

Sites Project and EBMUD

September 22, 2021



Agenda

1. Introductions
2. Meeting Overview
3. Project Overview
 - a) Facilities
 - b) Operations
4. Modeling Approach
5. Analysis Results
6. RDEIR/SDEIS Aquatic Impact Determinations
7. Planning and Permitting Considerations/Schedule
8. Additional Topics
9. Action Items and Next Steps

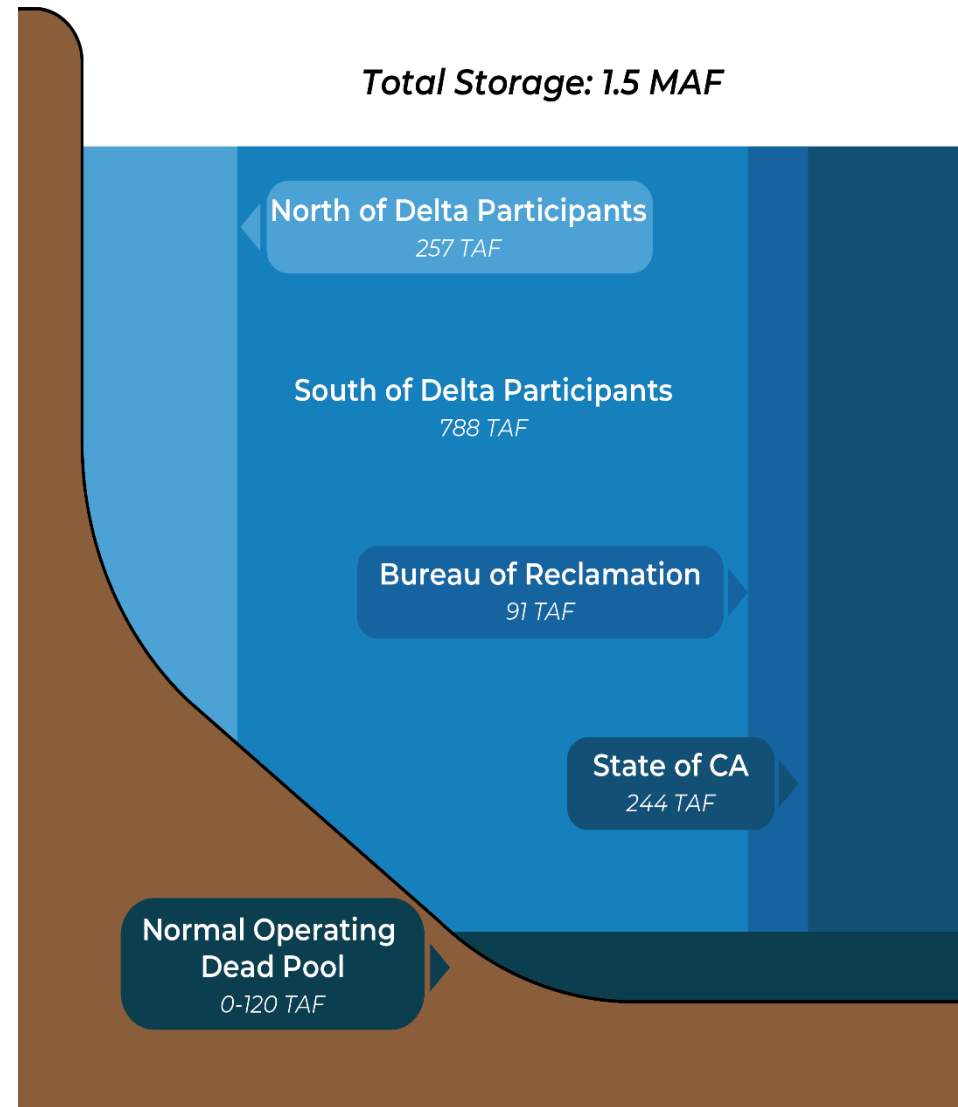
Project Overview

Ali Forsythe/Erin Heydinger

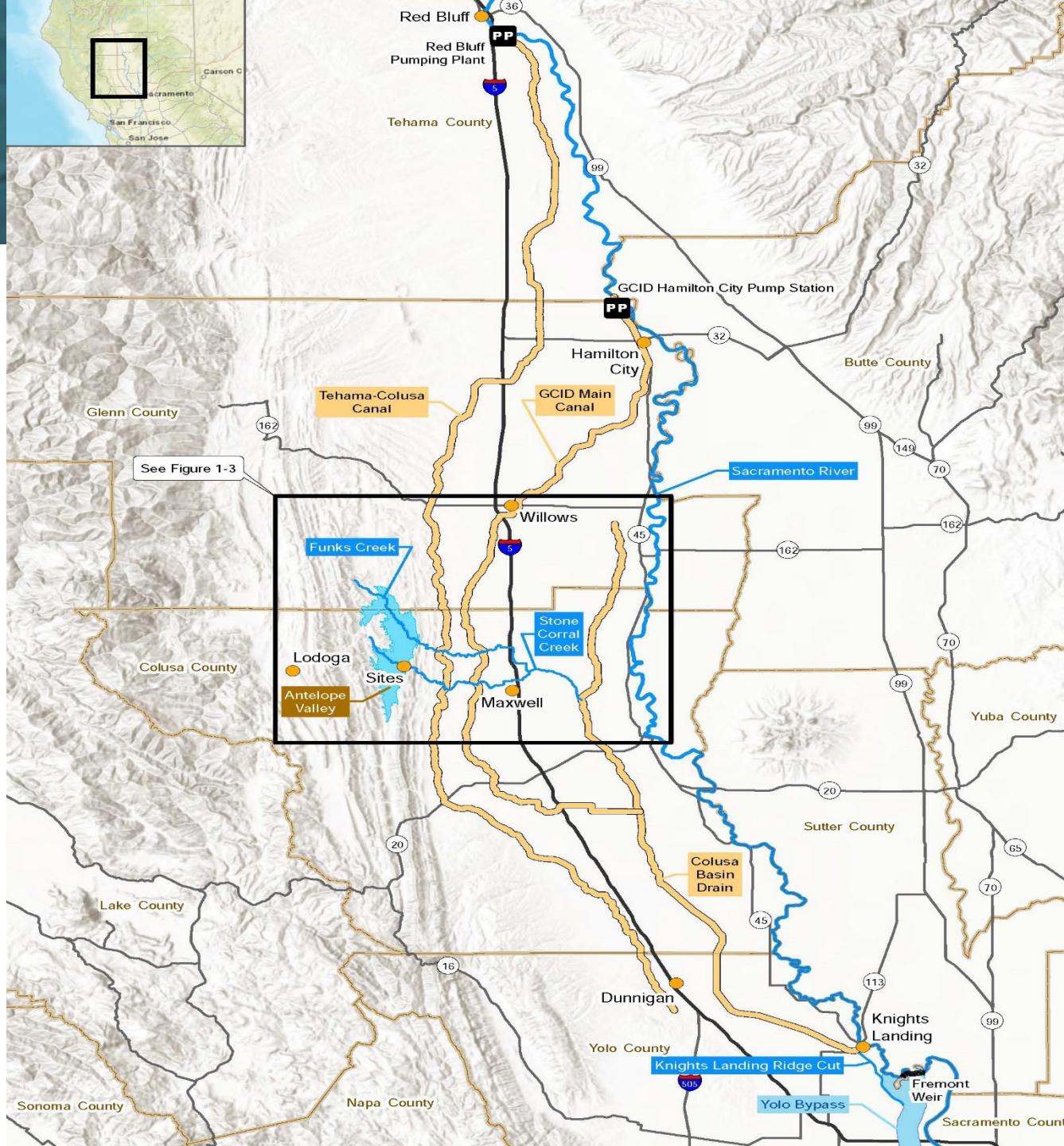
What is the Sites Project?



