,254	4,223	4,228	3,497	2,737	1,125	1,125	1,125	2,692	3,000	4,586	4,541	4,474	2,596
1969	4,043	4,253	3,003	3,008	4,247	4,307	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,564
1970	4,391	4,265	1,747	1,921	2,252	2,622	3,753	800	800	800	1,979	4,570	4,529	4,468	2,164
1971	4,341	4,249	4,222	4,226	4,244	4,280	4,600	1,125	1,125	1,125	3,000	4,594	4,547	4,478	2,785
1972	4,359	3,959	4,224	4,228	4,246	4,276	2,639	800	800	2,588	3,000	4,580	4,537	4,472	2,736
1973	4,239	4,252	4,223	4,227	4,246	3,312	4,202	1,500	1,500	1,500	2,754	4,587	4,542	4,475	2,727
1974	4,354	4,253	4,223	3,008	4,247	4,295	4,544	800	800	800	2,852	4,590	4,544	4,476	2,672
1975	4,356	4,254	4,223	4,228	3,074	2,669	4,600	1,500	1,500	1,500	3,000	4,588	4,543	4,475	2,656
1976	4,355	4,254	4,223	4,228	2,850	1,876	800	800	800	800	1,513	1,936	2,843	3,416	1,999
1977	2,627	1,745	800	800	800	800	800	800	800	800	1,475	3,182	3,020	2,810	1,191
1978	3,052	1,280	2,989	2,991	4,218	4,305	800	800	800	800	2,941	4,600	4,557	4,483	2,233
1979	4,369	4,057	3,654	4,229	4,250	4,288	1,500	1,500	1,500	3,000	3,000	4,592	4,546	4,477	2,731
1980	4,358	4,255	4,224	4,228	4,246	2,118	4,154	800	800	800	2,392	4,600	4,557	4,483	2,576
1981	4,369	4,213	4,225	4,042	2,728	2,624	3,347	1,125	1,125	1,125	2,851	4,595	4,548	4,478	2,542
1982	3,959	4,255	3,004	3,008	4,248	4,292	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,651
1983	4,390	4,265	3,433	3,012	3,330	1,670	800	800	800	800	3,000	4,600	4,578	4,494	2,315
1984	4,391	4,265	2,174	2,622	3,096	4,292	1,500	1,500	1,500	1,500	2,536	4,600	4,554	4,481	2,417
1985	4,366	4,257	4,225	4,229	3,520	3,058	800	800	800	800	1,807	4,524	4,494	4,427	2,448
1986	2,767	3,918	2,999	4,222	4,237	4,274	4,544	800	800	800	2,327	3,455	4,531	4,469	2,450
1987	4,343	4,250	4,222	4,226	4,148	2,562	2,954	800	800	1,817	1,691	1,639	1,753	3,296	2,126
1988	2,623	2,935	2,425	4,218	2,877	800	800	800	800	1,941	2,258	1,784	3,762	2,935	1,737
1989	2,739	2,280	2,426	2,887	800	4,217	4,004	800	800	800	1,863	3,985	4,203	4,361	2,001
1990	4,110	1,345	2,838	2,999	3,916	2,325	800	800	800	800	1,066	859	1,635	2,529	1,517
1991	2,912	800	1,826	1,554	1,384	4,230	800	800	800	800	1,220	846	2,699	4,269	1,413
1992	2,932	1,122	1,827	2,451	4,222	3,352	800	800	800	800	800	800	1,838	1,394	1,341
1993	2,989	800	3,966	2,998	4,231	4,274	4,600	1,125	1,125	1,125	3,000	4,564	4,525	4,466	2,401
1994	4,337	4,248	4,221	4,226	2,445	2,576	2,210	800	800	1,775	2,167	4,600	4,569	4,489	2,463
Avg	3,751	3,465	3,364	3,450	3,383	3,003	2,737	1,019	1,011	1,505	2,385	3,809	4,012	4,165	2,289
Min	1,751	800	16	603	641	800	800	800	800	800	800	800	800	1,394	850
Max	4,391	4,265	4,227	4,232	4,254	4,307	4,600	1,500	1,500	3,001	3,000	4,600	4,578	4,494	2,848

Table I-40b. CALSIM Simulated CVP Tracy Pumping, 2001 Scenario C minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	0	0	0	-500	0	0	0	0	0	0	0	0	-31
1923	0	0	0	0	0	-2	0	0	0	0	-1	0	0	0	0
1924	0	-319	-87	0	0	0	0	0	0	0	0	485	9	176	17
1925	-12	-4	-3	0	-55	0	0	0	0	0	40	4	-167	4	-12
1926	1	-13	0	0	0	1	0	0	0	0	320	0	-68	7	15
1927	265	2	0	0	1	471	0	0	0	0	1	0	0	0	46
1928	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
1929	70	-277	0	0	-1	0	0	0	0	0	0	33	60	7	-6
1930	0	-29	0	0	-3	-598	0	0	0	0	2	2	-318	0	-58
1931	2	-251	5	-22	-26	-54	0	0	0	0	-35	0	-29	-1	-25
1932	24	805	0	0	-703	-85	-244	0	0	0	-14	-15	-250	-19	-20
1933	-159	-46	-57	-88	-110	0	0	0	0	217	0	0	-15	-1	-22
1934	218	95	0	-467	0	5	0	0	0	0	0	0	-56	9	-12
1935	252	-56	48	0	-17	20	-2	0	0	0	0	-1	0	1	15
1936	-87	-379	304	0	-209	0	0	0	0	0	0	4	-1	-2	-21
1937	-2	38	15	0	0	-1,015	0	0	0	0	5	-2	0	0	-59
1938	0	-1,329	0	0	0	0	0	0	0	0	0	0	0	0	-79
1939	0	0	0	0	86	-3	0	0	0	0	462	281	114	19	58
1940	-526	-4	-335	-2	-4	2	0	0	0	0	0	4	3	7	-53
1941	4	-162	1	0	1	-176	0	0	0	0	0	0	0	0	-20
1942	0	0	0	-1,678	0	0	0	0	0	0	0	0	0	0	-103
1943	0	0	0	0	-7	-1,742	0	0	0	0	0	0	0	0	-108
1944	0	-85	0	0	0	0	0	0	0	0	0	-2	-116	-2	-12
1945	20	0	0	0	0	1	2	0	0	0	0	-1	0	0	1
1946	0	0	0	0	-3,304	63	49	0	0	0	0	1	1	0	-178
1947	1	-980	0	0	150	35	0	0	0	0	1	11	8	10	-46
1948	-146	-356	702	102	1	-12	0	0	0	0	0	11	9	4	20
1949	9	-1,342	1	-143	69	7	-13	0	0	0	-1	3	1	3	-84
1950	-1	509	66	0	1	0	0	0	0	0	0	-3	-2	-4	34
1951	-152	-1	0	-735	-2,303	0	0	0	0	0	0	0	0	0	-183
1952	0	-229	0	0	0	9	0	0	0	0	0	0	0	0	-13
1953	0	0	0	-922	-37	-369	2	0	0	0	0	0	0	0	-81
1954	0	0	0	0	0	6	0	0	0	0	150	10	10	6	11
1955	11	-51	1	1	262	2	4	0	0	0	0	-11	-236	10	-2
1956	-96	8	-1	-1	-1	5	0	0	0	0	0	0	0	0	-5
1957	0	0	0	0	526	35	-2	0	0	0	0	0	-3	-2	31
1958	-4	-1	-1	0	0	8	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	-459	-10	0	0	0	-14	0	14	11	5	-25
1960	-535	150	-393	1	2	0	0	0	0	0	80	-1	-5	-2	-44
1961	-9	1	45	1	0	-8	0	0	0	8	178	-1	-1	-100	7
1962	-227	0	0	128	0	0	0	0	0	0	0	-2	-1	-1	-6
1963	-1	0	0	0	-1	-239	0	0	0	0	0	0	0	0	-15
1964	0	0	0	0	-351	-60	0	0	0	-353	52	168	255	34	-3
1965	1	-54	1	1	3	-3	0	0	0	0	0	0	0	1	-3
1966	0	0	0	0	0	17	0	0	0	0	0	10	8	4	2
1967	-386	3	1	1	1	0	0	0	0	0	0	3	3	1	-23
1968	3	1	0	1	-273	-914	0	0	0	0	0	0	0	0	-71
1969	-310	0	0	0	0	-1	0	0	0	0	0	0	0	0	-19
1970	0	0	-2,185	0	0	0	0	0	0	0	0	0	0	0	-134
1971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	-296	0	0	52	1	26	0	0	2	0	19	15	8	-11
1973	80	5	2	2	3	-824	2	0	0	0	-1	0	0	0	-45
1974	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	-1,173	-463	0	0	0	0	0	0	0	0	-94
1976	0	0	0	0	-231	13	0	0	0	0	2	-82	91	-159	-21
1977	39	17	0	0	0	0	0	0	0	0	-1	-32	32	0	3
1978	0	29	0	0	0	0	0	0	0	0	-1	0	0	0	2
1979	0	-201	-239	0	0	33	0	0	0	0	0	2	2	1	-24
1980	2	1	0	0	0	372	0	0	0	0	-1	0	0	0	23
1981	0	-14	0	-187	-195	0	-2	0	0	0	1	0	0	0	-23
1982	45	0	0	0	0	6	0	0	0	0	0	0	11	6	4
1983	11	4	221	1	1,294	0	0	0	0	0	0	0	0	0	86
1984	0	0	-1,039	0	0	0	0	0	0	0	-4	2	4	2	-64
1985	4	1	1	0	1	-26	0	0	0	0	1	-1	-1	-1	-1
1986	-1,197	-320	0	0	0	0	118	0	0	0	-2	155	-2	-1	-80
1987	-2	-1	0	-1	-28	-237	34	0	0	50	45	52	37	13	-5
1988	-44	39	-710	0	0	0	0	0	0	-48	109	-184	44	-1,340	-127
1989	476	-17	49	2	0	0	0	0	0	0	129	409	439	-3	91
1990	103	-520	-176	0	0	1	0	0	0	0	159	2	-413	-2	-51
1991	0	0	0	1	-5	0	0	0	0	0	0	-1	108	0	6
1992	83	69	0	62	0	0	0	0	0	0	0	0	-277	-16	-5
1993	-9	0	0	-2	-1	1	0	0	0	0	0	3	3	2	0
1994	3	1	0	1	70	0	2	0	0	0	-249	0	0	0	-11
Avg	-30	-76	-51	-54	-96	-85	0	0	0	-2	20	19	-9	-18	-23
Min	-1,197	-1,342	-2,185	-1,678	-3,304	-1,742	-244	0	0	-353	-249	-184	-413	-1,340	-183
Max	476	805	702	128	1,294	471	118	0	0	217	462	485	439	176	91

Table I-41a. CALSIM Simulated CVP Tracy Pumping, for 2020 Scenario C Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-	VAMP	VAMP	Post-	Jun	Jul	Aug	Sep	taf/yr
							VAMP	4/16-	5/1-	VAMP					
							4/1-4/15	4/30	5/15	5/16-5/31					
1922	4,391	4,265	3,007	4,232	4,254	4,287	4,600	1,500	1,500	1,500	3,000	4,593	4,547	4,477	2,750
1923	4,359	4,255	4,224	2,629	2,794	2,601	4,544	800	800	800	2,261	4,571	4,530	4,468	2,427
1924	4,283	3,306	1,389	4,226	3,529	800	800	800	800	800	800	1,154	1,895	2,525	1,533
1925	2,661	1,087	3,860	2,991	4,218	800	4,600	1,125	1,125	1,125	1,621	3,180	1,450	4,365	1,814
1926	3,788	2,444	3,078	4,219	4,231	3,373	800	800	800	2,939	1,594	800	1,210	3,326	1,851
1927	2,876	4,219	2,992	2,995	4,225	4,287	4,600	1,500	1,500	1,500	2,908	4,588	4,543	4,475	2,569
1928	4,355	4,254	4,223	4,228	4,245	4,269	4,544	800	800	800	1,774	4,551	4,514	4,460	2,676
1929	3,619	3,752	4,220	4,224	3,517	800	800	800	800	800	1,385	1,453	2,737	3,024	1,827
1930	3,062	1,770	4,210	4,213	3,809	3,040	2,816	800	800	800	2,561	1,310	1,435	1,970	4,338
1931	3,501	3,196	1,285	4,217	2,349	1,388	800	800	800	800	1,204	800	1,062	2,334	1,382
1932	2,132	1,993	2,989	4,211	2,308	1,554	2,689	1,125	1,125	1,125	2,072	3,168	3,684	4,287	1,899
1933	3,032	1,177	762	720	1,029	1,247	800	800	800	1,856	800	800	898	2,533	915
1934	3,037	902	4,209	1,818	641	1,166	800	800	800	800	800	800	2,628	2,355	1,214
1935	1,661	3,988	3,999	2,222	1,063	1,521	2,608	1,500	800	800	2,523	2,560	4,466	4,365	1,888
1936	2,442	1,974	2,029	2,999	2,198	2,064	800	800	800	800	2,333	3,257	4,476	4,386	1,798
1937	3,934	3,694	1,234	3,000	4,233	1,657	1,500	1,500	1,500	1,500	2,683	3,739	4,455	4,341	2,163
1938	4,267	2,181	750	761	800	1,666	800	800	800	800	3,000	4,600	4,578	4,494	1,739
1939	4,390	4,265	4,227	4,232	3,045	2,826	2,638	1,125	1,125	1,125	2,799	3,354	2,937	3,776	2,347
1940	2,033	2,205	740	4,222	4,236	4,249	4,600	1,500	1,500	3,000	3,000	4,529	4,498	4,436	2,377
1941	4,310	4,007	4,219	4,222	4,238	3,201	4,544	800	800	2,953	3,000	4,600	4,552	4,480	2,740
1942	4,364	4,257	4,224	4,229	3,628	2,826	4,600	1,500	1,500	1,500	3,000	4,600	4,558	4,483	2,699
1943	4,370	4,259	4,225	4,229	3,470	4,308	4,544	800	800	800	2,233	4,600	4,552	4,480	2,671
1944	4,364	3,346	4,224	4,229	3,943	3,980	1,500	1,500	1,500	1,500	2,325	3,556	3,554	4,384	2,469
1945	2,234	4,232	2,997	3,000	4,233	4,273	3,714	800	800	800	2,322	4,547	4,511	4,459	2,400
1946	4,323	4,244	4,220	3,902	800	3,006	3,448	1,500	1,500	3,000	3,000	4,585	4,541	4,474	2,541
1947	4,145	3,727	4,223	4,227	4,065	4,249	2,954	800	800	800	1,849	4,371	3,926	4,420	2,528
1948	2,341	3,379	2,690	4,064	4,235	3,293	4,544	800	800	2,953	3,000	4,562	4,523	4,465	2,478
1949	3,827	2,940	3,970	4,225	2,993	4,242	3,129	800	800	800	2,045	4,545	4,510	4,458	2,452
1950	3,644	3,637	2,729	3,004	3,925	3,963	800	800	800	800	2,445	4,468	4,451	4,332	2,304
1951	3,211	4,225	4,214	1,507	1,415	2,644	3,554	800	800	800	2,150	4,568	4,527	4,467	2,174
1952	4,339	4,249	4,222	3,006	4,242	4,305	4,600	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,749
1953	4,391	4,265	4,227	4,232	2,952	863	4,159	1,125	1,125	3,001	3,000	4,585	4,540	4,474	2,553
1954	4,352	4,253	2,824	4,227	4,246	4,277	4,600	1,125	1,125	3,001	3,000	4,597	4,549	4,479	2,760
1955	4,283	4,256	4,224	4,228	3,363	2,187	2,778	800	800	2,900	3,000	2,248	3,486	4,323	2,369
1956	3,026	3,269	2,997	3,000	4,232	4,290	4,544	800	800	2,953	3,000	4,600	4,556	4,482	2,533
1957	4,368	4,258	4,225	4,229	4,250	4,001	4,470	1,125	1,125	1,125	3,000	4,586	4,541	4,475	2,766
1958	4,354	4,253	4,223	3,008	4,247	4,293	4,600	1,500	1,500	1,500	3,000	4,600	4,569	4,489	2,749
1959	4,381	4,262	4,226	4,231	4,246	3,751	2,544	1,125	1,125	2,813	3,000	4,579	4,536	4,472	2,747
1960	2,816	1,487	847	3,007	3,940	3,951	800	800	800	800	1,746	4,423	4,370	3,222	1,894
1961	3,332	4,082	4,077	3,650	4,224	2,392	2,561	800	800	800	1,677	4,561	4,523	3,952	2,348
1962	2,928	2,417	4,221	3,780	4,243	4,276	3,255	1,125	1,125	3,001	3,000	4,576	4,533	4,470	2,579
1963	4,345	4,251	4,222	4,227	4,245	4,283	4,544	800	800	2,953	3,000	4,600	4,558	4,483	2,824
1964	4,370	4,258	4,225	4,229	2,887	2,328	3,843	800	800	800	1,577	2,459	4,149	4,384	2,294
1965	2,000	4,232	4,216	4,220	4,233	3,284	4,600	1,500	1,500	3,000	3,000	4,600	4,562	4,486	2,661
1966	4,375	4,260	4,225	4,230	4,251	4,283	1,125	1,125	1,125	3,001	2,694	4,584	4,540	4,474	2,726
1967	3,325	4,253	3,003	3,008	3,931	4,036	800	800	800	800	3,000	4,579	4,536	4,472	2,396
1968	4,348	4,252	4,223	3,533	2,391	2,634	1,125	1,125	1,125	2,706	3,000	4,598	4,551	4,479	2,487
1969	3,578	3,962	3,004	3,009	4,248	4,304	1,500	1,500	1,500	1,500	3,000	4,600	4,578	4,494	2,518
1970	4,391	4,265	4,227	1,921	2,252	2,614	3,749	800	800	800	2,036	4,570	4,529	4,468	2,319
1971	4,341	4,249	4,222	4,226	4,244	4,280	4,600	1,125	1,125	1,125	3,000	4,594	4,547	4,478	2,785
1972	4,359	4,003	4,224	4,228	4,246	4,274	800	800	800	2,625	3,000	4,558	4,520	4,463	2,682
1973	4,234	4,247	4,221	3,005	4,242	4,287	4,350	1,500	1,500	1,500	2,752	4,588	4,542	4,475	2,715
1974	4,354	4,254	4,223	3,008	4,247	4,290	4,544	800	800	800	2,725	4,590	4,544	4,476	2,664
1975	4,356	4,026	4,223	4,228	4,078	2,643	4,600	1,500	1,500	1,500	3,000	4,588	4,543	4,475	2,697
1976	4,355	4,254	4,223	4,228	1,994	2,207	800	800	800	800	1,470	800	2,681	3,439	1,890
1977	2,420	1,638	800	835	800	800	800	800	800	800	1,315	1,960	2,914	2,803	1,082
1978	3,053	1,120	2,989	2,992	3,904	2,457	800	800	800	800	2,931	4,574	4,532	4,470	2,088
1979	4,344	3,805	2,597	4,226	4,245	2,890	4,438	1,500	1,500	3,000	3,000	4,586	4,541	4,474	2,650
1980	4,353	4,253	4,223	3,008	4,245	4,306	4,544	800	800	800	2,351	4,600	4,557	4,483	2,644
1981	4,369	3,468	4,225	4,229	3,495	2,549	3,506	1,125	1,125	2,553	2,888	4,595	4,548	4,478	2,599
1982	3,876	4,255	3,004	3,008	4,248	4,286	4,600	1,500	1,500	1,500	3,000	4,600	4,556	4,482	2,643
1983	4,368	4,258	3,728	1,175	1,687	1,670	800	800	800	800	3,000	4,600	4,578	4,494	2,127
1984	4,391	4,265	2,533	2,890	4,252	3,340	4,172	1,500	1,500	1,500	2,499	4,587	4,542	4,475	2,537
1985	4,354	4,253	4,223	4,228	3,562	2,950	800	800	800	800	1,775	4,531	4,500	4,439	2,442
1986	2,798	2,101	2,999	3,003	4,238	4,261	4,544	800	800	800	2,302	3,808	4,501	4,442	2,284
1987	4,313	4,240	4,219	4,078	2,031	1,762	2,786	800	800	1,589	1,494	1,128	2,084	2,926	1,891
1988	1,741	3,002	2,784	4,218	4,229	800	2,150	800	800	2,034	800	1,757	3,708	4,018	1,800
1989	2,997	2,309	2,224	2,995	800	4,217	4,057	800	800	800	1,833	3,491	3,660	4,350	1,948
1990	3,838	1,270	2,804	2,998	3,915	2,370	800	800	800	800	1,113	856	1,986	2,511	1,519
1991	2,921	800	1,849	1,623	1,447	4,231	800	800	800	800	1,275	902	2,589	4,245	1,421
1992	2,941	1,538	1,972	2,429	4,222	3,420	2,634	800	800	800	800	800	3,550	1,187	1,525
1993	2,776	1,295	2,996	2,999	4,232	4,265	4,600	1,125	1,125	1,125	3,000	4,550	4,514	4,460	2,355
1994	4,326	3,880	4,220	3,403	2,190	2,576	2,225	800	800	1,821	800	4,600	4,562	4,467	2,295
Avg	3,677	3,407	3,380	3,417	3,385	3,083	2,910	1,021	1,011	1,542	2,316	3,695	3,971	4,134	2,276
Min	1,661	800	740	720	641	800	800	800	800	800	800	800	898	1,187	915
Max	4,391	4,265	4,227												

Table I-41b. CALSIM Simulated CVP Tracy Pumping, 2020 Scenario C minus 2020 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1923	0	0	0	-145	-495	-1	0	0	0	0	1	3	3	1	-36
1924	-56	393	-123	0	21	0	0	0	0	0	0	-90	100	-342	-6
1925	-11	-246	-80	0	0	0	0	0	0	0	-387	4	-974	2	-103
1926	1	-415	-1	0	0	-67	0	0	0	0	335	-57	42	-1	-10
1927	-208	0	0	0	0	83	0	0	0	0	0	0	0	0	-8
1928	0	0	0	0	0	-5	0	0	0	0	7	-2	-2	-1	0
1929	76	-118	-1	-1	1	0	0	0	0	0	-75	-384	-886	4	-85
1930	0	-295	-1	-1	73	-9	0	0	0	2	126	-83	-375	-1	-35
1931	5	-123	303	0	-5	-2	0	0	0	0	25	0	1	0	13
1932	10	58	0	0	-51	-7	-24	0	0	0	0	-2	-55	-2	-4
1933	16	-4	-5	-8	-11	0	0	0	0	0	0	0	0	3	0
1934	0	0	0	-2	0	0	0	0	0	0	0	0	-29	-1	-2
1935	-6	-32	0	39	6	0	4	0	0	0	0	0	0	1	1
1936	82	-239	428	0	-396	0	0	0	0	0	0	-4	0	0	-5
1937	-237	43	-119	0	0	-408	0	0	0	0	1	14	5	11	-43
1938	5	-927	27	46	2	0	0	0	0	0	0	0	0	0	-50
1939	0	0	0	0	-59	-1	-366	0	0	0	246	507	251	-74	43
1940	369	-10	-60	2	4	-3	0	0	0	0	0	-6	-5	-10	17
1941	-5	80	0	-1	-1	-514	0	0	0	0	0	0	0	0	-27
1942	0	0	0	0	-621	-187	0	0	0	0	0	0	0	0	-46
1943	0	0	0	0	-580	0	0	0	0	0	0	0	0	0	-32
1944	0	-911	0	0	0	0	0	0	0	0	1	122	-158	4	-56
1945	56	0	1	0	0	0	0	0	0	0	-1	-1	-1	0	3
1946	-1	0	0	-322	-1,542	-5	-2	0	0	0	0	7	6	3	-105
1947	-202	-524	0	0	2	129	0	0	0	0	13	479	306	14	14
1948	-186	59	173	-96	1	1	0	0	0	0	0	-2	-1	-1	-3
1949	-235	-649	-21	-1	37	2	2	0	0	0	0	2	2	1	-52
1950	21	11	11	0	0	0	0	0	0	0	0	0	0	0	3
1951	57	0	0	-1,906	-2	0	0	0	0	0	-1	0	0	0	-114
1952	0	97	0	0	0	4	0	0	0	0	0	0	0	0	6
1953	0	0	0	0	-58	-331	0	0	0	0	0	-1	-2	-1	-24
1954	-2	0	-955	-1	-1	3	0	0	0	0	0	14	10	6	-57
1955	132	3	1	1	247	-5	11	0	0	2	0	-201	-397	2	-14
1956	192	-32	0	0	0	0	0	0	0	0	0	0	0	0	10
1957	0	0	0	0	0	-53	4	0	0	0	0	0	0	1	-3
1958	1	0	0	0	0	9	0	0	0	0	0	0	6	3	1
1959	5	2	1	1	-5	1,084	2	0	0	-47	0	-11	-8	-4	64
1960	-1,363	264	-182	-1	-1	-1	0	0	0	0	75	0	0	5	-75
1961	146	-135	-8	1	0	-477	0	0	0	0	-15	0	0	-5	-30
1962	-275	-107	0	317	0	-1	0	0	0	0	0	-2	-2	-1	-4
1963	-2	0	-1	0	0	3	0	0	0	0	0	4	9	4	1
1964	9	2	1	1	2	4	26	0	0	0	36	204	-141	15	9
1965	-57	2	0	1	1	-439	0	0	0	0	0	0	0	0	-30
1966	0	0	0	0	0	12	0	0	0	0	-1	27	21	11	4
1967	302	7	2	3	4	0	0	0	0	0	0	-7	-5	-2	19
1968	-5	-1	0	-694	-1,854	-914	0	0	0	0	0	5	5	2	-202
1969	22	-293	0	1	0	-1	0	0	0	0	0	0	3	2	-16
1970	3	1	0	-2,310	-1,073	-1,669	-43	0	0	0	-10	0	0	0	-306
1971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	-252	0	0	0	0	0	0	0	-2	0	0	0	0	-15
1973	-25	0	0	0	0	1	0	0	0	0	0	0	0	0	-1
1974	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1975	0	-228	0	0	-169	-781	0	0	0	0	0	0	0	0	-71
1976	0	0	0	0	33	-15	0	0	0	0	-4	-555	-772	-489	-110
1977	-34	-158	0	-48	0	0	0	0	0	0	-160	-929	307	0	-62
1978	18	-266	0	0	0	-100	0	0	0	0	0	0	0	0	-21
1979	0	-49	-158	0	0	-39	0	0	0	0	0	0	0	0	-15
1980	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
1981	0	-207	0	0	-755	-499	4	0	0	0	0	13	10	5	-83
1982	-81	3	1	1	2	-2	0	0	0	0	0	0	4	2	-4
1983	4	1	724	234	48	0	0	0	0	0	0	0	0	0	62
1984	0	0	-1,034	0	0	0	0	0	0	0	0	0	0	0	-64
1985	0	0	0	0	-5	127	0	0	0	0	1	-2	-1	-3	7
1986	-881	-577	0	0	0	-3	0	0	0	0	1	-12	-6	-14	-91
1987	-6	-2	-1	-146	-1,379	5	1,489	0	0	-31	-15	-277	606	-390	-46
1988	-660	-47	-1,430	1	1,638	0	-4	0	0	6	-1,234	-220	131	-62	-123
1989	90	162	-1	0	0	0	0	0	0	0	23	-26	198	1	27
1990	-167	-963	-223	0	0	3	0	0	0	0	313	49	-468	-6	-89
1991	0	0	-2	0	25	0	0	0	0	0	0	-387	1,003	-4	39
1992	0	710	28	-54	0	1	0	0	0	0	0	0	-139	-11	32
1993	-271	-33	0	-1	0	0	0	0	0	0	0	-2	-1	-1	-19
1994	-1	152	0	-821	-528	0	2	0	0	0	0	0	1	3	-71
Avg	-46	-80	-37	-81	-102	-69	15	0	0	-1	-10	-25	-19	-18	-29
Min	-1,363	-963	-1,430	-2,310	-1,854	-1,669	-366	0	0	-47	-1,234	-929	-974	-489	-306
Max	369	710	724	317	1,638	1,084	1,489	0	0	6	335	507	1,003	15	64

Table I-42b. CALSIM Simulated SWP Banks Pumping, 2001 Scenario C minus 2001 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	1,001	16	0	0	0	0	0	0	0	248	1,628	-258	163
1923	-546	-20	977	-741	0	-2	0	0	0	0	-2	533	925	-242	55
1924	-289	410	-39	11	0	0	0	0	3	3	-283	-1,545	1,783	-175	-8
1925	70	-32	-3	0	-921	0	0	0	0	0	8	24	32	-4	-45
1926	57	-3	0	404	1,181	1	0	0	0	0	68	594	-478	-657	66
1927	63	1,820	547	462	282	275	0	0	0	0	1	-527	370	-115	190
1928	-666	305	372	1,099	0	-724	0	0	0	0	0	-145	431	106	47
1929	-263	87	3	-9	-1	0	0	0	0	0	0	662	-1,043	-7	-35
1930	-7	0	126	1,050	2	589	0	0	0	0	-4	642	-592	1	111
1931	214	-92	-461	-22	-26	-1	0	0	0	0	36	-54	40	-3	-22
1932	-25	-303	936	253	785	95	119	119	0	-132	0	-48	-361	-658	42
1933	211	-55	57	-513	108	-45	13	0	0	21	0	-120	17	0	-20
1934	-223	-74	-124	319	4	3	0	0	0	0	0	16	-251	-5	-20
1935	-140	-58	48	229	-14	304	0	0	0	0	-1	173	775	-558	48
1936	-9	-185	183	1,197	63	0	2	0	0	2	0	665	918	-537	142
1937	-240	-542	-27	-7	0	0	0	0	0	2	70	490	184	9	-3
1938	-191	1,820	822	-306	0	0	0	0	0	0	1,320	-1,268	1,320	210	210
1939	1,820	-1,195	-77	-768	86	-3	-4	-4	0	0	-905	561	60	-624	-60
1940	-236	589	0	353	63	0	0	0	0	-2	-119	222	396	-4	76
1941	6	108	1,306	58	0	-924	0	0	0	0	8	0	1,630	1,320	213
1942	1,066	-806	-667	-284	0	0	0	0	0	0	0	815	1,628	1,320	188
1943	1,820	865	1,081	0	-7	0	0	0	0	2	0	47	1,219	152	316
1944	-428	-146	-418	241	291	0	-1,890	-486	0	2	0	1,320	1,233	34	59
1945	138	-627	253	63	0	-3	2	0	0	0	0	74	232	-218	-4
1946	68	-370	616	249	-79	-23	49	0	0	-2	-104	238	405	-2	64
1947	-78	-641	-206	0	150	35	0	0	0	-10	3	1,320	748	-37	80
1948	-782	146	702	116	-2	-12	0	0	0	0	4	1,320	654	-191	120
1949	-1,903	219	-401	-143	69	338	-13	0	0	10	-2	-1,058	-814	-5	-228
1950	100	-223	-816	432	911	3	2	0	0	0	0	958	1,101	15	148
1951	-91	1,820	616	-105	-1,409	0	0	0	0	0	0	-479	1,125	-5	95
1952	-111	-62	1,305	0	63	0	0	0	0	0	0	816	359	1,320	224
1953	1,820	545	1,337	-922	-30	370	2	0	0	0	0	844	1,193	1,320	395
1954	1,820	-808	-4,652	1,257	1,067	-157	0	0	0	-415	-149	372	333	294	-57
1955	-135	-277	1,526	1,204	-5	2	-24	0	0	10	2	-448	2,569	19	274
1956	58	-6	308	0	63	0	0	0	0	0	0	784	1,630	1,320	253
1957	1,820	-22	-384	-939	147	-671	-2	0	0	0	-1	691	752	20	86
1958	1,510	-902	1,126	1,159	679	0	0	0	0	0	0	825	1,630	1,320	447
1959	1,820	-206	-20	1,095	-882	28	0	0	0	-14	29	29	86	688	168
1960	183	278	-180	-1	1,127	1	0	0	0	0	836	472	360	-345	160
1961	-191	-62	45	1	818	-1	0	0	0	0	1,840	-241	-644	-1,299	11
1962	-241	-153	-270	-3	0	7	0	0	-2	-2	0	1,306	-403	197	27
1963	1,820	979	1,178	341	732	-476	0	0	0	0	1,517	107	69	1,059	439
1964	120	1,820	-1,683	1,266	-52	-60	13	13	0	-353	472	1,275	733	-527	193
1965	184	160	807	0	0	367	0	0	0	-2	0	664	1,130	118	210
1966	-957	1,820	861	220	-1	-60	0	0	0	0	-13	676	-87	595	183
1967	-141	-266	1,298	748	765	-19	0	0	0	0	0	1,320	264	1,320	319
1968	1,820	-533	852	1,132	-196	0	0	0	0	0	-50	1,320	11	913	325
1969	-582	-423	1,467	0	0	0	0	0	0	0	-7	312	1,618	1,320	226
1970	1,820	-881	-1,502	-326	0	0	0	0	0	0	0	572	-144	60	-23
1971	0	1,269	1,379	1,035	-454	333	2	0	0	0	0	-602	1,320	1,320	342
1972	1,820	-2,817	1,494	991	93	608	26	0	0	2	-146	794	-67	970	234
1973	319	1,820	1,548	764	0	-1,511	2	0	0	0	-4	663	-95	347	233
1974	-410	1,820	1,447	-3,535	240	0	0	0	0	0	0	834	1,130	1,320	167
1975	1,535	68	952	-567	-2,316	-16	0	0	0	0	0	3,221	1,669	1,320	372
1976	1,820	61	451	-976	-138	-1	0	0	0	0	2	108	-545	150	58
1977	-27	-323	0	0	-15	-3	0	0	0	0	-1	-227	0	0	-36
1978	-12	16	151	216	0	0	0	0	0	0	-11	1	1,627	253	137
1979	-559	-283	-455	162	0	0	0	0	0	0	-799	1,031	683	-32	-13
1980	-233	-155	1,484	0	279	21	0	0	0	0	0	820	1,405	-624	184
1981	-124	-704	-171	1,112	-60	288	-2	0	0	0	1	831	256	-42	87
1982	136	1,820	1,499	0	0	0	0	0	0	0	0	817	1,630	1,320	438
1983	1,820	1,820	-2,066	-15	0	0	0	0	0	0	0	1,320	1,574	1,902	383
1984	1,820	-638	-1,039	0	0	0	0	0	0	0	-39	770	19	655	95
1985	164	1,820	1,461	7	1	-26	0	0	0	0	2	712	214	-403	240
1986	-1,585	-281	562	1,093	0	0	0	0	0	0	-7	38	1,630	173	100
1987	-655	-247	-424	73	-28	-166	34	0	-25	-25	290	995	628	-2,213	-103
1988	-241	-4	-710	1,394	-5	-3	0	0	0	-48	-68	83	211	336	59
1989	-423	-129	49	-3	1	466	0	0	0	0	-38	1,320	244	-33	90
1990	-333	-158	-26	747	4	15	0	0	0	0	0	660	-445	-33	27
1991	72	-86	0	2	94	370	0	0	0	0	0	411	-559	-422	-7
1992	24	-274	0	62	834	0	0	0	0	0	88	-89	-125	14	28
1993	99	198	0	0	57	144	0	0	0	0	0	1,320	1,751	321	238
1994	-88	-1,385	-776	-898	494	-8	2	0	0	0	251	1,320	519	-15	-37
Avg	232	97	228	158	68	-3	-23	-5	0	-13	38	508	532	223	126
Min	-1,903	-2,817	-4,652	-3,535	-2,316	-1,511	-1,890	-486	-25	-415	-905	-1,545	-1,268	-2,213	-228
Max	1,820	1,820	1,548	1,394	1,181	608	119	119	3	21	1,840	3,221	2,569	1,902	447

Table I-43a. CALSIM Simulated SWP Banks Pumping, 2020 Scenario C Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	5,335	3,336	4,815	7,919	8,500	7,561	5,640	1,500	1,500	5,640	6,680	7,602	8,282	5,867	4,407
1923	7,522	5,319	6,319	8,500	4,363	3,527	5,697	700	700	4,184	5,183	6,448	6,601	6,246	3,977
1924	5,197	2,590	5,671	4,920	3,529	300	328	328	700	700	300	3,163	1,943	1,671	1,834
1925	1,943	2,464	3,860	3,095	6,320	300	5,357	1,125	1,125	3,617	300	7,160	300	4,001	2,119
1926	2,425	1,096	2,875	4,956	5,566	1,300	4,971	700	700	3,033	2,531	6,506	4,323	2,162	2,316
1927	2,602	8,500	4,810	8,500	8,500	7,561	5,640	1,500	1,500	5,499	5,725	5,108	7,845	5,042	4,291
1928	4,921	6,715	7,564	8,500	6,464	7,561	5,697	700	700	700	3,227	4,351	7,114	4,885	3,936
1929	2,247	3,529	4,404	4,532	3,517	1,650	1,021	700	300	300	1,203	4,757	677	1,531	1,761
1930	1,139	300	5,704	6,322	3,809	7,561	2,931	700	700	2,655	2,162	7,421	4,750	4,485	2,862
1931	1,386	910	2,695	4,292	2,349	1,039	300	300	700	700	2,294	2,721	4,366	1,522	1,487
1932	1,138	986	4,808	8,500	6,737	4,824	1,584	1,125	1,125	3,355	300	2,042	5,512	3,570	2,534
1933	2,789	2,654	5,523	2,070	5,253	2,443	1,396	700	700	1,950	300	2,496	302	1,473	1,661
1934	1,607	615	4,919	4,502	5,644	1,174	300	300	300	300	300	3,272	1,903	1,596	1,568
1935	1,786	2,981	3,029	4,521	4,234	7,561	5,640	1,500	324	324	5,969	7,326	7,555	4,098	3,199
1936	5,492	2,633	3,633	8,500	8,500	7,561	5,564	700	700	4,255	5,400	7,576	6,902	5,341	4,050
1937	3,532	2,399	3,416	6,220	8,500	7,561	5,640	1,500	1,500	5,172	5,050	6,242	8,064	5,193	3,801
1938	3,437	8,500	3,969	8,500	7,793	7,561	5,697	700	700	5,687	6,680	8,500	8,500	8,252	4,708
1939	8,500	4,874	5,801	4,191	3,045	2,826	1,040	1,040	1,125	1,125	2,799	7,898	7,048	5,558	3,318
1940	3,694	2,969	300	6,320	8,500	7,561	5,640	1,500	1,500	4,561	4,598	7,175	6,775	5,487	3,608
1941	5,850	4,120	8,500	8,500	8,500	7,561	5,697	700	700	5,687	1,510	8,500	8,500	8,500	4,621
1942	8,500	4,018	8,500	8,500	6,985	3,363	5,640	1,500	1,500	5,640	6,680	5,673	8,325	8,304	4,591
1943	8,500	7,262	8,500	8,500	3,470	7,561	5,697	700	700	700	5,098	4,387	8,158	6,303	4,342
1944	4,488	1,488	3,287	4,981	5,166	4,677	2,850	1,500	1,500	3,031	3,975	8,500	8,103	5,395	3,297
1945	4,189	6,974	4,579	4,759	8,500	6,231	3,829	700	700	3,804	5,367	6,690	7,287	5,364	3,877
1946	6,288	5,224	6,320	8,500	845	6,168	3,448	1,500	1,500	3,788	4,146	8,500	8,390	6,379	4,013
1947	4,231	3,927	5,312	3,061	4,065	3,924	3,068	700	700	1,026	3,751	8,500	6,036	5,314	3,075
1948	4,468	3,377	2,690	4,064	2,095	3,293	5,697	700	700	5,687	5,530	8,354	7,814	6,760	3,328
1949	2,855	2,232	3,970	3,940	2,993	5,610	3,244	700	700	3,205	4,534	5,895	2,786	4,080	2,593
1950	793	1,538	2,450	4,814	8,500	4,476	4,660	700	700	4,000	5,736	8,132	8,500	6,125	3,371
1951	5,285	8,500	6,322	8,500	6,712	6,659	3,668	700	700	4,556	4,851	5,913	8,384	6,228	4,359
1952	5,406	4,401	8,500	8,500	8,500	7,561	5,640	1,500	1,500	5,640	6,100	5,213	6,560	8,500	4,606
1953	8,500	5,710	8,500	7,866	2,894	7,514	4,159	1,125	1,125	5,512	6,680	4,702	8,192	8,500	4,554
1954	8,500	4,989	2,824	8,500	8,500	7,561	5,640	1,125	1,125	5,161	2,660	6,418	6,165	6,821	4,190
1955	6,103	4,784	8,500	8,500	1,768	2,187	1,538	700	700	2,994	3,135	5,550	976	3,155	2,897
1956	1,501	3,518	4,811	8,500	8,500	7,561	4,726	700	700	5,687	6,641	8,500	7,725	8,500	4,320
1957	8,500	4,622	2,833	4,812	8,500	7,107	4,470	1,125	1,125	1,125	3,988	4,450	7,694	6,577	3,789
1958	7,802	4,724	7,204	8,500	8,500	7,561	5,640	1,500	1,500	5,640	6,680	4,399	8,310	8,500	4,785
1959	8,500	5,368	5,341	8,500	4,246	959	2,544	1,125	1,125	2,813	3,965	6,626	7,477	6,238	3,695
1960	3,289	2,231	5,172	3,625	8,500	5,053	300	300	700	2,707	3,156	6,074	4,864	2,565	2,797
1961	1,266	3,017	6,289	3,650	6,319	4,864	2,676	700	300	300	1,799	6,835	6,624	4,261	2,826
1962	3,378	3,394	6,485	2,290	8,500	7,087	3,255	1,125	1,125	1,700	3,107	5,764	7,379	6,179	3,436
1963	8,500	6,640	6,319	7,767	8,500	7,266	5,697	700	700	5,687	4,242	5,347	7,544	5,881	4,491
1964	7,892	8,500	5,573	8,500	1,839	1,696	3,957	700	700	700	3,598	8,500	6,535	4,767	3,668
1965	3,451	5,530	6,321	8,500	8,500	4,276	5,640	1,500	1,500	2,389	3,297	4,843	8,310	6,575	3,918
1966	4,014	8,098	8,500	8,500	6,569	6,923	1,125	1,125	1,125	3,258	3,793	6,447	6,070	6,999	4,181
1967	4,840	6,436	4,814	8,500	8,500	7,232	5,697	700	700	5,687	6,680	8,500	8,500	8,500	4,757
1968	8,500	6,755	8,044	7,010	3,883	7,561	300	300	1,125	2,706	3,717	6,176	7,302	6,655	4,115
1969	3,605	4,072	8,500	4,816	8,500	7,561	5,640	1,500	1,500	5,640	6,063	5,072	8,310	6,669	4,237
1970	8,500	6,665	7,673	6,250	3,232	7,561	3,863	700	700	700	4,509	5,960	7,997	5,667	4,063
1971	4,830	8,500	8,500	8,500	2,095	7,561	4,984	1,125	1,125	1,125	5,343	6,475	8,500	8,500	4,426
1972	8,500	2,962	8,289	6,378	5,651	7,561	700	700	700	2,719	2,850	6,408	6,445	4,220	3,740
1973	3,121	8,500	8,500	7,178	8,500	7,561	4,350	1,500	1,500	4,416	5,256	3,820	6,966	7,028	4,353
1974	6,606	8,500	8,500	6,779	8,500	7,561	5,697	700	700	5,615	6,575	4,483	8,310	8,500	4,863
1975	8,500	3,546	7,861	5,304	7,975	6,928	5,640	1,500	1,500	5,640	6,462	4,801	8,310	8,500	4,546
1976	8,500	8,443	7,811	5,140	2,924	2,810	2,153	700	700	1,799	2,151	7,121	5,768	4,303	3,497
1977	3,303	2,931	1,790	1,790	1,193	1,238	700	700	700	700	1,367	4,863	1,773	1,532	1,406
1978	840	1,258	4,524	4,809	6,448	5,840	5,697	700	700	5,687	6,680	2,919	8,059	7,229	3,313
1979	4,425	2,854	5,465	8,500	6,314	7,561	4,438	1,500	1,500	4,197	3,926	4,849	6,927	6,496	3,816
1980	5,155	4,499	8,500	4,815	8,500	7,561	4,684	700	700	4,282	5,452	4,601	8,166	6,868	4,176
1981	5,995	1,453	4,821	8,500	4,224	3,896	3,506	1,125	1,125	2,553	2,888	8,458	7,060	5,846	3,475
1982	4,095	8,500	4,814	8,500	8,500	7,561	5,640	1,500	1,500	5,640	6,680	8,500	8,500	8,500	4,899
1983	8,500	7,072	6,028	3,484	3,548	3,555	5,697	700	700	700	3,877	8,500	8,500	8,500	3,960
1984	8,500	6,158	2,533	2,890	8,500	3,340	4,172	1,500	1,500	1,500	4,498	5,129	6,418	6,735	3,540
1985	6,597	8,500	8,500	6,023	3,562	2,950	700	700	700	2,986	3,725	8,500	8,158	7,042	4,007
1986	5,083	4,136	4,635	8,500	8,500	7,561	5,697	700	700	4,096	5,305	1,593	8,310	7,045	3,989
1987	5,462	1,600	2,585	5,130	4,213	3,613	2,901	700	307	307	4,340	8,500	6,595	4,697	2,954
1988	2,222	2,067	2,784	6,321	1,963	532	2,264	700	700	2,128	1,288	4,291	938	806	1,584
1989	300	2,823	3,371	3,344	778	5,616	4,171	700	700	2,851	3,900	8,500	7,759	5,276	2,791
1990	3,679	1,659	3,802	8,182	2,109	3,066	300	300	700	2,124	330	4,650	422	1,770	1,911
1991	1,309	300	1,722	1,358	1,103	5,613	700	700	700	700	1,225	2,870	300	938	1,103
1992	1,148	635	1,964	2,429	6,319	3,420	2,749	700	300	300	749	3,510	1,874	2,954	1,613
1993	825	1,809	6,653	4,812	8,500	7,561	5,640	1,125	1,125	5,639	6,680	8,500	7,658	5,653	3,942
1994	6,458	1,600	5,995	5,474	4,509	1,151	2,339	700	700	1,915	3,856	8,000	8,000	4,805	3,191
Avg	4,769	4,271	5,434	6,167	5,721	5,256	3,775	923	919	3,158	3,992	6,055	6,347	5,507	3,498
Min	300	300	300	1,358	778	300	300	300	300	300	300	1,593	300	806	1,103
Max	8,500	8,500	8,500	8,500	8,500	7,561	5,697	1,500	1,500	5,687	6,680	8,5			

Table I-43b. CALSIM Simulated SWP Banks Pumping, 2020 Scenario C minus 2020 Baseline (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	500	307	0	0	0	0	0	0	0	422	1,533	-3	170
1923	842	-334	894	430	496	-249	0	0	0	-2	2	-237	-288	85	98
1924	1,161	86	1,090	105	21	0	8	8	0	0	0	-693	-64	346	126
1925	8	87	-80	-55	669	0	0	0	0	-2	-2,738	4,710	-4,542	18	-117
1926	63	-81	-1	252	1,275	-59	6	0	0	0	2,231	82	-127	0	212
1927	-28	1,820	547	1,231	284	278	0	0	0	0	1	708	665	2	333
1928	139	35	500	1,099	3	377	0	0	0	0	-141	1,738	-66	5	227
1929	-770	-453	279	23	1	2	32	0	0	0	-7	634	-1,809	109	-121
1930	289	-1	586	1,050	-28	591	0	0	0	2	-130	616	-589	3	147
1931	349	-278	96	-5	-5	-4	0	0	0	0	-24	-5	-15	0	7
1932	-3	-12	467	676	62	7	24	0	0	0	0	-9	-27	-56	68
1933	-3	-12	24	2	10	5	-2	0	0	0	0	0	0	-2	1
1934	-1	0	-1	517	0	1	0	0	0	0	0	532	44	17	68
1935	3	2	30	244	-46	307	0	0	0	0	0	146	497	-786	26
1936	98	-176	149	1,198	63	0	0	0	0	0	2	396	832	-39	155
1937	454	-13	139	11	0	0	0	0	0	-8	4	434	1,470	-187	142
1938	-70	1,820	382	220	-707	0	0	0	0	0	0	1,320	1,751	1,072	354
1939	1,820	-560	-1,267	-1,312	-59	-1	-1,964	-85	200	200	-222	718	561	90	-61
1940	-309	395	-765	356	130	0	0	0	0	2	156	-5	232	-459	-17
1941	-192	-63	1,306	189	0	0	0	0	0	0	-476	1,320	1,751	1,320	316
1942	1,820	-2,347	1,025	0	-941	-5	0	0	0	0	0	-95	1,145	1,124	114
1943	1,820	582	1,225	0	-580	0	0	0	0	0	0	826	978	-375	278
1944	-132	-300	-59	52	296	-130	2	0	0	-2	2	1,320	923	-207	108
1945	-111	294	317	-24	0	-7	0	0	0	0	-1	-121	1,188	25	95
1946	46	-94	819	231	-2,001	619	-2	0	0	19	-2	1,320	1,364	-131	146
1947	-853	-307	57	325	2	24	0	0	0	134	34	1,320	-1,144	174	-18
1948	181	34	116	-96	-2	1	0	0	0	0	0	1,174	634	82	130
1949	-1,256	261	-21	-72	37	341	2	0	0	-14	0	-496	-1,142	-3	-146
1950	65	-11	-43	432	911	0	0	0	0	10	1	952	1,320	-337	198
1951	33	1,820	617	0	-1,788	-277	0	0	0	0	-1	173	1,635	28	145
1952	7	-220	1,305	0	124	0	0	0	0	0	0	815	661	1,320	244
1953	1,820	-18	1,343	-634	-48	330	0	0	0	0	0	738	1,012	1,320	358
1954	1,820	-1,691	-955	1,258	1,069	459	0	0	0	10	0	508	-25	441	174
1955	-28	-296	1,525	1,204	-10	-5	-58	0	0	2	2	313	-185	-206	142
1956	66	-264	308	0	63	0	0	0	0	0	0	1,320	976	1,320	231
1957	1,820	4	-424	187	1,010	-237	4	0	0	0	8	108	661	424	212
1958	1,122	-1,550	2,592	1,160	682	0	0	0	0	0	0	816	1,630	1,320	474
1959	1,820	-137	-195	1,095	-1,440	9	2	0	0	-47	-15	-54	297	186	103
1960	-307	255	-324	-1	1,125	-18	0	0	0	-10	765	-123	998	-11	136
1961	121	-175	287	1	1,021	414	0	0	0	0	-5	-100	178	-695	60
1962	27	27	-21	10	0	8	0	0	0	0	0	311	221	-271	20
1963	1,820	-40	1,178	471	732	143	0	0	0	0	405	534	364	24	341
1964	1,212	1,820	-1,423	1,265	-23	-25	26	0	0	0	-53	1,320	-145	-6	240
1965	-320	176	906	0	0	-6	0	0	0	-147	0	221	1,130	48	127
1966	69	1,418	907	245	-7	-12	0	0	0	0	-3	706	-383	795	225
1967	128	79	488	747	767	-304	0	0	0	0	0	1,320	1,320	1,320	353
1968	1,820	75	1,013	-358	-841	358	0	0	0	0	18	606	145	190	191
1969	-28	29	1,466	0	0	0	0	0	0	0	-11	826	1,630	-501	211
1970	1,820	-15	356	-2,250	-93	0	-43	0	0	0	-29	1,849	817	-989	91
1971	-828	1,820	1,379	1,035	101	501	-4	0	0	0	0	-205	1,320	1,320	389
1972	1,820	-2,592	1,282	-873	-233	620	0	0	0	-2	29	-139	297	16	20
1973	38	1,820	1,547	-303	115	0	0	0	0	0	0	-282	286	348	215
1974	-74	1,820	1,446	-1,721	252	0	0	0	0	0	0	832	1,630	1,320	331
1975	1,820	-3,134	829	-1,706	-496	3	0	0	0	0	-1	835	1,630	1,320	74
1976	1,820	1,763	800	-359	18	4	6	0	0	0	-46	3,069	-334	136	419
1977	238	-43	-167	-34	98	56	290	290	0	0	-58	3,082	-1,970	0	91
1978	254	-165	294	216	-1,723	-295	0	0	0	0	0	-31	1,379	362	28
1979	-128	-181	-849	555	0	0	0	0	0	0	174	158	271	-3	0
1980	-109	-20	1,483	0	63	0	0	0	0	0	0	840	1,486	208	242
1981	-647	-2	-271	1,112	-254	-498	4	0	0	0	0	1,278	322	-704	24
1982	-529	1,820	562	0	0	0	0	0	0	0	0	1,320	1,751	1,320	378
1983	1,820	392	-1,650	-437	-62	0	0	0	0	0	0	1,320	1,320	2,963	342
1984	1,820	-522	-1,034	0	63	0	0	0	0	0	0	313	496	124	78
1985	-83	1,820	1,460	-331	-5	127	0	0	0	2	2	1,320	1,326	365	365
1986	-597	-496	384	1,093	0	0	0	0	0	2	3	-5,587	1,561	359	-201
1987	-1,104	98	-868	553	-19	-170	2,601	400	-272	-272	-306	1,320	-468	-434	-12
1988	-456	121	-2,347	1,047	713	-36	-4	0	0	6	988	240	569	5	46
1989	-308	33	-191	53	0	467	0	0	0	4	68	1,320	1,079	248	170
1990	-691	-298	111	1,107	1	-17	0	0	0	-4	-3	660	-472	-31	23
1991	67	-557	-4	0	44	371	0	0	0	0	0	94	-163	-132	-16
1992	-300	-294	84	-54	833	1	0	0	0	0	177	-70	346	11	40
1993	170	222	-60	0	70	134	0	0	0	0	0	1,320	909	1	169
1994	-6	-1,341	-712	402	271	-191	2	0	0	0	2	1,147	893	-1,251	-45
Avg	333	51	312	180	29	55	13	8	-1	-2	11	622	486	217	141
Min	-1,256	-3,134	-2,347	-2,250	-2,001	-498	-1,964	-85	-272	-272	-2,738	-5,587	-4,542	-1,251	-201
Max	1,820	1,820	2,592	1,265	1,275	620	2,601	400	200	200	2,231	4,710	1,751	2,963	474

Table I-44a. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario C Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-	VAMP	VAMP	Post-	Jun	Jul	Aug	Sep	taf/yr
							VAMP	4/16-	5/1-	VAMP					
							4/1-4/15	4/30	5/15	5/16-5/31					
1922	9,566	7,279	10,545	11,860	12,754	10,744	9,609	3,000	3,000	7,140	9,680	8,526	12,861	10,903	7,001
1923	10,500	9,257	11,505	8,724	6,810	5,700	10,241	1,500	1,500	5,015	7,336	10,380	10,928	10,903	6,119
1924	7,918	5,366	6,372	7,478	6,852	1,100	1,100	1,100	1,409	1,409	1,359	3,514	5,722	4,066	3,150
1925	4,375	3,432	7,402	6,946	8,893	1,100	9,754	2,250	2,250	6,691	5,510	5,798	9,983	8,366	4,351
1926	7,132	3,925	3,510	9,905	12,734	3,980	9,469	1,500	1,500	1,500	3,547	7,808	6,107	6,448	4,319
1927	6,810	12,719	7,802	7,806	12,725	11,385	10,240	3,000	3,000	7,100	8,683	7,428	12,093	11,038	6,626
1928	7,826	11,238	11,659	12,728	10,613	11,122	10,241	1,500	1,500	1,500	5,635	8,637	11,939	9,426	6,527
1929	6,667	7,523	8,487	8,464	6,962	2,396	1,500	1,500	1,100	1,100	2,744	6,577	4,869	4,581	3,731
1930	4,001	2,042	9,455	10,535	7,434	10,196	5,473	1,500	1,500	5,084	3,474	8,880	6,226	8,193	4,674
1931	5,454	3,231	3,299	8,146	4,236	2,035	1,100	1,100	1,500	1,500	3,692	3,530	5,181	4,005	2,744
1932	3,665	2,637	10,532	7,800	8,535	6,078	3,364	2,121	2,250	4,296	2,298	9,166	3,817	7,472	4,104
1933	6,887	3,516	6,233	2,496	6,168	3,553	2,143	1,500	1,500	3,670	1,100	3,682	1,284	4,148	2,618
1934	4,572	1,553	8,557	5,542	6,238	1,992	1,100	1,100	1,100	1,100	1,100	3,481	4,270	4,034	2,625
1935	3,500	6,701	6,166	7,803	5,111	9,757	8,044	3,000	1,124	1,124	8,628	9,330	11,524	8,594	5,063
1936	8,774	4,700	5,055	11,499	10,368	9,704	6,302	1,500	1,500	5,007	7,781	11,594	11,220	9,664	5,888
1937	8,010	5,327	5,120	9,006	12,735	10,186	6,985	2,845	3,000	6,550	6,021	9,790	11,441	9,637	5,840
1938	9,062	11,394	9,292	4,482	7,468	8,130	6,497	1,500	1,500	6,487	9,680	13,100	10,057	12,993	6,260
1939	12,889	9,749	11,197	9,333	6,204	5,734	1,425	1,425	2,250	2,250	5,428	11,092	10,085	9,023	5,719
1940	5,461	6,299	316	10,539	12,731	11,815	10,240	3,000	3,000	7,580	7,123	11,942	10,652	9,604	5,921
1941	9,615	7,162	12,720	12,723	12,740	9,694	10,241	1,500	1,500	6,487	7,459	8,755	12,841	12,969	7,031
1942	12,089	9,299	11,134	6,638	4,993	10,333	10,240	3,000	3,000	7,140	9,680	9,004	12,866	12,983	6,707
1943	12,870	11,804	12,646	12,729	6,260	9,683	10,241	1,500	1,500	3,701	7,180	8,591	12,951	11,312	6,935
1944	9,593	5,450	7,044	9,200	9,109	8,665	2,514	2,514	3,000	4,478	6,355	13,025	12,415	10,480	5,900
1945	6,960	10,200	7,515	11,060	12,737	10,721	7,299	1,500	1,500	6,803	7,604	11,148	11,029	10,885	6,531
1946	10,320	10,492	10,542	12,727	1,552	9,086	6,981	3,000	3,000	6,798	7,062	11,993	11,071	10,585	6,406
1947	7,859	6,403	11,096	6,080	8,340	7,076	5,991	1,500	1,500	3,577	5,515	13,049	12,004	9,450	5,632
1948	6,506	6,530	6,764	8,462	6,343	6,390	10,241	1,500	1,500	8,640	8,740	13,076	12,365	10,957	5,876
1949	7,675	5,380	8,852	5,766	5,968	9,857	6,270	1,500	1,500	3,401	6,640	10,291	6,080	8,550	4,924
1950	4,959	4,863	4,742	7,818	12,425	8,380	5,421	1,500	1,500	4,726	8,264	12,623	12,746	11,057	5,683
1951	8,435	12,729	10,536	11,879	7,891	6,333	7,243	1,500	1,500	5,449	5,748	10,638	12,402	10,938	6,371
1952	9,213	7,944	11,502	11,506	12,742	11,862	3,000	3,000	3,000	7,140	9,277	11,499	11,617	12,994	7,134
1953	12,891	9,832	12,727	5,622	6,724	8,433	8,014	2,250	2,250	8,382	9,680	9,273	12,926	12,981	6,751
1954	12,865	10,129	6,551	12,729	12,749	9,382	10,240	2,250	2,250	7,737	5,701	10,201	10,690	11,406	6,853
1955	9,744	8,481	12,725	12,729	4,923	4,572	4,194	1,500	1,500	3,773	6,137	9,926	9,399	7,399	5,552
1956	4,646	6,506	7,810	11,502	12,736	11,852	9,017	1,500	1,500	8,640	9,680	9,391	12,866	12,982	6,647
1957	12,868	9,096	8,603	9,623	11,948	8,681	9,000	2,250	2,250	7,098	5,705	10,853	11,173	11,180	6,638
1958	12,554	10,035	10,543	11,509	12,749	11,858	10,240	3,000	3,000	7,140	9,680	9,935	12,879	12,989	7,626
1959	12,881	9,436	9,953	12,731	7,586	2,804	2,250	2,250	2,250	5,586	7,283	11,297	11,809	11,223	6,244
1960	8,893	4,053	3,617	7,980	12,441	8,600	1,100	1,100	1,500	3,451	4,718	12,071	10,245	8,755	5,116
1961	4,294	7,035	8,314	6,862	9,947	5,472	5,353	1,500	1,100	2,644	5,502	10,687	10,414	7,379	4,890
1962	6,306	7,617	10,076	5,377	12,745	11,197	6,240	2,250	2,026	3,902	6,878	11,108	10,986	10,448	6,015
1963	12,843	11,909	10,541	11,862	12,744	9,627	10,241	1,500	1,500	6,487	7,403	8,529	11,786	11,740	7,165
1964	11,149	12,752	9,414	12,727	3,952	4,686	1,357	1,357	1,500	5,286	6,166	12,994	11,962	9,871	6,097
1965	6,625	9,440	10,539	12,723	12,739	8,876	10,240	3,000	3,000	5,910	6,366	9,853	12,872	11,284	6,773
1966	8,317	12,760	12,725	12,730	9,063	11,433	6,647	2,250	2,250	2,250	6,521	11,143	11,308	11,749	6,915
1967	7,631	10,185	11,503	11,508	12,746	8,937	6,497	1,500	1,500	6,487	9,680	13,088	11,987	12,975	7,128
1968	12,855	10,317	12,106	12,728	7,071	6,388	1,425	1,425	2,250	5,385	6,590	11,324	11,732	11,853	6,556
1969	7,730	8,262	11,503	11,508	12,747	11,868	3,000	3,000	3,000	7,140	9,255	9,657	12,876	12,994	7,025
1970	12,891	9,600	5,790	6,867	8,100	8,344	7,620	1,500	1,500	3,990	6,317	8,895	11,565	11,208	5,850
1971	9,808	12,198	12,722	12,726	5,413	11,841	9,426	2,250	2,250	2,250	9,019	9,265	13,047	12,978	7,091
1972	12,859	6,674	12,724	12,740	8,533	11,837	5,391	1,500	1,500	5,270	5,496	11,183	10,756	9,323	6,588
1973	7,724	12,752	12,723	10,545	12,746	9,362	8,404	3,000	3,000	6,021	8,016	11,070	11,127	11,483	7,095
1974	10,198	12,753	12,723	7,966	12,747	11,856	10,241	1,500	1,500	6,336	9,532	10,791	12,854	12,976	7,485
1975	12,571	11,002	12,206	10,415	9,258	5,785	10,171	3,000	3,000	7,140	9,680	11,410	12,892	12,975	7,240
1976	12,855	10,995	11,685	8,658	5,793	4,614	1,500	1,500	1,500	2,562	3,785	8,322	7,810	7,854	5,202
1977	5,872	4,651	3,443	2,518	1,848	1,955	1,500	1,500	1,500	1,500	2,900	7,809	4,659	4,336	2,607
1978	3,888	2,290	7,370	7,800	12,718	11,866	1,500	1,500	1,500	6,487	9,469	7,684	12,864	11,916	5,621
1979	10,347	6,192	4,804	12,729	10,563	11,849	3,000	3,000	3,000	7,187	6,683	10,723	11,909	10,676	6,320
1980	9,451	8,488	12,724	12,728	12,746	4,614	8,681	1,500	1,500	4,939	7,970	9,727	12,642	11,039	6,655
1981	10,925	6,080	8,568	12,542	6,476	10,185	6,694	2,250	2,250	2,250	5,702	11,327	11,307	10,531	6,081
1982	8,305	12,755	11,504	7,824	12,748	11,853	10,240	3,000	3,000	7,140	9,680	9,291	12,888	12,994	7,320
1983	12,890	12,765	8,729	5,642	6,024	4,240	6,103	1,500	1,500	1,500	7,126	13,100	13,078	12,994	6,158
1984	12,891	10,307	4,348	5,244	6,192	11,853	2,905	2,905	3,000	3,000	6,844	9,760	11,576	11,728	5,844
1985	9,918	12,757	12,725	10,620	7,040	6,116	3,649	1,500	1,500	3,717	5,628	12,416	11,408	10,704	6,326
1986	7,553	7,845	7,811	12,722	12,737	11,835	10,176	1,500	1,500	4,840	7,707	4,938	12,841	11,822	6,431
1987	10,368	6,552	6,339	9,710	8,296	6,547	6,021	1,500	1,211	2,228	5,203	9,814	8,971	6,253	5,046
1988	5,048	4,747	4,850	12,718	4,073	1,249	1,500	1,500	1,500	3,976	3,672	5,683	5,187	4,108	3,368
1989	3,039	5,029	4,852	6,202	1,563	9,833	8,121	1,500	1,500	3,656	5,852	12,485	11,127	9,633	4,679
1990	8,220	2,817	6,599	10,822	5,785	5,384	1,100	1,100	1,500	2,794	1,366	5,509	2,057	4,306	3,399
1991	4,219	1,100	3,536	2,802	2,768	9,843	1,500	1,500	1,500	1,500	1,520	5,380	3,086	5,184	2,575
1992	3,998	2,046	3,539	4,902	10,542	6,704	1,500	1,500	1,100	1,100	1,220	4,172	3,219	4,313	2,826

Table I-44b. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2001 Scenario C minus 2001 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	1,001	16	0	-500	0	0	0	0	0	248	1,628	-258	132
1923	-546	-20	977	-741	0	-4	0	0	0	0	-3	533	925	-242	55
1924	-289	91	-126	11	0	0	0	0	3	3	-283	-1,060	1,792	1	9
1925	58	-36	-6	0	-976	0	0	0	0	0	48	28	-135	0	-57
1926	58	-16	0	404	1,181	2	0	0	0	0	388	594	-546	-650	81
1927	328	1,822	547	462	283	746	0	0	0	0	2	-527	370	-115	236
1928	-666	305	372	1,099	0	-718	0	0	0	0	0	-145	431	106	47
1929	-193	-190	3	-9	-2	0	0	0	0	0	0	695	-983	0	-41
1930	-7	-29	126	1,050	-1	-9	0	0	0	0	-2	644	-910	1	53
1931	216	-343	-456	-44	-52	-55	0	0	0	0	1	-54	11	-4	-47
1932	-1	502	936	253	82	10	-125	119	0	-132	-14	-63	-611	-677	21
1933	52	-101	0	-601	-2	-45	13	0	0	238	0	-120	2	-1	-42
1934	-5	21	-124	-148	4	8	0	0	0	0	0	16	-307	4	-33
1935	112	-114	96	229	-31	324	-2	0	0	0	-1	172	775	-557	63
1936	-96	-564	487	1,197	-146	0	2	0	0	2	0	669	917	-539	122
1937	-242	-504	-12	-7	0	-1,015	0	0	0	2	75	488	184	9	-62
1938	-191	491	822	-306	0	0	0	0	0	0	0	1,320	-1,268	1,320	131
1939	1,820	-1,195	-77	-768	172	-6	-4	-4	0	0	-443	842	174	-605	-2
1940	-762	585	-335	351	59	2	0	0	0	-2	-119	226	399	3	24
1941	10	-54	1,307	58	1	-1,100	0	0	0	0	8	0	1,630	1,320	193
1942	1,066	-806	-667	-1,962	0	0	0	0	0	0	0	815	1,628	1,320	85
1943	1,820	865	1,081	0	-14	-1,742	0	0	0	2	0	47	1,219	152	209
1944	-428	-231	-418	241	291	0	-1,890	-486	0	2	0	1,318	1,117	32	46
1945	158	-627	253	63	0	-2	4	0	0	0	0	73	232	-218	-2
1946	68	-370	616	249	-3,383	40	99	0	0	-2	-104	239	406	-2	-114
1947	-77	-1,621	-206	0	300	70	0	0	0	-10	4	1,331	756	-27	34
1948	-928	-210	1,404	218	-1	-24	0	0	0	0	4	1,331	663	-187	140
1949	-1,894	-1,123	-400	-286	138	345	-26	0	0	10	-3	-1,055	-813	-2	-312
1950	99	286	-750	432	912	3	2	0	0	0	0	955	1,099	11	181
1951	-243	1,819	616	-840	-3,712	0	0	0	0	0	0	-479	1,125	-5	-87
1952	-111	-291	1,305	0	63	9	0	0	0	0	0	816	359	1,320	211
1953	1,820	545	1,337	-1,844	-67	1	4	0	0	0	0	844	1,193	1,320	314
1954	1,820	-808	-4,652	1,257	1,067	-151	0	0	0	-415	1	382	343	300	-46
1955	-124	-328	1,527	1,205	257	4	-19	0	0	10	2	-459	2,333	29	272
1956	-38	2	307	-1	62	5	0	0	0	0	0	784	1,630	1,320	247
1957	1,820	-22	-384	-939	673	-636	-4	0	0	0	-1	691	749	18	117
1958	1,506	-903	1,125	1,159	679	8	0	0	0	0	0	825	1,630	1,320	447
1959	1,820	-206	-20	1,095	-1,341	18	0	0	0	-27	29	43	97	693	143
1960	-352	428	-573	0	1,129	1	0	0	0	0	916	471	355	-347	116
1961	-200	-61	90	2	818	-9	0	0	0	8	2,018	-242	-645	-1,399	17
1962	-468	-153	-270	125	0	7	0	0	-2	-2	0	1,304	-404	196	21
1963	1,819	979	1,178	341	731	-715	0	0	0	0	1,517	107	69	1,059	424
1964	120	1,820	-1,683	1,266	-403	-120	13	13	0	-705	524	1,443	988	-493	190
1965	185	106	808	1	3	364	0	0	0	-2	0	664	1,130	119	207
1966	-957	1,820	861	220	-1	-43	0	0	0	0	-13	686	-79	599	185
1967	-527	-263	1,299	749	766	-19	0	0	0	0	0	1,323	267	1,321	296
1968	1,823	-532	852	1,133	-469	-914	0	0	0	0	-50	1,320	11	913	254
1969	-892	-423	1,467	0	0	-1	0	0	0	0	-7	312	1,618	1,320	207
1970	1,820	-881	-3,687	-326	0	0	0	0	0	0	0	572	-144	60	-157
1971	0	1,269	1,379	1,035	-454	333	2	0	0	0	0	-602	1,320	1,320	342
1972	1,820	-3,113	1,494	991	145	609	51	0	0	4	-146	813	-52	978	223
1973	399	1,825	1,550	766	3	-2,335	4	0	0	0	-5	663	-95	347	188
1974	-410	1,820	1,447	-3,535	240	2	0	0	0	0	0	834	1,130	1,320	168
1975	1,535	68	952	-567	-3,489	-479	0	0	0	0	0	3,221	1,669	1,320	278
1976	1,820	61	451	-976	-369	12	0	0	0	0	4	26	-454	-9	37
1977	12	-306	0	0	-15	-3	0	0	0	0	-2	-259	32	0	-33
1978	-12	45	151	216	0	0	0	0	0	0	-12	1	1,627	253	139
1979	-559	-484	-694	162	0	33	0	0	0	0	-799	1,033	685	-31	-38
1980	-231	-154	1,484	0	279	393	0	0	0	0	-1	820	1,405	-624	207
1981	-124	-718	-171	925	-255	288	-4	0	0	0	2	831	256	-42	64
1982	181	1,820	1,499	0	0	6	0	0	0	0	0	817	1,641	1,326	442
1983	1,831	1,824	-1,845	-14	1,294	0	0	0	0	0	0	1,320	1,574	1,902	470
1984	1,820	-638	-2,078	0	0	0	0	0	0	0	-43	772	23	657	32
1985	168	1,821	1,462	7	2	-52	0	0	0	0	3	711	213	-404	239
1986	-2,782	-601	562	1,093	0	0	118	0	0	0	-9	193	1,628	172	20
1987	-657	-248	-424	72	-56	-403	69	0	-25	25	335	1,047	665	-2,200	-108
1988	-285	35	-1,420	1,394	-5	-3	0	0	0	-97	41	-101	255	-1,004	-68
1989	53	-146	98	-1	1	466	0	0	0	0	91	1,729	683	-36	181
1990	-230	-678	-202	747	4	16	0	0	0	0	159	662	-858	-35	-24
1991	72	-86	0	3	89	370	0	0	0	0	0	410	-451	-422	0
1992	107	-205	0	124	834	0	0	0	0	0	88	-89	-402	-2	23
1993	90	198	0	-2	56	145	0	0	0	0	0	1,323	1,754	323	238
1994	-85	-1,384	-776	-897	564	-8	4	0	0	0	2	1,320	519	-15	-47
Avg	202	20	176	104	-28	-89	-23	-5	0	-15	58	527	523	205	103
Min	-2,782	-3,113	-4,652	-3,535	-3,712	-2,335	-1,890	-486	-25	-705	-799	-1,060	-1,268	-2,200	-312
Max	1,831	1,825	1,550	1,394	1,294	746	118	119	3	238	2,018	3,221	2,333	1,902	470

Table I-45a. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario C Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-	VAMP	VAMP	Post-	Jun	Jul	Aug	Sep	taf/yr
							VAMP	4/16-	5/1-	VAMP					
							4/1-4/15	4/30	5/15	5/16-5/31					
1922	9,726	7,601	7,822	12,151	12,754	11,848	10,240	3,000	3,000	7,140	9,680	12,195	12,829	10,344	7,157
1923	11,881	9,574	10,543	11,129	7,157	6,128	10,241	1,500	1,500	4,984	7,444	11,019	11,131	10,714	6,403
1924	9,480	5,896	7,060	9,146	7,058	1,100	1,128	1,128	1,500	1,500	1,100	4,317	3,838	4,196	3,367
1925	4,604	3,551	7,720	6,086	10,538	1,100	9,957	2,250	2,250	4,742	1,921	10,340	1,750	8,366	3,933
1926	6,213	3,540	5,953	9,175	9,797	4,673	5,771	1,500	1,500	5,972	4,125	7,306	5,533	5,488	4,167
1927	5,478	12,719	7,802	11,495	12,725	11,848	10,240	3,000	3,000	6,999	8,633	9,696	12,388	9,517	6,860
1928	9,276	10,969	11,787	12,728	10,709	11,830	10,241	1,500	1,500	1,500	5,001	8,902	11,628	9,345	6,612
1929	5,866	7,281	8,624	8,756	7,034	2,450	1,821	1,500	1,100	1,100	2,588	6,210	3,414	4,555	3,588
1930	4,201	2,070	9,914	10,535	7,618	10,601	5,747	1,500	1,500	5,216	3,472	8,856	6,720	8,823	4,830
1931	4,887	4,106	3,980	8,509	4,698	2,427	1,100	1,100	1,500	1,500	3,498	3,521	5,428	3,856	2,869
1932	3,270	2,979	7,797	12,711	9,045	6,378	4,273	2,250	2,250	4,480	2,372	5,210	9,196	7,857	4,433
1933	5,821	3,831	6,285	2,790	6,282	3,690	2,196	1,500	1,500	3,806	1,100	3,296	1,200	4,006	2,576
1934	4,644	1,517	9,128	6,320	6,285	2,340	1,100	1,100	1,100	1,100	1,100	4,072	4,531	3,951	2,782
1935	3,447	6,969	7,028	6,743	5,297	9,082	8,248	3,000	1,124	1,124	8,492	9,886	12,021	8,463	5,087
1936	7,934	4,607	5,662	11,499	10,698	9,625	6,364	1,500	1,500	5,055	7,733	10,833	11,378	9,727	5,848
1937	7,466	6,093	4,650	9,220	12,733	9,218	7,140	3,000	3,000	6,672	7,733	9,981	12,519	9,534	5,964
1938	7,704	10,681	4,719	9,261	8,593	9,227	6,497	1,500	1,500	6,487	9,680	13,100	13,078	12,746	6,448
1939	12,890	9,139	10,028	8,423	6,090	5,652	3,678	2,165	2,250	2,250	5,598	11,252	9,985	9,334	5,665
1940	5,727	5,174	1,040	10,542	12,736	11,810	10,240	3,000	3,000	7,561	7,598	11,704	11,273	9,923	5,986
1941	10,160	8,127	12,719	12,722	12,738	10,762	10,241	1,500	1,500	8,640	4,510	13,100	13,052	12,980	7,361
1942	12,864	8,275	12,724	12,729	10,613	6,189	10,240	3,000	3,000	7,140	9,680	10,273	12,883	12,787	7,291
1943	12,870	11,521	12,725	12,729	6,940	11,869	10,241	1,500	1,500	1,500	7,331	8,987	12,710	10,783	7,013
1944	8,852	4,834	7,511	9,210	9,109	8,657	4,350	3,000	3,000	4,531	6,300	12,056	11,657	9,779	5,766
1945	6,423	11,206	7,576	7,759	12,733	10,504	7,543	1,500	1,500	4,604	7,689	11,237	11,798	9,823	6,278
1946	10,611	9,468	10,540	12,402	1,645	9,174	6,896	3,000	3,000	6,788	7,146	13,085	12,931	10,853	6,553
1947	8,376	7,654	9,535	7,288	8,130	8,173	6,021	1,500	1,500	1,826	5,600	12,871	9,962	9,734	5,603
1948	6,809	6,756	5,380	8,128	6,330	6,586	10,241	1,500	1,500	8,640	8,530	12,916	12,337	11,225	5,806
1949	6,682	5,172	7,940	8,165	5,986	9,852	6,373	1,500	1,500	4,005	6,579	10,440	7,296	8,538	5,044
1950	4,437	5,175	5,179	7,818	12,425	8,439	5,460	1,500	1,500	4,800	8,181	12,600	12,951	10,457	5,674
1951	8,496	12,725	10,536	10,007	8,127	9,303	7,221	1,500	1,500	5,356	7,001	10,481	12,911	10,695	6,533
1952	9,745	8,650	12,722	11,506	12,742	11,866	10,240	3,000	3,000	7,140	9,100	9,813	11,138	12,994	7,356
1953	12,891	9,975	12,727	12,098	5,846	8,377	8,319	2,250	2,250	8,512	9,680	9,287	12,732	12,974	7,108
1954	12,852	9,242	5,648	12,727	12,746	11,838	10,240	2,250	2,250	8,161	5,660	11,015	10,714	11,300	6,950
1955	10,386	9,040	12,724	12,728	5,131	4,374	4,316	1,500	1,500	5,894	6,135	7,798	4,462	7,478	5,265
1956	4,527	6,787	7,808	11,500	12,732	11,851	9,270	1,500	1,500	8,640	9,641	13,100	12,281	12,982	6,853
1957	12,868	8,880	7,058	9,041	12,750	11,108	8,940	2,250	2,250	2,250	6,988	9,036	12,235	11,052	6,555
1958	12,156	8,977	11,427	11,508	12,747	11,854	10,240	3,000	3,000	7,140	9,680	8,999	12,879	12,989	7,535
1959	12,881	9,630	9,567	12,731	8,492	4,710	5,087	2,250	2,250	5,625	6,965	11,205	12,013	10,710	6,442
1960	6,105	3,718	6,019	6,632	12,440	9,004	1,100	1,100	1,500	3,507	4,902	10,497	9,234	5,787	4,691
1961	4,598	7,099	10,366	7,300	10,543	7,256	5,237	1,500	1,100	1,100	3,476	11,396	11,147	8,213	5,174
1962	6,306	5,811	10,706	6,070	12,743	11,363	6,510	2,250	2,250	4,701	6,107	10,340	11,912	10,649	6,015
1963	12,845	10,891	10,541	11,994	12,745	11,549	10,241	1,500	1,500	8,640	7,242	9,947	12,102	10,364	7,315
1964	12,262	12,758	9,798	12,729	4,726	4,024	7,800	1,500	1,500	1,500	5,175	10,959	10,684	9,151	5,962
1965	5,451	9,762	10,537	12,720	12,733	7,560	10,240	3,000	3,000	5,389	6,297	9,443	12,872	11,061	6,579
1966	8,389	12,358	12,725	12,730	10,820	11,206	2,250	2,250	2,250	6,259	6,487	11,031	10,610	11,473	6,907
1967	8,165	10,689	7,817	11,508	12,431	11,268	6,497	1,500	1,500	6,487	9,680	13,079	13,036	12,972	7,154
1968	12,848	11,007	12,267	10,543	6,274	10,195	1,425	1,425	2,250	5,412	6,717	10,774	11,853	11,134	6,602
1969	7,183	8,034	11,504	7,825	12,748	11,865	7,140	3,000	3,000	7,140	9,063	9,672	12,888	11,163	6,756
1970	12,891	10,930	11,900	8,171	5,484	10,175	7,611	1,500	1,500	1,500	6,545	10,530	12,526	10,135	6,383
1971	9,171	12,749	12,722	12,726	6,339	11,841	9,584	2,250	2,250	2,250	8,343	11,069	13,047	12,978	7,211
1972	12,859	6,965	12,513	10,606	9,897	11,835	1,500	1,500	1,500	5,344	5,850	10,966	10,965	8,683	6,422
1973	7,355	12,747	12,721	10,183	12,742	11,848	8,700	3,000	3,000	5,916	8,008	8,408	11,508	11,503	7,068
1974	10,960	12,754	12,723	9,787	12,747	11,851	10,241	1,500	1,500	6,415	9,300	9,073	12,854	12,976	7,527
1975	12,856	7,572	12,084	9,532	12,053	9,571	10,240	3,000	3,000	7,140	9,462	9,389	12,853	12,975	7,242
1976	12,855	12,697	12,034	9,368	4,918	5,017	2,953	1,500	1,500	2,599	3,621	7,921	8,449	7,742	5,387
1977	5,723	4,569	2,590	2,625	1,993	2,038	1,500	1,500	1,500	1,500	2,682	6,823	4,687	4,335	2,488
1978	3,893	2,378	7,513	7,801	10,352	8,297	6,497	1,500	1,500	6,487	9,611	7,493	12,591	11,699	5,400
1979	8,769	6,659	8,062	12,726	10,559	10,451	8,876	3,000	3,000	7,197	6,926	9,435	11,468	10,970	6,466
1980	9,508	8,752	12,723	7,823	12,745	11,867	9,227	1,500	1,500	5,082	7,803	9,201	12,723	11,351	6,821
1981	10,364	4,921	9,046	12,729	7,719	6,445	7,011	2,250	2,250	5,106	5,776	13,053	11,608	10,324	6,074
1982	7,971	12,755	7,818	11,508	12,748	11,847	10,240	3,000	3,000	7,140	9,680	13,100	13,056	12,982	7,542
1983	12,868	11,330	9,756	4,659	5,235	5,225	6,497	1,500	1,500	1,500	6,877	13,100	13,078	12,994	6,088
1984	12,891	10,423	5,066	5,780	12,752	6,680	8,344	3,000	3,000	3,000	6,997	9,716	10,960	11,210	6,077
1985	10,951	12,753	12,723	10,251	7,124	5,900	1,500	1,500	1,500	3,786	5,500	13,031	12,658	11,481	6,449
1986	7,881	6,237	7,634	11,503	12,738	11,822	10,241	1,500	1,500	4,896	7,607	5,401	12,811	11,487	6,274
1987	9,775	5,840	6,804	9,208	6,244	5,375	5,687	1,500	1,107	1,896	5,834	9,628	8,679	7,623	4,845
1988	3,963	5,069	5,568	10,539	6,192	1,332	4,414	1,500	1,500	4,162	2,088	6,048	4,646	4,824	3,384
1989	3,297	5,132	5,595	6,339	1,578	9,833	8,229	1,500	1,500	3,651	5,733	11,991	11,419	9,626	4,739
1990	7,517	2,929	6,606	11,180	6,024	5,436	1,100	1,100	1,500	2,924	1,443	5,506	2,408	4,281	3,430
1991	4,230	1,100	3,571	2,981	2,550	9,844	1,500	1,500	1,500	1,500	2,500	3,772	2,889	5,183	2,524
1992	4,089	2,173	3,936	4,858	10,541	6,840	5,383	1,500	1,100	1,100	1,549	4,310	5,424	4,141	3,138

Table I-45b. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 Scenario C minus 2020 Baseline

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	500	307	0	0	0	0	0	0	0	422	1,533	-3	170
1923	842	-334	894	285	1	-250	0	0	0	-2	3	-234	-285	86	62
1924	1,105	479	967	105	42	0	8	8	0	0	0	-783	36	4	120
1925	-3	-159	-160	-55	669	0	0	0	0	-2	-3,125	4,714	-5,516	20	-220
1926	64	-496	-2	252	1,275	-126	6	0	0	0	2,566	25	-85	-1	202
1927	-236	1,820	547	1,231	284	361	0	0	0	0	1	708	665	2	326
1928	139	35	500	1,099	3	372	0	0	0	0	-134	1,736	-68	4	227
1929	-694	-571	278	22	2	2	32	0	0	0	-82	250	-2,695	113	-206
1930	289	-296	585	1,049	45	582	0	0	0	4	-4	533	-964	2	112
1931	354	-401	399	-5	-10	-6	0	0	0	0	1	-5	-14	0	20
1932	7	46	467	676	11	0	0	0	0	0	0	-11	-82	-58	65
1933	13	-16	19	-6	-1	5	-2	0	0	0	0	0	0	1	1
1934	-1	0	-1	515	0	1	0	0	0	0	0	532	15	16	66
1935	-3	-30	30	283	-40	307	4	0	0	0	0	146	497	-785	27
1936	180	-415	577	1,198	-333	0	0	0	0	0	2	392	832	-39	150
1937	217	30	20	11	0	-408	0	0	0	-8	5	448	1,475	-176	100
1938	-65	893	409	266	-705	0	0	0	0	0	0	1,320	1,751	1,072	304
1939	1,820	-560	-1,267	-1,312	-118	-2	-2,331	-85	200	200	24	1,225	812	16	-19
1940	60	385	-825	358	134	-3	0	0	0	2	156	-11	227	-469	0
1941	-197	17	1,306	188	-1	-514	0	0	0	-476	1,320	1,751	1,320	288	
1942	1,820	-2,347	1,025	0	-1,562	-192	0	0	0	0	0	-95	1,145	1,124	68
1943	1,820	582	1,225	0	-1,160	0	0	0	0	0	0	826	978	-375	246
1944	-132	-1,211	-59	52	296	-130	2	0	0	-2	3	1,442	765	-203	52
1945	-55	294	318	-24	0	-7	0	0	0	0	-2	-122	1,187	25	99
1946	45	-94	819	-91	-3,543	614	-4	0	0	19	-2	1,327	1,370	-128	42
1947	-1,055	-831	57	325	4	153	0	0	0	134	47	1,799	-838	188	-4
1948	-5	93	289	-192	-1	2	0	0	0	0	0	1,172	633	81	127
1949	-1,491	-388	-42	-73	74	343	4	0	0	-14	0	-494	-1,140	-2	-198
1950	86	0	-32	432	911	0	0	0	0	10	1	952	1,320	-337	201
1951	90	1,820	617	-1,906	-1,790	-277	0	0	0	0	-2	173	1,635	28	31
1952	7	-123	1,305	0	124	4	0	0	0	0	0	815	661	1,320	250
1953	1,820	-18	1,343	-634	-106	-1	0	0	0	0	0	737	1,010	1,319	334
1954	1,818	-1,691	-1,910	1,257	1,068	462	0	0	0	10	0	522	-15	447	117
1955	104	-293	1,526	1,205	237	-10	-47	0	0	4	2	112	-582	-204	127
1956	258	-296	308	0	63	0	0	0	0	0	0	1,320	976	1,320	240
1957	1,820	4	-424	187	1,010	-290	9	0	0	0	8	108	661	425	209
1958	1,123	-1,550	2,592	1,160	682	9	0	0	0	0	0	816	1,636	1,323	476
1959	1,825	-135	-194	1,096	-1,445	1,093	4	0	0	-93	-15	-65	289	182	168
1960	-1,670	519	-506	-2	1,124	-19	0	0	0	-10	840	-123	998	-6	61
1961	267	-310	279	2	1,021	-63	0	0	0	0	-20	-100	178	-700	30
1962	-248	-80	-21	327	0	7	0	0	0	0	0	309	219	-272	16
1963	1,818	-40	1,177	471	732	146	0	0	0	0	405	538	373	28	342
1964	1,221	1,822	-1,422	1,266	-21	-21	51	0	0	0	-17	1,524	-286	9	249
1965	-377	178	906	1	1	-445	0	0	0	-147	0	221	1,130	48	97
1966	69	1,418	907	245	-7	0	0	0	0	0	-4	733	-362	806	230
1967	430	86	490	750	771	-304	0	0	0	0	0	1,313	1,315	1,318	372
1968	1,815	74	1,013	-1,052	-2,695	-556	0	0	0	0	18	611	150	192	-11
1969	-6	-264	1,466	1	0	-1	0	0	0	0	-11	826	1,633	-499	195
1970	1,823	-14	356	-4,560	-1,166	-1,669	-86	0	0	0	-39	1,849	817	-989	-214
1971	-828	1,820	1,379	1,035	101	501	-4	0	0	0	0	-205	1,320	1,320	389
1972	1,820	-2,844	1,282	-873	-233	620	0	0	0	-4	29	-139	297	16	5
1973	13	1,820	1,547	-303	115	1	0	0	0	0	0	-282	286	348	213
1974	-74	1,820	1,446	-1,721	252	1	0	0	0	0	0	832	1,630	1,320	331
1975	1,820	-3,362	829	-1,706	-665	-778	0	0	0	0	-1	835	1,630	1,320	3
1976	1,820	1,763	800	-359	51	-11	6	0	0	0	-50	2,514	-1,106	-353	309
1977	204	-201	-167	-82	98	56	290	290	0	0	-218	2,153	-1,663	0	29
1978	272	-431	294	216	-1,723	-395	0	0	0	0	0	-31	1,379	362	7
1979	-128	-230	-1,007	555	0	-39	0	0	0	0	174	158	271	-3	-15
1980	-109	-20	1,483	0	63	8	0	0	0	0	0	840	1,486	208	243
1981	-647	-209	-271	1,112	-1,009	-997	9	0	0	0	0	1,291	332	-699	-59
1982	-610	1,823	563	1	2	-2	0	0	0	0	0	1,320	1,755	1,322	373
1983	1,824	393	-926	-203	-14	0	0	0	0	0	0	1,320	1,320	2,963	404
1984	1,820	-522	-2,068	0	63	0	0	0	0	0	0	313	496	124	14
1985	-83	1,820	1,460	-331	-10	254	0	0	0	2	3	1,318	1,325	362	372
1986	-1,478	-1,073	384	1,093	0	-3	0	0	0	2	4	-5,599	1,555	345	-292
1987	-1,110	96	-869	407	-1,398	-165	4,090	400	-272	-303	-321	1,043	138	-824	-58
1988	-1,116	74	-3,777	1,048	2,351	-36	-9	0	0	12	-246	20	700	-57	-77
1989	-218	195	-192	53	0	467	0	0	0	4	91	1,294	1,277	249	197
1990	-858	-1,261	-112	1,107	1	-14	0	0	0	-4	310	709	-940	-37	-66
1991	67	-557	-6	0	69	371	0	0	0	0	0	-293	840	-136	23
1992	-300	416	112	-108	833	2	0	0	0	0	177	-70	207	0	72
1993	-101	189	-60	-1	70	134	0	0	0	0	0	1,318	908	0	150
1994	-7	-1,189	-712	-419	-257	-191	4	0	0	0	2	1,147	894	-1,248	-115
Avg	287	-28	275	99	-73	-14	28	8	-1	-3	1	597	467	199	112
Min	-1,670	-3,362	-3,777	-4,560	-3,543	-1,669	-2,331	-85	-272	-303	-3,125	-5,599	-5,516	-1,248	-292
Max	1,825	1,823	2,592	1,266	2,351	1,093	4,090	400	200	200	2,566	4,714	1,755	2,963	476