30 participants
span California



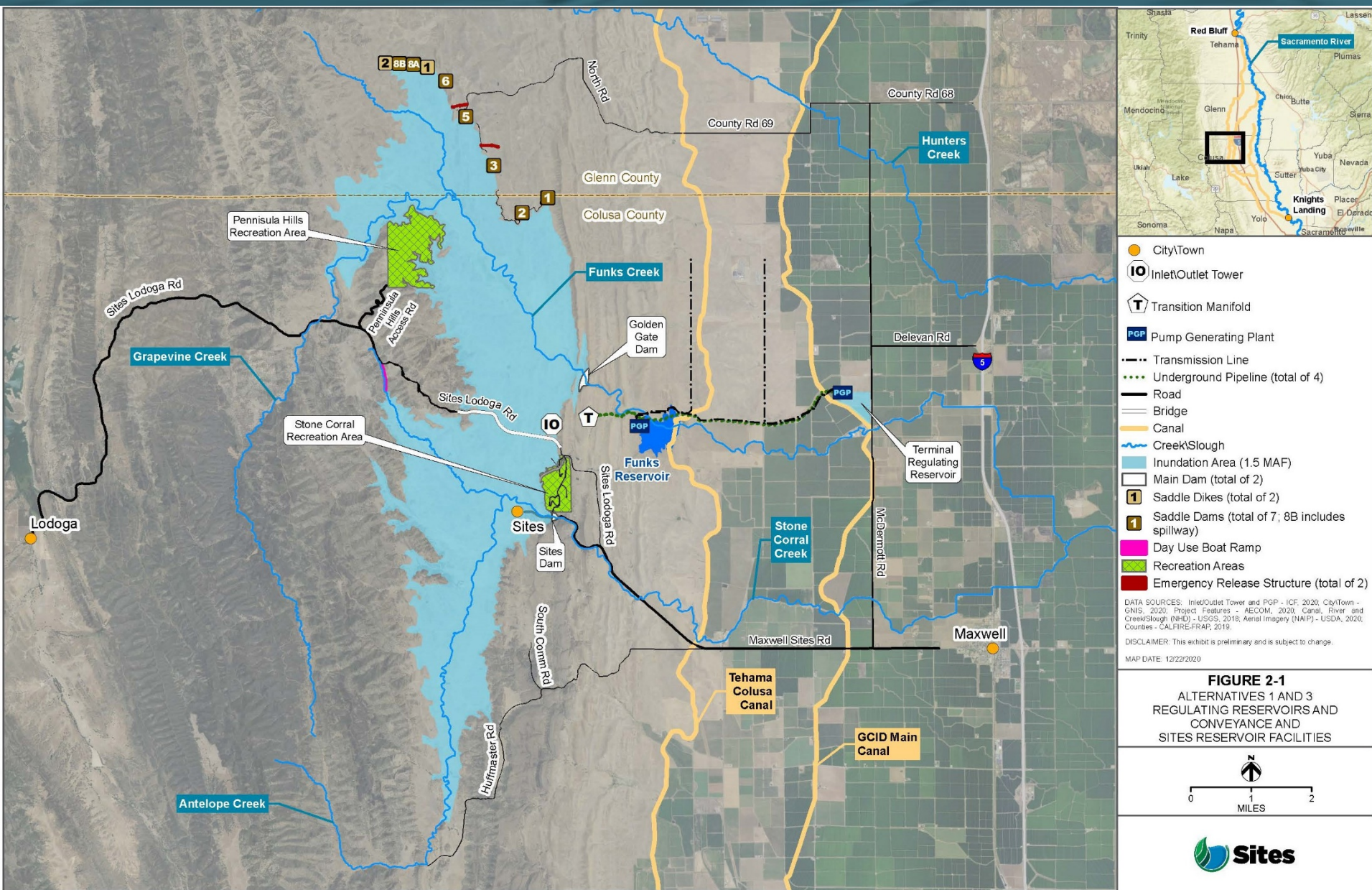
Regional Area



See Figure 1-3

Not to scale

Alt 1 – Authority’s Preferred Project



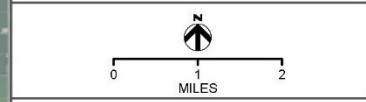
- City/Town
- IO Inlet/Outlet Tower
- T Transition Manifold
- PGP Pump Generating Plant
- Transmission Line
- ... Underground Pipeline (total of 4)
- Road
- Bridge
- Canal
- ~ Creek/Slough
- Inundation Area (1.5 MAF)
- Main Dam (total of 2)
- 1 Saddle Dikes (total of 2)
- 1 Saddle Dams (total of 7; 8B includes spillway)
- Day Use Boat Ramp
- Recreation Areas
- Emergency Release Structure (total of 2)

DATA SOURCES: Inlet/Outlet Tower and PGP - ICF; 2020, City/Town - GIS; 2020, Project Features - AECOM, 2020, Canal, River and Creek/Slough (NHD) - USGS, 2018, Aerial Imagery (NAIP) - USDA, 2020, Counties - CALFIRE-FRAP, 2019.