Table I-46a. CALSIM Simulated CVP Tracy Pumping, for 2020 OCAP Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	3,862	4,600	4,193	4,193	4,150	4,600	4,281	1,500	1,500	1,500	3,000	4,600	4,019	4,600	2,787
1923	4,143	4,600	4,193	4,193	4,203	3,459	4,543	800	800	800	3,000	4,153	3,782	4,402	2,627
1924	3,033	2,293	2,510	3,818	4,053	800	1,483	800	800	1,473	800	600	600	2,864	1,417
1925	2,908	1,494	4,176	4,193	3,941	800	4,600	1,125	1,125	1,125	2,049	3,561	1,293	4,528	1,980
1926	3,717	3,044	2,700	4,193	4,600	3,657	3,531	800	800	800	800	800	800	2,967	1,815
1927	3,600	4,600	4,193	1,624	482	2,744	4,600	1,500	1,500	1,500	3,000	4,600	4,600	4,600	2,341
1928	2,754	4,600	4,193	4,193	4,165	4,600	4,543	800	800	2,953	3,000	3,924	3,176	4,077	2,608
1929	3,306	4,522	4,193	3,975	4,210	1,176	1,902	800	800	800	830	800	800	2,821	1,726
1930	3,144	1,139	4,193	4,193	3,939	3,458	2,702	800	800	800	1,575	1,507	1,525	3,927	1,876
1931	3,436	2,551	2,274	3,811	3,540	1,213	800	800	800	800	800	600	600	2,261	1,361
1932	2,490	1,187	4,193	4,193	4,600	1,568	2,876	1,125	1,125	1,125	1,763	2,185	3,132	4,186	1,961
1933	3,722	2,166	682	597	877	1,247	600	600	800	800	800	800	600	2,903	953
1934	2,418	716	4,193	2,996	641	779	800	800	800	800	800	600	600	2,217	1,067
1935	2,080	2,890	3,520	4,193	2,162	1,593	2,088	1,500	1,500	144	2,650	1,892	4,462	3,516	1,906
1936	2,754	2,753	2,248	4,193	3,185	2,317	4,144	800	800	800	2,475	2,334	4,486	4,375	2,072
1937	3,780	2,689	3,692	4,193	3,254	1,753	800	1,817	2,776	1,213	2,948	2,127	2,845	4,600	2,120
1938	4,501	4,600	1,864	800	800	2,519	800	4,354	4,600	3,232	3,000	4,600	4,600	4,600	2,325
1939	4,600	4,377	2,852	1,819	3,892	1,946	2,807	1,125	1,125	1,125	1,740	2,278	1,518	3,672	1,908
1940	2,396	2,973	878	4,193	4,165	4,600	4,600	1,500	1,500	1,500	3,000	4,600	4,320	4,600	2,425
1941	3,546	4,336	4,193	4,193	4,150	4,600	4,600	2,497	2,595	2,595	2,906	4,600	4,600	4,600	2,889
1942	4,600	4,600	4,193	2,850	2,089	4,028	4,600	1,500	1,500	1,500	3,000	4,600	4,600	4,600	2,646
1943	4,600	4,600	4,193	4,600	4,175	2,979	4,543	800	800	800	2,475	4,600	4,566	4,600	2,706
1944	4,600	4,061	3,872	3,982	4,600	4,600	2,852	1,500	1,500	1,500	2,195	1,950	1,537	4,177	2,362
1945	3,461	4,600	4,193	4,193	4,600	2,784	3,455	800	800	800	3,000	4,575	4,533	4,600	2,618
1946	4,171	4,251	4,193	4,193	3,911	2,449	3,485	1,500	1,500	1,500	3,000	4,600	4,591	4,365	2,637
1947	3,467	4,600	4,193	4,193	4,600	4,140	2,884	800	800	800	2,406	2,112	1,501	4,355	2,297
1948	3,293	3,660	2,436	3,812	4,272	3,114	4,543	800	800	800	3,000	4,563	4,600	4,343	2,442
1949	4,254	3,592	4,193	3,819	3,751	4,600	2,995	800	800	2,953	3,000	4,561	3,623	4,057	2,613
1950	3,893	4,028	3,960	4,193	4,600	4,276	4,225	800	800	800	2,475	3,477	4,454	4,550	2,604
1951	3,592	4,600	2,366	800	992	3,242	3,684	800	800	800	3,000	4,600	4,600	4,124	2,116
1952	4,271	4,253	4,193	4,193	4,165	4,600	4,600	2,520	3,493	3,000	3,000	4,600	4,600	4,600	2,975
1953	4,600	4,265	2,714	1,821	2,543	2,739	3,769	1,125	1,125	1,125	3,000	4,600	4,572	4,600	2,357
1954	4,600	4,600	4,193	4,193	4,150	4,600	4,600	1,125	1,125	1,125	2,850	4,600	4,029	4,436	2,790
1955	3,667	4,600	4,193	4,193	4,600	2,307	2,901	800	800	800	3,000	3,698	1,537	3,597	2,287
1956	3,947	4,369	4,193	4,193	4,194	2,835	4,486	800	800	800	2,475	3,913	4,600	4,600	2,577
1957	4,600	4,600	3,561	4,193	4,150	4,600	4,468	1,125	1,125	3,000	3,000	4,600	3,977	4,482	2,815
1958	4,600	4,600	4,193	4,193	4,600	4,600	1,419	3,745	3,298	3,000	3,000	4,600	4,600	4,600	2,976
1959	4,600	4,197	4,193	4,600	4,138	2,696	2,556	1,125	1,125	1,125	3,000	4,555	4,458	3,026	2,561
1960	3,730	1,561	1,380	3,820	4,600	4,286	800	800	800	800	2,475	3,126	2,030	2,503	1,872
1961	3,508	4,221	4,193	4,089	4,600	1,788	2,594	800	800	2,383	3,000	4,600	3,624	3,857	2,456
1962	2,210	2,619	4,142	4,193	4,600	4,600	3,127	1,125	1,125	1,125	3,000	4,600	4,505	4,051	2,518
1963	4,600	4,600	4,193	4,193	4,443	3,573	4,543	800	800	800	3,000	4,600	4,600	4,600	2,765
1964	4,600	4,600	4,193	4,193	3,384	2,724	1,857	800	800	800	1,728	3,467	3,128	3,805	2,291
1965	3,303	4,234	4,193	4,193	4,150	4,019	4,600	1,500	1,500	1,500	3,000	4,600	4,600	4,600	2,741
1966	4,600	4,600	4,193	4,193	4,600	4,593	3,222	1,125	1,125	1,125	3,000	4,600	4,572	4,013	2,791
1967	3,554	4,600	4,193	4,193	4,150	4,600	4,158	3,223	3,645	3,000	3,000	4,600	4,600	4,600	2,963
1968	4,600	4,600	3,700	1,819	3,630	2,682	3,501	1,125	1,125	1,125	3,000	4,600	4,304	3,657	2,413
1969	3,777	4,552	4,193	4,193	4,150	4,600	800	4,360	4,600	3,247	3,000	4,600	4,569	4,600	2,942
1970	4,600	4,509	2,312	1,514	1,802	3,207	3,700	800	800	800	2,475	2,685	4,600	4,600	2,136
1971	4,242	4,600	4,193	4,193	4,131	4,600	4,600	1,125	1,125	1,125	3,000	4,600	4,600	4,600	2,821
1972	4,600	4,600	4,193	4,193	4,600	4,600	2,695	800	800	800	3,000	4,600	4,284	4,165	2,737
1973	3,783	4,600	4,193	4,600	4,146	4,002	4,292	1,500	1,500	1,500	2,728	4,600	4,337	4,482	2,767
1974	4,367	4,600	4,193	4,193	4,150	4,600	4,543	800	800	800	2,475	4,600	4,600	4,600	2,767
1975	4,600	4,600	4,193	4,193	4,600	4,600	4,600	1,500	1,500	1,500	2,694	4,600	4,600	4,600	2,885
1976	4,600	4,600	4,193	4,042	3,659	2,617	2,054	800	800	800	1,305	1,101	1,265	2,433	1,930
1977	2,850	3,163	800	1,795	800	800	800	800	800	800	1,125	2,986	2,840	2,335	1,278
1978	3,050	1,297	4,193	4,600	3,640	1,811	1,540	3,510	3,315	3,000	3,000	4,600	4,515	4,600	2,476
1979	4,600	4,395	2,777	4,193	4,600	3,486	4,170	1,500	1,500	1,500	2,650	4,064	4,072	3,456	2,568
1980	4,600	4,580	4,193	4,193	4,165	3,481	4,448	800	800	800	3,000	4,600	4,578	4,600	2,739
1981	4,390	3,823	4,193	4,193	4,600	4,600	3,653	1,125	1,125	1,125	2,847	4,568	3,311	3,611	2,632
1982	4,600	4,600	4,193	4,193	4,150	4,600	1,680	4,600	4,112	3,000	3,000	4,600	4,600	4,600	3,009
1983	4,600	4,600	1,813	1,512	1,801	2,642	800	4,337	4,600	3,228	3,000	4,600	4,600	4,494	2,428
1984	2,160	1,503	1,039	1,513	2,435	3,948	4,236	1,500	1,500	1,500	3,000	4,600	4,600	4,472	2,031
1985	4,105	4,600	4,193	4,193	4,600	4,600	2,708	800	800	800	2,475	4,600	4,462	3,452	2,644
1986	3,656	2,282	4,193	4,193	4,585	4,600	800	2,749	2,284	2,284	2,833	2,746	4,513	4,600	2,549
1987	4,600	4,384	3,338	1,171	2,849	1,785	2,893	800	800	800	1,525	1,610	1,170	3,188	1,700
1988	2,879	4,024	4,193	4,193	3,795	800	2,000	800	800	800	800	800	800	2,820	1,639
1989	3,096	2,112	3,221	3,805	2,127	4,600	4,055	800	800	800	2,295	2,590	2,237	3,351	1,976
1990	3,378	3,873	2,180	4,193	4,600	2,444	800	800	800	800	800	800	800	2,347	1,619
1991	2,956	1,072	1,887	1,155	1,085	4,600	2,812	800	800	800	1,690	800	812	2,996	1,311
1992	2,946	1,102	1,250	3,393	4,600	3,650	2,617	800	800	800	800	800	600	1,290	1,374
1993	3,066	669	4,193	4,193	4,150	3,147	4,600	1,125	1,125	1,125	2,563	4,598	4,550	4,600	2,397
1994	4,600	4,493	4,193	3,822	4,600	3,800	2,326	800	800	800	823	4,600	4,600	3,603	2,504
Avg	3,787	3,686	3,513	3,623	3,667	3,284	3,456	1,019	1,011	1,489	2,410	3,489	3,422	3,948	2,318
Min	2,080	669	682	597	482	779	800	800	800	800	800	600	600	1,290	953
Max	4,600	4,600	4,193	4,600	4,600	4,600	4,600	1,500	1,500	4,600	3,000	4,600	4,600	4,600	3,009

Table I-46b. CALSIM Simulated CVP Tracy Pumping, 2020 OCAP minus 2020 SDIP 2A Scenario (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-	VAMP	VAMP	Post-	Jun	Jul	Aug	Sep	taf/yr
							VAMP	4/16-	5/1-	VAMP					
							4/1-4/15	4/30	5/15	5/16-5/31					
1922	-529	335	1,186	-39	-104	299	-319	0	0	0	0	0	-555	108	33
1923	-243	336	-34	1,181	625	243	-1	0	0	0	744	43	-727	-55	124
1924	-1,288	-204	1,077	-406	672	0	683	0	0	673	0	-621	-1,184	-16	-83
1925	247	151	228	1,202	-277	0	0	0	0	0	72	377	-997	148	72
1926	-72	229	-395	-27	367	264	2,731	0	0	-2,139	-655	0	-304	-45	-27
1927	12	381	1,201	-1,371	-3,743	-1,557	0	0	0	0	89	0	28	110	-277
1928	-1,412	337	-33	-38	-86	335	-1	0	0	2,153	1,187	-613	-1,328	-372	-58
1929	-154	910	-26	-248	676	376	1,102	0	0	0	-271	-321	-2,058	-204	-53
1930	82	-97	-18	-21	294	-343	-114	0	0	-1,761	196	371	-296	-414	-76
1931	-67	-454	1,474	-407	1,183	-179	0	0	0	0	-633	-200	-548	-73	1
1932	301	-1,004	1,204	-18	1,225	25	219	0	0	0	-309	-981	-408	-98	-2
1933	536	995	-72	-111	-138	0	-200	-200	0	-1,056	0	0	-298	364	31
1934	-581	-158	-16	1,113	0	-388	0	0	0	0	0	-200	-693	-2	-57
1935	277	-1,191	-505	1,200	984	-424	-537	0	700	-656	128	-667	-4	-849	-83
1936	473	796	215	1,194	788	252	3,344	0	0	0	141	-928	10	-11	273
1937	63	-975	2,451	1,193	-979	96	-700	317	1,276	-287	265	-1,608	-1,609	263	-28
1938	236	2,251	1,123	54	0	853	0	3,554	3,800	2,432	0	0	22	106	577
1939	209	112	-1,375	-2,413	851	-489	155	0	0	0	-1,020	-1,024	-1,388	-123	-408
1940	287	765	78	-30	-72	338	0	0	0	-1,500	0	39	-202	136	33
1941	-788	836	-28	-32	-93	306	56	1,697	1,795	-358	-94	0	29	110	108
1942	216	337	-33	-1,381	-2,164	605	0	0	0	0	0	0	22	106	-129
1943	209	335	-34	368	-13	-1,330	-1	0	0	0	242	0	8	117	-7
1944	394	-106	-353	-247	656	621	1,352	0	0	0	-129	-1,599	-1,642	-205	-123
1945	1,189	368	1,197	1,193	367	-1,484	-261	0	0	0	679	6	5	132	212
1946	-169	22	-29	-33	1,878	-522	38	0	0	-1,500	0	0	39	-115	8
1947	-169	343	-31	-36	536	221	2	0	0	0	557	-1,340	-1,736	-27	-108
1948	1,198	468	-283	-71	40	-178	-1	0	0	-2,153	0	-24	58	-132	-3
1949	435	-232	116	-409	829	362	-136	0	0	2,153	955	16	-887	-401	107
1950	365	268	1,230	1,189	675	314	3,425	0	0	0	45	-988	5	223	301
1951	296	376	-1,848	94	-396	328	131	0	0	0	849	0	44	-358	-33
1952	-97	211	-32	1,184	-83	290	0	1,020	1,993	1,500	0	0	22	106	236
1953	209	0	-1,513	-2,411	-438	1,853	-390	0	0	-1,876	0	0	7	113	-203
1954	223	339	1,298	-37	-101	315	0	0	0	-1,876	-150	0	-545	-56	20
1955	-719	336	-34	-38	965	116	128	0	0	-2,108	0	1,811	-608	-365	21
1956	1,125	281	1,197	1,194	-37	-1,465	-58	0	0	-2,153	-525	-687	22	106	5
1957	209	335	-666	-39	-104	307	1	0	0	1,875	0	0	-579	0	26
1958	232	342	-32	1,184	350	298	-3,181	2,245	1,798	1,500	0	0	22	106	224
1959	209	-68	-34	368	-116	-1,074	11	0	0	-1,682	0	-37	-88	-1,451	-190
1960	1,495	-385	316	812	658	341	0	0	0	0	723	-1,280	-2,328	-561	-16
1961	1,040	23	208	457	377	-1,436	32	0	0	1,583	1,308	44	-894	-82	111
1962	-784	419	-79	293	358	325	-126	0	0	-1,876	0	2	-45	-428	-62
1963	238	344	-31	-36	195	-718	-1	0	0	-2,153	0	0	22	106	-63
1964	209	335	-34	-39	497	396	-2,073	0	0	0	180	662	-1,254	-573	-41
1965	1,221	3	-23	-26	-83	503	0	0	0	-1,500	0	0	30	111	59
1966	218	338	-33	-38	348	302	2,097	0	0	-1,876	305	5	24	-465	62
1967	11	345	1,189	1,185	217	564	3,358	2,423	2,845	2,200	0	0	41	116	550
1968	229	341	-525	-2,411	828	-151	2,376	0	0	-1,581	0	0	-265	-832	-155
1969	77	783	1,187	1,182	-102	285	-700	2,860	3,100	1,747	0	0	-9	106	427
1970	209	244	-1,915	-407	-450	509	-72	0	0	0	427	-1,907	54	123	-192
1971	-116	345	-31	-35	-116	306	0	0	0	0	0	0	27	109	30
1972	215	337	-33	-38	885	318	1,895	0	0	-1,823	0	50	-230	-177	75
1973	77	355	-27	1,595	-95	-297	-58	0	0	0	-25	0	-233	-7	81
1974	-15	338	-33	1,182	-102	305	-1	0	0	0	-250	0	33	112	97
1975	221	586	-33	-37	348	310	0	0	0	0	-306	0	30	110	73
1976	218	338	-33	-189	546	425	1,254	0	0	0	-177	-519	-1,261	-1,027	-67
1977	391	1,513	0	962	0	0	0	0	0	0	-341	-135	-221	-468	103
1978	-2	186	1,204	1,608	-264	-215	740	2,710	2,515	2,200	45	0	-43	117	410
1979	230	710	386	-36	350	-783	-268	0	0	-1,500	-350	-503	-455	-1,011	-146
1980	261	331	-29	1,187	-77	-106	-96	0	0	0	645	0	0	106	138
1981	-1	-63	-34	-39	371	1,373	147	0	0	-1,428	-45	-11	-1,224	-860	-74
1982	697	349	1,190	1,186	-95	298	-2,920	3,100	2,612	1,500	0	0	22	106	361
1983	209	335	-1,917	-141	-135	972	0	3,537	3,800	2,428	0	0	22	0	255
1984	-2,231	-2,762	-1,253	-1,377	-1,817	567	62	0	0	0	500	0	30	-18	-497
1985	-278	337	-33	-38	1,047	1,910	1,908	0	0	0	682	53	-50	-1,007	212
1986	237	14	1,193	1,189	344	340	-3,744	1,949	1,484	1,484	531	-1,046	19	174	219
1987	295	146	-226	-209	913	73	2,093	0	0	-847	-2	188	-370	-47	77
1988	921	1,008	-21	-24	2,378	0	-152	0	0	-1,226	-1,421	-1,381	-2,845	-1,305	-220
1989	3	-124	992	810	1,327	383	0	0	0	0	432	-303	-1,177	-997	76
1990	-411	2,589	-623	1,195	685	74	0	0	0	0	-323	-67	-1,257	-165	96
1991	35	272	37	-468	-358	369	2,012	0	0	0	414	-456	-1,202	-1,251	-97
1992	4	-324	-735	931	378	230	-17	0	0	0	0	0	-2,577	105	-125
1993	378	-618	1,198	1,194	-81	-1,125	0	0	0	0	-438	8	6	124	42
1994	244	612	-30	-406	353	1,142	107	0	0	-1,021	23	0	46	-144	81
Avg	120	245	126	206	200	101	573	-2	0	-53	67	-216	-492	-176	32
Min	-2,231	-2,762	-1,917	-2,413	-3,743	-1,557	-3,744	-200	0	-2,153	-1,421	-1,907	-2,845	-1,451	-497
Max	1,495	2,589	2,451	1,608	2,378	1,910	3,425	3,554	3,800	2,432	1,308	1,811	58	364	577

Table I-47a. CALSIM Simulated SWP Banks Pumping, for 2020 OCAP Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	5,335	3,771	8,093	7,798	8,050	8,500	5,556	1,500	1,500	1,500	8,500	8,266	1,502	6,099	4,272
1923	5,862	6,239	8,093	8,093	4,203	3,459	5,645	700	700	3,836	3,498	8,498	8,357	5,474	4,076
1924	6,559	2,690	5,079	3,574	4,053	300	300	300	430	430	300	361	3,545	1,136	1,709
1925	2,172	2,316	4,910	4,083	5,586	300	4,741	1,125	1,125	1,125	3,064	3,066	407	2,755	1,957
1926	2,360	1,163	2,357	6,332	8,500	1,143	4,813	700	700	894	1,938	7,205	4,365	2,504	2,481
1927	2,136	8,500	8,093	7,465	5,204	6,673	6,550	1,500	1,500	1,500	4,680	4,357	7,039	5,648	3,941
1928	6,680	7,323	6,983	8,093	6,215	8,500	5,960	700	700	4,170	3,134	3,529	4,639	4,763	3,966
1929	3,178	3,484	4,228	4,245	4,127	2,417	2,016	700	300	300	1,178	3,226	415	1,087	1,760
1930	1,351	1,139	6,290	8,093	3,939	6,964	2,817	700	700	894	1,059	7,472	6,128	3,808	2,963
1931	2,156	861	800	4,095	1,988	990	300	300	599	599	768	1,876	4,648	1,646	1,256
1932	1,267	1,278	8,093	8,093	4,934	4,011	2,428	1,125	1,125	1,125	2,890	6,252	300	2,567	2,573
1933	2,216	1,499	4,873	3,821	4,222	3,918	2,080	700	700	894	300	3,250	433	1,156	1,681
1934	2,367	786	5,504	7,390	4,064	940	300	300	300	300	300	3,040	303	1,714	1,631
1935	2,190	2,836	3,283	8,093	4,141	5,399	6,550	1,500	324	324	3,259	7,709	6,808	6,766	3,314
1936	5,615	2,896	5,894	8,093	8,500	7,050	5,424	700	700	894	4,763	7,877	7,035	4,301	3,972
1937	2,894	2,011	5,343	5,863	8,500	8,500	5,839	2,438	2,776	2,776	3,589	3,795	5,241	3,766	3,392
1938	3,205	8,500	8,093	8,093	6,900	6,709	6,550	4,447	5,409	5,409	8,500	8,000	5,536	6,451	4,877
1939	8,500	4,260	7,358	6,542	4,263	4,355	2,807	1,125	300	300	2,129	6,905	7,444	5,293	3,596
1940	3,698	2,398	4,552	8,093	8,065	8,500	6,550	1,500	1,500	1,500	2,790	8,461	8,215	4,683	3,921
1941	6,499	2,451	8,093	8,093	8,050	8,500	6,550	2,497	2,595	6,550	4,793	8,000	5,990	6,904	4,622
1942	6,422	4,492	8,093	6,148	6,213	6,766	6,550	1,500	1,500	1,500	8,500	3,211	7,482	7,308	4,230
1943	7,585	7,182	8,030	6,470	6,224	6,916	6,465	700	700	894	2,656	4,068	8,109	5,648	4,063
1944	3,962	2,454	5,379	4,926	8,500	4,583	2,852	1,500	1,500	1,500	4,127	8,198	7,119	4,844	3,475
1945	4,393	6,281	8,073	4,157	8,500	7,943	3,569	700	700	3,655	4,563	7,752	6,099	4,634	4,020
1946	4,794	5,783	8,093	8,093	2,900	6,091	3,485	1,500	1,500	1,500	4,175	8,500	8,283	4,792	3,977
1947	6,377	3,750	7,619	2,602	5,698	4,140	2,999	700	300	300	2,763	7,768	4,431	3,606	3,073
1948	3,039	3,097	2,782	4,554	300	3,114	5,762	700	700	894	5,350	8,349	7,216	5,396	2,869
1949	6,519	3,342	5,048	2,911	3,751	8,500	3,110	700	700	2,300	2,619	4,960	3,374	3,766	2,920
1950	1,428	2,230	2,299	8,093	8,500	4,276	4,339	700	700	894	5,060	8,015	7,028	4,428	3,284
1951	5,374	8,500	8,093	7,545	6,261	6,939	3,798	700	700	894	2,747	5,456	8,500	5,618	4,112
1952	6,031	5,093	8,093	8,093	8,065	8,500	6,550	2,520	3,493	3,493	7,576	7,647	7,167	8,500	4,993
1953	8,500	2,419	3,524	5,596	5,014	6,679	3,769	1,125	1,125	1,125	6,505	5,244	6,498	7,932	3,713
1954	6,019	6,939	3,105	8,093	8,050	8,500	6,550	1,125	1,125	5,023	2,851	7,770	6,613	6,581	4,309
1955	6,144	5,102	8,093	8,093	2,654	2,403	2,456	700	700	894	2,891	4,263	343	3,627	2,787
1956	1,967	3,019	8,093	8,093	6,793	7,162	4,600	700	700	894	7,464	2,917	7,312	8,244	3,885
1957	7,818	4,010	3,332	5,174	8,050	8,500	4,468	1,125	1,125	3,813	4,320	5,558	7,561	5,106	3,902
1958	8,107	4,565	8,093	8,093	6,924	7,926	6,550	3,745	3,298	3,298	8,494	8,000	7,382	8,500	5,105
1959	8,500	4,197	4,136	7,016	6,772	1,515	2,556	1,125	1,125	1,125	2,575	6,405	8,071	5,381	3,471
1960	4,517	1,811	5,123	3,730	8,500	4,286	300	300	700	894	1,320	7,853	1,373	2,577	2,532
1961	2,017	3,099	6,434	3,955	8,500	4,682	2,708	700	300	300	2,768	7,038	2,250	3,681	2,783
1962	3,564	3,213	6,274	2,014	8,500	6,237	3,127	1,125	864	864	2,559	7,657	8,452	5,790	3,443
1963	8,500	6,548	8,093	8,060	7,464	6,777	6,607	700	700	894	4,562	3,395	7,551	6,359	4,327
1964	6,116	8,500	5,048	8,093	2,300	2,181	3,381	700	700	2,524	3,671	8,500	7,474	4,160	3,623
1965	2,826	5,514	8,093	8,093	8,050	4,687	6,550	1,500	1,500	2,497	4,274	2,759	8,063	5,617	3,851
1966	3,389	8,500	8,093	8,093	6,575	6,354	3,222	1,125	1,125	1,125	2,384	6,386	7,253	5,381	3,966
1967	4,916	5,896	8,093	8,093	8,050	8,500	6,550	3,223	3,645	3,645	8,500	8,000	7,494	8,500	5,099
1968	8,500	5,805	6,298	5,665	6,677	6,601	3,501	1,125	1,125	1,125	2,505	3,913	7,149	5,393	3,738
1969	4,761	4,450	8,093	8,093	8,050	6,682	3,717	4,693	4,292	4,292	6,091	7,334	2,390	8,500	4,392
1970	8,500	4,923	4,323	5,519	6,225	6,896	3,814	700	700	894	2,154	4,180	8,500	7,465	3,727
1971	5,633	8,500	8,093	8,093	300	8,500	4,858	1,125	1,125	1,125	5,079	7,596	7,397	7,395	4,299
1972	6,366	4,745	7,745	6,988	5,092	8,500	2,810	700	700	2,589	3,475	6,530	5,557	4,125	3,789
1973	4,412	8,500	8,093	6,174	6,213	6,936	4,292	1,500	1,500	1,500	3,836	7,241	6,496	5,108	4,068
1974	5,490	8,500	8,093	8,093	8,050	8,500	6,607	700	700	5,468	6,289	6,690	8,000	8,500	5,005
1975	6,666	4,469	6,256	6,757	7,065	7,409	5,563	1,500	1,500	1,500	7,851	7,470	8,000	8,500	4,552
1976	8,500	6,116	5,252	2,881	3,659	3,428	2,168	700	700	894	1,881	2,838	7,271	5,827	3,016
1977	2,560	3,229	2,867	2,030	2,282	690	300	300	388	388	300	455	3,871	1,769	1,251
1978	1,036	1,118	5,989	6,934	3,461	5,366	6,550	3,510	3,315	3,315	4,208	8,500	2,942	6,154	3,271
1979	4,871	2,407	5,945	8,093	8,500	7,373	4,170	1,500	1,500	1,500	3,173	7,037	5,212	5,011	3,733
1980	4,465	4,559	8,093	8,093	8,065	5,684	4,693	700	700	894	4,037	8,500	2,063	6,589	3,831
1981	5,143	1,777	4,475	8,093	5,832	7,495	3,653	1,125	1,125	2,622	2,847	7,910	5,508	5,812	3,580
1982	4,177	8,500	8,093	8,093	8,050	8,500	6,550	6,197	4,112	6,550	7,598	8,000	5,210	8,500	5,209
1983	8,500	7,579	5,733	3,075	3,097	4,530	1,364	5,032	2,573	2,573	3,876	8,500	8,500	4,192	3,841
1984	3,617	3,142	3,315	5,234	6,096	7,205	4,236	1,500	1,500	1,500	2,870	4,162	8,500	5,307	3,245
1985	6,412	8,500	8,093	5,836	4,592	2,013	2,822	700	700	894	2,183	8,500	8,000	6,710	3,834
1986	5,810	4,604	7,978	8,093	7,181	8,149	5,630	3,103	2,284	2,284	3,232	7,624	2,229	5,100	4,022
1987	3,882	1,007	3,229	6,815	7,213	5,448	3,008	700	369	369	1,607	6,530	6,541	4,054	2,926
1988	2,799	2,072	6,019	8,093	1,175	496	2,114	700	300	300	300	4,314	301	892	1,716
1989	1,337	2,423	2,817	2,927	1,010	8,500	4,170	700	700	894	1,990	7,502	5,689	6,187	2,651
1990	4,505	2,527	5,460	7,790	2,973	2,444	300	300	700	894	300	636	4,581	1,898	2,077
1991	1,557	300	1,015	838	1,049	7,572	2,927	700	700	894	300	571	3,351	1,114	1,234
1992	1,839	586	1,011	2,943	8,500	4,037	2,731	700	300	300	831	3,339	1,344	3,197	1,760
1993	1,530	1,485	5,307	8,093	7,664	6,238	6,550	1,125	1,125	1,125	7,827	8,112	5,690	5,136	3,734
1994	5,380	1,072	4,858	4,177	7,208	2,887	2,440	700	700	894	3,847	6,999	8,000	5,545	3,152
Avg	4,703	4,176	5,942	6,321	5,834	5,608	4,255	925	891	1,860	3,660	5,997	5,550	5,048	3,444
Min	1,036	300	800	838	300	300	300	300	300	300	300	361	300	892	1,234
Max	8,500	8,500	8,093	8,093	8,500	8,500	6,680	1,500	1,500	6,680	8,500	8,500	8,500		

Table I-47b. CALSIM Simulated SWP Banks Pumping, 2020 OCAP minus 2020 SDIP 2A Scenario (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	0	435	3,278	-121	-450	0	-167	0	0	-5,049	0	4,406	-4,940	489	26
1923	-1,654	878	1,775	-407	625	296	-287	0	0	-351	-1,671	1,855	454	-971	53
1924	2,478	245	-276	-1,030	672	0	0	0	130	130	0	-3,540	1,568	-176	0
1925	218	-65	962	929	-206	0	-618	0	0	-2,490	31	521	-4,468	-1,210	-296
1926	-66	-14	-530	1,573	3,204	-176	-152	0	0	-2,141	-563	1,112	25	28	192
1927	102	0	3,283	-1,035	-3,296	-1,693	-1	0	0	-3,999	-1,053	-601	-447	614	-360
1928	1,383	535	-614	-407	-186	0	57	0	0	3,470	-104	-871	-2,383	-134	-59
1929	63	20	-46	-175	593	770	1,050	0	0	0	2	-667	115	-209	57
1930	221	162	695	1,771	46	-1,536	-181	0	0	-1,846	-1,091	113	1,706	-675	26
1931	1,129	-1,709	-2,553	-201	-369	-56	0	0	299	299	-1,293	-855	550	124	-296
1932	137	365	3,285	-407	-767	-827	778	0	0	-2,230	2,590	4,223	-5,141	-856	113
1933	-407	-1,166	-662	1,785	-1,045	1,480	679	0	0	-1,054	0	754	131	-310	30
1934	721	143	596	2,865	-1,575	-234	0	0	0	0	0	133	-2,916	65	-3
1935	528	49	79	3,283	-16	-3,101	-1	0	0	0	-2,699	383	-964	2,804	21
1936	-68	287	2,256	-407	0	-1,257	-141	0	0	-3,360	-638	374	165	-1,043	-128
1937	-637	-358	1,936	-356	0	0	-199	938	1,276	-2,380	-1,460	-2,487	-2,834	-1,411	-477
1938	-224	0	4,128	-407	-893	-891	-58	3,747	4,709	-1,188	0	-500	-2,425	-1,853	33
1939	0	-526	615	1,806	1,222	1,530	103	0	-825	-825	-631	-981	559	-242	154
1940	72	-404	4,252	1,774	-435	0	-1	0	0	-3,065	-1,898	1,201	428	-2,561	64
1941	426	-1,328	-407	-407	-450	0	-58	1,797	1,895	-48	3,424	-500	-2,378	-1,596	-89
1942	-2,078	161	-407	-2,352	-1,770	3,343	-1	0	0	-5,049	549	32	-285	-661	-363
1943	-378	-456	-470	-2,030	2,036	-1,584	-10	0	0	194	-2,445	-684	111	-561	-397
1944	-548	823	1,990	-189	3,334	-114	-9	0	0	-1,740	154	-302	-1,056	-487	145
1945	244	-665	3,487	-807	0	1,698	-261	0	0	-149	-800	929	-1,917	-726	81
1946	-1,178	717	1,773	-407	2,023	-62	35	0	0	-2,253	28	0	-217	-2,302	-56
1947	1,855	-325	1,810	-467	1,634	79	-146	0	0	0	-953	-732	-1,377	-1,747	-22
1948	-1,242	-709	10	671	-1,799	-178	-226	0	0	-5,191	-182	-151	-500	-1,620	-506
1949	3,203	1,438	971	-1,353	829	2,185	-123	0	0	354	-1,915	-1,545	119	-276	229
1950	746	562	357	3,279	0	-201	-314	0	0	-3,253	-629	45	-973	-1,867	-28
1951	163	0	2,114	-955	-1,752	280	131	0	0	-3,664	-2,107	-653	983	-606	-252
1952	624	464	-407	-407	-435	0	-1	1,020	1,993	-3,056	1,476	2,140	460	0	232
1953	0	-3,282	-4,976	-1,415	2,096	-813	-390	0	0	-4,387	-289	341	-943	-568	-761
1954	-2,481	1,042	210	-407	-450	0	-1	0	0	-149	191	1,352	195	-363	-47
1955	24	-279	-407	-407	872	212	1,043	0	0	-2,087	-245	-1,525	-3,909	78	-383
1956	489	-467	3,282	-407	-1,707	-1,338	-126	0	0	-5,704	820	-1,934	1,130	791	-136
1957	-682	193	246	-911	-450	0	-2	0	0	2,688	337	224	378	-1,379	-36
1958	260	2	-407	-407	-1,576	-574	-1	2,245	1,798	-3,251	80	3,321	-928	0	12
1959	0	-917	-1,013	-1,484	760	567	17	0	0	-2,067	-1,449	-1,085	463	-477	-349
1960	602	-256	-72	102	0	-775	0	0	0	-1,814	-1,898	1,926	-1,963	-155	-206
1961	-276	-515	700	323	2,181	666	32	0	0	0	950	-472	-4,347	-1,427	-146
1962	270	-237	71	-274	0	-857	-165	0	561	561	-548	1,635	142	-651	5
1963	0	313	1,774	293	-1,036	-1,000	-1	0	0	-5,704	677	-1,658	-949	486	-245
1964	-1,840	0	-526	-407	457	485	-324	0	0	1,824	27	0	902	-615	-47
1965	-975	140	1,772	-407	-450	415	-1	0	0	220	977	-1,975	-66	165	-18
1966	-654	0	-407	-407	-2	-563	2,097	0	0	-2,124	-1,411	-60	354	-1,199	-267
1967	-42	-597	3,279	-407	-450	1,269	-58	2,523	2,945	-2,953	0	-500	-1,006	0	166
1968	0	-950	-1,746	-2,835	2,693	-1,899	3,201	825	0	-1,686	-1,218	-2,642	-533	-1,522	-598
1969	1,134	-47	-407	3,276	-450	-1,818	-2,833	3,193	2,792	-2,258	30	2,049	-5,404	1,827	33
1970	0	-1,600	-2,839	-731	2,993	-1,604	-72	0	0	194	-2,389	-1,539	0	1,343	-400
1971	-151	125	-407	-407	-1,034	0	-111	0	0	0	-267	1,587	-1,103	-1,105	-164
1972	-2,134	435	-494	-886	-363	0	2,110	0	0	-221	566	362	-726	-217	-156
1973	737	0	-407	-766	-2,287	-1,564	-58	0	0	-2,918	-1,422	2,255	-975	-2,201	-481
1974	-1,123	0	-407	949	-450	0	-1	0	0	-147	-285	2,128	-310	0	29
1975	-1,834	942	-1,555	1,485	-1,435	-1,091	-127	0	0	-4,838	1,385	2,556	-158	0	-135
1976	0	-2,307	-2,568	-2,258	546	623	15	0	0	-905	-467	-3,639	1,600	1,677	-447
1977	-656	252	1,075	242	1,169	-501	-225	-225	-312	-312	-1,116	-3,741	2,121	237	-95
1978	239	-145	1,460	2,125	-3,325	-738	-58	2,810	2,615	-2,482	-2,752	5,599	-3,368	-1,078	-13
1979	302	-367	-939	-407	2,187	-1,127	-266	0	0	-2,697	-1,046	2,276	-1,192	-1,410	-207
1980	-583	45	-407	3,278	-435	-2,178	12	0	0	-3,387	-1,428	3,901	-4,828	-316	-283
1981	-1,073	140	-958	-407	1,603	3,141	143	0	0	-74	-45	-563	-1,621	-127	-2
1982	-22	0	3,279	-407	-450	0	-1	4,697	2,612	1	555	-500	-3,290	0	168
1983	0	619	-295	-409	-451	975	-5,244	4,332	1,873	1,873	-1	0	33	-4,274	-136
1984	-4,883	-3,016	1,023	2,344	-2,404	3,824	86	0	0	0	-1,631	-1,366	414	-1,779	-430
1985	-624	0	-407	-519	1,039	-677	2,122	0	0	-2,091	-1,570	0	-500	-572	-241
1986	413	410	3,297	-407	-1,319	-351	-108	2,403	1,584	-1,810	-2,075	6,032	-5,749	-1,649	-14
1987	-1,930	-597	-532	-889	2,984	2,148	122	0	69	69	-3,114	-1,970	-749	175	-278
1988	113	95	272	1,772	-70	-103	-152	0	-400	-578	0	135	-306	116	90
1989	1,037	-366	-660	-389	232	2,179	-2	0	0	-1,963	-1,999	-998	-2,080	703	-204
1990	786	820	1,618	-391	865	-619	0	0	0	-1,230	-30	-4,014	4,091	129	154
1991	259	0	-708	-520	-46	1,549	2,227	0	0	194	-926	-2,296	3,051	176	107
1992	552	53	-937	481	2,181	617	58	0	0	0	3	-70	-899	243	125
1993	629	-371	-1,303	3,281	-836	-2,262	-1	0	0	-5,425	760	-388	-1,761	-501	-336
1994	-1,082	-522	-1,126	-448	1,091	1,739	99	0	0	-1,027	-8	-1,268	0	22	-134
Avg	-128	-159	407	68	72	-31	210	4	0	-1,404	-495	91	-858	-484	-115
Min	-4,883	-3,282	-4,976	-2,835	-3,325	-3,101	-5,244	-225	-825	-5,704	-3,114	-4,014	-5,749	-4,274	-761
Max	3,203	1,438	4,252	3,283	3,334	3,824	3,201	4,697	4,709	3,470	3,424	6,032	4,091	2,804	232