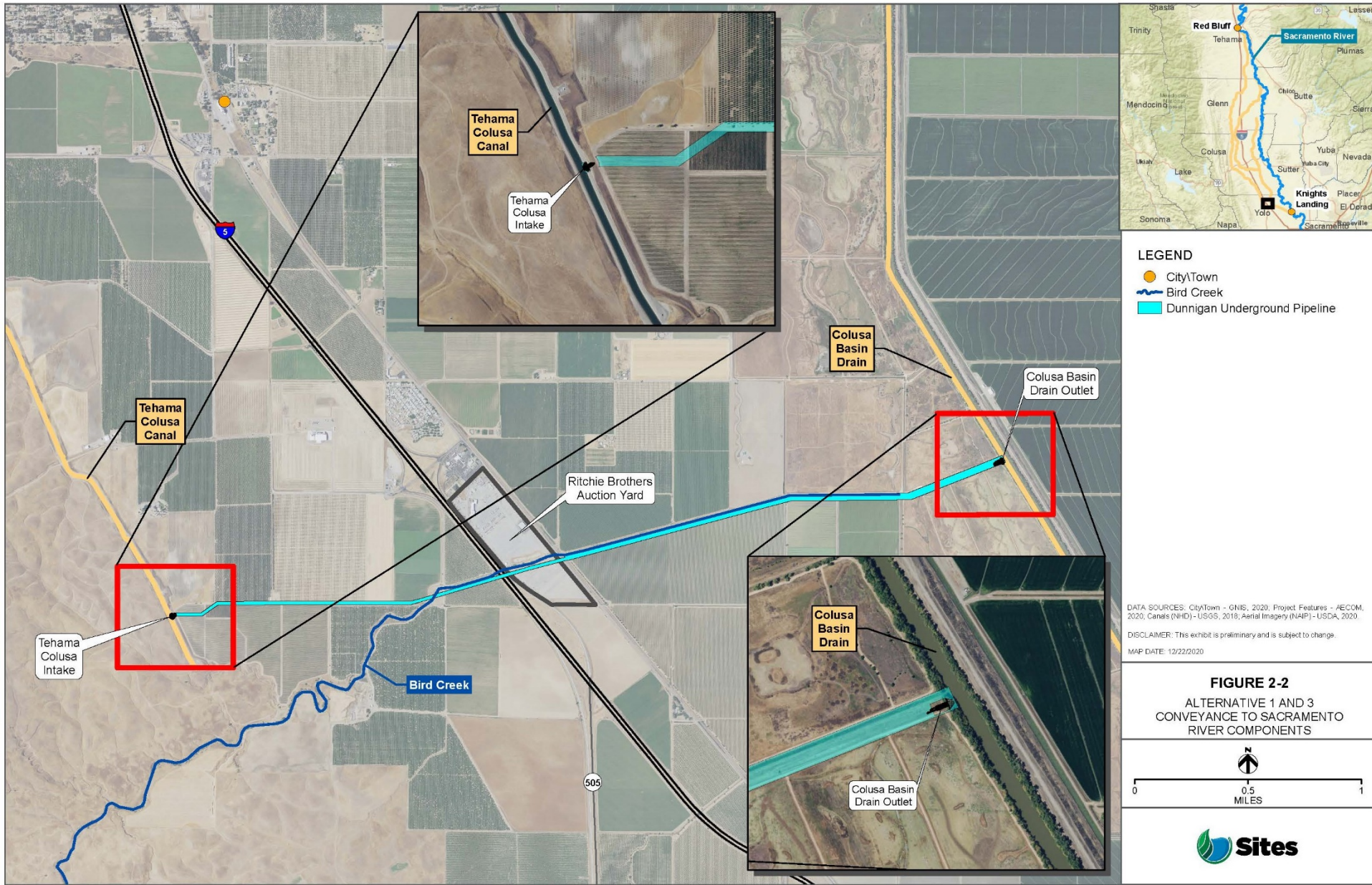
DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 2-1
ALTERNATIVES 1 AND 3
REGULATING RESERVOIRS AND
CONVEYANCE AND
SITES RESERVOIR FACILITIES



Alt 1 – Authority's Preferred Project



Operations

- Junior diverter – Diverting after all senior water rights and water quality and flow requirement are met
- Diverting during “excess conditions” (as determined by Reclamation and DWR)
- Diversion locations in priority:
 1. Red Bluff Pumping Plant into the Tehama-Colusa Canal: 2,100 cfs for Sites
 2. Hamilton City Pump Station into the GCID Main Canal: 1,800 cfs for Sites
- Diversions when Sacramento River not fully appropriated (September 1 to June 15)

Operations (cont.)

- Diversion Criteria
 - Wilkins Slough Bypass flow requirements:
 - 10,700 cfs March/April/May
 - 5,000 cfs all other months
 - Pulse flow protection
 - Fremont Weir Notch Protection
 - Objective is to limit changes to frequency and duration of spills

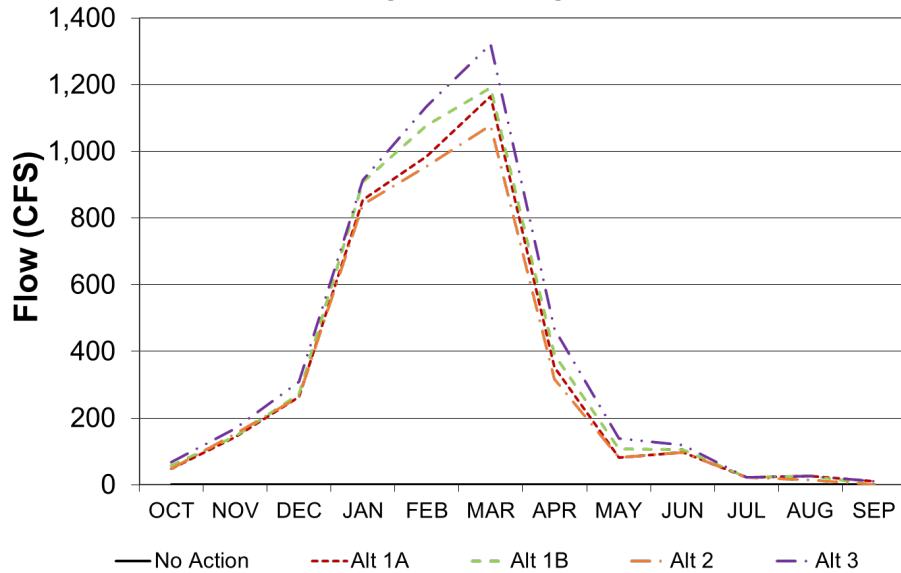
Operations (cont)

- Releases
 - TC Canal
 - GCID Canal
 - North Delta (Yolo Bypass)
 - South of Delta
- Exchanges
 - Reclamation
 - DWR
- Exports through the Delta

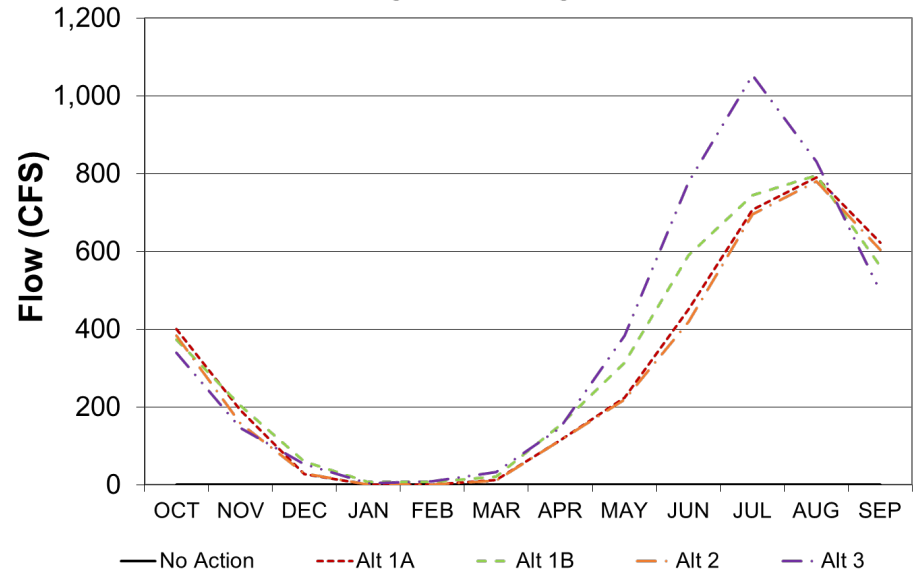


Diversions and Releases

Total Sites Diversion to Fill
Long-term Averages



Total Sites Release
Long-term Averages



Modeling Approach

Steve Micko

Modeling Approach

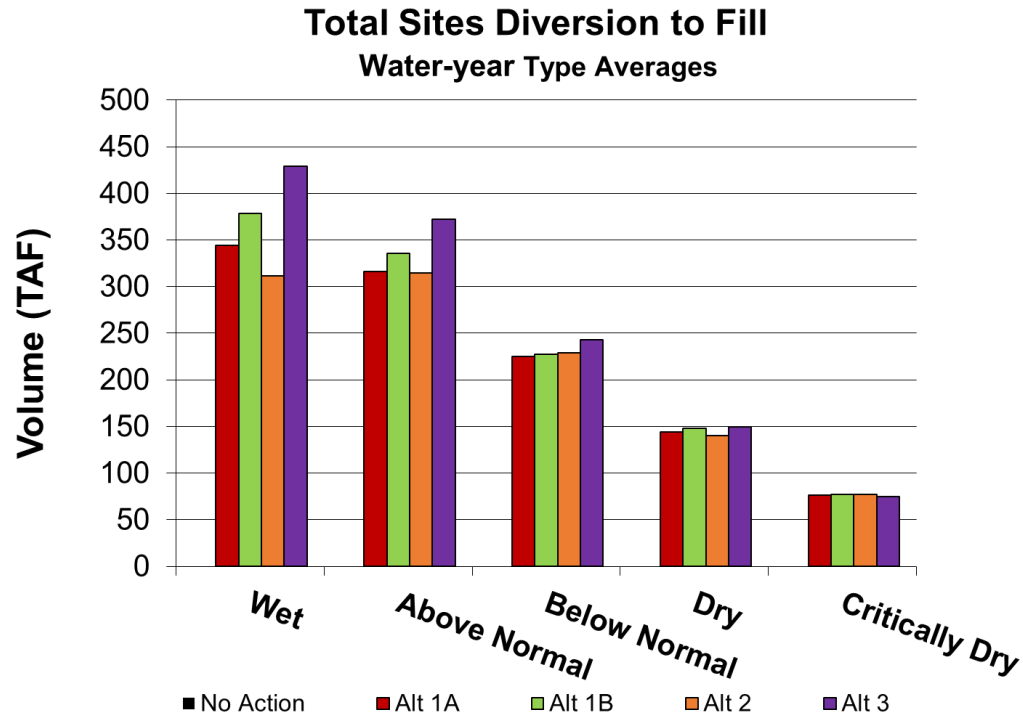
- Regulatory Environment
 - 2019 BiOps and 2020 SWP ITP
- Modeling Framework
 - CalSim II
 - Hydrodynamics
 - Water Temperature
 - Aquatics