Table I-48a. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, for 2020 OCAP Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-	VAMP	VAMP	Post-	Jun	Jul	Aug	Sep	taf/yr
							VAMP	4/16-	5/1-	VAMP					
							4/1-4/15	4/30	5/15	5/16-5/31					
1922	9,197	8,371	12,287	11,991	12,200	13,100	9,837	3,000	3,000	3,000	11,500	12,866	5,521	10,699	7,059
1923	10,005	10,839	12,287	12,287	8,406	6,918	10,188	1,500	1,500	4,636	6,498	12,651	12,139	9,876	6,703
1924	9,592	4,983	7,589	7,392	8,106	1,100	1,783	1,100	1,230	1,902	1,100	961	4,145	4,000	3,126
1925	5,080	3,810	9,086	8,276	9,527	1,100	9,341	2,250	2,250	2,250	5,113	6,627	1,700	7,283	3,937
1926	6,077	4,207	5,057	10,525	13,100	4,801	8,343	1,500	1,500	1,694	2,738	8,005	5,165	5,470	4,295
1927	5,737	13,100	12,287	9,089	5,685	9,417	11,150	3,000	3,000	3,000	7,680	8,957	11,639	10,248	6,282
1928	9,434	11,923	11,177	12,287	10,381	13,100	10,503	1,500	1,500	7,123	6,134	7,453	7,815	8,840	6,574
1929	6,483	8,006	8,422	8,221	8,337	3,594	3,917	1,500	1,100	1,100	2,008	4,026	1,215	3,908	3,486
1930	4,495	2,278	10,484	12,287	7,878	10,421	5,519	1,500	1,500	1,694	2,633	8,979	7,653	7,735	4,838
1931	5,591	3,411	3,074	7,906	5,528	2,203	1,100	1,100	1,399	1,399	1,568	2,476	5,248	3,907	2,617
1932	3,758	2,464	12,287	12,287	9,534	5,578	5,304	2,250	2,250	2,250	4,653	8,438	3,432	6,753	4,534
1933	5,938	3,665	5,555	4,418	5,100	5,164	2,680	1,300	1,500	1,694	1,100	4,050	1,033	4,059	2,634
1934	4,785	1,502	9,697	10,387	4,705	1,719	1,100	1,100	1,100	1,100	1,100	3,640	903	3,931	2,698
1935	4,271	5,726	6,803	12,287	6,302	6,992	8,638	3,000	1,824	468	5,909	9,601	11,270	10,282	5,221
1936	8,369	5,649	8,142	12,287	11,685	9,367	9,567	1,500	1,500	1,694	7,238	10,211	11,521	8,676	6,044
1937	6,674	4,699	9,035	10,057	11,754	10,253	6,639	4,255	5,552	3,989	6,537	5,921	8,086	8,366	5,513
1938	7,706	13,100	9,958	8,893	7,700	9,229	7,350	8,800	10,009	8,641	11,500	12,600	10,136	11,051	7,202
1939	13,100	8,637	10,210	8,361	8,155	6,302	5,615	2,250	1,425	1,425	3,869	9,183	8,961	8,966	5,504
1940	6,095	5,371	5,429	12,287	12,231	13,100	11,150	3,000	3,000	3,000	5,790	13,061	12,535	9,283	6,346
1941	10,045	6,787	12,287	12,287	12,200	13,100	11,150	4,994	5,189	9,145	7,699	12,600	10,590	11,504	7,511
1942	11,022	9,092	12,287	8,999	8,302	10,794	11,150	3,000	3,000	3,000	11,500	7,811	12,082	11,908	6,876
1943	12,185	11,782	12,223	11,070	10,400	9,895	11,008	1,500	1,500	1,694	5,131	8,668	12,675	10,248	6,768
1944	8,562	6,516	9,251	8,908	13,100	9,183	5,704	3,000	3,000	3,000	6,322	10,148	8,656	9,021	5,837
1945	7,854	10,881	12,266	8,351	13,100	10,726	7,024	1,500	1,500	4,455	7,563	12,327	10,632	9,234	6,638
1946	8,965	10,034	12,287	12,287	6,811	8,540	6,971	3,000	3,000	3,000	7,175	13,100	12,874	9,157	6,614
1947	9,845	8,350	11,812	6,796	10,298	8,279	5,883	1,500	1,100	1,100	5,170	9,880	5,933	7,962	5,370
1948	6,332	6,756	5,218	8,366	4,572	6,229	10,305	1,500	1,500	1,694	8,350	12,911	11,816	9,739	5,311
1949	10,773	6,934	9,241	6,729	7,502	13,100	6,105	1,500	1,500	5,253	5,619	9,521	6,996	7,823	5,534
1950	5,321	6,258	6,260	12,287	13,100	8,553	8,564	1,500	1,500	1,694	7,535	11,492	11,482	8,978	5,888
1951	8,967	13,100	10,459	8,345	7,254	10,181	7,483	1,500	1,500	1,694	5,747	10,056	13,100	9,742	6,229
1952	10,301	9,346	12,287	12,287	12,231	13,100	11,150	5,041	6,987	6,493	10,576	12,247	11,767	13,100	7,968
1953	13,100	6,684	6,238	7,417	7,557	9,418	7,538	2,250	2,250	2,250	9,505	9,844	11,071	12,532	6,070
1954	10,619	11,539	7,298	12,287	12,200	13,100	11,150	2,250	2,250	6,148	5,701	12,370	10,642	11,018	7,099
1955	9,811	9,702	12,287	12,287	7,254	4,710	5,358	1,500	1,500	1,694	5,891	7,961	1,879	7,224	5,073
1956	5,913	7,388	12,287	12,287	10,987	9,998	9,086	1,500	1,500	1,694	9,939	6,830	11,912	12,844	6,462
1957	12,418	8,610	6,893	9,367	12,200	13,100	8,937	2,250	2,250	6,813	7,320	10,158	11,538	9,587	6,717
1958	12,707	9,165	12,287	12,287	11,524	12,526	7,969	7,491	6,595	6,298	11,494	12,600	11,982	13,100	8,081
1959	13,100	8,393	8,330	11,616	10,911	4,210	5,113	2,250	2,250	2,250	5,575	10,960	12,529	8,407	6,032
1960	8,247	3,372	6,503	7,550	13,100	8,573	1,100	1,100	1,500	1,694	3,795	10,979	3,403	5,079	4,404
1961	5,525	7,320	10,627	8,043	13,100	6,471	5,302	1,500	1,100	2,683	5,768	11,638	5,873	7,538	5,239
1962	5,774	5,832	10,417	6,208	13,100	10,837	6,253	2,250	1,989	1,989	5,559	12,257	12,957	9,841	5,962
1963	13,100	11,148	12,287	12,254	11,907	10,351	11,150	1,500	1,500	1,694	7,562	7,995	12,151	10,959	7,093
1964	10,716	13,100	9,242	12,287	5,684	4,905	5,238	1,500	1,500	3,324	5,399	11,967	10,602	7,965	5,914
1965	6,129	9,748	12,287	12,287	12,200	8,706	11,150	3,000	3,000	3,997	7,274	7,359	12,663	10,217	6,591
1966	7,989	13,100	12,287	12,287	11,175	10,947	6,445	2,250	2,250	2,250	5,384	10,986	11,825	9,394	6,756
1967	8,470	10,496	12,287	12,287	12,200	13,100	10,708	6,446	7,290	6,645	11,500	12,600	12,094	13,100	8,062
1968	13,100	10,405	9,998	7,484	10,307	9,283	7,002	2,250	2,250	2,250	5,505	8,513	11,452	9,050	6,152
1969	8,538	9,002	12,287	12,287	12,200	11,282	4,517	9,053	8,892	7,538	9,091	11,934	6,959	13,100	7,334
1970	13,100	9,432	6,636	7,033	8,027	10,103	7,514	1,500	1,500	1,694	4,629	6,865	13,100	12,065	5,863
1971	9,875	13,100	12,287	12,287	4,431	13,100	9,458	2,250	2,250	2,250	8,079	12,196	11,997	11,995	7,120
1972	10,966	9,345	11,938	11,181	9,692	13,100	5,505	1,500	1,500	3,389	6,475	11,130	9,841	8,290	6,526
1973	8,195	13,100	12,287	10,774	10,359	10,938	8,583	3,000	3,000	3,000	6,563	11,841	10,833	9,589	6,835
1974	9,858	13,100	12,287	12,287	12,200	13,100	11,150	1,500	1,500	6,268	8,764	11,290	12,600	13,100	7,772
1975	11,266	9,069	10,450	10,950	11,665	12,009	10,163	3,000	3,000	3,000	10,545	12,070	12,600	13,100	7,436
1976	13,100	10,716	9,446	6,923	7,318	6,045	4,222	1,500	1,500	1,694	3,186	3,939	8,536	8,259	4,946
1977	5,410	6,393	3,667	3,825	3,082	1,490	1,100	1,100	1,188	1,188	1,425	3,441	6,711	4,105	2,529
1978	4,086	2,414	10,182	11,534	7,101	7,177	8,090	7,021	6,631	6,315	7,208	13,100	7,458	10,754	5,747
1979	9,471	6,802	8,722	12,287	13,100	10,860	8,340	3,000	3,000	3,000	5,823	11,101	9,284	8,466	6,301
1980	9,065	9,140	12,287	12,287	12,231	9,165	9,141	1,500	1,500	1,694	7,037	13,100	6,641	11,189	6,570
1981	9,533	5,601	8,668	12,287	10,432	12,095	7,306	2,250	2,250	3,747	5,695	12,478	8,819	9,423	6,212
1982	8,777	13,100	12,287	12,287	12,200	13,100	8,230	10,797	8,225	9,550	10,598	12,600	9,810	13,100	8,217
1983	13,100	12,179	7,546	4,587	4,898	7,173	2,164	9,369	7,173	5,801	6,876	13,100	13,100	8,686	6,269
1984	5,777	4,646	4,353	6,747	8,531	11,153	8,473	3,000	3,000	3,000	5,870	8,762	13,100	9,779	5,276
1985	10,517	13,100	12,287	10,029	9,192	6,613	5,530	1,500	1,500	1,694	4,658	13,100	12,462	10,162	6,478
1986	9,467	6,886	12,172	12,287	11,765	12,749	6,430	5,852	4,569	4,569	6,065	10,370	6,741	9,700	6,571
1987	8,482	5,391	6,567	7,986	10,062	7,233	5,901	1,500	1,169	1,169	3,132	8,140	7,711	7,242	4,626
1988	5,678	6,096	10,212	12,287	4,970	1,296	4,114	1,500	1,100	1,100	1,100	5,114	1,101	3,712	3,355
1989	4,433	4,534	6,038	6,733	3,137	13,100	8,225	1,500	1,500	1,694	4,286	10,092	7,926	9,539	4,627
1990	7,883	6,400	7,640	11,983	7,573	4,887	1,100	1,100	1,500	1,694	1,100	1,436	5,381	4,245	3,695
1991	4,513	1,372	2,902	1,992	2,133	12,172	5,739	1,500	1,500	1,694	1,990	1,371	4,163	4,110	2,545
1992	4,785	1,688	2,262	6,336	13,100	7,687	5,348	1,500	1,100	1,100	1,631	4,139	1,944	4,487	3,134

Table I-48b. CALSIM Simulated Combined CVP Tracy and SWP Banks Pumping, 2020 OCAP minus 2020 SDIP 2A Scenario

Year	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1-4/15	VAMP 4/16-4/30	VAMP 5/1-5/15	Post-VAMP 5/16-5/31	Jun	Jul	Aug	Sep	taf/yr
1922	-529	770	4,465	-160	-554	299	-486	0	0	-5,049	0	4,406	-5,495	597	59
1923	-1,897	1,214	1,742	775	1,250	539	-288	0	0	-351	-927	1,898	-273	-1,026	177
1924	1,190	41	801	-1,436	1,344	0	683	0	130	802	0	-4,161	384	-192	-83
1925	465	86	1,190	2,131	-483	0	-618	0	0	-2,490	103	898	-5,465	-1,062	-224
1926	-138	215	-925	1,546	3,571	89	2,579	0	0	-4,280	-1,218	1,112	-279	-18	165
1927	115	381	4,485	-2,406	-7,040	-3,250	-1	0	0	-3,999	-964	-601	-419	724	-637
1928	-29	872	-647	-444	-271	335	57	0	0	5,623	1,083	-1,484	-3,711	-506	-116
1929	-92	930	-71	-422	1,269	1,147	2,152	0	0	0	-269	-988	-1,943	-413	4
1930	303	65	678	1,751	340	-1,880	-295	0	0	-3,608	-896	484	1,410	-1,089	-50
1931	1,061	-2,164	-1,079	-608	814	-235	0	0	299	299	-1,926	-1,055	2	51	-294
1932	439	-640	4,490	-424	458	-803	997	0	0	-2,230	2,281	3,243	-5,549	-954	111
1933	129	-171	-734	1,674	-1,182	1,479	479	-200	0	-2,110	0	754	-167	54	61
1934	140	-15	580	3,979	-1,575	-622	0	0	0	0	0	-67	-3,609	63	-60
1935	806	-1,142	-426	4,484	967	-3,525	-538	0	700	-656	-2,571	-284	-968	1,955	-62
1936	405	1,083	2,471	788	788	-1,005	3,203	0	0	-3,360	-497	-554	175	-1,054	145
1937	-574	-1,334	4,387	838	-979	96	-899	1,255	2,552	-2,667	-1,195	-4,096	-4,443	-1,148	-505
1938	12	2,251	5,252	-353	-893	-37	-58	7,300	8,509	1,243	0	-500	-2,403	-1,747	610
1939	209	-414	-760	-607	2,073	1,042	258	0	-825	-825	-1,651	-2,005	-830	-364	-254
1940	360	361	4,329	1,745	-506	338	-1	0	0	-4,565	-1,898	1,240	226	-2,425	98
1941	-362	-492	-434	-438	-543	306	-1	3,494	3,689	-406	3,330	-500	-2,349	-1,486	19
1942	-1,862	498	-439	-3,732	-3,934	3,948	-1	0	0	-5,049	549	32	-263	-555	-492
1943	-169	-121	-504	-1,662	2,024	-2,914	-10	0	0	194	-2,203	-684	119	-444	-404
1944	-154	718	1,637	-436	3,990	507	1,343	0	0	-1,740	25	-1,901	-2,698	-692	22
1945	1,433	-297	4,684	387	367	213	-523	0	0	-149	-121	935	-1,912	-594	293
1946	-1,347	739	1,745	-439	3,901	-584	73	0	0	-3,753	28	0	-178	-2,417	-48
1947	1,687	18	1,779	-502	2,170	299	-145	0	0	0	-395	-2,072	-3,112	-1,773	-130
1948	-44	-242	-273	600	-1,759	-355	-227	0	0	-7,343	-182	-176	-442	-1,752	-509
1949	3,638	1,206	1,087	-1,763	1,658	2,547	-259	0	0	2,507	-960	-1,529	-769	-677	336
1950	1,111	830	1,588	4,469	675	114	3,111	0	0	-3,253	-584	-943	-968	-1,643	274
1951	460	376	266	-861	-2,147	608	261	0	0	-3,664	-1,258	-653	1,027	-964	-286
1952	526	675	-438	778	-517	290	-1	2,041	3,987	-1,556	1,476	2,140	482	106	468
1953	209	-3,282	-6,489	-3,826	1,658	1,040	-780	0	0	-6,262	-289	341	-935	-455	-964
1954	-2,258	1,381	1,508	-443	-551	315	-1	0	0	-2,025	41	1,352	-350	-418	-28
1955	-695	57	-440	-444	1,837	328	1,171	0	0	-4,195	-245	286	-4,518	-287	-362
1956	1,613	-186	4,480	788	-1,744	-2,802	-184	0	0	-7,857	295	-2,621	1,152	897	-131
1957	-473	528	-420	-950	-554	307	-1	0	0	4,563	337	224	-201	-1,380	-10
1958	492	344	-438	778	-1,226	-276	-3,182	4,491	3,595	-1,751	80	3,321	-906	106	236
1959	209	-986	-1,046	-1,116	645	-508	28	0	0	-3,749	-1,449	-1,122	375	-1,928	-539
1960	2,097	-641	244	914	658	-433	0	0	0	-1,814	-1,175	646	-4,291	-717	-222
1961	764	-492	908	779	2,558	-769	64	0	0	1,583	2,258	-428	-5,242	-1,509	-36
1962	-514	182	-7	20	358	-532	-291	0	561	-1,314	-548	1,637	97	-1,079	-57
1963	238	657	1,744	258	-841	-1,717	-1	0	0	-7,857	677	-1,658	-927	592	-308
1964	-1,631	335	-559	-445	954	881	-2,397	0	0	1,824	207	662	-352	-1,188	-88
1965	246	143	1,750	-432	-533	918	-1	0	0	-1,280	977	-1,975	-36	276	42
1966	-436	338	-439	-444	346	-261	4,195	0	0	-3,999	-1,106	-55	378	-1,664	-205
1967	-31	-252	4,469	779	-233	1,833	3,301	4,946	5,790	-753	0	-500	-965	116	716
1968	229	-609	-2,271	-5,246	3,521	-2,050	5,577	825	0	-3,267	-1,218	-2,642	-799	-2,354	-752
1969	1,211	736	781	4,459	-552	-1,533	-3,533	6,053	5,892	-511	30	2,049	-5,413	1,933	460
1970	209	-1,356	-4,753	-1,138	2,543	-1,095	-145	0	0	194	-1,962	-3,446	54	1,466	-593
1971	-267	470	-437	-441	-1,150	306	-111	0	0	0	-267	1,587	-1,076	-996	-135
1972	-1,919	772	-527	-924	522	318	4,005	0	0	-2,044	566	412	-956	-394	-82
1973	814	355	-433	829	-2,382	-1,861	-117	0	0	-2,918	-1,448	2,255	-1,208	-2,209	-401
1974	-1,137	338	-439	2,132	-552	305	-1	0	0	-147	-535	2,128	-277	112	126
1975	-1,613	1,528	-1,587	1,448	-1,087	-781	-127	0	0	-4,838	1,079	2,556	-128	110	-62
1976	218	-1,969	-2,600	-2,447	1,092	1,048	1,269	0	0	-905	-644	-4,158	339	649	-515
1977	-265	1,766	1,075	1,204	1,169	-501	-225	-225	-312	-312	-1,457	-3,876	1,900	-230	9
1978	237	40	2,664	3,733	-3,589	-953	682	5,521	5,131	-282	-2,707	5,599	-3,410	-961	397
1979	532	343	-553	-442	2,537	-1,909	-533	0	0	-4,197	-1,396	1,773	-1,647	-2,421	-353
1980	-322	377	-435	4,466	-511	-2,284	-84	0	0	-3,387	-783	3,901	-4,828	-210	-144
1981	-1,074	78	-992	-445	1,974	4,514	290	0	0	-1,502	-89	-573	-2,845	-987	-76
1982	675	349	4,470	780	-545	298	-2,921	7,797	5,225	1,501	555	-500	-3,268	106	529
1983	209	954	-2,212	-550	-586	1,948	-5,244	7,869	5,673	4,301	-1	0	55	-4,274	119
1984	-7,114	-5,777	-231	967	-4,221	4,391	148	0	0	0	-1,131	-1,366	444	-1,797	-927
1985	-902	337	-439	-557	2,086	1,233	4,030	0	0	-2,091	-888	53	-550	-1,579	-29
1986	651	424	4,491	783	-976	-11	-3,851	4,352	3,069	-326	-1,544	4,986	-5,731	-1,475	205
1987	-1,635	-451	-758	-1,098	3,897	2,221	2,215	0	69	-778	-3,116	-1,782	-1,119	128	-201
1988	1,034	1,103	251	1,749	2,308	-103	-305	0	-400	-1,805	-1,421	-1,246	-3,151	-1,189	-130
1989	1,040	-491	332	422	1,559	2,562	-1	0	0	-1,963	-1,566	-1,301	-3,257	-293	-128
1990	375	3,409	995	804	1,550	-546	0	0	0	-1,230	-353	-4,081	2,834	-36	250
1991	294	272	-671	-989	-405	1,918	4,239	0	0	194	-512	-2,752	1,849	-1,075	10
1992	556	-271	-1,671	1,412	2,559	847	41	0	0	0	3	-70	-3,476	348	0
1993	1,007	-989	-105	4,476	-917	-3,387	-1	0	0	-5,425	323	-381	-1,755	-377	-294
1994	-838	90	-1,156	-854	1,444	2,881	206	0	0	-2,048	15	-1,268	46	-122	-53
Avg	-9	86	534	274	272	70	250	761	731	-1,659	-428	-125	-1,349	-660	-83
Min	-7,114	-5,777	-6,489	-5,246	-7,040	-3,525	-5,244	-225	-825	-7,857	-3,116	-4,161	-5,731	-4,274	-964
Max	3,638	3,409	5,252	4,484	3,990	4,514	5,577	7,869	8,509	5,623	3,330	5,599	2,834	1,955	716

Table I-49a. CALSIM Simulated Delta Outflow, for 2020 OCAP Conditions (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	4,000	4,500	9,412	9,204	38,411	27,161	23,974	51,288	32,175	8,000	4,000	3,759	12,921
1923	4,000	7,428	28,475	27,566	15,126	11,601	25,835	16,092	8,208	6,500	4,000	3,432	9,555
1924	4,242	6,974	4,500	7,077	10,212	10,098	5,864	4,286	5,134	6,761	3,529	3,000	4,326
1925	3,613	5,265	7,397	7,042	66,914	27,187	21,113	16,175	8,278	5,000	5,366	3,000	10,373
1926	4,000	5,439	5,287	9,932	36,410	9,727	22,329	10,601	5,112	5,000	5,308	3,000	7,225
1927	4,000	13,178	7,485	25,559	127,670	39,893	46,032	27,007	9,964	10,397	4,000	3,477	18,695
1928	4,577	7,987	6,714	13,865	18,936	95,246	26,483	16,409	6,591	8,000	4,000	3,000	12,864
1929	5,135	5,716	6,254	6,629	9,969	9,543	6,940	6,569	6,034	4,000	4,873	3,000	4,490
1930	3,609	5,274	8,900	12,599	13,928	23,223	10,954	10,364	5,758	5,000	5,852	3,000	6,538
1931	4,000	5,595	4,500	7,619	7,673	6,162	6,820	4,376	5,463	5,646	3,292	3,000	3,858
1932	4,115	4,755	14,141	14,035	17,067	11,400	11,197	11,590	10,196	5,000	5,413	3,000	6,757
1933	4,000	5,416	4,907	11,500	8,100	10,073	10,038	5,715	6,043	4,000	5,210	3,000	4,701
1934	3,178	6,160	6,680	10,913	14,070	11,400	9,995	5,616	6,896	4,000	4,805	3,000	5,198
1935	3,447	6,767	4,794	24,576	11,400	24,306	52,281	26,383	10,761	6,500	4,000	3,000	10,749
1936	5,261	5,128	5,609	31,059	74,945	25,841	23,997	18,381	9,800	6,500	4,354	3,000	12,774
1937	4,656	6,251	4,845	7,788	41,653	47,404	26,530	19,873	9,471	6,500	4,736	3,000	10,900
1938	4,000	14,112	55,539	29,504	145,602	166,723	74,124	69,240	41,332	8,000	4,000	3,916	36,761
1939	8,950	4,500	5,656	7,929	9,693	11,206	10,019	9,671	5,118	5,000	3,929	3,000	5,105
1940	5,924	4,500	4,500	29,611	59,101	101,470	67,787	18,629	7,304	8,000	4,000	3,076	18,908
1941	4,845	7,238	36,629	95,767	121,365	87,580	73,515	43,374	14,893	8,000	4,835	4,461	29,985
1942	4,519	5,552	54,603	79,476	139,539	22,177	50,475	39,055	17,595	8,406	4,000	4,534	25,457
1943	4,945	5,571	21,499	84,358	55,997	86,110	29,530	23,411	8,012	10,317	4,000	3,000	20,287
1944	4,000	7,559	4,666	7,391	19,276	16,003	10,748	11,255	7,393	5,000	3,500	3,000	6,004
1945	6,876	6,056	7,622	6,813	43,543	24,601	14,119	16,572	8,953	6,500	4,320	3,001	8,840
1946	4,000	8,323	61,416	41,632	25,082	16,111	13,124	15,006	8,699	6,500	4,000	3,000	12,510
1947	5,691	5,828	6,617	6,512	12,780	15,138	11,196	8,719	6,022	5,000	3,594	3,068	5,418
1948	6,332	4,500	4,603	8,128	11,209	11,320	26,436	28,897	11,466	6,500	4,336	3,419	7,685
1949	5,068	5,347	6,391	6,722	9,154	38,926	11,880	13,806	7,483	5,000	3,500	3,000	7,042
1950	6,031	4,509	5,197	11,677	26,735	15,253	17,982	15,629	10,651	6,500	5,897	3,012	7,708
1951	4,000	39,616	91,212	74,192	71,808	26,818	15,681	21,065	6,089	10,149	4,000	3,103	22,062
1952	4,721	7,534	33,105	84,516	73,130	62,651	66,585	68,244	38,422	8,000	4,000	6,890	27,629
1953	8,115	7,097	43,256	101,694	22,385	16,508	15,665	24,449	13,740	10,577	4,000	4,594	16,519
1954	4,109	7,686	4,500	23,536	53,431	41,800	39,027	21,701	6,134	8,199	4,000	3,786	12,972
1955	5,113	6,664	13,099	11,795	11,400	7,790	12,554	12,247	6,972	5,000	4,904	3,000	6,058
1956	4,460	5,847	91,778	164,163	83,299	35,756	19,884	42,560	14,158	8,000	4,000	5,063	29,039
1957	5,260	4,500	6,337	6,335	26,481	38,412	18,855	16,648	8,849	8,796	4,000	3,218	8,856
1958	5,540	6,944	12,397	30,827	171,809	92,066	96,929	49,747	26,460	8,000	4,000	6,800	30,166
1959	5,687	4,500	6,115	28,079	50,892	20,734	8,875	9,613	6,998	7,906	4,000	3,190	9,281
1960	5,115	5,628	4,500	7,430	20,120	15,144	11,400	11,399	5,575	5,000	4,347	3,000	5,937
1961	4,880	6,405	7,560	6,843	17,916	12,010	10,186	9,355	5,805	5,109	4,025	3,000	5,569
1962	6,026	4,500	7,973	6,000	43,503	19,624	11,846	12,844	7,126	6,500	4,000	3,000	7,865
1963	22,257	4,876	15,622	11,175	72,822	25,203	91,575	33,212	10,629	12,029	4,000	3,559	18,226
1964	4,800	13,067	4,915	15,375	11,193	7,922	17,324	8,515	5,924	5,000	5,108	3,000	6,160
1965	5,493	6,010	64,378	115,379	29,875	18,480	43,608	23,209	9,224	9,647	4,000	3,389	20,161
1966	4,000	10,051	9,193	24,598	20,842	20,886	11,796	12,490	5,786	7,201	4,000	3,247	8,062
1967	5,786	6,214	26,574	44,614	50,833	55,756	52,534	52,986	39,848	8,000	4,000	8,839	21,379
1968	9,815	4,500	8,844	26,449	58,512	31,972	13,715	9,272	6,328	7,314	4,000	3,000	11,013
1969	6,378	4,848	14,099	113,636	132,443	60,590	56,877	62,680	34,216	8,000	4,000	5,286	29,951
1970	9,261	5,698	55,152	208,631	84,521	35,380	15,338	14,142	5,621	13,532	4,000	3,116	27,385
1971	4,000	8,421	51,183	42,330	26,118	38,421	20,526	27,195	10,596	11,117	4,000	4,521	15,036
1972	4,313	6,629	7,197	7,553	16,480	23,234	10,483	9,707	10,617	6,500	4,000	3,000	6,621
1973	5,388	10,550	12,400	77,388	90,381	57,026	17,084	17,679	9,877	8,000	4,000	3,000	18,618
1974	4,787	49,176	61,039	123,234	35,468	104,659	70,428	26,655	11,686	8,387	4,000	7,610	30,704
1975	4,850	4,500	7,844	7,056	62,848	85,229	24,325	27,143	15,563	8,000	4,000	6,905	15,408
1976	7,167	4,586	5,139	7,621	8,362	9,548	7,495	4,210	4,668	7,628	3,000	3,000	4,382
1977	5,412	3,683	5,391	5,296	6,881	6,116	7,100	4,322	4,998	6,492	3,000	3,000	3,716
1978	3,874	5,201	7,400	62,227	57,657	68,406	40,024	23,108	14,711	8,000	4,519	3,661	17,907
1979	4,000	6,034	5,127	17,141	39,648	31,720	16,963	16,345	10,312	6,500	4,000	3,000	9,581
1980	5,248	6,636	10,162	95,623	130,966	56,210	20,090	20,034	8,834	8,000	4,817	4,171	22,207
1981	4,000	5,224	7,016	12,787	18,810	22,620	14,534	9,095	5,499	5,000	4,365	3,000	6,717
1982	5,976	22,508	80,142	75,140	97,337	85,335	135,179	49,409	18,867	8,000	5,326	5,860	35,289
1983	15,412	35,681	84,446	107,599	178,449	250,655	87,096	74,851	82,386	25,384	8,263	23,074	58,347
1984	24,914	80,387	155,944	67,431	38,123	31,589	16,917	13,291	8,266	11,517	4,000	3,000	27,641
1985	4,630	19,017	11,753	7,013	11,047	12,487	10,613	11,512	5,416	5,000	4,810	3,629	6,434
1986	5,301	5,327	7,723	14,545	204,192	147,088	24,179	15,613	9,339	8,000	5,608	3,785	26,420
1987	4,000	5,458	5,313	8,291	12,526	18,479	11,192	7,292	6,637	5,000	3,500	3,000	5,451
1988	5,865	4,500	8,266	19,963	11,187	7,887	7,504	6,637	6,822	4,000	4,819	3,000	5,475
1989	3,534	6,045	5,365	7,929	7,828	35,435	16,702	10,557	7,080	5,000	4,268	3,486	6,851
1990	5,664	5,082	5,056	10,013	11,400	7,796	9,868	6,536	4,000	4,927	4,301	3,000	4,664
1991	3,292	5,923	5,332	5,301	6,986	22,896	11,192	6,873	4,000	4,760	4,284	3,000	5,067
1992	3,362	5,471	4,970	5,303	24,694	14,163	10,367	5,775	6,732	4,000	4,681	3,000	5,542
1993	3,373	5,735	6,491	62,855	54,699	42,123	36,556	31,736	17,483	8,000	4,000	3,000	16,528
1994	4,000	6,983	5,487	7,831	15,254	11,011	8,881	8,057	4,000	6,656	3,685	4,008	5,142
Avg	5,119	9,128	20,433	35,688	47,481	38,884	27,491	20,740	11,686	7,279	4,305	3,903	13,941
Min	3,178	3,683	4,500	5,296	6,881	6,116	5,864	4,210	4,000	4,000	3,000	3,000	3,716
Max	24,914	80,387	155,944	208,631	204,192	250,655	135,179	74,851	82,386	25,384	8,263	23,074	58,347

Table I-49b. CALSIM Simulated Delta Outflow, 2020 OCAP minus 2020 SDIP 2A Scenario (cfs)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/yr
1922	0	0	-4,357	889	2,431	3,517	-645	-349	5,759	0	0	469	449
1923	-839	1,091	-361	2,731	2,203	930	-1,543	-1,842	-1,761	0	1,243	-366	83
1924	0	560	-1,281	2,622	-997	-3	-581	-325	226	-99	331	0	31
1925	-291	61	-180	-1,138	-1,405	6	-3,261	345	56	0	240	0	-328
1926	0	119	787	-377	-2,419	191	-2,164	33	46	24	1,501	0	-121
1927	-117	-444	-4,956	4,461	1,044	3,254	-1,354	3,075	-1,805	1,986	0	536	349
1928	-1,189	1,572	637	1,249	1,661	-3,362	313	-8	474	-86	0	0	66
1929	-217	315	828	1,142	-820	-789	37	-800	73	0	659	0	30
1930	-159	1	-1,121	-1,095	475	892	-431	1,027	-1,064	158	1,444	0	8
1931	-887	696	-1,806	-97	-276	40	9	-703	797	-808	388	0	-164
1932	-407	178	-5,167	1,243	670	0	0	-1,333	13	0	948	0	-240
1933	0	60	230	-1,889	769	-1,703	19	-300	40	0	233	0	-161
1934	-26	66	-1,159	-3,850	1,716	0	-1	-128	50	0	1,298	0	-135
1935	-682	438	165	-4,642	77	3,116	229	-367	-7	0	0	604	-69
1936	-290	-451	-851	598	657	1,626	-2,384	181	-928	0	1,702	-131	-12
1937	-1,210	876	-2,551	-133	2,455	3,312	-1,467	-1,937	-417	0	603	-24	-43
1938	-1,137	-452	2,556	3,803	1,733	-2,581	-4,172	-3,657	1,232	0	0	-977	-226
1939	46	0	822	1,399	931	-862	2	-151	-434	313	-470	0	94
1940	60	0	-5,604	-2,744	-962	-656	754	461	-1,895	0	691	-1,158	-671
1941	-212	1,353	3,962	2,758	4,255	-3,205	-3,213	-3,186	300	0	1,026	-888	161
1942	-833	1,016	300	-456	1,062	-2,163	-233	2,425	-5	322	0	-184	69
1943	75	-215	1,599	44	-1,430	1,282	-51	1,225	-285	-190	0	-204	124
1944	0	86	339	1,349	-1,504	802	-633	363	-7	0	2,048	0	182
1945	-1,856	2,077	-4,782	-404	-359	1,976	-1,630	-809	-293	0	1,283	-135	-301
1946	-1,332	2,046	-4,289	1,146	-216	-1,117	164	1,001	-16	0	0	-1,124	-231
1947	434	1,399	-1,621	810	-531	414	0	-852	-408	0	1,083	0	46
1948	-1,822	938	-3	-759	1	-872	-1,400	1,576	-379	0	65	-764	-207
1949	1,815	-889	-543	2,273	1,140	-1,317	-648	-1,128	38	0	770	0	89
1950	-902	1,242	-941	-3,466	755	-15	-3,666	-925	-1,091	0	2,297	-691	-451
1951	-896	-194	-934	9,551	3,066	869	619	1,162	-2,408	1,889	0	-361	747
1952	-329	1,317	1,692	-955	-1,077	341	-3,446	-1,296	-1,599	0	0	-428	-343
1953	-2,777	3,078	7,321	510	642	1,900	-1,863	514	-628	1,740	0	-104	631
1954	-1,043	1,255	-937	2,332	-1,637	-37	-765	130	0	0	0	-75	-39
1955	-186	241	555	683	0	19	227	1,347	-53	0	1,538	0	268
1956	-756	1,016	834	-3,280	1,244	3,524	-775	3,009	896	0	0	582	379
1957	-547	0	639	917	1,068	-1,188	0	-4,240	546	-116	37	-641	-223
1958	432	502	980	-86	-958	131	-1,975	-182	-9	0	0	-274	-79
1959	-1,164	0	1,589	2,488	-7	-212	43	459	-1,443	810	0	-828	111
1960	316	562	-1,473	-757	1,602	-945	0	1,047	-51	311	2,681	0	195
1961	-1,526	1,860	-417	-280	-1,176	-1,572	17	820	-614	293	1,088	0	-88
1962	-1,276	1,637	-819	0	-3,903	-1,223	-1,024	984	196	540	-259	-414	-320
1963	643	152	-2,121	1,306	-226	-266	2,783	3,354	-140	2,815	0	452	533
1964	-718	1,460	417	2,047	-4	-21	-2,533	-703	320	0	188	0	29
1965	-634	1,478	-10,238	6,124	728	-173	-749	107	1,742	-792	0	283	-140
1966	0	917	-226	1,136	606	-521	-2,954	1,173	-1,989	666	0	-673	-109
1967	190	298	-3,133	-355	3,288	-2,450	-3,205	-4,516	-1,301	0	0	139	-691
1968	-321	-328	2,825	6,313	-3,999	2,840	-97	416	-1,970	488	-214	-1,032	325
1969	1,361	-672	-985	-4,258	844	3,283	-1,362	-2,496	-361	0	0	1,195	-215
1970	-1,600	787	3,574	-5,042	3,403	2,780	-343	356	-2,185	310	0	946	165
1971	0	458	3,118	982	-434	2,438	-682	-2,008	-565	1,094	0	-607	239
1972	-929	485	927	783	663	-1,730	-784	242	-287	0	534	0	-7
1973	-124	1,511	-1,208	-4,360	4,814	3,078	-289	136	-29	0	0	-1,083	122
1974	-453	-867	-2,150	-4,520	2,101	-3,070	3,106	-766	-996	308	217	-701	-493
1975	-866	0	2,441	-505	2,846	140	-658	1,576	-1,747	0	0	-95	181
1976	-1,265	-1,064	-188	1,952	320	-1,434	-513	-274	761	3,451	-944	-418	25
1977	497	-281	-1,734	-2,210	250	63	0	-370	114	2,482	-1,110	0	-143
1978	-186	23	-2,359	-3,975	3,593	-2,483	-3,252	-2,951	-255	0	715	-169	-709
1979	0	575	-1,258	1,656	-749	2,874	-1,280	279	-12	0	171	-720	102
1980	-284	1,521	1,959	-13,271	1,402	3,487	103	1,517	-1,537	0	1,263	39	-240
1981	-14	-218	1,127	801	-822	-1,641	700	1,047	-242	0	1,103	-312	99
1982	-399	-279	-9,014	456	-4,040	3,587	-6,384	-1,220	-70	0	1,655	-2,071	-1,052
1983	-175	-909	696	-1,203	-3,080	-5,398	4,289	-7,125	1,554	1,253	1,437	3,941	-290
1984	6,218	4,020	-4,414	1,451	5,480	-4,240	294	431	-146	-1,432	0	-814	393
1985	-541	5,480	243	813	70	934	-2,785	654	-130	0	-296	-627	230
1986	581	75	-4,303	-2,717	-7,465	6,764	-975	-2,148	-137	0	1,475	-819	-547
1987	0	99	402	1,478	-3,672	-2,882	667	-533	-734	0	148	0	-287
1988	-544	0	-580	-1,527	2	11	-727	162	15	0	1,339	0	-112
1989	-1,026	1,139	-61	1,039	-58	-6,488	-91	180	277	0	-1,260	-191	-404
1990	1,533	-1,594	981	-34	0	-948	18	-1,556	0	430	-179	0	-80
1991	-181	-280	708	801	-487	-2,274	-243	-1,081	0	575	-41	0	-150
1992	-489	315	2,194	-1,293	-2,578	-1,125	10	20	19	0	1,253	0	-93
1993	-968	1,098	122	-1,450	737	-114	-359	1,318	-493	0	0	155	-2
1994	-333	142	549	968	-3,480	5	503	1,945	0	-2,439	542	499	-49
Avg	-312	556	-575	27	164	-9	-749	-221	-238	223	444	-141	-51
Min	-2,777	-1,594	-10,238	-13,271	-7,465	-6,488	-6,384	-7,125	-2,408	-2,439	-1,260	-2,071	-1,052
Max	6,218	5,480	7,321	9,551	5,480	6,764	4,289	3,354	5,759	3,451	2,681	3,941	747

Table I-50a. CALSIM-Simulated Monthly Range of Sacramento River Flow at Keswick, for 2001 Scenario A Compared to 2001 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	2,818	3,000	3,000	3,000	3,000	3,000	3,250	4,204	6,928	8,864	7,549	3,163	
10	4,625	3,250	3,000	3,000	3,000	3,000	5,000	7,000	9,000	11,000	8,828	5,115	
20	4,875	3,658	3,270	3,250	3,250	3,250	5,500	7,154	9,465	12,214	10,000	6,000	
30	5,070	3,900	3,907	3,304	3,250	3,250	5,500	8,000	9,694	12,814	10,120	6,319	
40	5,294	4,192	4,275	3,420	3,250	3,410	5,500	8,000	10,025	13,233	10,549	6,587	
50	5,762	4,509	4,275	3,420	4,223	3,600	5,914	8,121	10,382	13,758	10,888	7,067	
60	6,244	4,996	4,275	3,600	6,683	4,547	6,813	8,406	10,816	14,054	11,144	7,539	
70	6,948	5,385	6,362	5,959	8,662	7,392	8,204	8,699	11,265	14,622	11,305	7,860	
80	8,113	6,041	10,773	12,050	18,932	12,866	9,434	9,383	11,995	15,000	11,928	8,790	
90	8,691	8,011	18,147	20,279	25,869	17,802	11,792	10,696	14,308	15,000	12,730	11,252	
Max	9,869	30,557	26,961	52,774	53,770	45,897	25,689	14,499	15,985	17,672	14,243	12,549	
Avg	6,204	5,425	7,119	7,860	10,109	8,153	7,624	8,537	10,863	13,467	10,852	7,539	6,263
B: 2020 Baseline													
Min	2,818	2,905	3,000	3,000	3,000	3,000	3,250	4,154	6,863	8,800	7,478	3,222	
10	4,625	3,250	3,000	3,000	3,000	3,000	5,000	7,000	9,000	11,005	8,790	5,170	
20	4,875	3,748	3,250	3,250	3,250	3,250	5,500	7,181	9,597	12,510	10,000	6,000	
30	4,875	3,885	3,705	3,250	3,250	3,250	5,500	8,000	9,794	13,594	10,532	6,330	
40	5,002	4,005	3,928	3,420	3,250	3,410	5,500	8,000	10,129	13,860	10,814	6,629	
50	5,275	4,727	4,275	3,420	4,223	3,600	5,909	8,121	10,383	14,274	11,207	7,206	
60	5,700	4,977	4,275	3,600	6,230	4,788	6,817	8,406	10,816	14,940	11,392	7,669	
70	6,479	5,208	5,392	5,961	9,024	7,602	8,204	8,606	11,252	15,000	11,759	8,197	
80	7,507	5,732	9,376	12,879	18,779	12,877	9,433	9,226	12,025	15,000	12,146	9,157	
90	8,727	7,101	17,572	20,279	25,550	18,038	11,792	10,549	13,870	15,285	13,133	11,210	
Max	10,613	29,196	26,961	52,774	53,770	45,897	25,133	14,499	16,077	18,777	15,498	12,549	
Avg	6,006	5,239	6,834	7,882	10,090	8,162	7,611	8,514	10,877	13,873	11,128	7,579	6,266
Comparison: B - A													
Min	0	-95	0	0	0	0	0	-50	-65	-64	-71	59	
10	0	0	0	0	0	0	0	0	0	5	-38	55	
20	0	90	-20	0	0	0	0	27	132	296	0	0	
30	-195	-15	-202	-54	0	0	0	0	100	780	412	11	
40	-292	-187	-347	0	0	0	0	0	104	627	265	42	
50	-487	218	0	0	0	0	-5	0	1	516	319	139	
60	-544	-19	0	0	-453	241	4	0	0	886	248	130	
70	-469	-177	-970	2	362	210	0	-93	-13	378	454	337	
80	-606	-309	-1,397	829	-153	11	-1	-157	30	0	218	367	
90	36	-910	-575	0	-319	236	0	-147	-438	285	403	-42	
Max	744	-1,361	0	0	0	0	-556	0	92	1,105	1,255	0	
Avg	-198	-186	-285	22	-19	9	-13	-23	14	406	276	40	3

Table I-50b. CALSIM-Simulated Monthly Range of Sacramento River Flow at Keswick, for 2020 Scenario A Compared to 2020 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	3,393	2,905	3,000	3,000	3,000	3,000	3,250	4,147	6,996	9,022	7,611	4,509	
10	3,884	3,250	3,000	3,000	3,000	3,000	5,000	7,000	9,000	10,773	8,757	5,260	
20	4,875	3,417	3,250	3,250	3,250	3,250	5,037	7,031	9,086	11,215	10,000	6,000	
30	4,908	3,714	3,555	3,250	3,250	3,250	5,500	8,000	9,432	11,829	10,372	6,212	
40	5,231	3,919	4,046	3,418	3,250	3,250	5,500	8,000	9,899	12,545	10,651	6,500	
50	5,455	4,481	4,275	3,420	3,965	3,600	5,658	8,000	10,159	12,964	10,939	6,791	
60	6,078	4,619	4,275	3,600	6,167	4,402	6,922	8,341	10,523	13,375	11,189	7,274	
70	6,838	4,814	4,938	5,959	9,297	6,977	7,791	8,651	11,169	13,951	11,422	7,950	
80	7,333	5,646	9,126	12,400	18,779	12,366	9,721	9,100	11,487	15,000	11,695	8,394	
90	8,680	6,684	15,482	20,279	26,183	18,263	12,271	10,749	13,164	15,251	12,019	11,070	
Max	9,869	26,645	26,961	52,774	53,770	45,897	25,247	14,154	15,670	17,704	14,243	12,549	
Avg	6,019	4,972	6,644	7,828	10,016	8,040	7,550	8,414	10,618	13,049	10,820	7,422	6,120
B: 2020 Baseline													
Min	3,355	3,000	3,000	3,000	3,000	3,000	3,250	4,135	6,980	9,007	7,617	4,500	
10	3,880	3,250	3,000	3,000	3,000	3,000	5,000	7,000	9,000	10,780	8,756	5,264	
20	4,875	3,399	3,250	3,250	3,250	3,250	5,000	7,020	9,141	11,444	10,000	6,000	
30	4,875	3,666	3,573	3,250	3,250	3,250	5,500	8,000	9,432	12,427	10,481	6,093	
40	5,078	3,900	4,003	3,418	3,250	3,250	5,500	8,000	9,878	13,004	10,775	6,500	
50	5,316	4,295	4,275	3,420	3,970	3,600	5,689	8,048	10,134	13,425	11,130	6,654	
60	5,775	4,749	4,275	3,600	5,906	4,401	6,922	8,360	10,510	14,142	11,399	7,158	
70	6,462	5,005	4,364	5,961	9,080	6,977	7,814	8,664	11,166	14,667	11,745	7,681	
80	7,515	5,535	7,722	12,579	18,779	12,366	9,113	9,095	11,538	15,000	12,239	8,462	
90	8,710	6,483	15,115	20,279	25,104	17,407	12,271	10,749	13,362	15,501	12,822	10,463	
Max	10,488	25,758	26,961	52,774	53,770	45,897	25,246	14,154	15,722	18,033	16,380	12,549	
Avg	5,993	4,919	6,435	7,795	9,837	8,012	7,535	8,415	10,632	13,403	11,154	7,304	6,124
Comparison: B - A													
Min	-38	95	0	0	0	0	0	-12	-16	-15	6	-9	
10	-4	0	0	0	0	0	0	0	0	7	-1	4	
20	0	-18	0	0	0	0	-37	-11	55	229	0	0	
30	-33	-48	18	0	0	0	0	0	0	598	109	-119	
40	-153	-19	-43	0	0	0	0	0	-21	459	124	0	
50	-139	-186	0	0	5	0	31	48	-25	461	191	-137	
60	-303	130	0	0	-261	-1	0	19	-13	767	210	-116	
70	-376	191	-574	2	-217	0	23	13	-3	716	323	-269	
80	182	-111	-1,404	179	0	0	-608	-5	51	0	544	68	
90	30	-201	-367	0	-1,079	-856	0	0	198	250	803	-607	
Max	619	-887	0	0	0	0	-1	0	52	329	2,137	0	
Avg	-26	-53	-209	-33	-179	-28	-15	1	14	354	334	-118	4

Table I-51a. CALSIM-Simulated Monthly Range of Feather River Flow below Thermalito, for 2001 Scenario A Compared to 2001 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	894	908	894	894	869	748	756	748	767	1,234	992	756	
10	1,256	908	1,001	894	900	748	756	909	2,054	1,640	1,637	1,008	
20	1,708	1,415	1,708	894	1,165	1,143	1,008	992	3,369	2,511	3,380	1,008	
30	1,708	1,697	1,708	1,203	1,634	1,708	1,008	992	4,076	3,408	3,986	1,008	
40	1,708	1,697	1,708	1,708	1,693	2,809	1,008	1,044	4,387	4,964	5,460	1,008	
50	1,892	1,974	2,016	1,708	2,812	4,332	1,449	1,688	4,989	5,851	5,856	1,049	
60	2,206	2,208	2,815	2,424	4,873	5,289	2,147	2,492	5,480	6,556	6,297	1,321	
70	2,726	2,500	3,562	3,932	8,589	6,663	3,155	3,210	5,996	7,264	6,747	1,621	
80	3,637	2,500	4,138	8,931	11,707	10,162	4,099	5,682	6,644	8,168	7,114	2,805	
90	4,000	3,494	9,108	14,374	15,935	14,438	7,656	9,064	7,089	8,767	7,424	3,518	
Max	6,243	14,569	24,345	35,878	23,682	31,845	18,983	20,073	11,636	12,878	8,230	5,080	
Avg	2,465	2,332	3,927	5,041	6,019	6,151	3,148	3,627	4,985	5,546	5,271	1,688	3,030
B: 2020 Baseline													
Min	894	907	894	894	869	748	756	748	1,008	1,238	992	756	
10	1,203	976	1,001	894	900	748	756	768	2,037	1,811	1,412	1,008	
20	1,708	1,553	1,707	894	1,165	996	1,008	992	3,218	2,481	3,800	1,008	
30	1,708	1,697	1,708	1,203	1,634	1,708	1,008	992	4,254	3,464	5,006	1,008	
40	1,708	1,697	1,708	1,708	1,693	2,781	1,008	1,064	4,579	4,515	5,660	1,315	
50	1,864	1,697	1,804	1,708	2,799	4,152	1,408	1,508	4,994	5,495	5,974	1,445	
60	2,160	1,932	2,816	2,100	4,873	5,289	2,135	2,407	5,311	6,457	6,643	2,172	
70	2,434	2,500	3,368	3,974	8,590	6,663	3,155	3,207	5,996	7,256	6,770	2,269	
80	3,376	2,500	4,119	8,931	11,706	10,162	4,114	5,682	6,477	8,906	6,922	2,832	
90	3,972	2,843	9,108	14,374	15,933	14,438	7,656	9,064	7,001	9,469	7,385	3,340	
Max	5,202	14,569	24,345	35,878	23,682	31,845	18,983	20,073	11,636	14,583	8,330	5,292	
Avg	2,330	2,220	3,852	4,992	6,021	6,169	3,127	3,597	4,996	5,656	5,418	1,914	3,035
Comparison: B – A													
Min	0	-1	0	0	0	0	0	0	241	4	0	0	
10	-53	68	0	0	0	0	0	-141	-17	171	-225	0	
20	0	138	-1	0	0	-147	0	0	-151	-30	420	0	
30	0	0	0	0	0	0	0	0	178	56	1,020	0	
40	0	0	0	0	0	-28	0	20	192	-449	200	307	
50	-28	-277	-212	0	-13	-180	-41	-180	5	-356	118	396	
60	-46	-276	1	-324	0	0	-12	-85	-169	-99	346	851	
70	-292	0	-194	42	1	0	0	-3	0	-8	23	648	
80	-261	0	-19	0	-1	0	15	0	-167	738	-192	27	
90	-28	-651	0	0	-2	0	0	0	-88	702	-39	-178	
Max	-1,041	0	0	0	0	0	0	0	0	1,705	100	212	
Avg	-135	-112	-75	-49	2	18	-21	-30	11	110	147	226	5

Table I-51b. CALSIM-Simulated Monthly Range of Feather River Flow below Thermalito, for 2020 Scenario A Compared to 2020 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	894	907	894	894	869	748	756	748	756	1,281	992	756	
10	1,203	908	930	894	900	748	756	748	2,146	1,823	2,234	1,008	
20	1,700	1,314	1,708	894	1,165	1,150	1,008	992	3,468	2,923	3,795	1,008	
30	1,708	1,697	1,708	1,203	1,634	1,708	1,008	992	4,294	4,201	4,575	1,008	
40	1,708	1,697	1,708	1,708	1,693	2,282	1,008	992	4,530	5,740	5,675	1,008	
50	1,872	1,697	1,844	1,708	2,423	4,153	1,437	1,503	5,152	7,072	6,152	1,050	
60	2,177	2,021	2,415	1,708	4,344	4,833	2,128	2,282	5,513	7,908	6,633	1,598	
70	2,346	2,500	3,347	3,626	8,590	6,664	3,650	3,329	6,139	8,254	6,917	2,076	
80	3,190	2,500	4,099	8,343	11,793	10,162	4,465	5,774	6,751	8,636	7,176	2,412	
90	4,000	2,843	9,108	14,374	15,881	14,438	7,820	9,158	7,266	9,152	7,615	3,110	
Max	5,248	14,569	24,345	35,878	22,835	31,845	19,191	20,089	11,532	12,523	8,245	5,125	
Avg	2,290	2,263	3,756	4,881	5,911	6,032	3,244	3,603	5,117	6,267	5,589	1,687	3,058
B: 2020 Baseline													
Min	894	907	894	894	869	748	756	748	756	1,277	992	756	
10	1,203	908	929	894	900	748	756	748	2,141	2,062	2,139	1,008	
20	1,708	1,582	1,508	894	1,165	1,137	1,008	992	3,446	2,635	4,065	1,008	
30	1,708	1,697	1,708	1,203	1,634	1,708	1,008	992	4,320	3,959	5,463	1,008	
40	1,708	1,697	1,708	1,708	1,693	2,552	1,008	992	4,553	5,001	5,806	1,233	
50	1,845	1,708	1,708	1,708	2,630	4,153	1,601	1,503	5,053	5,980	6,051	1,654	
60	1,993	1,924	2,491	1,913	4,464	5,295	2,133	2,392	5,603	7,447	6,439	1,956	
70	2,277	2,186	3,368	3,625	7,503	6,664	3,191	3,328	6,301	8,225	6,809	2,269	
80	3,211	2,500	4,769	8,143	11,793	10,162	4,298	5,774	6,857	9,142	7,247	2,687	
90	4,000	2,724	9,108	14,374	15,937	14,438	7,820	9,158	7,387	9,745	7,684	3,269	
Max	5,248	14,569	24,345	35,878	22,967	31,845	19,191	20,089	11,532	14,331	8,530	5,125	
Avg	2,247	2,179	3,766	4,840	5,875	6,059	3,241	3,626	5,173	6,125	5,716	1,856	3,061
Comparison: B – A													
Min	0	0	0	0	0	0	0	0	0	-4	0	0	
10	0	0	-1	0	0	0	0	0	-5	239	-95	0	
20	8	268	-200	0	0	-13	0	0	-22	-288	270	0	
30	0	0	0	0	0	0	0	0	26	-242	888	0	
40	0	0	0	0	0	270	0	0	23	-739	131	225	
50	-27	11	-136	0	207	0	164	0	-99	-1,092	-101	604	
60	-184	-97	76	205	120	462	5	110	90	-461	-194	358	
70	-69	-314	21	-1	-1,087	0	-459	-1	162	-29	-108	193	
80	21	0	670	-200	0	0	-167	0	106	506	71	275	
90	0	-119	0	0	56	0	0	0	121	593	69	159	
Max	0	0	0	0	132	0	0	0	0	1,808	285	0	
Avg	-43	-84	10	-41	-36	27	-3	23	56	-142	127	169	4

Table I-52a. CALSIM-Simulated Monthly Range of American River Flow below Nimbus Dam, for 2001 Scenario A Compared to 2001 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	500	500	500	750	731	548	318	500	1,000	750	400	500	
10	750	800	1,300	1,000	988	1,139	1,750	1,000	1,500	1,750	1,000	1,000	
20	1,480	1,200	1,300	1,200	1,330	1,500	1,750	2,250	2,002	2,746	1,692	1,293	
30	1,500	1,281	1,399	1,518	1,519	2,021	2,049	2,250	2,942	3,199	1,814	2,500	
40	1,500	1,554	1,887	1,835	2,259	2,378	3,000	2,366	3,096	4,088	2,257	2,500	
50	1,750	1,947	2,185	2,025	3,106	3,000	3,000	3,000	3,493	4,854	2,500	2,508	
60	1,750	2,400	2,459	2,585	4,078	3,505	3,127	3,498	4,152	5,000	2,500	3,545	
70	1,751	2,622	2,700	3,652	5,884	4,165	4,009	4,103	5,000	5,000	2,588	4,069	
80	1,994	2,916	4,700	6,887	8,371	5,000	4,700	4,876	5,416	5,000	2,876	4,337	
90	2,346	4,132	6,745	10,362	10,592	7,738	6,278	8,655	6,830	5,000	3,883	4,640	
Max	3,202	16,816	21,250	23,807	32,947	16,480	14,459	11,546	14,668	6,194	5,168	5,273	
Avg	1,656	2,550	3,391	4,245	4,914	3,915	3,561	3,758	4,121	4,053	2,407	2,912	2,498
B: 2020 Baseline													
Min	500	500	500	750	731	548	318	500	1,000	750	400	500	
10	750	800	1,300	1,000	1,064	1,139	1,750	1,000	1,528	1,750	1,085	1,000	
20	1,120	1,195	1,300	1,200	1,215	1,500	1,750	2,250	2,056	2,802	1,696	1,090	
30	1,500	1,215	1,350	1,573	1,519	2,093	2,048	2,250	3,000	3,162	2,176	1,859	
40	1,500	1,500	1,798	1,688	2,310	2,416	3,000	2,250	3,188	4,700	2,500	2,500	
50	1,604	1,876	2,160	2,025	3,093	3,000	3,000	3,000	3,487	5,000	2,633	2,500	
60	1,750	2,237	2,471	2,404	4,140	3,505	3,176	3,498	4,209	5,000	2,767	2,601	
70	1,750	2,499	2,700	3,985	5,884	4,165	4,009	4,103	5,000	5,000	2,876	3,354	
80	1,751	2,803	4,700	6,887	8,371	5,000	4,700	4,876	5,416	5,000	3,276	3,908	
90	2,327	4,080	6,919	10,362	10,592	7,738	6,278	8,548	6,830	5,504	3,883	4,337	
Max	2,913	17,157	21,047	23,809	32,947	16,480	14,459	11,546	14,668	7,841	5,168	5,273	
Avg	1,569	2,492	3,361	4,225	4,916	3,946	3,585	3,737	4,165	4,267	2,616	2,619	2,500
Comparison: B – A													
Min	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	76	0	0	0	28	0	85	0	0
20	-360	-5	0	0	-115	0	0	0	54	56	4	-203	0
30	0	-66	-49	55	0	72	-1	0	58	-37	362	-641	0
40	0	-54	-89	-147	51	38	0	-116	92	612	243	0	0
50	-146	-71	-25	0	-13	0	0	0	-6	146	133	-8	0
60	0	-163	12	-181	62	0	49	0	57	0	267	-944	0
70	-1	-123	0	333	0	0	0	0	0	0	288	-715	0
80	-243	-113	0	0	0	0	0	0	0	0	400	-429	0
90	-19	-52	174	0	0	0	0	-107	0	504	0	-303	0
Max	-289	341	-203	2	0	0	0	0	0	1,647	0	0	0
Avg	-87	-58	-30	-20	2	31	24	-21	44	214	209	-293	2

Table I-52b. CALSIM-Simulated Monthly Range of American River Flow below Nimbus Dam, for 2020 Scenario A Compared to 2020 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	500	500	520	750	562	422	368	500	1,000	471	571	500	
10	750	800	1,000	935	750	1,012	750	1,000	1,500	1,750	1,000	1,000	
20	967	918	1,300	1,200	1,125	1,500	1,750	2,250	1,504	2,431	1,500	1,000	
30	1,500	1,200	1,300	1,410	1,350	1,686	1,750	2,250	2,127	2,890	1,500	1,327	
40	1,500	1,364	1,570	1,620	1,993	2,250	3,000	2,250	3,000	3,446	1,845	2,500	
50	1,750	1,786	1,871	1,821	2,978	3,000	3,000	3,000	3,038	4,165	2,204	2,501	
60	1,750	2,090	2,186	2,097	4,165	3,308	3,000	3,000	3,639	4,700	2,500	2,833	
70	1,811	2,400	2,700	3,893	5,762	4,034	3,606	3,349	4,511	5,000	2,500	3,174	
80	2,119	2,673	4,657	6,794	8,260	5,000	4,565	4,497	5,000	5,000	2,500	3,573	
90	2,398	3,910	6,326	10,253	10,515	7,585	5,968	8,149	6,387	5,000	2,715	4,002	
Max	3,338	16,927	21,022	23,726	32,839	16,369	14,328	11,162	14,191	6,483	4,743	4,961	
Avg	1,634	2,364	3,219	4,085	4,773	3,801	3,397	3,528	3,770	3,818	2,152	2,481	2,350
B: 2020 Baseline													
Min	500	500	520	750	562	422	368	500	1,000	353	571	500	
10	750	800	1,000	975	812	1,027	750	1,000	1,500	1,750	1,000	1,000	
20	797	813	1,300	1,200	1,203	1,500	1,750	2,250	1,504	2,500	1,500	1,000	
30	1,500	1,200	1,300	1,496	1,423	1,688	1,750	2,250	2,336	2,913	1,521	1,277	
40	1,500	1,435	1,573	1,620	2,061	2,250	3,000	2,250	3,000	3,525	2,108	2,500	
50	1,500	1,719	1,871	1,891	3,195	3,000	3,000	3,000	3,051	4,496	2,469	2,500	
60	1,750	2,081	2,160	2,025	4,223	3,308	3,000	3,000	3,663	5,000	2,500	2,500	
70	1,750	2,372	2,599	3,893	5,762	4,037	3,606	3,349	4,519	5,000	2,500	2,862	
80	2,140	2,535	4,397	6,794	8,260	5,000	4,566	4,497	5,000	5,000	2,581	3,092	
90	2,308	3,430	5,742	10,253	10,512	7,585	5,968	8,149	6,387	5,000	3,488	3,932	
Max	4,044	16,954	20,794	23,726	32,839	16,369	14,328	11,162	14,191	7,441	5,000	4,961	
Avg	1,595	2,307	3,159	4,055	4,815	3,807	3,389	3,523	3,788	3,953	2,255	2,369	2,350
Comparison: B - A													
Min	0	0	0	0	0	0	0	0	0	-118	0	0	
10	0	0	0	40	62	15	0	0	0	0	0	0	
20	-170	-105	0	0	78	0	0	0	0	69	0	0	
30	0	0	0	86	73	2	0	0	209	23	21	-50	
40	0	71	3	0	68	0	0	0	0	79	263	0	
50	-250	-67	0	70	217	0	0	0	13	331	265	-1	
60	0	-9	-26	-72	58	0	0	0	24	300	0	-333	
70	-61	-28	-101	0	0	3	0	0	8	0	0	-312	
80	21	-138	-260	0	0	0	1	0	0	0	81	-481	
90	-90	-480	-584	0	-3	0	0	0	0	0	773	-70	
Max	706	27	-228	0	0	0	0	0	0	958	257	0	
Avg	-39	-57	-60	-30	42	6	-8	-5	18	135	103	-112	0

Table I-53a. CALSIM-Simulated Monthly Range of Sacramento River Flow at Freeport, for 2001 Scenario A Compared to 2001 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	7,609	7,095	6,688	6,357	7,625	7,728	7,241	6,451	7,979	11,159	8,408	7,022	
10	7,764	7,335	9,689	11,129	11,451	12,359	9,166	7,896	10,955	13,626	10,591	8,021	
20	9,212	8,964	10,256	12,850	14,329	13,995	11,226	10,237	12,930	16,249	13,319	11,284	
30	10,161	10,064	12,405	14,546	17,630	20,027	11,999	12,119	14,148	17,836	15,631	12,580	
40	10,652	11,249	14,606	16,877	24,532	21,569	13,848	12,963	14,745	18,562	15,902	13,555	
50	11,276	12,537	15,909	20,754	32,270	28,587	16,372	15,027	16,299	19,202	16,184	14,437	
60	11,721	13,327	18,055	28,325	40,767	32,308	20,487	17,335	17,102	19,581	16,356	14,726	
70	12,543	14,421	23,662	37,959	55,477	43,812	23,692	20,641	18,902	20,176	16,482	15,107	
80	13,624	16,524	42,517	63,340	68,833	51,218	39,740	28,847	21,620	20,741	16,835	16,191	
90	16,695	23,707	65,954	73,256	73,863	71,093	60,036	41,508	26,770	22,019	17,011	19,428	
Max	33,847	65,605	75,128	76,567	78,624	77,376	74,356	60,999	54,134	23,773	21,353	27,541	
Avg	11,976	15,177	25,089	32,219	38,812	34,010	24,193	20,013	18,158	18,593	15,273	14,137	16,106
B: 2020 Baseline													
Min	7,609	7,147	6,688	6,359	7,301	7,334	7,240	6,458	7,979	11,371	8,386	7,013	
10	7,766	7,547	9,687	11,122	11,450	12,448	9,163	7,894	11,041	13,751	10,613	7,985	
20	9,193	8,938	10,505	12,825	14,432	14,336	11,360	10,593	13,439	16,965	13,149	11,148	
30	9,790	9,961	12,202	14,405	17,571	20,013	12,137	12,045	14,295	18,374	15,902	11,820	
40	10,472	10,757	13,910	17,063	24,710	21,575	13,817	12,893	14,819	19,251	16,572	13,357	
50	10,869	11,625	15,844	21,162	32,477	28,587	16,369	15,027	16,132	19,869	17,002	14,243	
60	11,283	13,177	17,552	28,228	40,777	32,616	20,474	17,361	17,126	20,451	17,230	15,165	
70	11,792	14,017	22,186	37,755	55,480	43,808	23,692	20,640	18,438	20,874	17,503	15,584	
80	13,678	16,689	39,805	63,166	68,823	50,807	39,727	28,846	21,622	21,686	17,724	16,356	
90	16,122	23,776	65,619	73,258	73,864	71,091	60,036	41,509	26,831	22,891	18,164	19,348	
Max	31,445	65,604	75,128	76,567	78,631	77,376	74,356	61,303	54,134	25,055	21,353	27,540	
Avg	11,566	14,835	24,746	32,200	38,809	34,040	24,192	19,948	18,239	19,245	15,930	14,101	16,119
Comparison: B - A													
Min	0	52	0	2	-324	-394	-1	7	0	212	-22	-9	
10	2	212	-2	-7	-1	89	-3	-2	86	125	22	-36	
20	-19	-26	249	-25	103	341	134	356	509	716	-170	-136	
30	-371	-103	-203	-141	-59	-14	138	-74	147	538	271	-760	
40	-180	-492	-696	186	178	6	-31	-70	74	689	670	-198	
50	-407	-912	-65	408	207	0	-3	0	-167	667	818	-194	
60	-438	-150	-503	-97	10	308	-13	26	24	870	874	439	
70	-751	-404	-1,476	-204	3	-4	0	-1	-464	698	1,021	477	
80	54	165	-2,712	-174	-10	-411	-13	-1	2	945	889	165	
90	-573	69	-335	2	1	-2	0	1	61	872	1,153	-80	
Max	-2,402	-1	0	0	7	0	0	304	0	1,282	0	-1	
Avg	-410	-342	-343	-19	-3	30	-1	-65	81	652	657	-36	13

Table I-53b. CALSIM-Simulated Monthly Range of Sacramento River Flow at Freeport, for 2020 Scenario A Compared to 2020 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	7,612	7,145	6,792	6,536	7,710	7,729	7,163	6,339	8,212	11,152	8,213	6,954	
10	7,769	7,801	10,008	11,682	11,693	11,604	10,210	8,189	10,627	12,972	10,848	7,996	
20	9,186	8,826	11,037	12,896	14,434	14,380	11,449	10,424	12,874	16,054	13,494	11,204	
30	10,189	10,363	12,904	14,135	17,975	19,951	12,648	12,164	13,925	17,675	15,428	12,508	
40	11,062	11,045	15,016	16,933	24,579	21,842	13,900	13,324	14,964	18,192	15,931	12,709	
50	11,761	12,570	16,170	21,060	32,843	27,950	17,626	14,709	16,373	19,148	16,201	13,808	
60	12,068	13,371	17,841	28,702	39,709	32,584	20,834	17,229	17,416	19,861	16,449	14,389	
70	12,629	14,362	22,945	38,202	55,793	43,534	24,524	19,645	18,321	20,214	16,647	14,775	
80	13,421	15,638	37,206	63,328	69,387	51,166	40,584	28,004	20,821	20,989	16,924	15,233	
90	15,539	23,642	65,449	73,450	74,090	71,243	60,916	40,301	25,170	22,222	17,256	18,046	
Max	32,455	66,390	75,313	76,764	78,800	77,571	74,632	59,359	53,267	24,875	20,556	27,352	
Avg	11,896	14,939	24,831	32,360	38,930	34,107	24,900	19,888	17,816	18,498	15,313	13,618	16,072
B: 2020 Baseline													
Min	7,611	7,146	6,788	6,537	7,654	7,682	7,162	6,408	8,532	11,152	8,213	6,953	
10	7,769	7,551	9,846	11,631	11,694	11,594	9,998	8,190	10,760	13,286	10,386	7,958	
20	9,188	9,188	11,043	13,053	14,474	14,271	10,989	10,525	13,159	15,379	12,753	10,998	
30	9,997	10,287	12,515	14,259	17,930	19,914	12,638	12,165	13,974	17,683	15,702	12,328	
40	10,416	10,879	14,640	16,926	24,244	22,714	13,533	13,323	15,011	18,894	16,285	12,625	
50	11,326	12,181	16,124	21,064	32,903	27,293	17,627	14,716	16,333	19,456	17,098	13,567	
60	11,907	13,028	17,841	28,714	39,709	33,158	20,846	17,249	17,657	20,192	17,413	14,375	
70	12,601	14,331	21,716	37,286	55,788	43,439	24,524	19,638	18,506	20,649	17,516	14,966	
80	14,000	15,192	36,184	63,328	69,380	51,199	40,577	28,003	20,684	21,725	17,926	15,759	
90	15,455	23,394	64,702	73,411	74,091	71,254	60,915	40,301	25,170	22,415	18,183	17,672	
Max	31,576	66,389	75,313	76,763	78,757	77,571	74,631	59,362	53,266	25,014	20,556	27,351	
Avg	11,799	14,750	24,628	32,320	38,813	34,124	24,873	19,913	17,915	18,876	15,800	13,543	16,089
Comparison: B – A													
Min	-1	1	-4	1	-56	-47	-1	69	320	0	0	-1	
10	0	-250	-162	-51	1	-10	-212	1	133	314	-462	-38	
20	2	362	6	157	40	-109	-460	101	285	-675	-741	-206	
30	-192	-76	-389	124	-45	-37	-10	1	49	8	274	-180	
40	-646	-166	-376	-7	-335	872	-367	-1	47	702	354	-84	
50	-435	-389	-46	4	60	-657	1	7	-40	308	897	-241	
60	-161	-343	0	12	0	574	12	20	241	331	964	-14	
70	-28	-31	-1,229	-916	-5	-95	0	-7	185	435	869	191	
80	579	-446	-1,022	0	-7	33	-7	-1	-137	736	1,002	526	
90	-84	-248	-747	-39	1	11	-1	0	0	193	927	-374	
Max	-879	-1	0	-1	-43	0	-1	3	-1	139	0	-1	
Avg	-97	-189	-203	-40	-117	17	-27	25	99	378	487	-75	17

Table I-54a. CALSIM-Simulated Monthly San Joaquin River Flow at Vernalis, for 2001 Scenario A Compared to 2001 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1- 4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16- 5/31	Jun	Jul	Aug	Sep	taf/ year
A: 2001 Baseline															
Min	1,040	1,173	1,130	1,033	1,149	1,253	1,218	1,561	1,361	1,005	1,046	864	673	927	
10	1,377	1,228	1,275	1,205	1,380	1,606	1,410	2,000	2,000	1,201	1,225	1,077	815	1,065	
20	1,602	1,358	1,394	1,316	1,855	1,796	1,634	3,200	3,199	1,405	1,422	1,364	952	1,150	
30	1,691	1,411	1,479	1,677	2,152	2,037	1,951	4,450	4,354	1,747	1,679	1,592	1,448	1,455	
40	1,880	1,509	1,644	1,846	2,671	2,765	3,004	5,699	4,799	2,288	1,754	1,676	1,612	1,580	
50	2,127	1,598	1,773	2,007	3,420	3,577	3,636	5,700	5,699	2,980	2,210	1,841	1,717	1,679	
60	2,294	1,668	1,920	2,356	4,931	4,568	4,349	6,999	6,999	3,529	2,353	1,976	1,811	1,821	
70	2,454	1,748	2,041	3,728	6,254	6,181	5,514	7,000	6,999	3,834	2,639	2,100	1,905	1,899	
80	3,663	1,844	2,815	6,512	9,354	8,606	6,905	7,569	7,000	5,417	4,871	2,347	2,071	2,043	
90	5,532	1,950	4,919	9,868	12,994	11,353	11,682	12,232	12,104	9,865	9,901	2,782	2,157	2,586	
Max	12,599	12,740	20,738	23,448	31,152	37,464	24,472	24,472	23,420	23,420	34,745	17,785	2,305	6,571	
Avg	2,955	1,860	2,749	4,119	5,817	5,860	5,118	6,569	6,397	4,373	4,088	2,211	1,607	1,793	2,660
B: 2020 Baseline															
Min	1,054	1,173	1,130	1,033	1,149	1,253	1,218	1,561	1,361	1,006	1,048	864	673	928	
10	1,366	1,228	1,276	1,205	1,377	1,606	1,409	2,000	2,000	1,198	1,226	1,077	811	1,065	
20	1,603	1,356	1,394	1,316	1,855	1,795	1,631	3,200	3,199	1,403	1,420	1,354	954	1,148	
30	1,689	1,412	1,478	1,671	2,162	2,037	1,951	4,450	4,362	1,748	1,672	1,593	1,459	1,420	
40	1,882	1,514	1,642	1,851	2,686	2,768	3,005	5,699	4,802	2,285	1,767	1,679	1,604	1,574	
50	2,135	1,602	1,761	2,007	3,420	3,577	3,640	5,700	5,699	2,981	2,220	1,854	1,729	1,691	
60	2,297	1,654	1,924	2,364	4,931	4,570	4,348	6,999	6,999	3,531	2,363	2,020	1,844	1,827	
70	2,458	1,737	2,045	3,728	6,268	6,183	5,510	7,000	6,999	3,840	2,649	2,120	1,941	1,899	
80	3,658	1,823	2,820	6,512	9,366	8,565	6,909	7,573	7,000	5,424	4,885	2,356	2,071	2,052	
90	5,519	1,952	4,924	9,868	13,071	11,353	11,671	12,244	12,053	9,811	9,891	2,791	2,176	2,586	
Max	12,591	12,740	20,738	23,448	31,145	37,464	24,454	24,454	23,368	23,368	34,745	17,785	2,313	6,571	
Avg	2,968	1,858	2,744	4,118	5,821	5,858	5,118	6,569	6,395	4,370	4,089	2,219	1,616	1,797	2,662
Comparison: B - A															
Min	14	0	0	0	0	0	0	0	0	1	2	0	0	1	
10	-11	0	1	0	-3	0	-1	0	0	-3	1	0	-4	0	
20	1	-2	0	0	0	-1	-3	0	0	-2	-2	-10	2	-2	
30	-2	1	-1	-6	10	0	0	0	8	1	-7	1	11	-35	
40	2	5	-2	5	15	3	1	0	3	-3	13	3	-8	-6	
50	8	4	-12	0	0	0	4	0	0	1	10	13	12	12	
60	3	-14	4	8	0	2	-1	0	0	2	10	44	33	6	
70	4	-11	4	0	14	2	-4	0	0	6	10	20	36	0	
80	-5	-21	5	0	12	-41	4	4	0	7	14	9	0	9	
90	-13	2	5	0	77	0	-11	12	-51	-54	-10	9	19	0	
Max	-8	0	0	0	-7	0	-18	-18	-52	-52	0	0	8	0	
Avg	13	-2	-5	-1	4	-2	0	0	-3	-3	1	8	9	4	2

Table I-54b. CALSIM-Simulated Monthly San Joaquin River Flow at Vernalis, for 2020 Scenario A Compared to 2020 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Pre-VAMP 4/1- 4/15	VAMP 4/16- 4/30	VAMP 5/1- 5/15	Post-VAMP 5/16- 5/31	Jun	Jul	Aug	Sep	taf/ year
A: 2001 Baseline															
Min	1,066	1,173	1,130	1,033	1,149	1,246	1,208	1,534	1,325	991	1,044	879	676	943	
10	1,429	1,229	1,275	1,196	1,376	1,598	1,389	2,000	2,000	1,182	1,221	1,102	819	1,072	
20	1,644	1,358	1,396	1,316	1,855	1,778	1,602	3,200	3,199	1,374	1,420	1,351	978	1,154	
30	1,744	1,411	1,491	1,670	2,159	2,021	1,924	4,450	4,222	1,674	1,655	1,576	1,463	1,461	
40	1,931	1,509	1,684	1,847	2,513	2,639	2,741	5,699	4,659	2,214	1,749	1,668	1,613	1,598	
50	2,145	1,601	1,789	2,007	3,420	3,299	3,222	5,700	5,699	2,907	2,192	1,839	1,730	1,685	
60	2,310	1,654	1,925	2,356	4,812	4,524	4,085	6,999	6,999	3,570	2,330	1,978	1,808	1,826	
70	2,446	1,751	2,103	3,727	5,373	5,723	5,339	7,000	7,000	4,172	2,627	2,101	1,924	1,906	
80	3,217	1,856	2,818	5,547	8,688	7,457	6,749	7,510	7,211	6,077	5,205	2,356	2,080	2,056	
90	4,639	1,974	3,980	7,621	11,948	11,235	11,637	12,371	12,921	10,687	9,576	2,785	2,186	2,315	
Max	12,324	13,120	20,679	23,423	31,066	37,366	24,614	24,614	23,519	23,519	34,313	17,655	2,327	5,967	
Avg	2,780	1,862	2,663	3,801	5,567	5,610	4,956	6,577	6,469	4,461	3,985	2,199	1,616	1,753	2,587
B: 2020 Baseline															
Min	1,066	1,173	1,130	1,033	1,149	1,246	1,208	1,534	1,325	992	1,045	879	677	943	
10	1,441	1,228	1,275	1,194	1,372	1,598	1,388	2,000	2,000	1,181	1,222	1,103	810	1,072	
20	1,644	1,356	1,396	1,316	1,855	1,777	1,602	3,200	3,199	1,361	1,420	1,344	978	1,153	
30	1,767	1,412	1,489	1,673	2,159	2,021	1,924	4,450	4,226	1,674	1,657	1,570	1,456	1,461	
40	1,935	1,514	1,681	1,847	2,522	2,639	2,743	5,699	4,673	2,214	1,752	1,705	1,635	1,588	
50	2,150	1,605	1,776	2,007	3,420	3,299	3,217	5,700	5,699	2,910	2,202	1,843	1,743	1,698	
60	2,314	1,651	1,928	2,361	4,820	4,524	4,090	6,999	6,999	3,582	2,339	2,008	1,848	1,829	
70	2,444	1,735	2,108	3,727	5,385	5,727	5,339	7,000	7,000	4,172	2,629	2,114	1,935	1,907	
80	3,214	1,844	2,823	5,547	8,677	7,459	6,754	7,514	7,191	6,060	5,214	2,360	2,081	2,063	
90	4,654	1,956	3,983	7,621	11,952	11,237	11,624	12,378	12,938	10,702	9,561	2,795	2,198	2,321	
Max	11,904	13,120	20,679	23,423	31,051	37,365	24,591	24,591	23,438	23,438	34,313	17,655	2,335	5,967	
Avg	2,785	1,864	2,659	3,801	5,573	5,609	4,955	6,577	6,468	4,458	3,986	2,207	1,625	1,757	2,589
Comparison: B - A															
Min	0	0	0	0	0	0	0	0	0	1	1	0	1	0	
10	12	-1	0	-2	-4	0	-1	0	0	-1	1	1	-9	0	
20	0	-2	0	0	0	-1	0	0	0	-13	0	-7	0	-1	
30	23	1	-2	3	0	0	0	0	4	0	2	-6	-7	0	
40	4	5	-3	0	9	0	2	0	14	0	3	37	22	-10	
50	5	4	-13	0	0	0	-5	0	0	3	10	4	13	13	
60	4	-3	3	5	8	0	5	0	0	12	9	30	40	3	
70	-2	-16	5	0	12	4	0	0	0	0	2	13	11	1	
80	-3	-12	5	0	-11	2	5	4	-20	-17	9	4	1	7	
90	15	-18	3	0	4	2	-13	7	17	15	-15	10	12	6	
Max	-420	0	0	0	-15	-1	-23	-23	-81	-81	0	0	8	0	
Avg	5	2	-4	0	6	-1	-1	-1	-1	-3	1	8	9	4	2

Table I-55a. CALSIM-Simulated Monthly Range of Combined CVP Tracy and SWP Banks Pumping, for 2001 Scenario A Compared to 2001 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	2,986	1,186	651	2,518	1,562	1,100	1,100	1,100	1,100	3,465	1,282	4,008	
10	4,147	2,251	4,191	5,252	4,665	2,396	1,425	1,500	2,312	4,847	4,577	4,342	
20	5,333	4,711	6,233	7,192	6,032	4,602	1,500	2,168	3,782	8,068	7,135	8,192	
30	6,836	5,831	7,249	7,584	6,485	6,169	2,913	2,507	5,634	8,422	10,253	9,152	
40	8,158	6,815	8,224	8,600	7,435	7,303	3,353	2,785	5,761	8,782	10,797	10,203	
50	9,245	8,235	9,329	9,780	8,818	8,957	3,832	3,314	6,534	9,345	11,221	10,681	
60	9,682	9,287	9,920	10,562	10,562	9,533	4,590	3,868	7,180	10,004	11,238	11,104	
70	10,608	10,827	10,347	11,472	11,682	10,723	5,355	4,074	7,716	10,496	11,271	11,148	
80	11,035	10,930	11,234	11,595	12,674	11,508	5,579	4,961	9,019	11,280	11,554	11,650	
90	11,049	10,936	11,287	12,478	12,737	11,846	6,084	5,137	9,680	11,716	11,721	11,663	
Max	11,071	10,945	11,865	12,729	12,754	11,869	6,379	5,414	9,680	11,780	11,749	11,674	
Avg	8,364	7,714	8,525	9,273	8,888	8,095	3,896	3,369	6,356	9,140	9,788	9,640	5,620
B: 2020 Baseline													
Min	3,304	1,100	484	2,530	1,452	1,100	1,100	1,100	1,100	3,514	1,283	4,006	
10	4,136	2,704	4,349	5,611	4,740	2,392	1,351	1,500	2,737	4,794	4,805	4,311	
20	5,080	4,534	5,776	6,867	6,168	4,810	1,500	2,048	4,649	8,556	9,138	8,195	
30	6,573	6,009	7,041	7,809	6,417	5,955	2,847	2,509	5,645	9,245	10,476	8,597	
40	7,800	6,497	7,936	8,314	7,415	7,407	3,346	2,779	5,769	9,450	11,513	9,837	
50	8,641	7,279	9,142	9,904	8,689	8,935	4,181	3,308	6,366	10,009	11,933	10,675	
60	9,602	9,110	10,536	10,572	10,566	10,641	4,590	3,869	7,015	10,733	12,185	11,327	
70	10,249	9,881	11,222	11,509	12,729	11,392	5,407	4,544	7,695	11,207	12,384	11,513	
80	12,091	11,284	11,713	12,723	12,744	12,775	5,791	5,019	9,020	11,891	12,554	12,023	
90	12,885	12,728	12,725	12,731	12,749	12,801	6,403	5,562	10,116	13,017	12,882	12,994	
Max	12,891	12,765	12,727	12,732	12,754	12,821	6,803	5,655	11,500	13,100	13,078	12,994	
Avg	8,561	7,757	8,846	9,430	9,047	8,540	3,972	3,432	6,547	9,695	10,480	9,926	5,813
Comparison: B - A													
Min	318	-86	-167	12	-110	0	0	0	0	49	1	-2	
10	-11	453	158	359	75	-4	-74	0	425	-53	228	-31	
20	-253	-177	-457	-325	136	208	0	-120	867	488	2,003	3	
30	-263	178	-208	225	-68	-214	-66	2	11	823	223	-555	
40	-358	-318	-288	-286	-20	104	-7	-6	8	668	716	-366	
50	-604	-956	-187	124	-129	-22	349	-6	-168	664	712	-6	
60	-80	-177	616	10	4	1,108	0	1	-165	729	947	223	
70	-359	-946	875	37	1,047	669	52	470	-21	711	1,113	365	
80	1,056	354	479	1,128	70	1,267	212	58	1	611	1,000	373	
90	1,836	1,792	1,438	253	12	955	319	425	436	1,301	1,161	1,331	
Max	1,820	1,820	862	3	0	952	424	241	1,820	1,320	1,329	1,320	
Avg	197	43	321	157	159	445	76	63	191	555	692	286	194

Table I-55b. CALSIM-Simulated Monthly Range of Combined CVP Tracy and SWP Banks Pumping, for 2020 Scenario A Compared to 2020 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	3,264	1,517	1,865	2,707	1,578	1,100	1,100	1,100	1,100	3,296	1,201	3,856	
10	4,163	2,933	4,630	5,780	4,867	2,448	1,332	1,500	2,334	4,797	5,044	4,335	
20	5,079	4,789	6,525	7,386	6,207	5,225	2,250	1,599	3,671	7,280	8,236	8,096	
30	6,479	5,559	7,255	8,319	7,015	6,381	3,348	2,541	5,497	8,361	10,464	9,142	
40	7,735	6,888	7,558	9,041	8,126	8,020	3,772	3,000	6,107	8,928	10,892	9,710	
50	8,407	8,298	9,128	10,073	9,708	9,227	4,320	3,417	6,699	9,533	11,222	10,392	
60	9,617	9,584	9,649	10,581	10,827	10,019	4,932	3,791	7,002	10,368	11,264	10,794	
70	10,791	10,527	10,683	11,500	12,013	11,276	5,579	4,074	7,728	11,000	11,327	11,023	
80	11,034	10,931	11,240	11,629	12,628	11,573	5,661	5,137	8,633	11,496	11,693	11,158	
90	11,044	10,934	11,343	12,484	12,733	11,847	6,379	5,166	9,680	11,762	11,723	11,660	
Max	11,071	10,945	11,818	12,732	12,754	11,869	6,379	5,482	9,680	11,780	11,758	11,674	
Avg	8,160	7,706	8,539	9,485	9,179	8,353	4,139	3,361	6,307	9,153	9,851	9,442	5,657
B: 2020 Baseline													
Min	3,319	1,100	1,100	2,621	1,578	1,100	1,100	1,100	1,100	3,296	1,201	3,856	
10	4,210	3,104	4,648	6,145	4,730	2,447	1,425	1,500	2,372	5,123	4,512	4,322	
20	4,761	4,942	6,259	7,801	6,023	5,012	2,250	1,500	3,956	7,501	7,694	7,609	
30	6,216	5,575	7,518	8,171	6,762	6,583	3,312	2,538	5,520	9,162	10,760	9,047	
40	7,327	6,462	7,816	8,979	8,377	7,981	3,770	3,000	6,107	9,503	11,116	9,713	
50	8,425	7,812	9,376	9,944	10,011	9,573	4,322	3,417	6,723	9,934	11,664	10,335	
60	9,463	8,763	9,961	11,179	10,689	10,554	5,105	3,790	7,147	10,620	12,154	10,887	
70	10,506	9,645	10,543	11,508	12,725	12,068	5,661	4,319	7,733	11,050	12,412	11,399	
80	12,354	11,013	12,269	12,719	12,741	12,782	5,941	5,167	8,644	12,049	12,657	11,741	
90	12,885	12,719	12,725	12,731	12,750	12,799	6,418	5,606	9,915	13,087	13,012	12,987	
Max	12,891	12,765	12,727	12,732	12,754	12,815	6,803	5,655	11,500	13,100	13,078	12,994	
Avg	8,499	7,776	8,922	9,671	9,229	8,822	4,243	3,447	6,498	9,612	10,322	9,656	5,841
Comparison: B - A													
Min	55	-417	-765	-86	0	0	0	0	0	0	0	0	
10	47	171	18	365	-137	-1	93	0	38	326	-532	-13	
20	-318	153	-266	415	-184	-213	0	-99	285	221	-542	-487	
30	-263	16	263	-148	-253	202	-36	-3	23	801	296	-95	
40	-408	-426	258	-62	251	-39	-2	0	0	575	224	3	
50	18	-486	248	-129	303	346	2	0	24	401	442	-57	
60	-154	-821	312	598	-138	535	173	-1	145	252	890	93	
70	-285	-882	-140	8	712	792	82	245	5	50	1,085	376	
80	1,320	82	1,029	1,090	113	1,209	280	30	11	553	964	583	
90	1,841	1,785	1,382	247	17	952	39	440	235	1,325	1,289	1,327	
Max	1,820	1,820	909	0	0	946	424	173	1,820	1,320	1,320	1,320	
Avg	339	70	383	186	50	469	104	86	191	459	471	214	184

Table I-56a. CALSIM-Simulated Monthly Range of Total Delta Outflow, for 2001 Scenario A Compared to 2001 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	3,257	4,330	3,500	4,500	6,636	6,049	6,336	4,148	4,000	4,000	3,000	3,000	
10	3,927	4,500	4,500	6,000	7,883	10,026	8,499	5,694	4,962	4,000	3,549	3,000	
20	4,000	4,594	5,341	6,549	11,208	11,400	10,358	8,806	5,949	5,000	4,000	3,000	
30	4,302	5,005	6,121	7,480	14,849	14,808	11,400	9,991	6,355	5,000	4,000	3,058	
40	4,472	5,262	6,609	9,848	22,349	19,945	12,739	11,901	7,401	6,500	4,000	3,554	
50	4,706	5,561	8,585	15,968	27,337	25,708	16,658	15,309	8,536	6,500	4,000	3,839	
60	4,880	5,859	10,956	23,358	45,283	29,101	20,770	18,106	9,600	8,000	4,000	4,069	
70	5,080	6,249	15,527	33,010	55,195	40,970	26,054	21,471	10,626	8,000	4,000	4,209	
80	6,456	7,151	37,081	67,182	74,751	59,417	44,548	29,109	13,852	8,000	4,410	5,595	
90	11,935	14,406	64,239	104,867	127,756	92,447	66,931	50,557	20,216	8,978	4,760	9,514	
Max	25,810	74,595	158,773	216,843	218,478	258,250	140,525	82,068	81,853	26,688	9,329	22,739	
Avg	6,308	9,255	22,123	36,511	47,938	39,500	27,735	21,105	12,296	7,096	4,175	4,898	14,322
B: 2020 Baseline													
Min	3,263	4,500	3,500	4,500	6,719	6,072	6,341	4,144	4,000	4,000	3,000	3,000	
10	4,000	4,500	4,500	6,000	7,881	10,027	9,324	5,693	4,963	5,000	3,628	3,000	
20	4,000	4,811	5,211	6,627	11,208	11,400	10,359	8,811	5,966	5,000	4,000	3,000	
30	4,099	5,133	5,668	7,132	15,338	14,813	11,400	10,013	6,608	5,016	4,000	3,027	
40	4,324	5,280	6,538	9,104	20,698	19,963	12,722	11,980	7,400	6,500	4,000	3,553	
50	4,510	5,569	8,445	15,716	27,195	24,478	16,661	15,307	8,700	6,500	4,000	3,980	
60	4,655	5,862	10,497	23,039	45,300	28,142	20,754	18,102	9,699	8,000	4,000	4,180	
70	5,116	6,224	14,300	31,609	54,283	40,082	25,966	21,604	10,669	8,000	4,000	4,356	
80	5,462	6,832	34,675	66,792	74,695	58,538	44,244	28,687	13,816	8,000	4,378	4,951	
90	10,013	13,739	62,822	106,735	126,029	92,285	66,508	50,075	19,532	9,671	4,961	8,185	
Max	21,573	75,232	160,849	217,187	218,803	258,248	140,077	82,067	81,852	25,367	7,754	20,836	
Avg	5,713	8,867	21,414	36,312	47,757	39,108	27,650	20,974	12,188	7,200	4,149	4,584	14,139
Comparison: B - A													
Min	6	170	0	0	83	23	5	-4	0	0	0	0	
10	73	0	0	0	-2	1	825	-1	1	1,000	79	0	
20	0	217	-130	78	0	0	1	5	17	0	0	0	
30	-203	128	-453	-348	489	5	0	22	253	16	0	-31	
40	-148	18	-71	-744	-1,651	18	-17	79	-1	0	0	-1	
50	-196	8	-140	-252	-142	-1,230	3	-2	164	0	0	141	
60	-225	3	-459	-319	17	-959	-16	-4	99	0	0	111	
70	36	-25	-1,227	-1,401	-912	-888	-88	133	43	0	0	147	
80	-994	-319	-2,406	-390	-56	-879	-304	-422	-36	0	-32	-644	
90	-1,922	-667	-1,417	1,868	-1,727	-162	-423	-482	-684	693	201	-1,329	
Max	-4,237	637	2,076	344	325	-2	-448	-1	-1	-1,321	-1,575	-1,903	
Avg	-595	-388	-709	-199	-181	-392	-85	-131	-108	104	-26	-314	-183