Modeling Results

Steve Micko

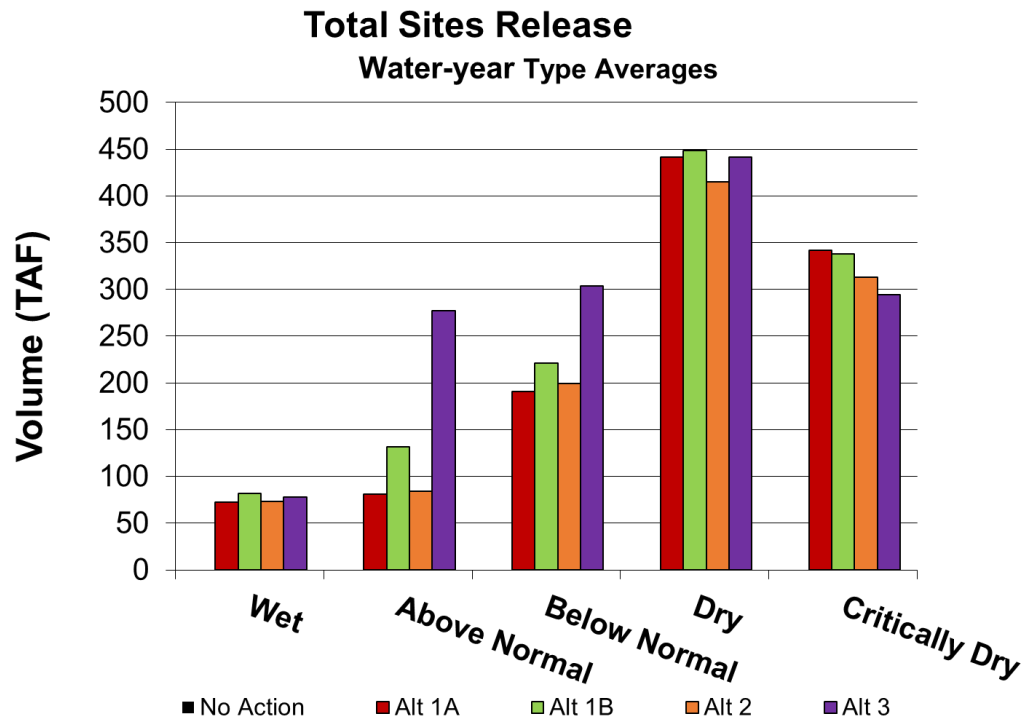
Modeling Results - Diversions

- Diversions occur in Wet and Above Normal Years



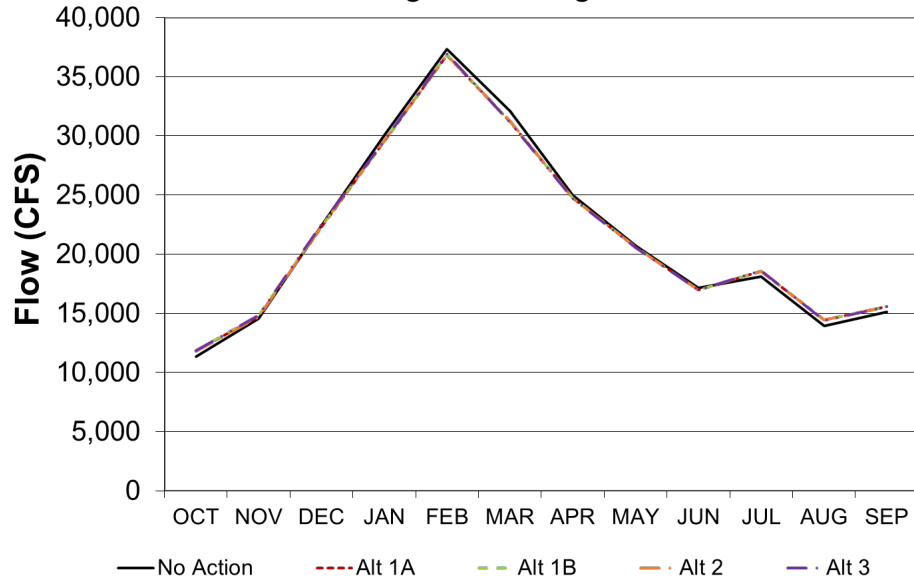
Modeling Results - Releases

- Releases in Dry and Critically Dry years

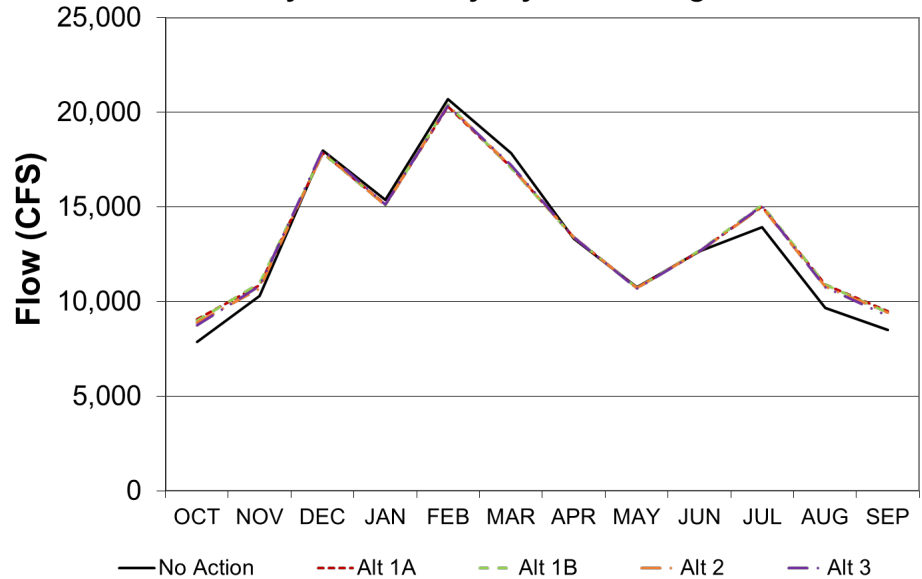


Modeling Results – Sac River at Freeport

**Sacramento River Flow at Freeport
Long-term Averages**

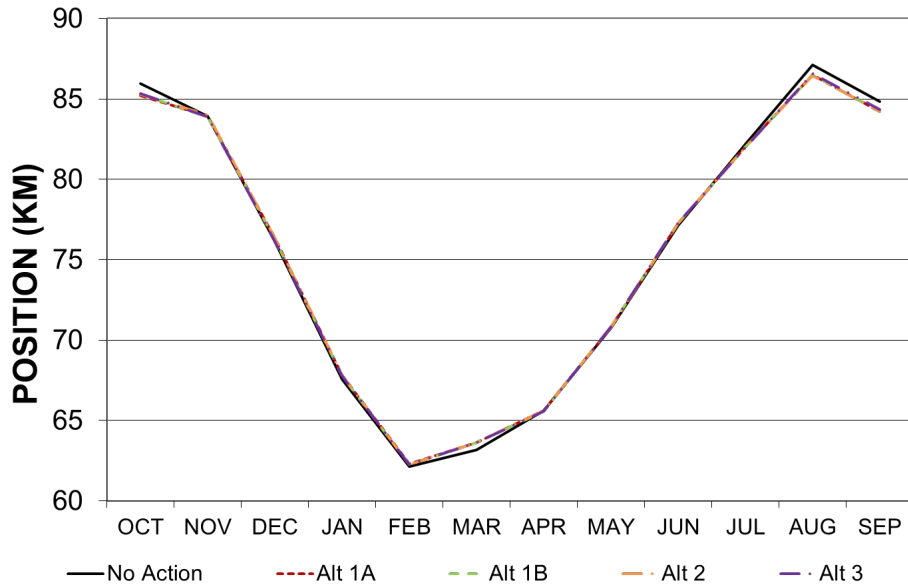


**Sacramento River Flow at Freeport
Dry and Critically Dry Year Average**

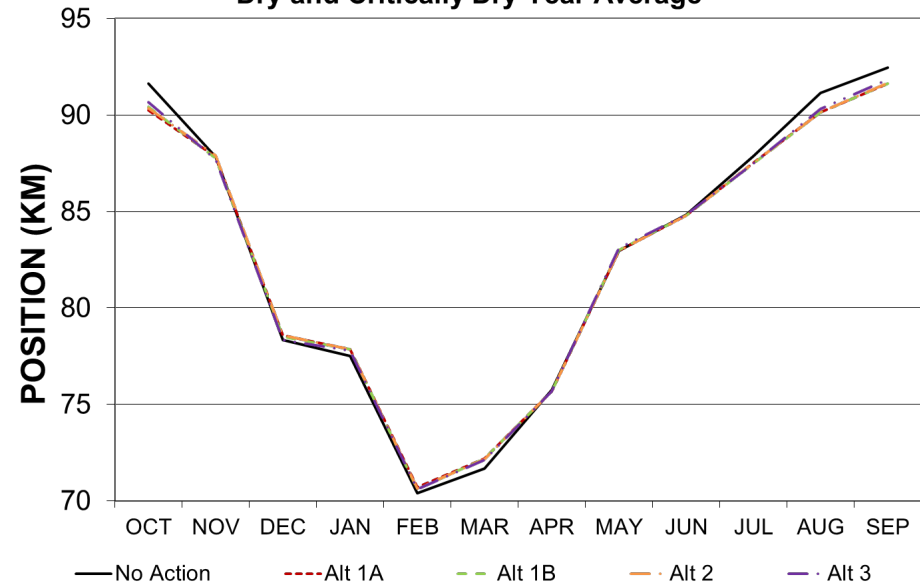


Modeling Results – X2

End of Month X2 Distance



End of Month X2 Distance
Dry and Critically Dry Year Average



RDEIR/SDEIS Aquatic Impact Determinations

Mike Hendrick/John Spranza

Aquatic Resources Evaluation – Near-Field Effect Analysis

- Near-Field Effects Analysis associated with salmon, sturgeon:
 - Entrainment through screens (Red Bluff and Hamilton City intakes)
 - Screen Impingement
 - Predation (Red Bluff and Hamilton City intakes, at Dunnigan Pipeline (Alt 2))
 - Stranding behind screens