Table I-56b. CALSIM-Simulated Monthly Range of Total Delta Outflow, for 2020 Scenario A Compared to 2020 Baseline (cfs)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	3,217	4,500	3,500	4,500	6,724	6,114	6,471	4,408	4,000	4,000	3,000	3,000	
10	4,000	4,500	4,500	6,000	8,638	9,527	8,407	6,015	5,117	4,446	3,500	3,000	
20	4,099	4,683	5,325	6,881	11,208	11,607	10,985	8,567	5,894	5,000	4,000	3,000	
30	4,321	4,964	6,153	7,840	14,684	15,053	11,543	9,554	6,519	5,000	4,000	3,000	
40	4,726	5,233	6,778	10,606	21,044	19,907	13,837	11,314	7,493	6,500	4,000	3,127	
50	4,906	5,466	8,021	15,315	27,603	25,314	17,412	15,878	8,425	6,500	4,000	3,693	
60	5,079	5,701	10,406	24,398	42,068	29,579	21,337	18,030	9,878	8,000	4,000	3,833	
70	5,293	6,060	15,304	33,044	55,513	39,263	26,293	22,185	10,651	8,000	4,000	4,009	
80	6,174	6,463	33,990	67,142	73,792	56,629	46,237	28,297	13,240	8,000	4,413	4,389	
90	10,812	15,438	64,450	99,700	126,681	91,986	67,750	49,851	19,374	8,405	4,742	6,997	
Max	24,422	75,759	157,895	211,435	213,896	257,091	141,745	82,085	80,862	25,485	8,186	22,911	
Avg	6,077	8,999	21,713	36,085	47,460	39,125	28,339	20,962	12,008	7,084	4,106	4,444	14,169
B: 2020 Baseline													
Min	3,217	4,365	3,500	4,500	6,643	6,057	6,478	4,401	4,000	4,000	3,000	3,000	
10	3,981	4,500	4,503	6,000	8,051	9,614	8,384	6,015	5,066	4,025	3,641	3,000	
20	4,000	4,721	5,206	6,948	11,323	11,486	10,524	8,552	6,003	5,000	4,000	3,000	
30	4,123	5,058	5,885	7,847	15,232	15,048	11,525	9,771	6,550	5,000	4,000	3,000	
40	4,493	5,351	6,651	9,943	20,102	19,911	13,863	11,320	7,493	6,500	4,000	3,125	
50	4,913	5,625	7,859	14,950	27,316	24,056	17,414	15,889	8,428	6,500	4,000	3,620	
60	5,109	5,832	10,104	22,027	40,750	28,084	21,338	18,052	9,889	8,000	4,000	3,890	
70	5,321	6,071	13,373	31,184	54,818	37,329	26,292	22,189	10,532	8,000	4,000	4,155	
80	5,538	6,505	31,795	66,926	73,934	56,015	45,846	27,940	13,245	8,000	4,283	4,437	
90	8,423	13,625	63,024	101,183	126,147	90,480	67,328	49,356	18,980	8,734	4,828	5,135	
Max	21,712	76,281	160,445	215,983	212,210	257,089	141,289	82,084	80,862	24,165	6,898	19,982	
Avg	5,647	8,741	21,069	35,800	47,239	38,663	28,203	20,898	11,916	7,010	4,130	4,159	13,992
Comparison: B - A													
Min	0	-135	0	0	-81	-57	7	-7	0	0	0	0	
10	-19	0	3	0	-587	87	-23	0	-51	-421	141	0	
20	-99	38	-119	67	115	-121	-461	-15	109	0	0	0	
30	-198	94	-268	7	548	-5	-18	217	31	0	0	0	
40	-233	118	-127	-663	-942	4	26	6	0	0	0	-2	
50	7	159	-162	-365	-287	-1,258	2	11	3	0	0	-73	
60	30	131	-302	-2,371	-1,318	-1,495	1	22	11	0	0	57	
70	28	11	-1,931	-1,860	-695	-1,934	-1	4	-119	0	0	146	
80	-636	42	-2,195	-216	142	-614	-391	-357	5	0	-130	48	
90	-2,389	-1,813	-1,426	1,483	-534	-1,506	-422	-495	-394	329	86	-1,862	
Max	-2,710	522	2,550	4,548	-1,686	-2	-456	-1	0	-1,320	-1,288	-2,929	
Avg	-430	-258	-644	-285	-221	-462	-136	-64	-92	-74	24	-285	-177

Table I-57a. CALSIM-Simulated Beginning of Month X2 Location (km upstream of Golden Gate), for 2001 Scenario A Compared to 2001 Baseline (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	69.0	68.5	58.6	49.6	49.6	46.3	41.9	48.5	51.6	52.4	61.2	72.2
10	78.9	75.4	73.9	62.6	54.9	51.7	52.8	54.6	56.9	61.8	73.6	82.6
20	82.0	82.3	80.8	68.7	59.1	55.3	57.1	60.5	63.5	69.9	75.7	83.4
30	85.7	84.9	82.6	74.5	64.4	60.3	60.6	63.1	65.7	73.6	76.4	83.6
40	86.1	85.5	83.3	77.6	70.9	64.0	63.1	66.4	68.4	74.3	78.0	84.0
50	86.5	85.8	83.9	80.5	75.1	67.0	66.9	69.0	70.6	76.0	79.3	84.4
60	87.1	86.0	84.5	82.0	76.9	71.2	69.0	71.8	73.9	77.9	80.4	84.6
70	88.2	86.5	84.8	82.6	80.4	72.9	71.9	74.0	75.5	79.7	82.7	84.8
80	88.6	86.9	85.0	84.0	82.0	76.6	74.4	75.1	77.0	81.0	83.4	85.3
90	89.1	87.9	85.5	85.0	82.7	79.5	77.4	77.2	80.8	82.0	85.2	86.7
Max	89.6	89.3	86.3	87.6	86.3	82.2	82.1	81.3	84.2	86.0	86.8	87.6
Avg	85.5	84.2	82.1	77.0	71.6	66.4	65.8	67.8	70.3	75.0	79.3	84.4
B: 2020 Baseline												
Min	70.1	69.6	58.9	49.6	49.6	46.3	41.9	48.6	51.6	52.4	61.6	73.8
10	79.7	78.0	76.4	62.6	55.0	51.7	52.9	54.6	57.0	62.3	73.7	82.7
20	84.0	83.6	82.2	69.5	59.6	55.1	57.2	60.5	63.6	70.0	75.6	83.3
30	85.5	85.5	83.0	75.3	64.4	60.3	60.9	63.2	65.7	73.7	76.4	83.6
40	85.7	85.7	83.6	78.2	71.1	64.0	63.5	66.6	68.4	74.3	78.0	84.0
50	86.2	86.1	84.1	80.7	75.2	67.0	66.9	69.1	70.6	75.9	79.3	84.4
60	87.0	86.4	84.4	82.6	77.5	71.6	69.3	72.2	73.9	77.9	80.2	84.6
70	88.4	86.7	84.7	83.0	80.8	73.4	72.0	74.0	75.7	79.1	82.4	84.8
80	88.7	86.8	85.1	84.3	81.9	75.9	74.9	75.2	76.9	81.0	83.3	85.2
90	89.3	87.5	85.5	85.1	83.1	79.4	77.4	77.2	80.8	82.0	83.5	86.7
Max	89.7	89.3	85.7	87.6	86.3	82.2	82.2	81.3	84.2	86.0	85.5	88.0
Avg	85.8	84.8	82.5	77.4	71.9	66.6	65.9	67.9	70.3	75.0	79.1	84.4
Comparison: B – A												
Min	1.1	1.1	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	1.6
10	0.8	2.6	2.5	0.0	0.1	0.0	0.1	0.0	0.1	0.5	0.1	0.1
20	2.0	1.3	1.4	0.8	0.5	-0.2	0.1	0.0	0.1	0.1	-0.1	-0.1
30	-0.2	0.6	0.4	0.8	0.0	0.0	0.3	0.1	0.0	0.1	0.0	0.0
40	-0.4	0.2	0.3	0.6	0.2	0.0	0.4	0.2	0.0	0.0	0.0	0.0
50	-0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.1	0.0	-0.1	0.0	0.0
60	-0.1	0.4	-0.1	0.6	0.6	0.4	0.3	0.4	0.0	0.0	-0.2	0.0
70	0.2	0.2	-0.1	0.4	0.4	0.5	0.1	0.0	0.2	-0.6	-0.3	0.0
80	0.1	-0.1	0.1	0.3	-0.1	-0.7	0.5	0.1	-0.1	0.0	-0.1	-0.1
90	0.2	-0.4	0.0	0.1	0.4	-0.1	0.0	0.0	0.0	0.0	-1.7	0.0
Max	0.1	0.0	-0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	-1.3	0.4
Avg	0.3	0.6	0.4	0.4	0.3	0.2	0.1	0.1	0.0	0.0	-0.2	0.0

Table I-57b. CALSIM-Simulated Beginning of Month X2 Location (km upstream of Golden Gate), for 2020 Scenario A Compared to 2020 Baseline (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	69.3	68.8	58.6	49.7	49.9	46.4	41.9	48.5	51.6	52.5	61.6	73.3
10	79.7	77.4	75.8	63.0	55.4	51.9	52.8	54.5	56.9	63.5	74.1	82.7
20	84.8	83.2	82.1	69.5	59.3	55.4	56.7	60.2	63.4	70.2	75.8	83.4
30	86.2	84.9	83.2	74.5	64.6	60.2	60.7	63.1	65.5	73.5	76.4	83.7
40	86.5	85.4	83.7	77.7	70.8	63.4	63.5	66.3	68.3	74.3	78.0	84.1
50	86.8	85.6	84.1	81.2	75.0	67.2	66.9	69.0	70.4	75.9	79.3	84.5
60	88.2	85.8	84.4	81.9	76.7	71.9	69.1	71.2	73.9	77.9	80.5	84.7
70	88.5	86.2	84.7	82.5	80.0	73.3	71.7	73.7	75.7	79.9	82.6	85.0
80	88.9	86.9	85.1	84.0	82.0	75.6	74.9	74.8	76.9	81.0	83.3	85.7
90	89.3	87.6	85.5	85.1	83.2	79.2	77.1	77.2	80.6	81.9	83.5	86.9
Max	89.7	89.4	86.2	87.5	86.3	82.2	82.1	81.3	84.2	85.8	86.0	88.0
Avg	86.1	84.5	82.4	77.1	71.7	66.5	65.9	67.6	70.2	75.0	79.3	84.5
B: 2020 Baseline												
Min	70.8	70.0	59.0	49.7	49.8	46.4	41.9	48.6	51.6	52.5	62.0	74.8
10	81.4	79.7	76.8	63.1	55.5	52.0	52.9	54.6	57.0	64.1	74.3	82.8
20	85.1	84.0	82.3	69.9	59.6	55.3	56.9	60.3	63.4	70.2	75.8	83.5
30	85.9	84.8	83.3	75.5	64.9	60.3	61.1	63.2	65.5	73.5	76.3	83.6
40	86.2	85.4	83.6	78.1	71.2	63.4	63.8	66.5	68.3	74.3	78.0	84.1
50	86.9	85.8	84.0	81.2	75.3	67.3	67.1	69.0	70.3	75.7	79.3	84.4
60	88.2	86.1	84.2	82.3	77.4	71.9	69.2	71.2	74.0	77.7	80.4	84.6
70	88.5	86.7	84.8	83.2	80.1	73.8	71.7	73.5	75.7	79.4	82.6	84.7
80	88.8	87.1	85.1	84.0	81.4	76.0	75.0	74.9	76.9	81.0	83.4	86.0
90	89.2	87.7	85.4	85.0	82.6	79.2	77.3	77.2	80.6	81.9	85.2	86.4
Max	89.7	89.4	86.5	87.6	86.3	82.2	82.1	81.3	84.2	86.0	86.8	88.2
Avg	86.4	84.9	82.6	77.5	71.9	66.6	66.0	67.7	70.2	75.0	79.3	84.4
Comparison: B – A												
Min	1.5	1.2	0.4	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	0.4	1.5
10	1.7	2.3	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.2	0.1
20	0.3	0.8	0.2	0.4	0.3	-0.1	0.2	0.1	0.0	0.0	0.0	0.1
30	-0.3	-0.1	0.1	1.0	0.3	0.1	0.4	0.1	0.0	0.0	-0.1	-0.1
40	-0.3	0.0	-0.1	0.4	0.4	0.0	0.3	0.2	0.0	0.0	0.0	0.0
50	0.1	0.2	-0.1	0.0	0.3	0.1	0.2	0.0	-0.1	-0.2	0.0	-0.1
60	0.0	0.3	-0.2	0.4	0.7	0.0	0.1	0.0	0.1	-0.2	-0.1	-0.1
70	0.0	0.5	0.1	0.7	0.1	0.5	0.0	-0.2	0.0	-0.5	0.0	-0.3
80	-0.1	0.2	0.0	0.0	-0.6	0.4	0.1	0.1	0.0	0.0	0.1	0.3
90	-0.1	0.1	-0.1	-0.1	-0.6	0.0	0.2	0.0	0.0	0.0	1.7	-0.5
Max	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.8	0.2
Avg	0.3	0.4	0.2	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	-0.1

Table I-58a. CALSIM-Simulated Monthly CVP San Luis Reservoir Storage, for 2001 Scenario A Compared to 2001 Baseline (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	114	131	104	187	242	215	177	105	45	45	45	51
10	135	250	355	482	580	579	540	399	214	82	45	90
20	178	288	418	540	622	715	638	463	314	151	45	130
30	209	318	437	573	674	764	703	536	326	168	87	148
40	234	324	489	624	710	786	731	568	354	205	126	171
50	258	370	539	688	785	849	801	629	399	232	135	198
60	276	417	574	731	826	915	843	652	431	259	164	228
70	317	455	606	763	861	954	881	697	489	303	178	261
80	394	501	673	803	923	972	925	730	565	356	236	303
90	497	640	780	920	972	972	961	804	652	496	396	439
Max	972	972	972	972	972	972	972	943	807	719	740	966
Avg	302	413	547	677	764	824	771	607	420	263	172	242
B: 2020 Baseline												
Min	108	90	45	109	189	234	197	124	45	45	45	45
10	135	209	316	458	573	603	541	366	200	83	45	90
20	160	290	404	538	612	704	635	459	242	98	45	124
30	188	321	451	575	660	751	683	491	283	129	90	135
40	214	324	486	624	690	788	712	538	303	146	125	159
50	238	350	520	651	786	833	778	572	355	224	135	181
60	277	369	547	722	814	885	826	621	394	245	142	223
70	342	421	595	754	861	926	857	640	434	291	193	268
80	390	542	689	829	904	971	895	708	505	370	263	323
90	495	618	817	902	972	972	921	792	609	428	320	428
Max	972	972	972	972	972	972	972	942	818	764	769	972
Avg	295	405	541	669	749	812	752	579	379	244	177	240
Comparison: B – A												
Min	-6	-41	-59	-78	-53	19	20	19	0	0	0	-6
10	0	-41	-39	-24	-7	24	1	-33	-14	1	0	0
20	-18	2	-14	-2	-10	-11	-3	-4	-72	-53	0	-6
30	-21	3	14	2	-14	-13	-20	-45	-43	-39	3	-13
40	-20	0	-3	0	-20	2	-19	-30	-51	-59	-1	-12
50	-20	-20	-19	-37	1	-16	-23	-57	-44	-8	0	-17
60	1	-48	-27	-9	-12	-30	-17	-31	-37	-14	-22	-5
70	25	-34	-11	-9	0	-28	-24	-57	-55	-12	15	7
80	-4	41	16	26	-19	-1	-30	-22	-60	14	27	20
90	-2	-22	37	-18	0	0	-40	-12	-43	-68	-76	-11
Max	0	0	0	0	0	0	0	-1	11	45	29	6
Avg	-7	-8	-6	-8	-15	-12	-19	-28	-41	-19	5	-2

Table I-58b. CALSIM-Simulated Monthly CVP San Luis Reservoir Storage, for 2001 Scenario A Compared to 2001 Baseline (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	90	92	59	127	210	273	233	142	45	45	45	65
10	141	218	332	463	568	671	605	471	285	118	45	85
20	167	290	415	526	654	718	656	508	325	166	62	135
30	205	321	447	609	692	761	717	553	348	194	99	156
40	230	337	486	642	740	811	771	598	380	220	133	168
50	258	364	525	660	765	857	826	641	416	253	149	194
60	277	397	556	690	809	888	858	672	460	276	165	226
70	338	451	600	752	847	937	887	690	478	315	192	278
80	407	541	663	822	928	972	925	751	569	367	253	348
90	459	606	784	900	972	972	938	807	628	429	317	414
Max	972	972	972	972	972	972	972	891	785	741	755	912
Avg	298	406	541	673	767	832	787	628	435	274	181	242
B: 2020 Baseline												
Min	90	90	59	125	208	254	213	137	45	45	45	45
10	135	182	331	429	533	611	572	408	218	53	45	90
20	157	294	400	528	623	677	648	487	287	126	49	135
30	192	316	437	575	669	742	674	518	302	174	103	143
40	213	324	486	620	699	804	751	560	340	195	135	167
50	244	353	510	661	771	839	794	589	378	213	135	186
60	271	372	532	695	802	884	816	621	401	248	143	220
70	341	443	580	742	846	907	856	650	441	296	180	259
80	426	579	688	821	908	971	896	712	525	348	248	357
90	550	654	832	964	972	972	927	775	552	435	351	509
Max	972	972	972	972	972	972	972	891	791	751	755	901
Avg	299	405	539	665	751	812	759	591	391	244	175	248
Comparison: B – A												
Min	0.0	-2.0	0.0	-2.0	-2.0	-19.0	-20.0	-5.0	0.0	0.0	0.0	-20.0
10	-6.0	-36.0	-1.0	-34.0	-35.0	-60.0	-33.0	-63.0	-67.0	-65.0	0.0	5.0
20	-10.0	4.0	-15.0	2.0	-31.0	-41.0	-8.0	-21.0	-38.0	-40.0	-13.0	0.0
30	-13.0	-5.0	-10.0	-34.0	-23.0	-19.0	-43.0	-35.0	-46.0	-20.0	4.0	-13.0
40	-17.0	-13.0	0.0	-22.0	-41.0	-7.0	-20.0	-38.0	-40.0	-25.0	2.0	-1.0
50	-14.0	-11.0	-15.0	1.0	6.0	-18.0	-32.0	-52.0	-38.0	-40.0	-14.0	-8.0
60	-6.0	-25.0	-24.0	5.0	-7.0	-4.0	-42.0	-51.0	-59.0	-28.0	-22.0	-6.0
70	3.0	-8.0	-20.0	-10.0	-1.0	-30.0	-31.0	-40.0	-37.0	-19.0	-12.0	-19.0
80	19.0	38.0	25.0	-1.0	-20.0	-1.0	-29.0	-39.0	-44.0	-19.0	-5.0	9.0
90	91.0	48.0	48.0	64.0	0.0	0.0	-11.0	-32.0	-76.0	6.0	34.0	95.0
Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	10.0	0.0	-11.0
Avg	1	-1	-2	-8	-16	-20	-28	-37	-44	-30	-6	6

Table I-59a. CALSIM-Simulated Monthly SWP San Luis Reservoir Storage, for 2001 Scenario A Compared to 2001 Baseline (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	55	55	55	88	85	94	67	55	55	55	55	55
10	110	70	66	270	389	474	406	232	121	115	110	110
20	130	110	159	368	598	685	557	351	253	165	132	133
30	150	163	286	482	708	785	626	406	303	194	160	147
40	184	214	344	587	751	839	722	503	362	242	166	215
50	280	350	471	735	855	915	765	590	463	324	246	269
60	397	438	559	823	924	956	833	639	529	354	291	368
70	530	603	688	944	985	1,025	897	710	614	379	353	452
80	741	770	882	1,067	1,050	1,067	931	748	734	465	421	581
90	872	940	1,067	1,067	1,067	1,067	959	814	822	601	642	740
Max	1,067	1,067	1,067	1,067	1,067	1,067	1,067	965	1,047	1,067	1,067	1,067
Avg	405	426	519	697	798	846	726	561	479	333	301	358
B: 2020 Baseline												
Min	55	55	55	162	138	121	91	81	55	83	55	100
10	110	93	67	275	389	499	432	254	128	132	116	110
20	127	134	186	379	618	681	551	367	262	165	148	131
30	148	154	269	469	724	793	629	425	344	183	165	152
40	216	211	380	604	792	869	713	554	386	261	192	216
50	315	343	525	819	869	948	800	599	463	330	241	292
60	384	531	639	909	950	1,002	865	655	539	389	309	360
70	618	642	764	978	1,023	1,043	908	733	638	445	365	501
80	869	835	1,006	1,067	1,067	1,067	937	782	838	487	450	624
90	1,063	1,067	1,067	1,067	1,067	1,067	956	815	921	650	585	798
Max	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,020	1,067	1,067	1,067	1,067
Avg	436	458	553	728	819	866	744	577	511	356	309	381
Comparison: B – A												
Min	0.0	0.0	0.0	74.0	53.0	27.0	24.0	26.0	0.0	28.0	0.0	45.0
10	0.0	23.0	1.0	5.0	0.0	25.0	26.0	22.0	7.0	17.0	6.0	0.0
20	-3.0	24.0	27.0	11.0	20.0	-4.0	-6.0	16.0	9.0	0.0	16.0	-2.0
30	-2.0	-9.0	-17.0	-13.0	16.0	8.0	3.0	19.0	41.0	-11.0	5.0	5.0
40	32.0	-3.0	36.0	17.0	41.0	30.0	-9.0	51.0	24.0	19.0	26.0	1.0
50	35.0	-7.0	54.0	84.0	14.0	33.0	35.0	9.0	0.0	6.0	-5.0	23.0
60	-13.0	93.0	80.0	86.0	26.0	46.0	32.0	16.0	10.0	35.0	18.0	-8.0
70	88.0	39.0	76.0	34.0	38.0	18.0	11.0	23.0	24.0	66.0	12.0	49.0
80	128.0	65.0	124.0	0.0	17.0	0.0	6.0	34.0	104.0	22.0	29.0	43.0
90	191.0	127.0	0.0	0.0	0.0	0.0	-3.0	1.0	99.0	49.0	-57.0	58.0
Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.0	20.0	0.0	0.0	0.0
Avg	31.0	32.0	34.0	31.0	21.0	20.0	18.0	16.0	32.0	23.0	8.0	23.0

Table I-59b. CALSIM-Simulated Monthly SWP San Luis Reservoir Storage, for 2020 Scenario A Compared to 2020 Baseline (thousand acre-feet)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
A: 2001 Baseline												
Min	55	55	55	86	75	71	55	55	55	55	55	55
10	110	55	55	245	349	363	270	140	60	57	94	110
20	115	110	141	332	504	537	393	233	165	137	115	120
30	137	141	272	454	617	658	499	331	272	164	140	144
40	165	226	321	556	689	788	612	411	327	193	165	174
50	250	280	423	645	773	837	678	484	401	274	221	290
60	341	322	442	680	823	893	725	556	453	301	289	327
70	453	554	587	810	888	923	759	599	529	397	345	409
80	621	674	753	951	987	1,009	836	662	657	453	413	559
90	817	908	1,067	1,067	1,050	1,067	896	772	790	535	498	719
Max	1,067	1,067	1,067	1,067	1,067	1,067	1,024	959	1,045	1,067	1,067	1,067
Avg	359	382	461	636	732	776	624	463	418	297	277	332
B: 2020 Baseline												
Min	55	55	55	55	55	55	55	55	55	55	55	109
10	110	55	67	246	356	410	328	148	89	110	113	110
20	122	110	151	353	566	586	434	275	174	159	143	134
30	139	146	310	511	679	724	539	342	295	180	160	151
40	165	224	352	578	751	797	625	396	345	220	165	171
50	241	282	424	711	837	871	704	518	443	302	221	267
60	387	419	507	809	886	928	769	583	523	344	261	350
70	467	554	624	869	924	987	803	634	607	376	345	406
80	654	758	919	1,001	997	1,067	873	700	714	484	433	519
90	925	929	1,067	1,067	1,067	1,067	925	783	811	610	574	706
Max	1,067	1,067	1,067	1,067	1,067	1,067	1,050	993	1,067	1,067	1,067	1,067
Avg	386	410	503	679	767	812	658	494	460	321	288	342
Comparison: B – A												
Min	0	0	0	-31	-20	-16	0	0	0	0	0	54
10	0	0	12	1	7	47	58	8	29	53	19	0
20	7	0	10	21	62	49	41	42	9	22	28	14
30	2	5	38	57	62	66	40	11	23	16	20	7
40	0	-2	31	22	62	9	13	-15	18	27	0	-3
50	-9	2	1	66	64	34	26	34	42	28	0	-23
60	46	97	65	129	63	35	44	27	70	43	-28	23
70	14	0	37	59	36	64	44	35	78	-21	0	-3
80	33	84	166	50	10	58	37	38	57	31	20	-40
90	108	21	0	0	17	0	29	11	21	75	76	-13
Max	0	0	0	0	0	0	26	34	22	0	0	0
Avg	27.0	28.0	42.0	43.0	35.0	36.0	34.0	31.0	42.0	24.0	11.0	10.0

Table I-63. Monthly Distribution of Folsom Reservoir Inflows (cfs) for 2001 and 2020 Baseline Conditions

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	101	154	116	119	162	321	343	325	152	105	94	92	164
10	320	253	326	369	780	1,230	1,118	645	700	788	274	290	584
20	354	402	396	484	1,024	1,420	1,639	1,033	922	885	688	336	669
30	415	473	586	603	1,318	1,767	1,919	1,787	1,175	936	844	530	810
40	503	548	683	985	1,651	2,135	2,423	2,412	1,273	993	904	712	1,041
50	669	650	897	1,172	2,224	2,622	3,188	2,993	1,457	1,035	928	811	1,275
60	707	732	1,220	1,519	2,802	2,881	3,534	3,661	1,915	1,079	946	839	1,485
70	745	903	1,652	2,738	3,237	3,397	4,116	4,061	2,239	1,131	960	870	1,770
80	778	1,094	2,804	3,921	4,699	3,914	4,480	4,395	3,035	1,215	982	884	2,058
90	863	1,840	4,113	5,442	5,911	6,653	5,467	6,707	3,810	1,444	1,013	931	2,360
Max	4,238	7,365	11,906	11,229	16,905	9,129	10,067	9,085	8,149	2,541	1,287	1,038	3,263
Avg	661	1,003	1,836	2,252	2,918	2,980	3,222	3,216	2,018	1,067	816	676	1,364
B: 2020 Baseline													
Min	162	154	118	161	230	476	471	446	304	268	212	204	229
10	314	239	330	444	819	1,262	1,221	762	699	612	286	268	590
20	349	406	466	550	1,065	1,461	1,674	1,100	912	799	571	327	670
30	419	501	619	665	1,336	1,792	1,949	1,773	1,162	911	765	482	812
40	497	610	700	1,013	1,663	2,136	2,429	2,396	1,261	961	859	729	1,060
50	682	706	919	1,187	2,248	2,632	3,183	3,069	1,440	998	910	799	1,272
60	715	768	1,251	1,523	2,814	2,892	3,522	3,573	1,899	1,051	929	825	1,485
70	754	938	1,553	2,742	3,247	3,400	3,841	3,936	2,216	1,099	944	859	1,769
80	781	1,115	2,825	3,938	4,694	3,918	4,395	4,359	2,973	1,196	968	873	2,057
90	872	1,880	4,129	5,445	5,921	6,609	5,473	6,688	3,794	1,425	998	920	2,360
Max	4,287	7,388	11,886	11,218	16,899	9,140	10,086	9,070	8,130	2,522	1,271	1,026	3,257
Avg	666	1,031	1,849	2,280	2,938	3,002	3,211	3,197	1,995	1,032	787	669	1,364
Comparison: B – A													
Min	61	0	2	42	68	155	128	121	152	163	118	112	65
10	-6	-14	4	75	39	32	103	117	-1	-176	12	-22	6
20	-5	4	70	67	41	41	35	67	-10	-86	-117	-10	1
30	4	29	33	62	18	26	30	-13	-13	-25	-78	-48	2
40	-6	62	17	28	12	1	6	-16	-12	-33	-45	18	20
50	13	56	22	15	24	10	-5	76	-17	-37	-18	-12	-2
60	7	36	31	4	12	11	-12	-88	-16	-28	-18	-14	0
70	8	35	-98	4	10	3	-275	-125	-23	-32	-16	-11	-1
80	3	21	21	17	-5	4	-85	-36	-63	-19	-14	-11	-1
90	9	40	16	4	10	-44	6	-19	-16	-19	-15	-11	0
Max	49	23	-20	-11	-6	11	19	-15	-19	-19	-16	-12	-6
Avg	5	28	13	28	20	21	-10	-19	-23	-35	-29	-8	-1

Table I-64. Monthly Distribution of New Melones Reservoir Inflows (cfs) for 2001 and 2020 Baseline Conditions

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	33	118	218	179	216	276	471	342	420	325	309	319	271
10	328	339	426	393	509	716	961	680	689	699	603	440	492
20	423	417	478	445	636	924	1,193	1,264	908	732	634	504	579
30	465	487	569	585	799	1,116	1,422	1,486	1,176	791	667	555	649
40	504	536	585	667	1,015	1,217	1,733	2,710	1,849	846	696	585	760
50	520	555	634	797	1,350	1,447	1,899	3,399	2,538	927	716	605	1,027
60	537	591	706	1,083	1,555	1,691	2,125	4,103	3,119	1,076	751	642	1,163
70	569	655	852	1,330	1,941	2,082	2,450	4,567	3,531	1,272	764	689	1,282
80	602	759	1,100	1,825	2,319	2,292	3,057	5,198	3,919	1,496	813	706	1,480
90	666	924	1,600	2,586	2,611	2,906	3,455	5,544	5,317	1,853	908	796	1,805
Max	1,404	4,756	6,392	5,058	8,540	6,453	6,067	8,294	10,507	4,630	1,592	1,161	2,901
Avg	520	696	989	1,260	1,621	1,732	2,127	3,319	2,719	1,160	738	631	1,056
B: 2020 Baseline													
Min	33	118	218	179	216	276	471	342	420	325	309	319	271
10	328	339	426	393	509	716	961	680	689	699	602	440	492
20	423	417	478	445	635	924	1,193	1,264	908	732	634	504	579
30	465	487	569	585	799	1,116	1,422	1,486	1,176	791	667	555	649
40	504	536	585	667	1,015	1,217	1,733	2,710	1,849	846	696	585	760
50	520	555	634	797	1,350	1,447	1,899	3,399	2,538	927	716	605	1,027
60	537	591	706	1,083	1,555	1,691	2,125	4,101	3,119	1,076	751	642	1,163
70	569	655	852	1,330	1,946	2,082	2,450	4,567	3,531	1,272	764	689	1,280
80	602	759	1,100	1,825	2,319	2,292	3,057	5,198	3,919	1,496	813	706	1,480
90	666	924	1,600	2,586	2,611	2,905	3,455	5,544	5,317	1,853	908	796	1,805
Max	1,404	4,756	6,392	5,058	8,540	6,453	6,067	8,294	10,507	4,630	1,592	1,161	2,901
Avg	520	696	989	1,260	1,621	1,732	2,127	3,319	2,718	1,160	738	631	1,056
Comparison: B - A													
Min	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	-1	0	0
20	0	0	0	0	-2	0	0	0	0	0	0	0	0
30	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
50	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	-2	0	0	0	0	0
70	0	0	0	0	5	0	0	0	0	0	0	0	-2
80	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	-1	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg	0	0	0	0	0	0	0	0	-1	0	0	0	0

Table I-65. Monthly Distribution of New Don Pedro Reservoir Inflows (cfs) for 2001 and 2020 Baseline Conditions

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	86	76	139	84	127	167	288	499	144	180	117	143	223
10	148	144	349	436	664	1,155	1,544	1,193	459	328	294	362	576
20	182	175	536	574	1,122	1,765	2,470	2,164	956	366	334	381	786
30	206	213	749	734	1,567	2,095	2,829	2,691	1,826	456	383	412	859
40	233	247	934	830	1,976	2,424	3,042	3,040	2,692	605	447	446	1,072
50	254	269	1,156	999	2,345	2,966	3,375	3,681	3,207	927	497	484	1,413
60	276	403	1,617	1,942	3,619	3,326	3,839	4,067	4,840	1,318	546	519	1,747
70	332	478	2,424	2,935	4,077	3,756	4,228	4,505	5,725	2,018	577	580	1,850
80	400	793	2,748	3,668	4,588	4,508	4,534	5,136	7,165	2,636	652	607	2,212
90	520	1,105	3,942	5,025	5,688	5,208	5,410	6,014	9,024	4,193	751	682	2,711
Max	2,792	7,365	9,252	9,343	10,739	9,424	9,125	10,471	15,114	9,811	3,024	1,729	4,417
Avg	336	632	1,874	2,136	3,015	3,131	3,512	3,736	4,246	1,638	538	518	1,522
B: 2020 Baseline													
Min	86	76	139	84	127	167	288	486	144	180	117	164	223
10	137	144	349	443	736	1,145	1,525	1,126	445	324	290	357	529
20	181	175	564	598	1,110	1,396	2,084	2,019	785	375	327	381	745
30	203	213	721	726	1,496	1,760	2,674	2,452	1,519	456	383	412	812
40	233	247	920	904	1,894	2,286	2,990	3,011	2,425	605	447	446	1,063
50	254	269	1,097	1,317	2,231	3,049	3,250	3,541	3,146	927	497	484	1,359
60	274	403	1,318	1,914	3,349	3,206	3,705	3,933	4,758	1,318	546	519	1,676
70	318	478	2,202	2,866	3,962	3,642	4,137	4,567	5,466	2,018	577	580	1,818
80	383	793	2,592	3,506	4,376	4,435	4,408	4,957	6,772	2,636	652	607	2,143
90	520	1,105	3,659	4,996	5,349	4,984	5,233	5,847	8,920	4,193	751	682	2,648
Max	2,636	7,470	8,806	9,151	10,120	9,289	8,972	10,184	14,805	9,811	2,982	1,563	4,373
Avg	327	646	1,774	2,122	2,903	3,001	3,391	3,580	4,087	1,640	534	514	1,475
Comparison: B - A													
Min	0	0	0	0	0	0	0	-13	0	0	0	21	0
10	-10	0	0	7	73	-10	-19	-66	-14	-4	-4	-5	-47
20	-1	0	27	24	-13	-370	-387	-145	-171	10	-7	0	-41
30	-3	0	-28	-8	-71	-335	-155	-239	-307	0	0	0	-47
40	0	0	-14	74	-82	-138	-52	-30	-267	0	0	0	-9
50	0	0	-59	318	-114	83	-125	-140	-61	0	0	0	-54
60	-2	0	-300	-28	-270	-120	-133	-133	-82	0	0	0	-71
70	-14	0	-222	-70	-115	-114	-91	62	-259	0	0	0	-32
80	-17	0	-156	-161	-212	-73	-126	-180	-394	0	0	0	-70
90	0	0	-282	-29	-339	-224	-177	-168	-104	0	0	0	-63
Max	-156	105	-446	-192	-619	-135	-153	-287	-309	0	-42	-166	-44
Avg	-9	14	-99	-14	-112	-130	-121	-156	-159	2	-4	-4	-48

Table I-66. Monthly Distribution of Lake McClure Inflows (cfs) for 2001 and 2020 Baseline Conditions

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	0	0	0	46	50	81	487	585	218	33	0	0	130
10	16	50	81	130	292	556	1,309	1,519	662	67	0	0	356
20	33	67	122	172	396	732	1,445	1,818	830	163	9	0	473
30	33	84	163	296	553	894	1,633	2,531	1,338	260	33	8	522
40	49	115	225	358	713	1,022	2,010	2,957	1,832	436	49	17	639
50	65	134	309	455	936	1,252	2,185	3,789	2,336	602	81	34	786
60	98	185	410	670	1,121	1,382	2,608	4,251	2,934	800	182	67	1,002
70	98	276	573	1,015	1,559	1,678	2,793	4,749	3,442	1,061	234	94	1,132
80	146	353	891	1,431	2,527	2,205	3,049	5,250	4,393	1,503	433	144	1,321
90	260	652	1,642	2,501	3,547	2,651	3,630	6,489	5,257	1,834	611	272	1,611
Max	862	4,336	6,034	5,627	6,482	6,213	7,243	9,189	10,655	5,676	1,480	1,193	2,769
Avg	112	320	687	927	1,423	1,522	2,371	3,789	2,777	878	248	116	914
B: 2020 Baseline													
Min	0	0	0	46	50	81	487	585	218	33	0	0	130
10	16	50	81	104	292	527	1,309	1,519	692	65	0	0	356
20	33	67	129	169	396	732	1,445	1,727	830	163	16	0	473
30	33	84	173	296	553	894	1,633	2,531	1,338	260	33	8	522
40	49	118	228	358	713	1,022	2,010	2,957	1,832	437	49	17	639
50	65	151	309	455	936	1,252	2,185	3,789	2,336	602	81	34	786
60	84	185	491	670	1,121	1,382	2,608	4,251	2,934	800	182	67	1,002
70	98	276	615	1,015	1,483	1,678	2,793	4,749	3,442	1,061	234	101	1,132
80	146	353	953	1,431	2,527	2,205	3,082	5,250	4,393	1,548	449	144	1,321
90	260	652	1,642	2,501	3,547	2,651	3,630	6,635	5,257	1,854	611	272	1,611
Max	862	4,336	6,034	5,627	6,482	6,213	7,243	9,189	10,655	5,676	1,480	1,193	2,769
Avg	111	321	697	920	1,412	1,520	2,377	3,798	2,785	883	251	117	916
Comparison: B - A													
Min	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	-26	0	-30	0	0	31	-2	0	0	0
20	0	0	7	-3	0	0	0	-91	0	0	7	0	0
30	0	0	10	0	0	0	0	0	0	0	0	0	0
40	0	3	3	0	0	0	0	0	0	1	0	0	0
50	0	17	0	0	0	0	0	0	0	0	0	0	0
60	-14	0	82	0	0	0	0	0	0	0	0	0	0
70	0	0	42	0	-76	0	0	0	0	0	0	7	0
80	0	0	62	0	0	0	33	0	0	45	16	0	0
90	0	0	0	0	0	0	0	147	0	20	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg	-1	2	10	-7	-11	-2	7	9	8	5	3	1	2

Table I-67. Monthly Distribution of Yuba River Inflows (cfs) to Feather River for 2001 and 2020 Baseline Conditions

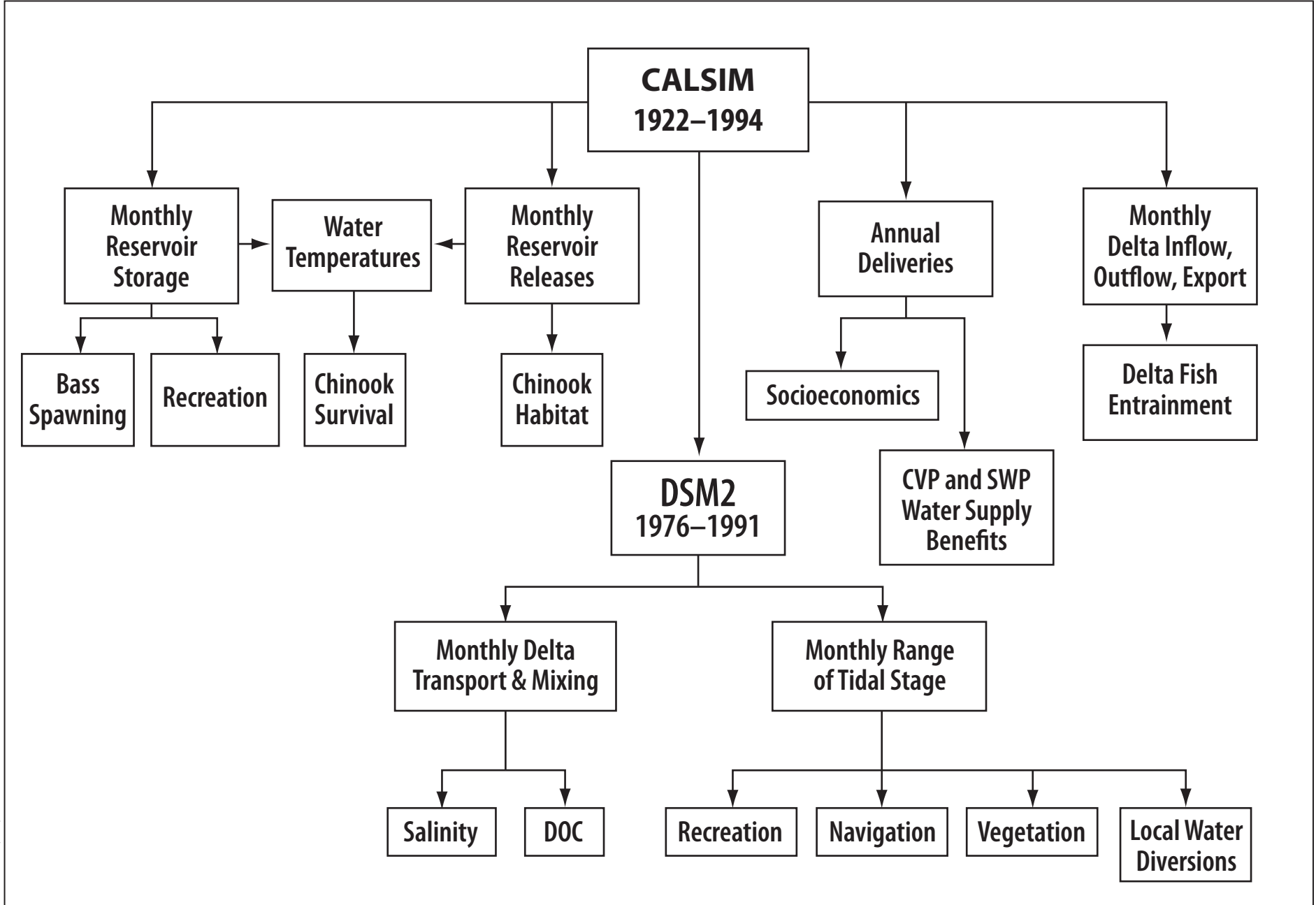
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	484	440	525	516	531	494	395	876	1,018	969	951	497	524
10	531	515	569	582	881	909	549	1,246	1,209	1,275	1,111	578	712
20	561	548	602	675	1,264	1,170	667	1,389	1,341	1,380	1,224	661	834
30	585	560	643	847	1,672	1,708	1,044	1,724	1,482	2,052	1,627	890	1,006
40	601	582	760	1,323	2,458	2,469	1,719	2,268	1,580	2,154	1,664	929	1,263
50	612	607	926	1,836	3,040	2,991	2,540	3,265	1,659	2,241	1,718	951	1,431
60	624	653	1,245	2,379	3,407	3,610	3,062	3,875	2,317	2,279	1,748	979	1,896
70	639	891	1,810	3,326	4,515	4,178	3,705	4,437	3,111	2,368	1,788	1,014	2,217
80	652	1,326	3,052	4,239	5,479	5,602	4,245	5,452	4,007	2,882	1,852	1,090	2,618
90	726	2,532	4,271	6,370	7,622	8,440	5,396	7,023	5,843	3,108	1,932	1,173	3,045
Max	4,130	7,523	17,077	17,831	20,895	14,228	12,087	12,133	10,358	3,969	4,091	2,117	4,244
Avg	669	1,156	2,276	2,989	3,772	3,698	2,770	3,739	2,839	2,193	1,672	933	1,730
B: 2020 Baseline													
Min	432	440	525	516	525	494	387	877	964	854	802	424	459
10	507	515	569	583	805	909	608	1,248	1,196	1,169	1,041	529	681
20	586	548	602	662	1,264	1,171	697	1,553	1,353	1,483	1,299	645	860
30	617	558	643	844	1,777	1,675	1,044	1,843	1,508	1,947	1,626	874	1,006
40	640	575	744	1,310	2,542	2,455	1,719	2,268	1,607	2,126	1,658	924	1,265
50	657	607	898	1,836	3,002	2,991	2,540	3,265	1,684	2,223	1,712	951	1,431
60	672	646	1,209	2,360	3,407	3,610	3,015	3,875	2,317	2,271	1,748	979	1,897
70	688	860	1,824	3,432	4,515	4,338	3,705	4,437	3,111	2,368	1,788	1,014	2,221
80	704	1,295	3,030	4,217	5,658	5,602	4,245	5,452	4,007	2,882	1,852	1,090	2,618
90	742	2,508	4,260	6,370	7,622	8,512	5,396	7,023	5,843	3,108	1,932	1,173	3,045
Max	4,130	7,523	17,077	17,831	20,895	14,228	12,087	12,133	10,358	3,969	4,091	2,117	4,254
Avg	696	1,144	2,271	2,996	3,797	3,721	2,763	3,747	2,849	2,157	1,648	918	1,729
Comparison: B - A													
Min	-52	0	0	0	-6	0	-8	1	-54	-115	-149	-73	-65
10	-24	0	0	2	-76	0	58	2	-12	-106	-70	-49	-32
20	25	0	0	-13	0	1	30	164	12	103	74	-16	26
30	32	-2	0	-3	105	-33	0	120	26	-104	-1	-16	0
40	39	-6	-16	-13	85	-14	0	0	27	-28	-6	-5	2
50	45	0	-28	0	-38	0	0	0	25	-18	-6	0	0
60	48	-6	-36	-19	0	0	-46	0	0	-8	0	0	0
70	48	-31	14	105	0	160	0	0	0	0	0	0	5
80	52	-30	-22	-22	179	0	0	0	0	0	0	0	0
90	16	-24	-11	0	0	72	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0	11
Avg	27	-12	-4	6	25	23	-7	8	10	-36	-24	-15	0

Table I-68. Monthly Distribution of Mokelumne River and Cosumnes River Inflows (cfs) for 2001 and 2020 Baseline Conditions

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf/year
A: 2001 Baseline													
Min	11	92	89	42	111	122	67	42	2	0	0	7	46
10	11	131	190	255	401	623	305	172	18	0	0	7	225
20	59	220	272	326	565	933	867	526	76	4	0	7	333
30	102	316	340	434	936	1,366	1,035	696	204	10	0	8	450
40	134	350	385	623	1,294	1,567	1,354	1,135	603	10	6	8	562
50	1,042	386	493	727	1,889	1,727	1,888	1,740	755	22	6	17	792
60	1,415	420	630	1,127	2,611	2,476	2,350	1,969	1,007	22	6	60	1,095
70	1,567	440	798	2,114	3,529	3,222	3,079	2,421	1,368	46	20	231	1,217
80	1,643	630	1,251	3,696	4,411	3,757	3,535	2,835	1,660	68	20	403	1,677
90	1,819	1,206	3,498	6,068	5,656	5,907	5,459	4,851	2,308	192	52	697	2,045
Max	2,784	8,628	10,238	10,476	18,661	14,858	11,966	8,892	5,321	1,956	442	1,355	4,088
Avg	891	691	1,384	2,113	2,789	2,767	2,479	2,064	996	94	21	200	990
B: 2020 Baseline													
Min	0	4	89	42	111	122	67	42	2	0	0	0	46
10	11	123	190	257	413	633	315	182	18	0	0	7	225
20	59	220	272	336	577	943	877	536	76	4	0	7	324
30	102	316	340	451	952	1,378	1,047	709	214	10	0	8	456
40	114	350	395	636	1,304	1,576	1,364	1,144	611	10	6	8	566
50	389	386	502	740	1,899	1,737	1,873	1,681	767	22	6	17	790
60	1,485	420	642	1,137	2,316	2,486	2,360	1,951	974	22	6	25	1,082
70	1,592	450	796	2,084	3,460	3,175	3,089	2,303	1,125	46	20	251	1,161
80	1,667	644	1,264	3,680	4,399	3,657	3,520	2,801	1,649	68	20	427	1,673
90	1,852	1,193	3,379	5,959	5,310	5,557	5,359	4,855	2,330	204	52	694	2,017
Max	2,656	8,525	10,084	10,374	18,342	14,471	11,717	8,706	5,419	1,974	387	1,290	3,995
Avg	845	686	1,364	2,098	2,701	2,720	2,466	2,023	985	98	20	208	974
Comparison: B - A													
Min	-11	-88	0	0	0	0	0	0	0	0	0	-7	0
10	0	-8	0	2	12	10	10	10	0	0	0	0	0
20	0	0	0	9	12	10	10	10	0	0	0	0	-9
30	0	0	0	17	16	11	12	13	10	0	0	0	5
40	-20	0	11	14	10	9	10	9	8	0	0	0	5
50	-653	0	9	13	10	10	-15	-59	12	0	0	0	-2
60	71	0	12	10	-295	10	10	-18	-33	0	0	-35	-13
70	24	10	-2	-30	-69	-47	10	-118	-242	0	0	19	-56
80	24	14	14	-16	-12	-100	-15	-34	-11	0	0	24	-4
90	33	-13	-119	-108	-345	-349	-100	4	22	13	0	-3	-28
Max	-128	-103	-154	-102	-319	-387	-249	-186	98	18	-55	-65	-92
Avg	-46	-4	-20	-15	-88	-47	-13	-42	-11	4	-1	8	-16

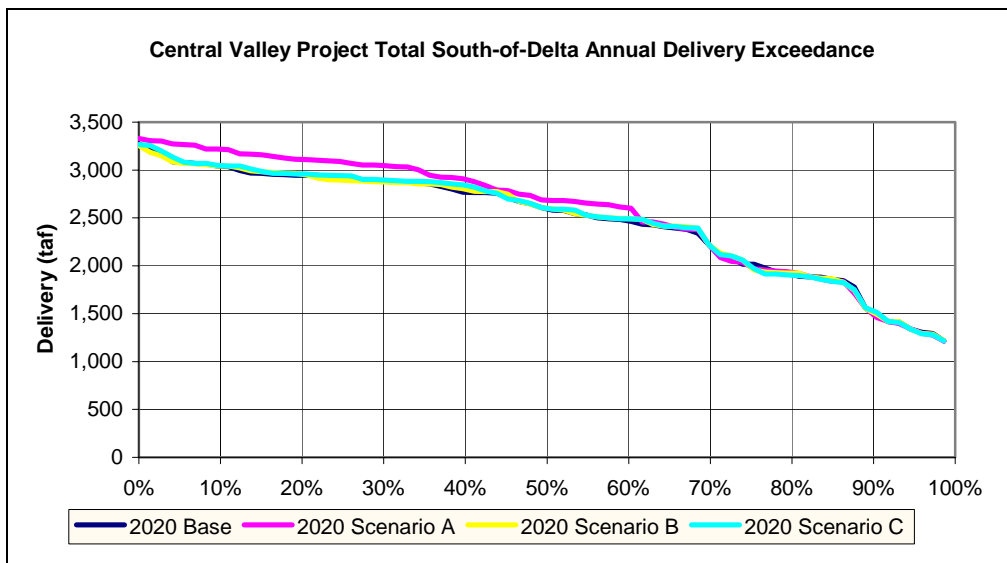
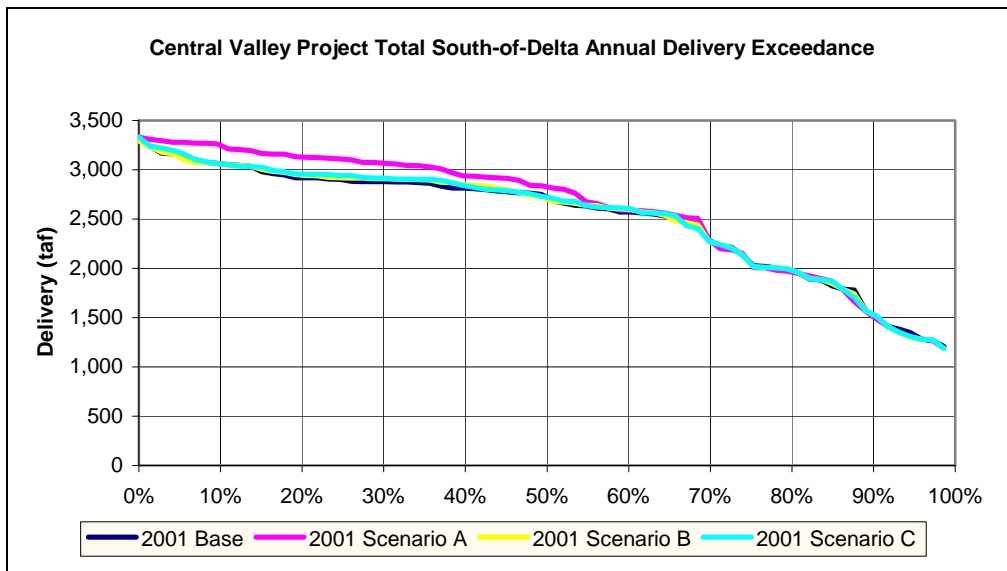
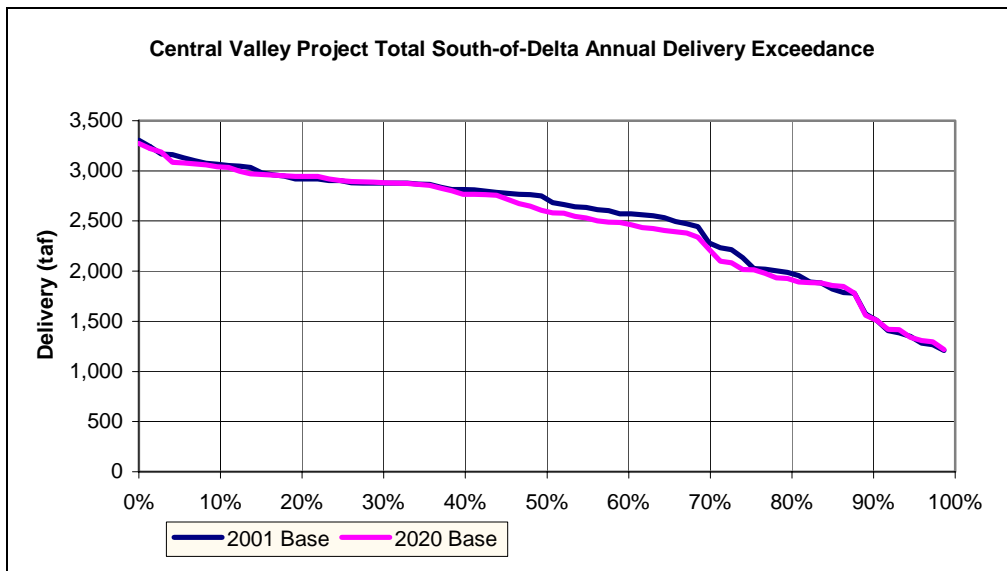
Table I-69b. CALSIM-Simulated SWP Article 21 Deliveries for 2020 Baseline Conditions Prior To Environmental Water Account Actions (taf)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	taf Total
1922	0	0	0	0	0	0	0	0	0	0	0	0	0
1923	0	0	0	0	0	0	0	0	0	0	0	0	0
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1925	0	0	0	0	0	0	0	0	0	0	0	0	0
1926	0	0	0	129	134	0	0	0	0	0	0	0	263
1927	0	0	0	0	0	85	0	0	0	0	0	0	85
1928	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	126	0	0	0	0	0	0	126
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	127	134	0	0	0	0	0	0	261
1933	0	0	0	134	134	134	0	0	0	0	0	0	402
1934	0	0	0	0	86	0	0	0	0	0	0	0	86
1935	0	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	12	0	0	0	0	12
1938	0	0	0	0	68	100	41	19	0	0	0	0	228
1939	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	17	130	134	128	0	0	0	0	0	0	409
1943	0	0	0	128	116	127	1	0	0	0	0	0	373
1944	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	69	119	108	0	0	0	0	0	0	295
1952	0	0	0	0	0	50	0	0	0	0	0	0	50
1953	0	0	35	131	0	83	0	0	0	0	0	0	248
1954	0	0	0	0	0	90	0	0	0	0	0	0	90
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	29	122	103	0	0	0	0	0	0	254
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	88	119	18	0	0	0	0	0	225
1959	0	0	0	0	90	0	0	0	0	0	0	0	90
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	63	0	0	0	0	0	0	63
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	76	115	112	0	0	0	0	0	0	304
1967	0	0	0	0	0	93	12	20	0	0	0	0	125
1968	0	0	77	129	123	133	0	0	0	0	0	0	463
1969	0	0	0	0	0	43	0	0	0	0	0	0	43
1970	0	0	28	130	127	128	0	0	0	0	0	0	413
1971	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	103	104	0	0	0	0	0	0	206
1974	0	0	0	1	118	108	0	0	0	0	0	0	228
1975	0	0	0	0	88	117	0	0	0	0	0	0	204
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	50	50	0	0	0	0	0	0	100
1979	0	0	0	0	0	75	0	0	0	0	0	0	75
1980	0	0	0	0	44	50	0	0	0	0	0	0	94
1981	0	0	0	0	0	71	0	0	0	0	0	0	71
1982	0	0	0	0	0	17	27	5	0	0	0	0	50
1983	0	0	0	50	50	50	0	0	0	0	0	0	150
1984	0	0	50	133	129	111	0	0	0	0	0	0	424
1985	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	112	0	0	0	0	0	0	112
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	60	0	0	0	0	0	0	60
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg	0	0	3	17	30	40	1	1	0	0	0	0	92
Min	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	77	134	134	134	41	20	0	0	0	0	463

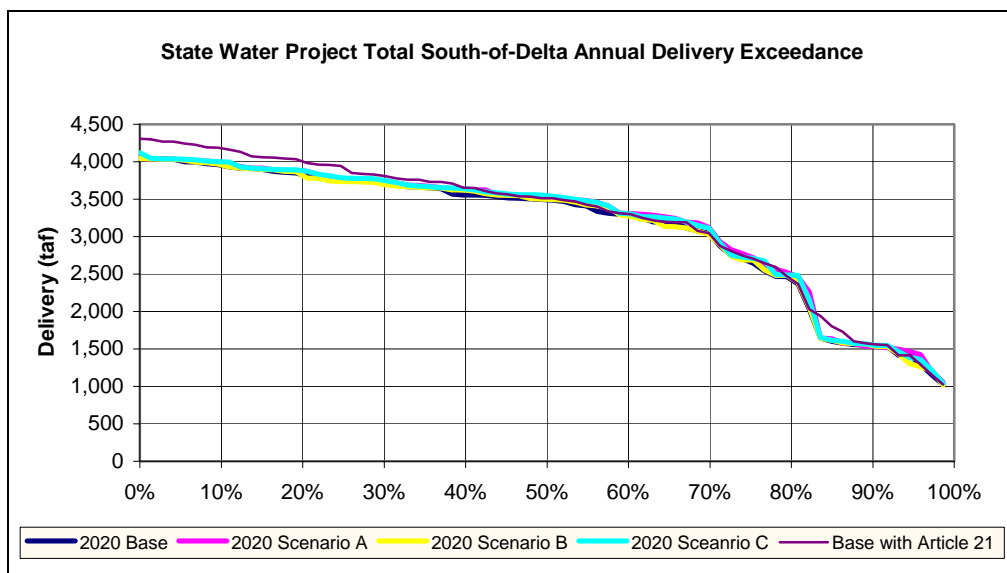
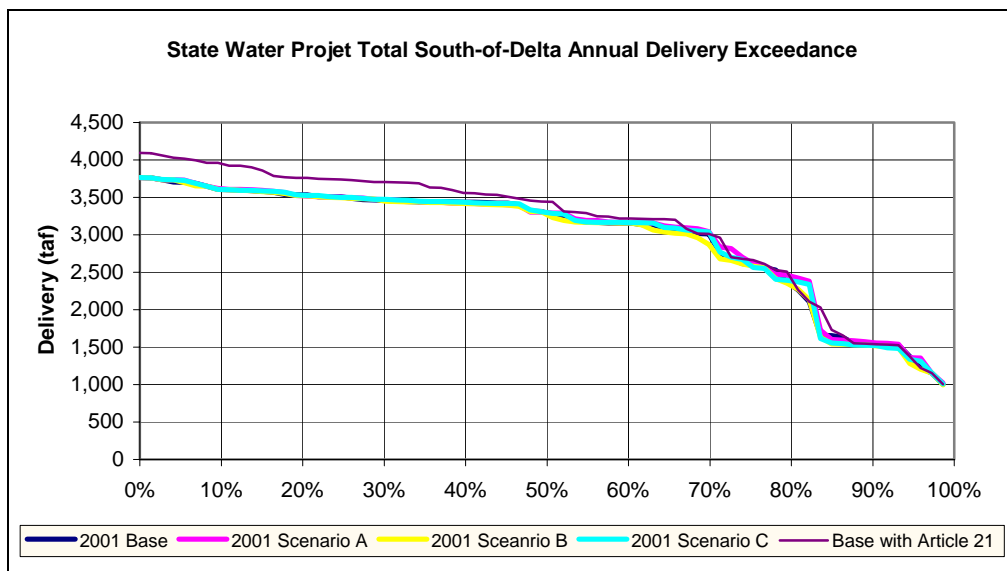
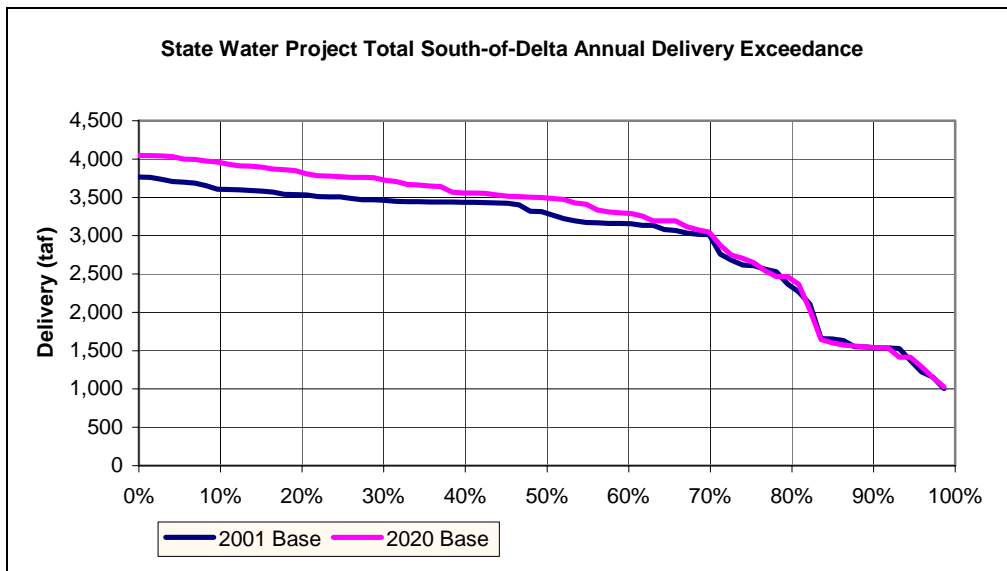


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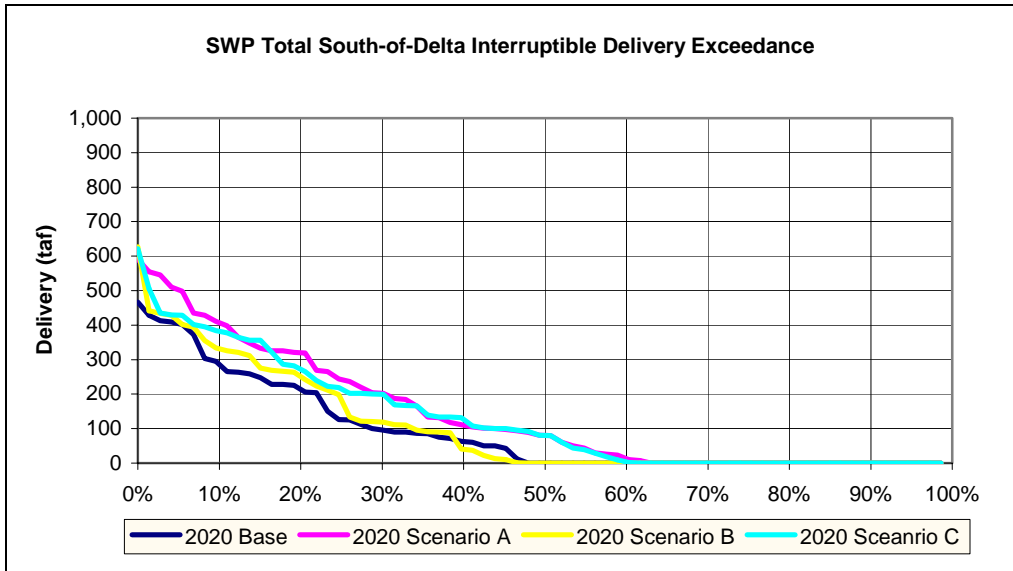
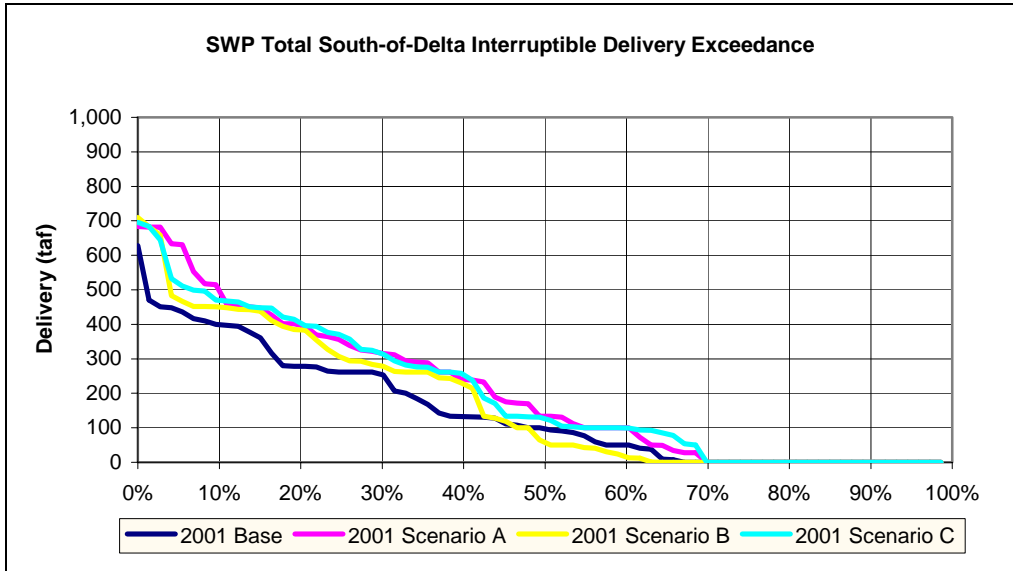
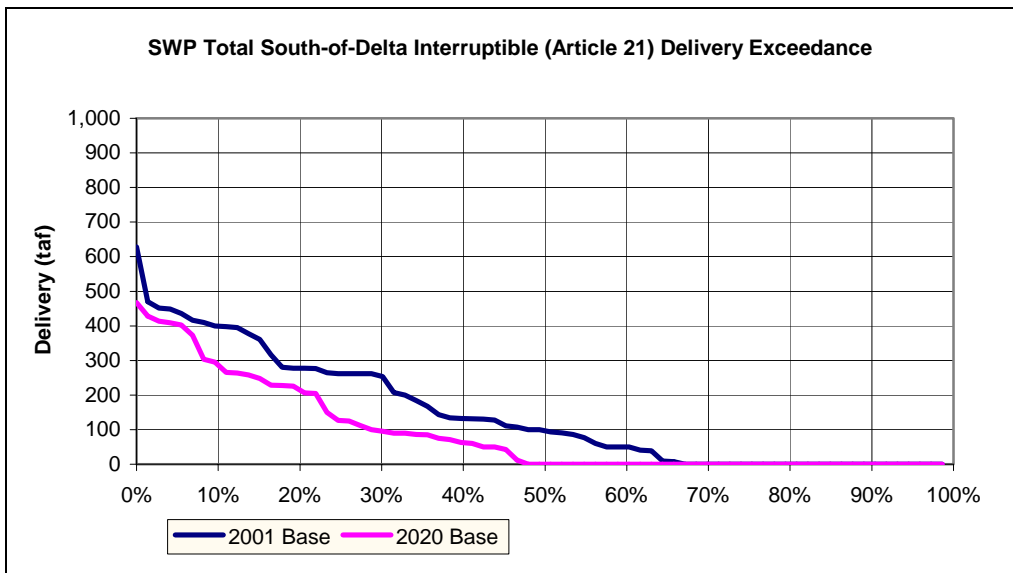
Figure I-1
Use of CALSIM and DSM2 Model Results
for SDIP Alternatives Impact Assessments



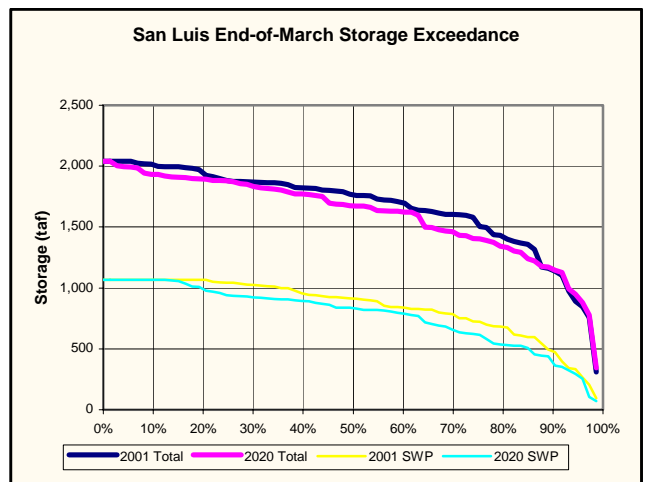
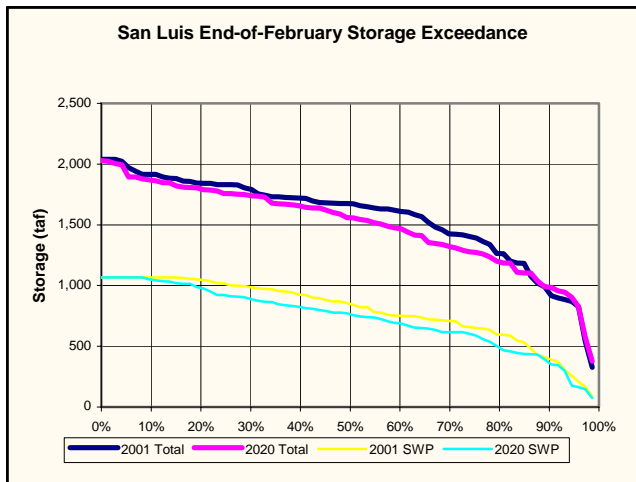
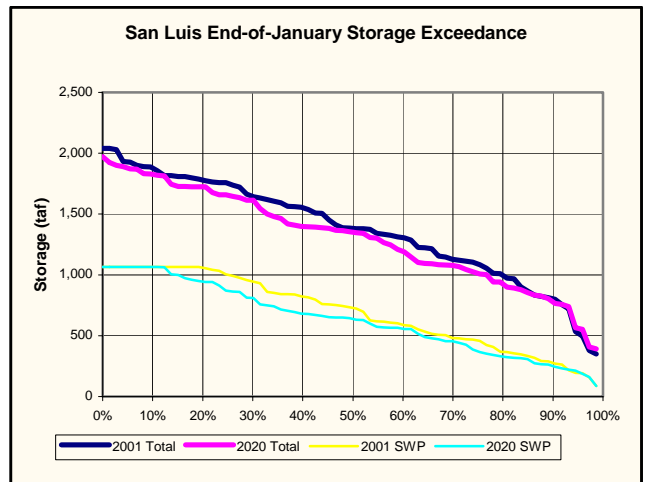
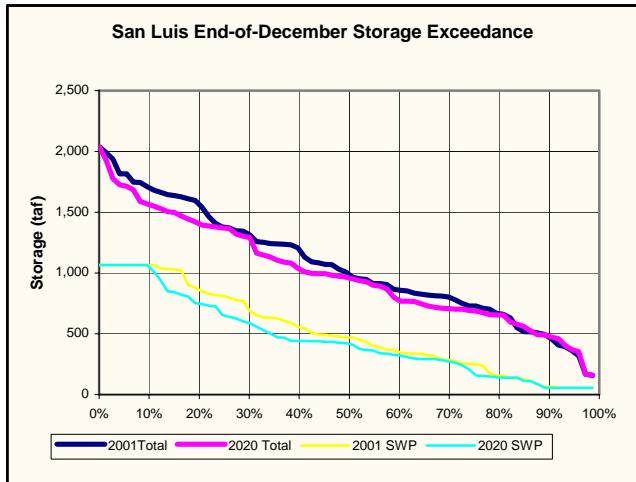
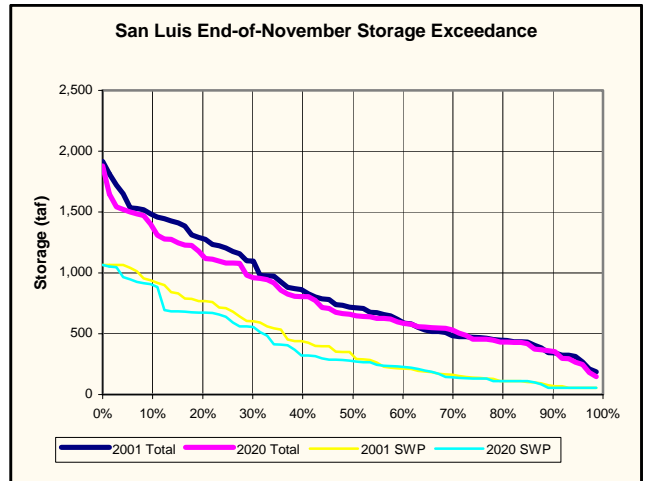
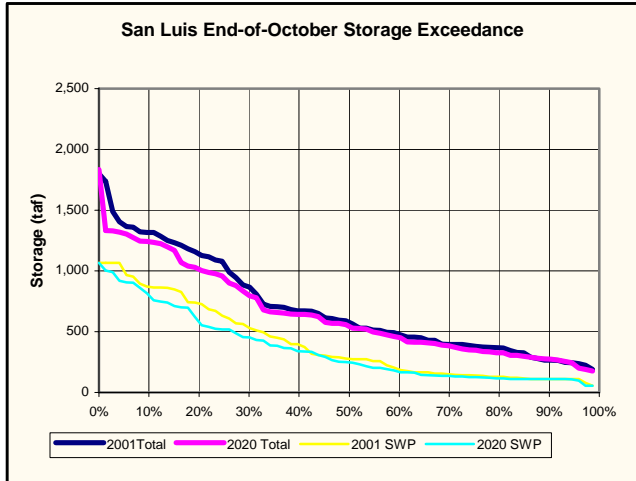
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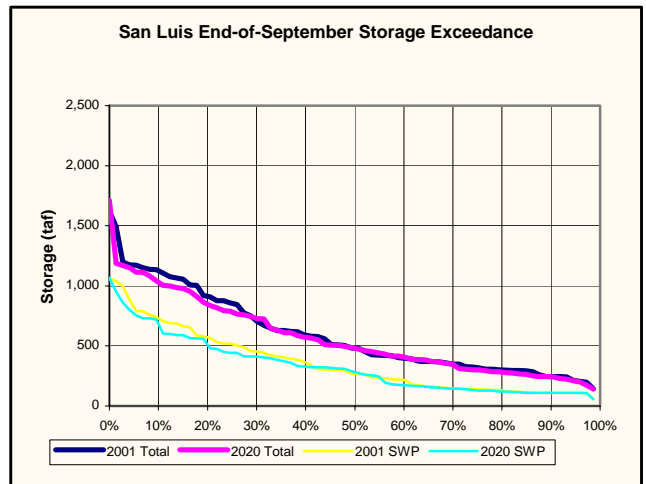
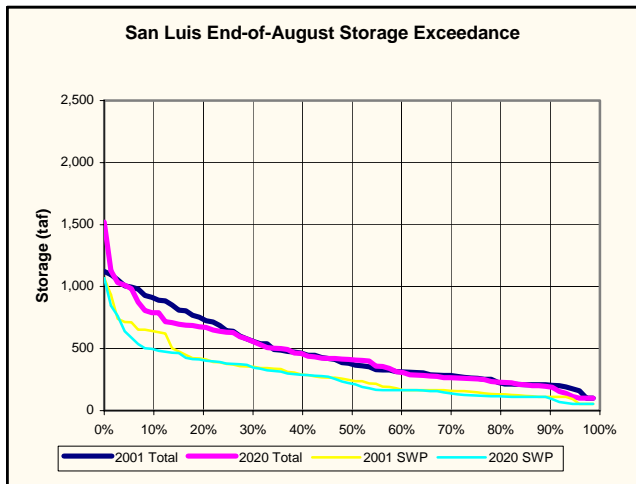
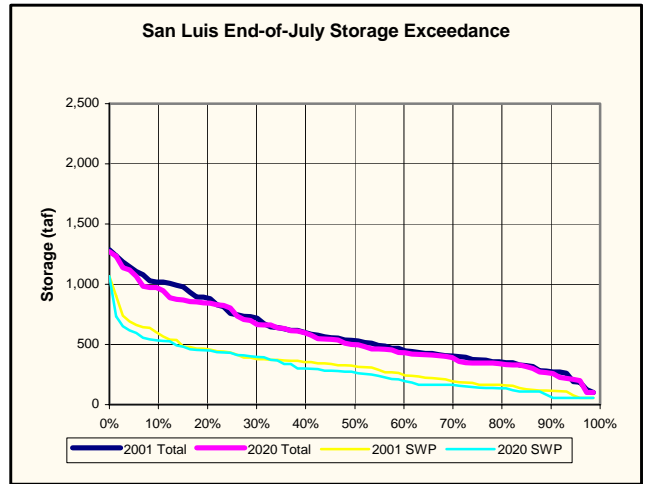
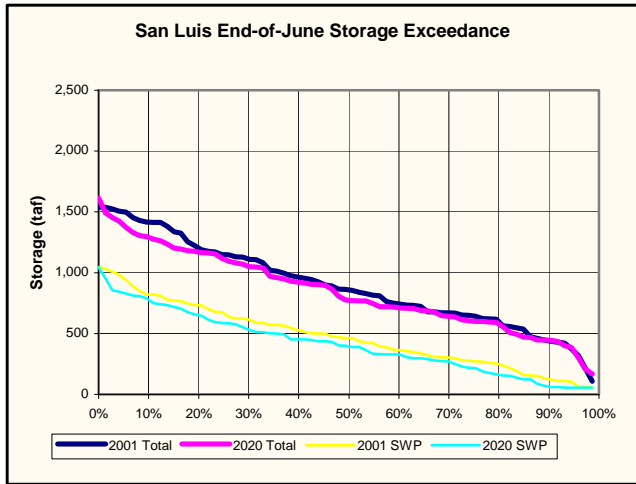
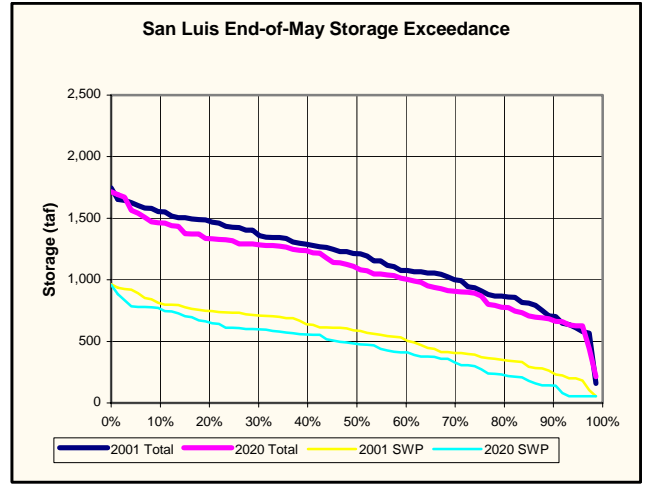
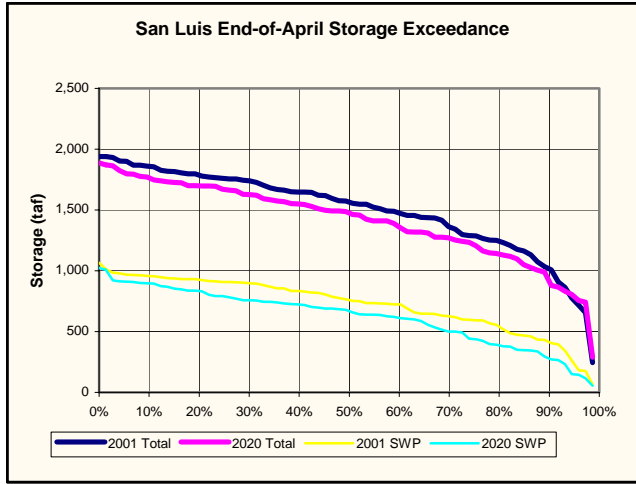


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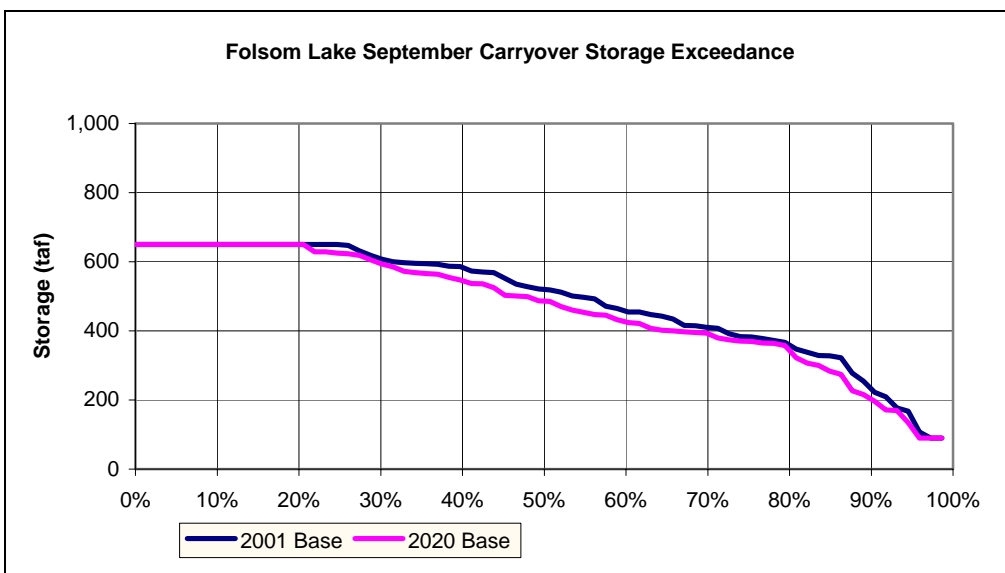
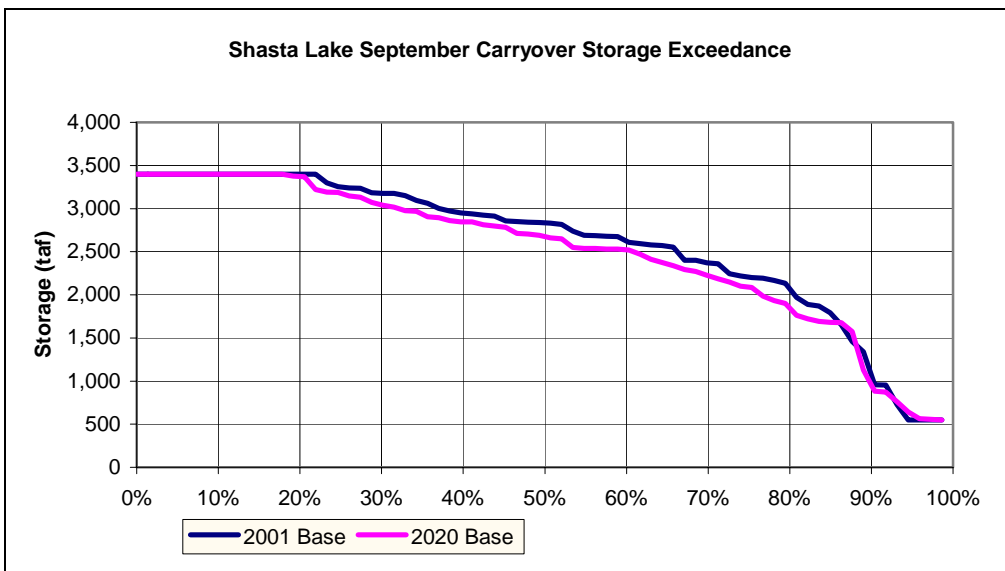
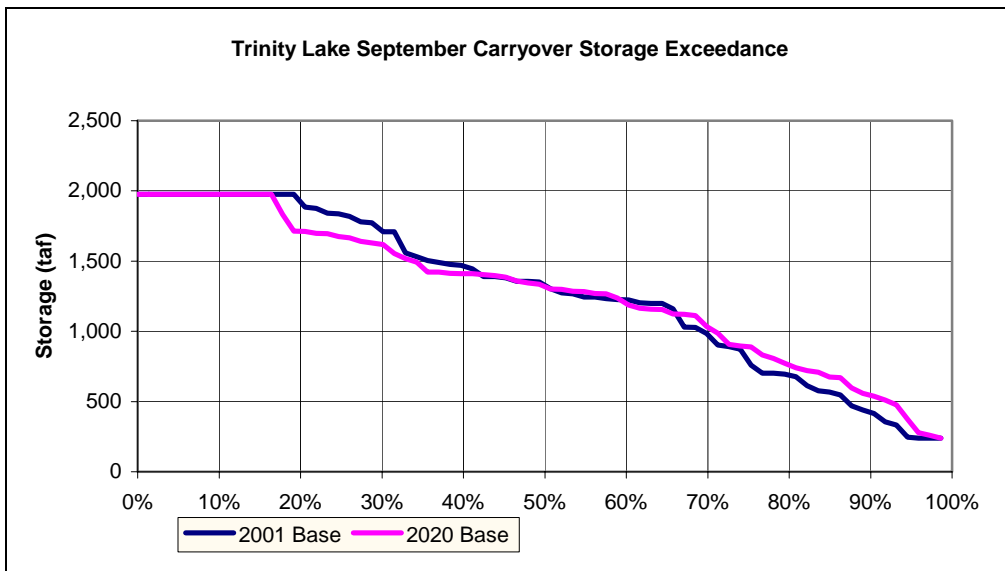


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Figure I-5
San Luis Reservoir Storage
for 2001 and 2020 Baselines (Page 1 of 2)

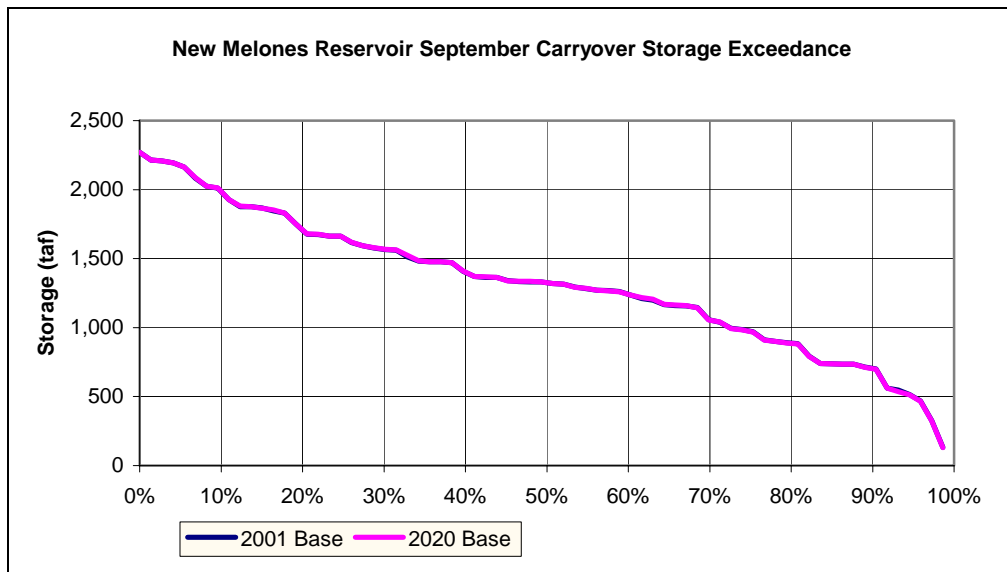
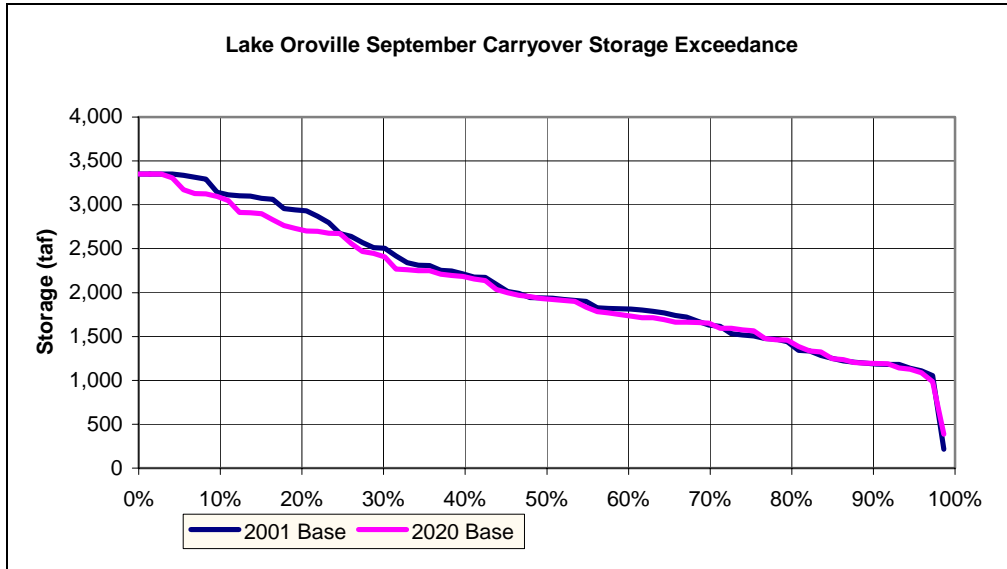


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Figure I-6
Upstream Reservoir Carryover (End-of-September) Storage
for 2001 and 2020 Baselines (Page 1 of 2)



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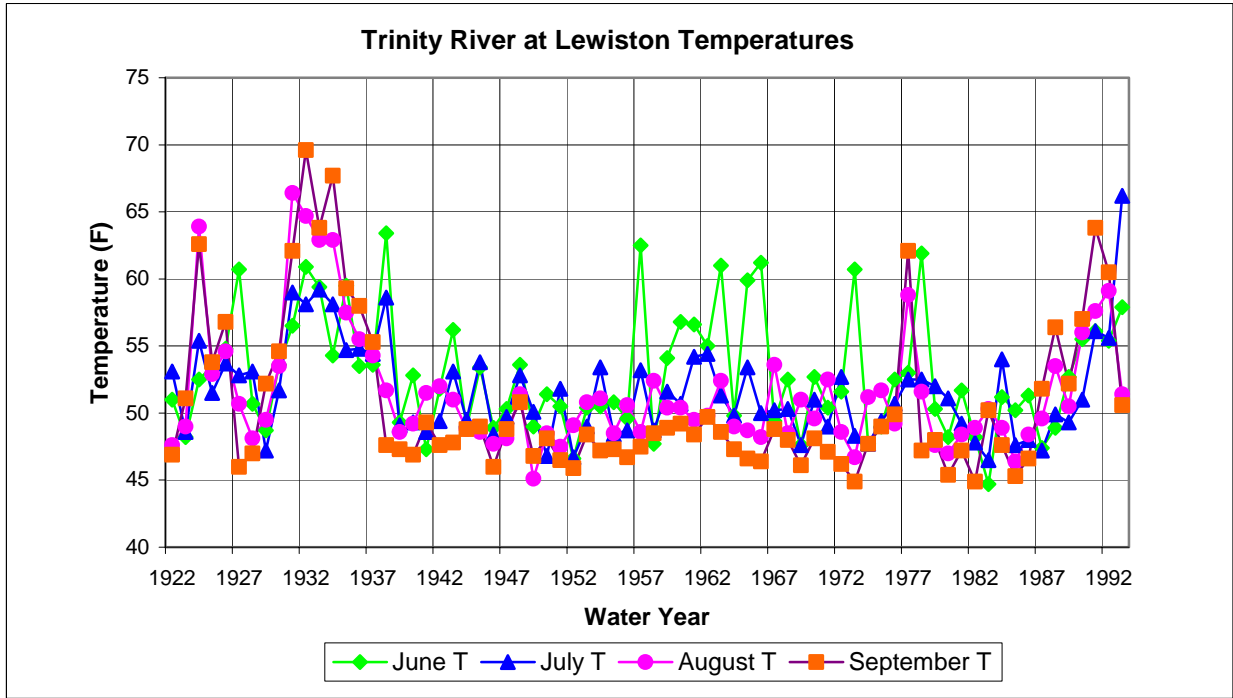


Figure I-7a. Simulated Monthly Trinity River Temperatures at Lewiston for 2001 Baseline Conditions

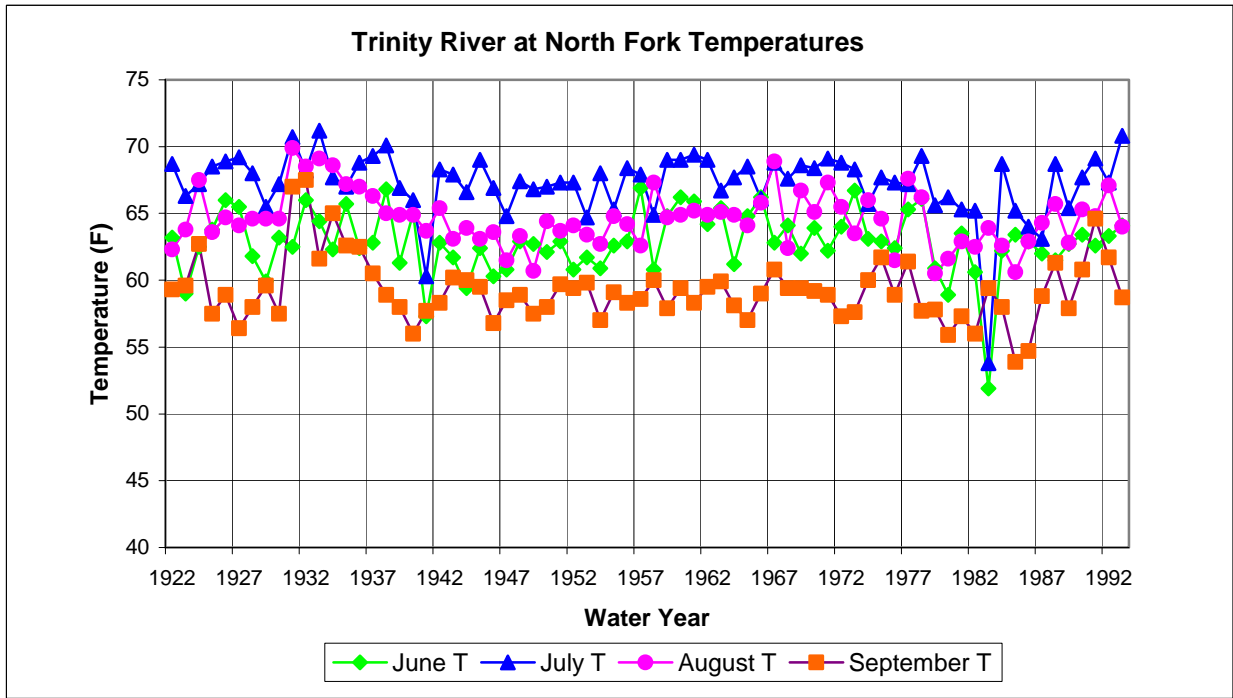


Figure I-7b. Simulated Monthly Trinity River Temperatures at North Fork for 2001 Baseline Conditions

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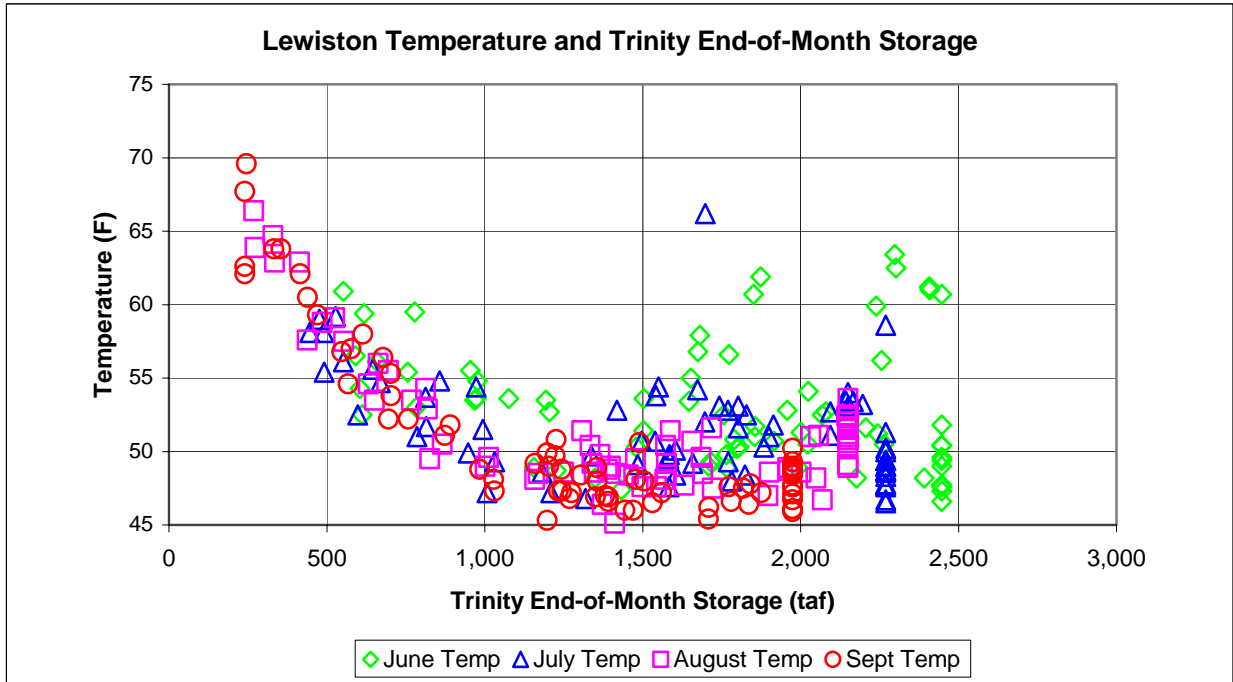


Figure I-7c. Relationship Between Trinity River at Lewiston Water Temperatures and Trinity Reservoir Storage for June, July, August, and September

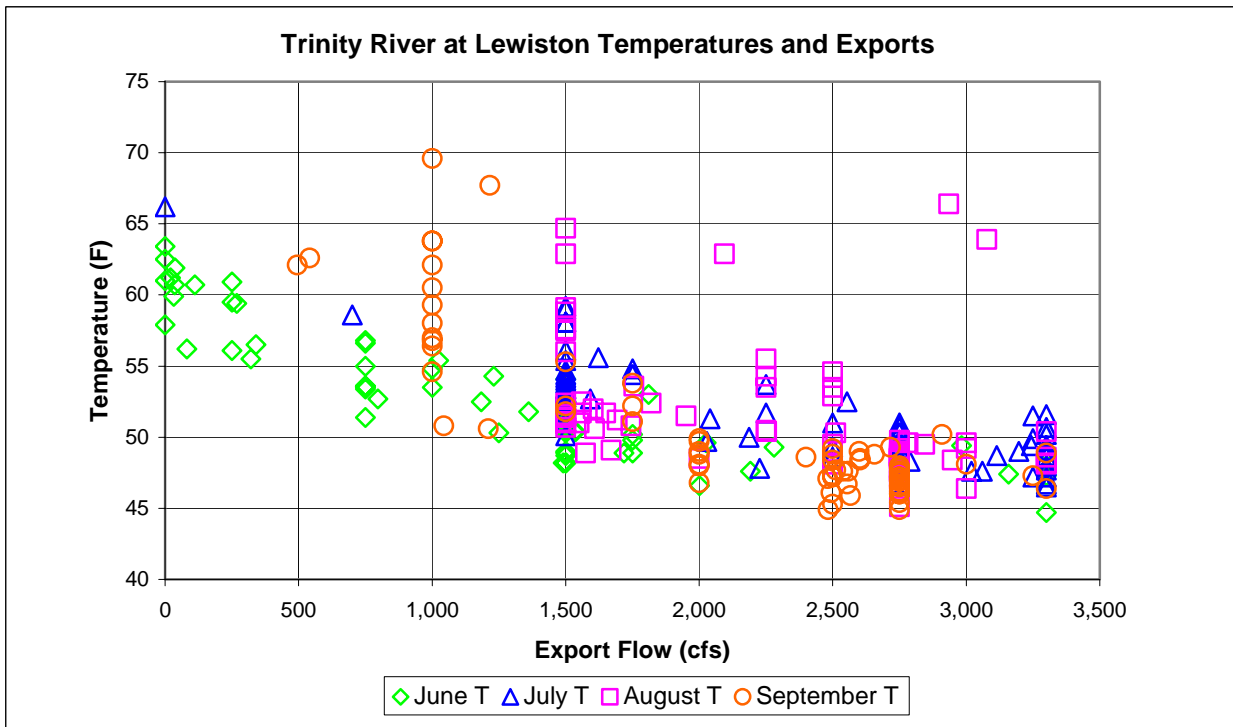


Figure I-7d. Relationship Between Trinity River at Lewiston Water Temperatures and Trinity River Exports for June, July, August, and September

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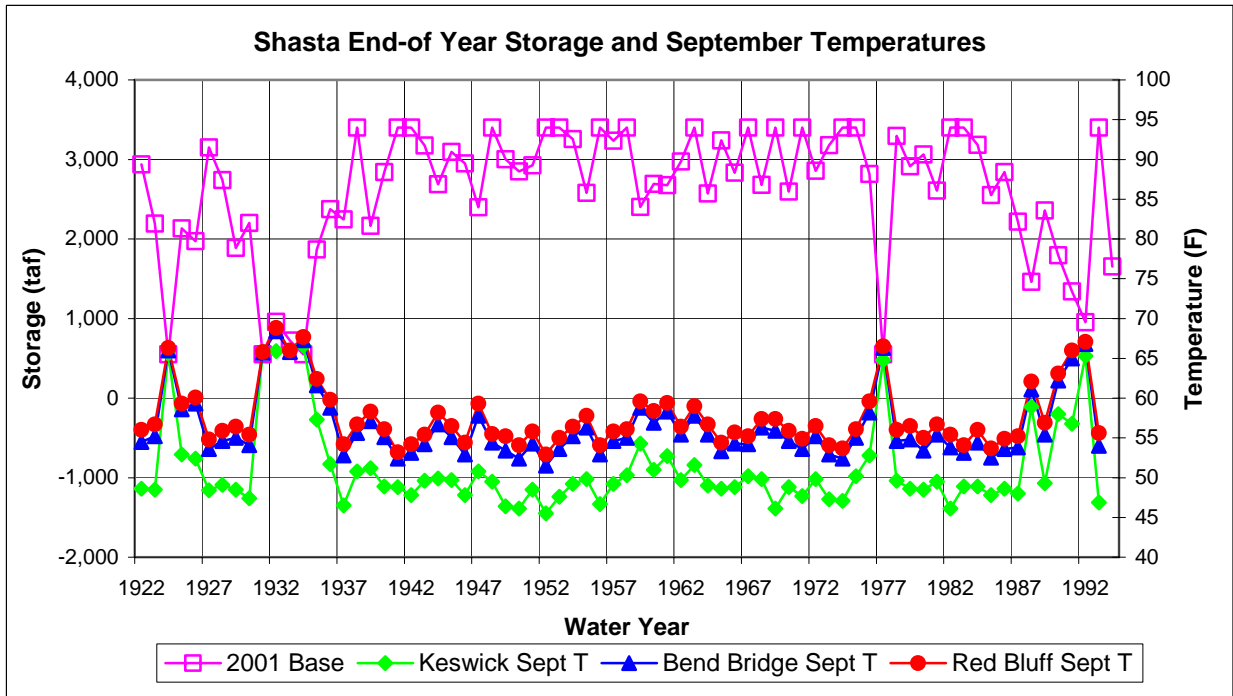


Figure I-8a. Simulated Shasta Carryover Storage and Sacramento River Water Temperatures for 2001 Baseline Conditions

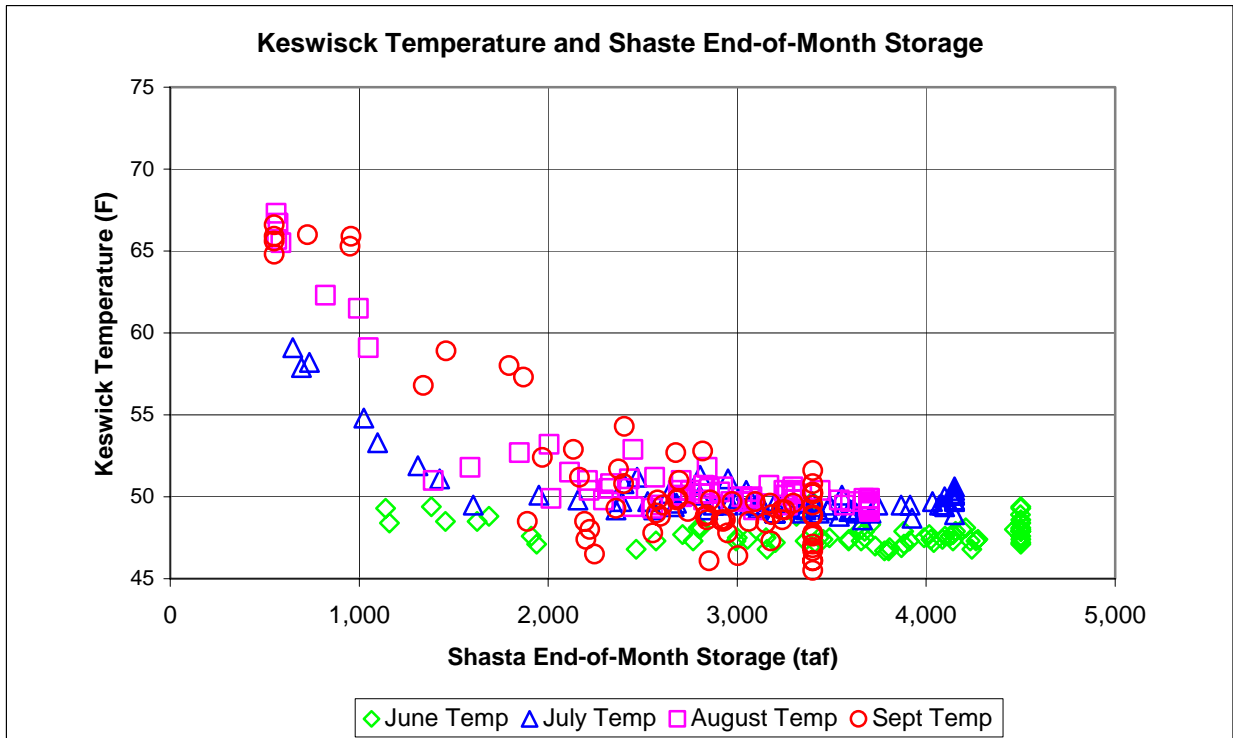


Figure I-8b. Relationship between Shasta Storage and Water Temperatures below Keswick for 2001 Baseline Conditions

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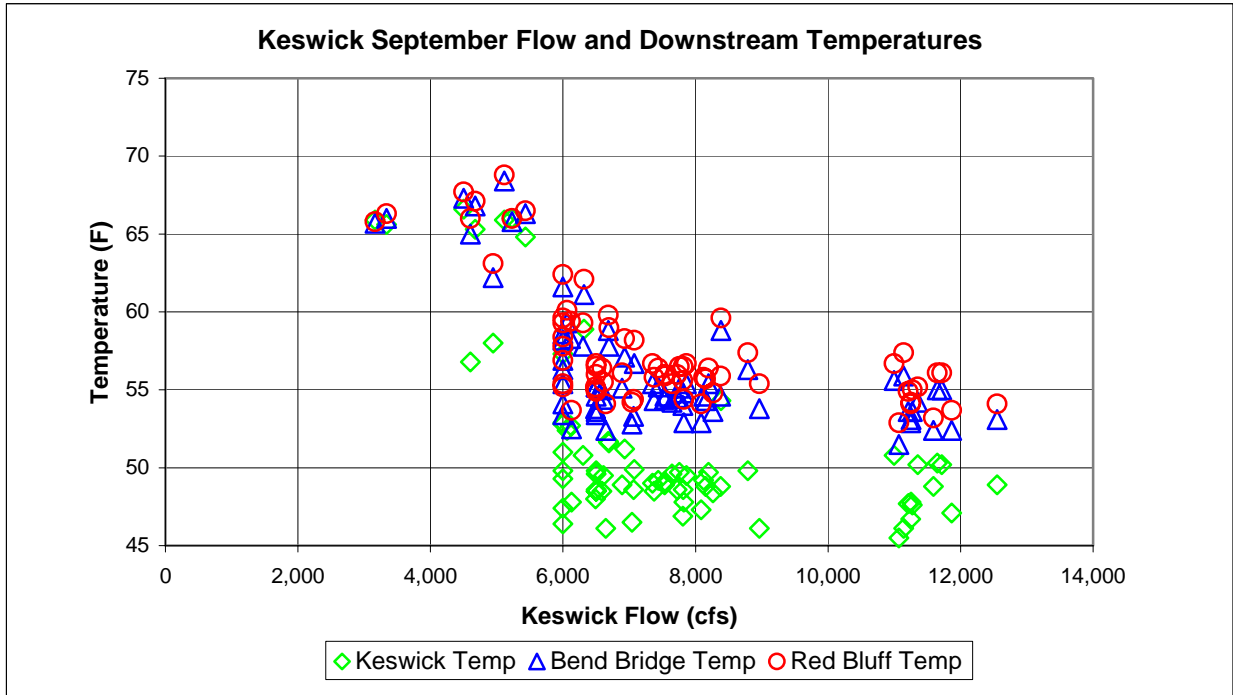


Figure I-8c. Relationship between Sacramento River Flow and Downstream September Temperatures for 2001 Baseline Conditions

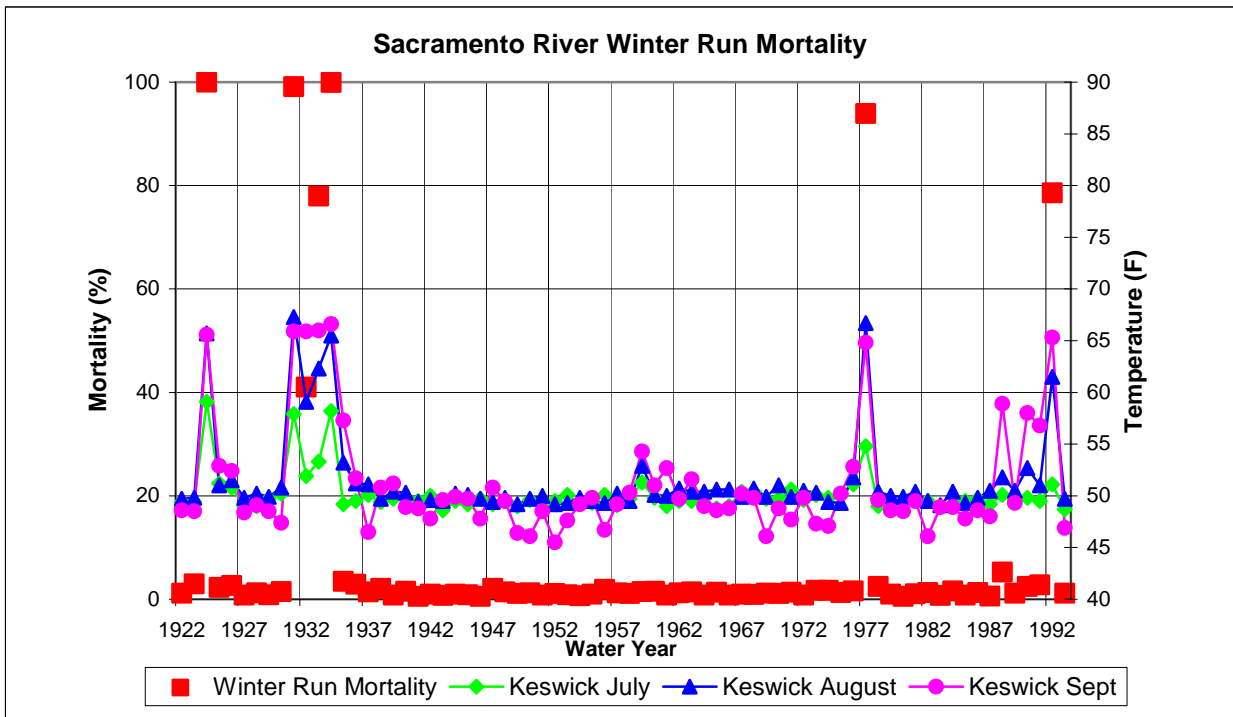


Figure I-8d. Relationship between Sacramento River Water Temperatures and Winter-Run Egg Mortality for 2001 Baseline Conditions

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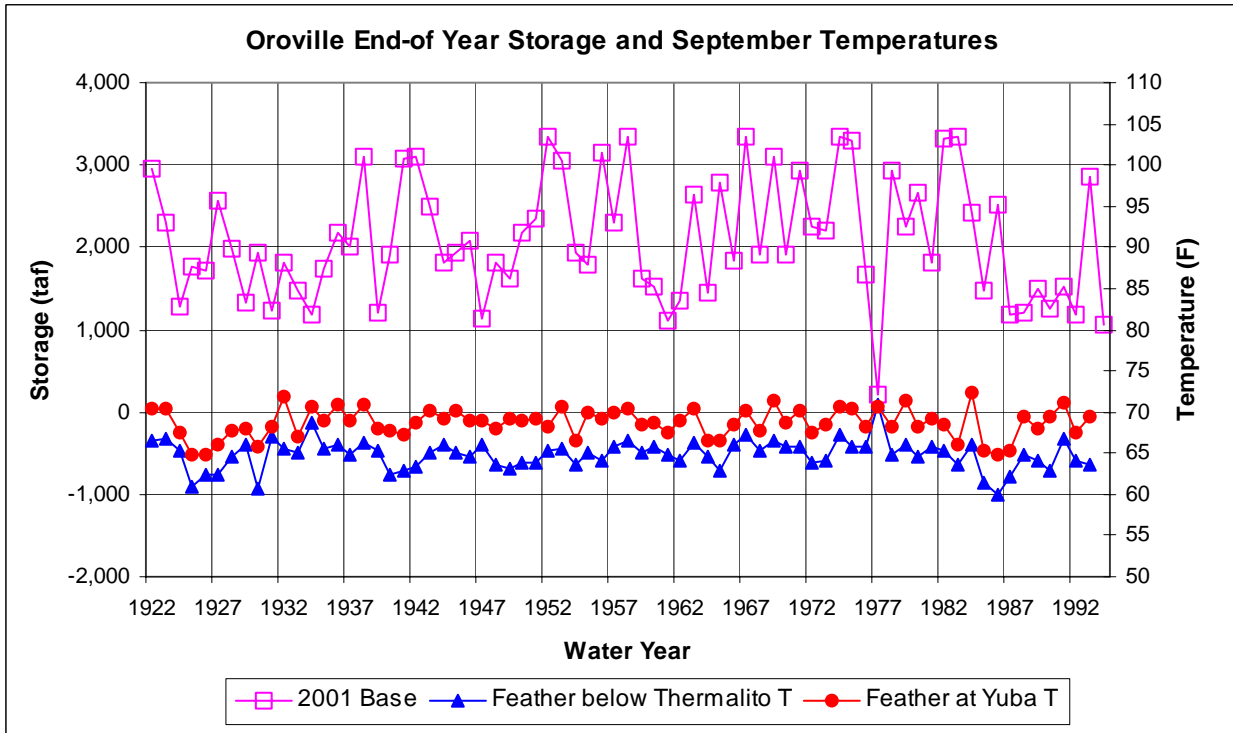


Figure I-9a. Simulated Oroville Carryover Storage and September Feather River Water Temperatures for 2001 Baseline Conditions

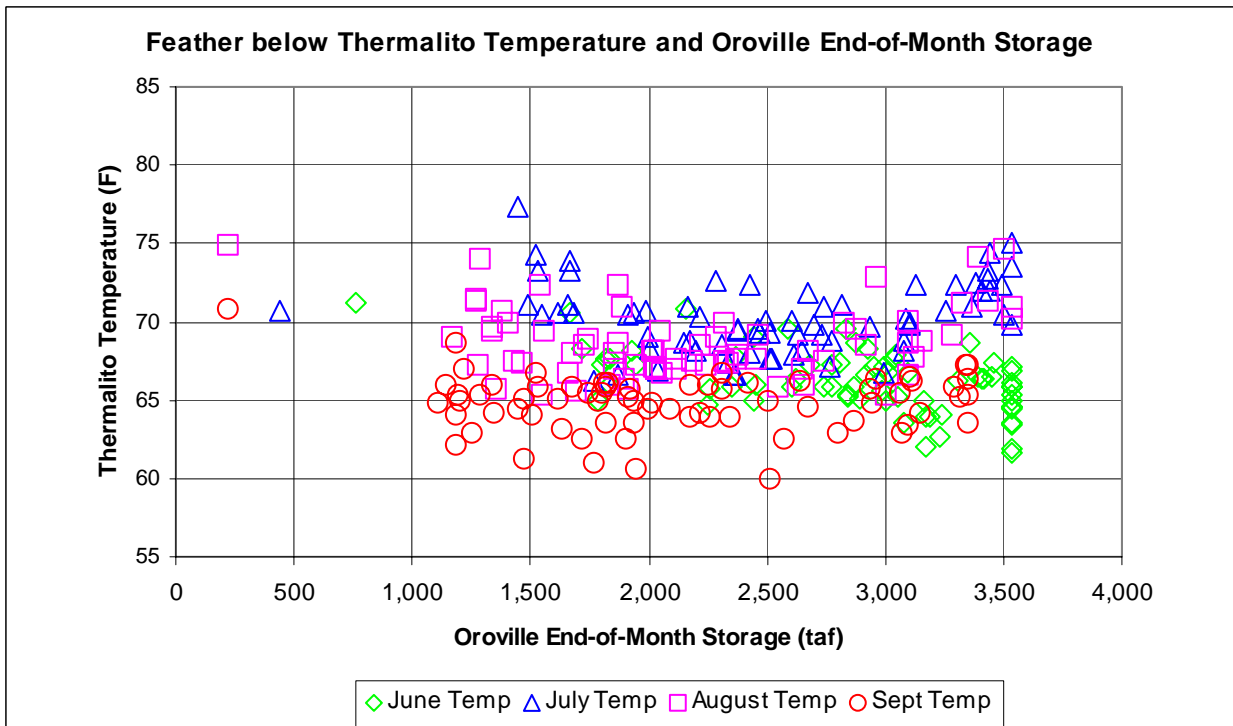


Figure I-9b. Relationship between Oroville End-of-Month Storage and Water Temperatures below Thermalito for 2001 Baseline Conditions

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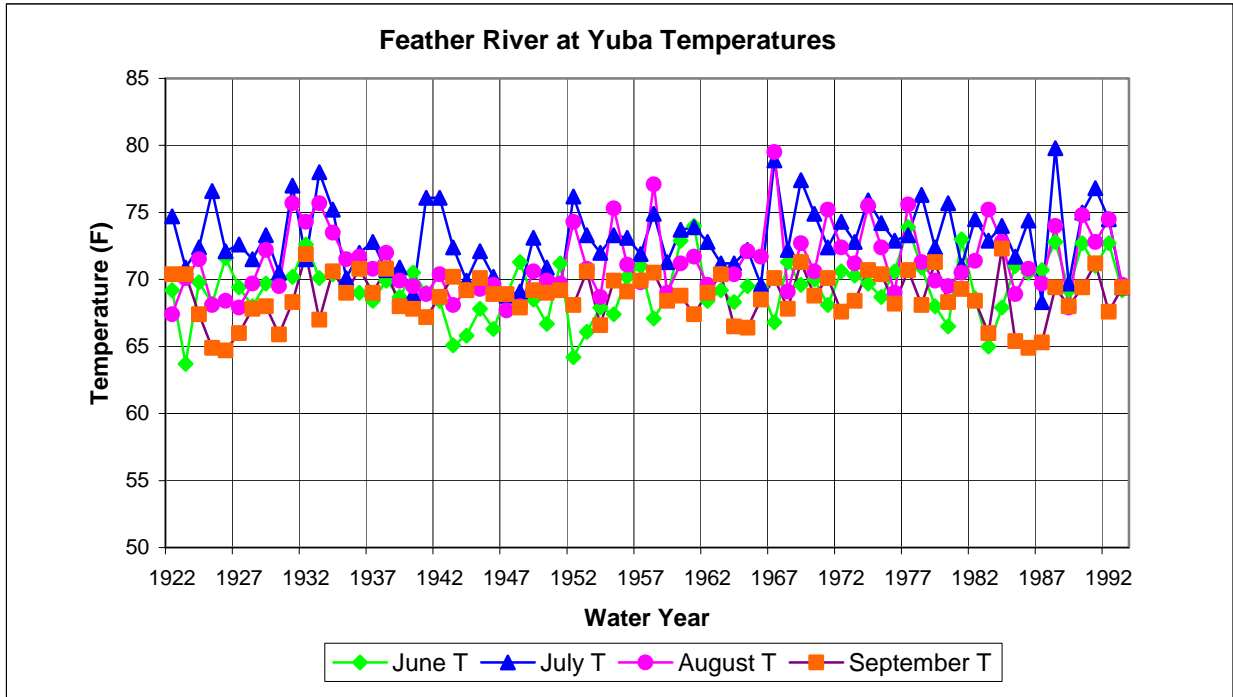


Figure I-9c. Simulated Feather River Water Temperatures below Thermalito for 2001 Baseline Conditions

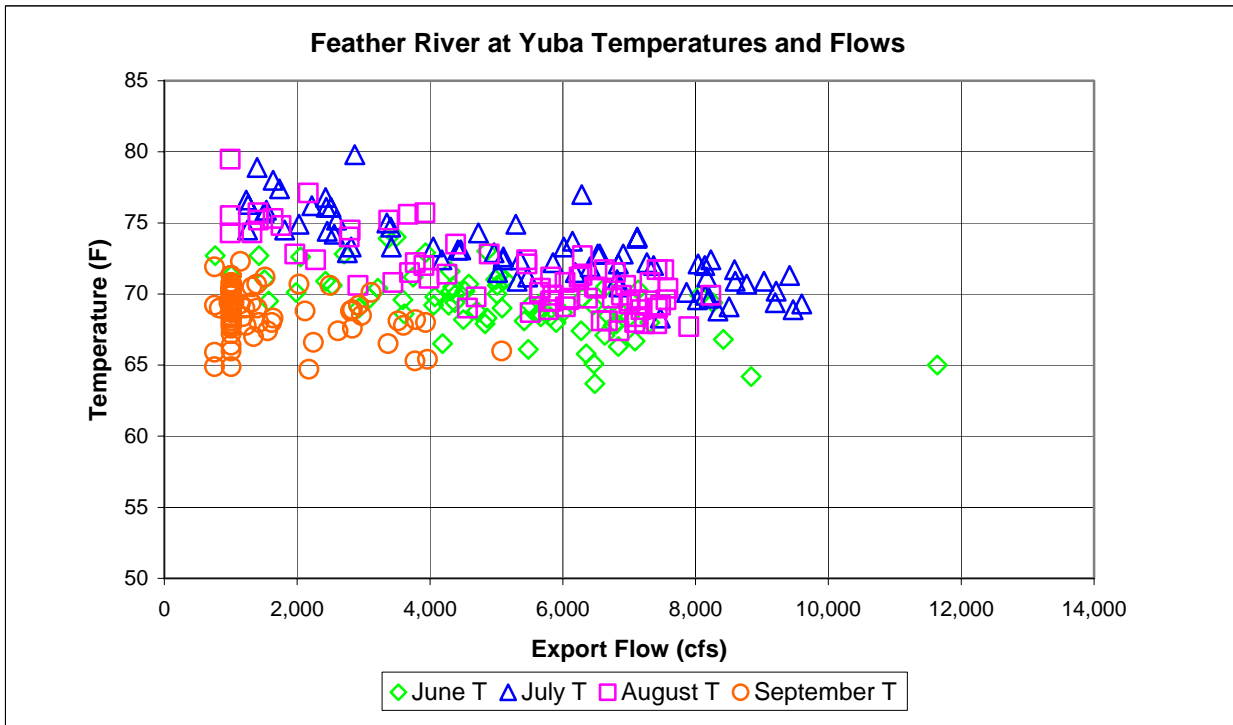


Figure I-9d. Relationship between Feather River Flow and Water Temperatures at Yuba for 2001 Baseline Conditions

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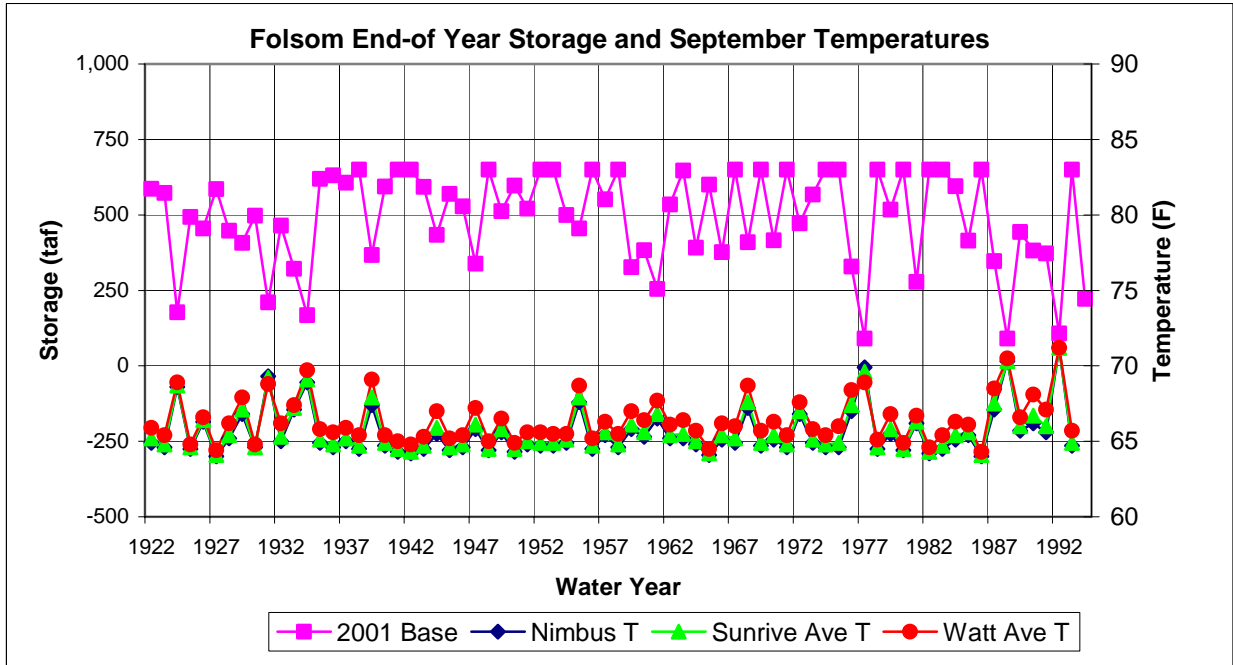


Figure I-10a. Simulated Folsom Carryover Storage and September American River Water Temperatures for 2001 Baseline Conditions

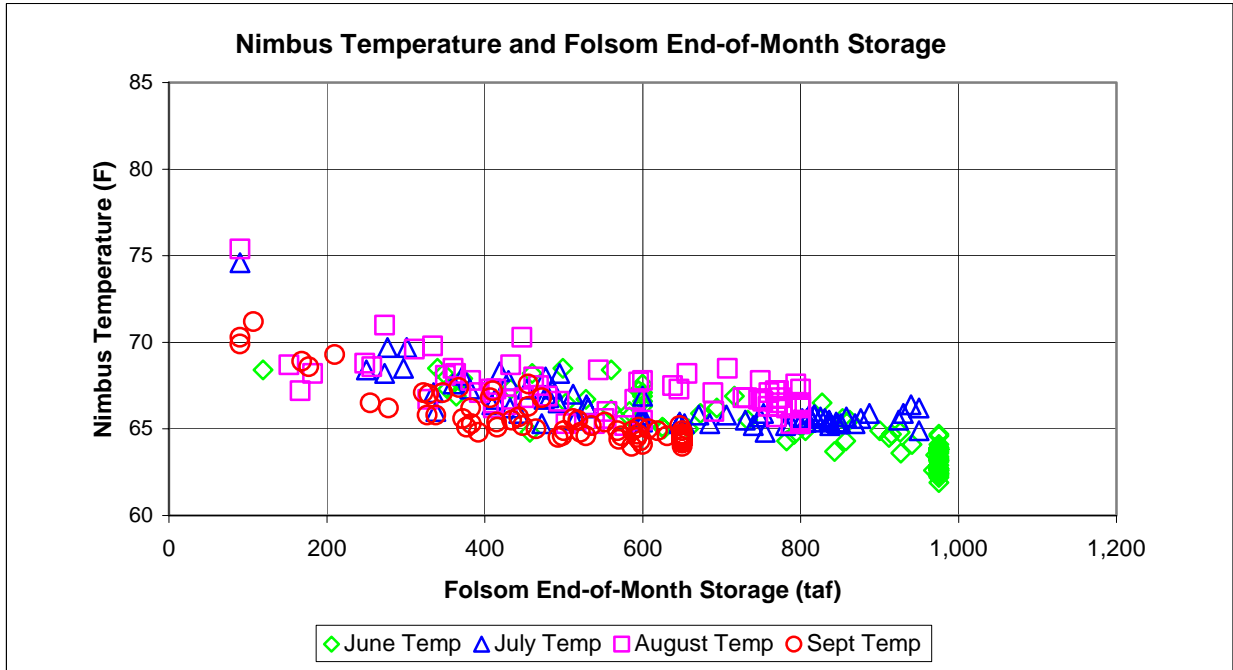


Figure I-10b. Relationship between Folsom End-of-Month Storage and Water Temperatures below Nimbus for 2001 Baseline Conditions

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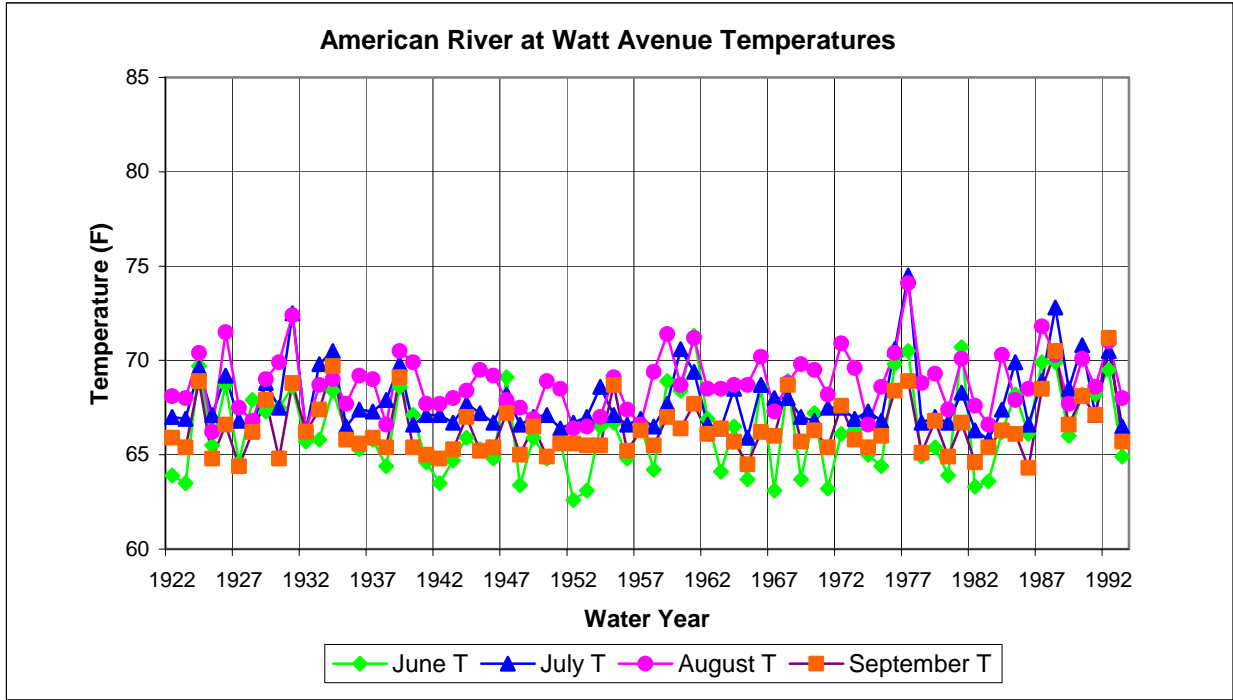


Figure I-10c. Simulated American River Water Temperatures at Watt Avenue for 2001 Baseline Conditions

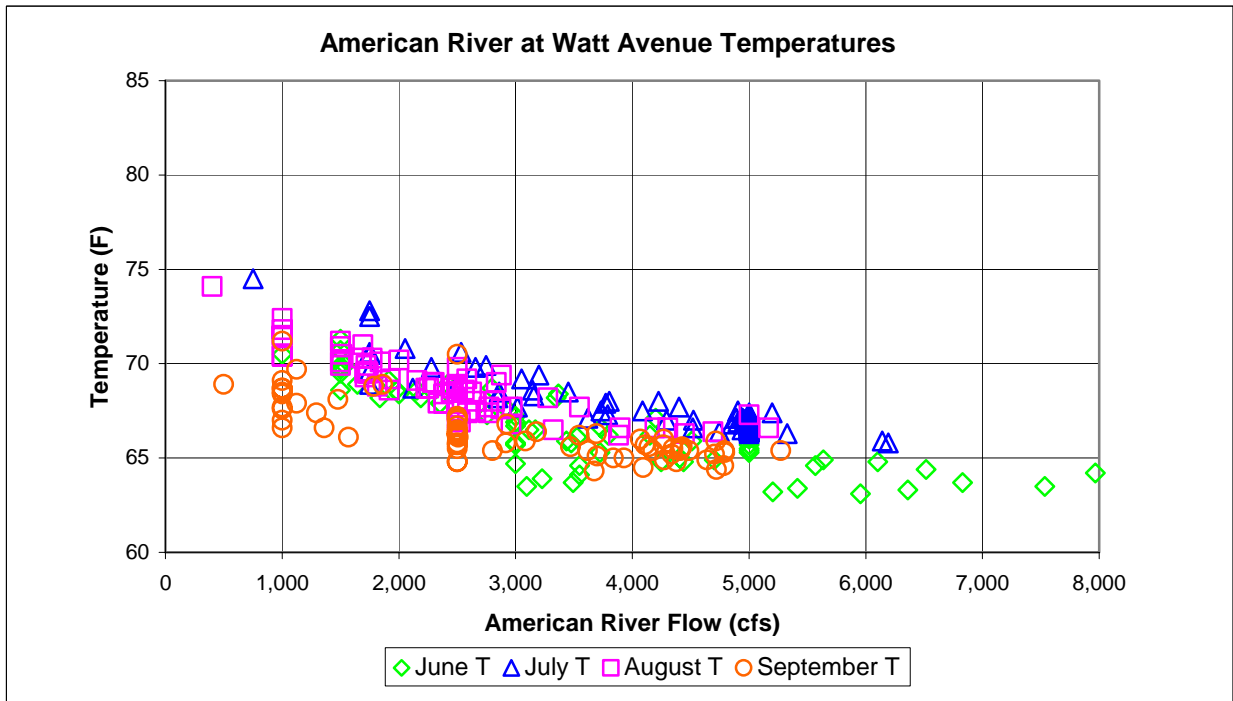


Figure I-10d. Relationship between American River Flow and Water Temperatures at Watt Avenue for 2001 Baseline Conditions

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