 - Attraction to Reservoir Discharge and Pipeline Entry (Alt 2)

Key species analyzed:

- Winter-run Chinook salmon
- Spring-run Chinook salmon
- Fall-run/late fall-run Chinook salmon
- CCV steelhead
- White sturgeon
- Green Sturgeon
- Longfin smelt
- Delta smelt

Aquatic Resources Evaluation – Far-Field Effects Analysis

Far-Field Effects Analysis associated with salmon, sturgeon, and smelt:

- Temperature Effects (Sacramento, Feather, American (as appropriate))
- Flow-Related Effects
 - Redd Scour Entombment
 - Redd Dewatering
 - Spawning and Egg Incubation
 - Adult Migration and Holding
- Habitat Weighted Usable Area (Spawning, Rearing)
- Juvenile Stranding

Key species analyzed:

- Winter-run Chinook salmon
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- CCV steelhead
- White sturgeon
- Green Sturgeon
- Longfin smelt
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Aquatic Resources Evaluation - Far-Field Effects Analysis (cont.)

Far-Field Effects Analysis associated with salmon, sturgeon, and smelt:

- Floodplain Inundation and Access
 - Yolo Bypass and Fremont Weir Spill Flow and Days of Yolo Bypass Inundation
 - Yolo Bypass Inundated Area
 - Sutter Bypass and Fremont Weir Spill Flow and Duration
 - Sutter Bypass Inundated Area
- Migration Flow-Survival
- Sites Reservoir Release Effects
 - Temperature Effects
 - Water Quality Effects

Key species analyzed:

- Winter-run Chinook salmon
- Spring-run Chinook salmon
- Fall-run/late fall-run Chinook salmon
- CCV steelhead
- White sturgeon
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Aquatic Resources Evaluation - Far-Field Effects Analysis (cont.)

Far-Field Effects Analysis associated with salmon, sturgeon, and smelt:

- Delta
 - Juvenile Through-Delta Survival
 - Juvenile Rearing Habitat
 - South Delta Entrainment

Key species analyzed:

- Winter-run Chinook salmon
- Spring-run Chinook salmon
- Fall-run/late fall-run Chinook salmon
- CCV steelhead
- White sturgeon
- Green Sturgeon
- Longfin smelt
- Delta smelt

CEQA Findings for Aquatic Biological Resources

- Based on analysis and discussions with agencies two areas of effect resulted in the need for mitigation associated with aquatic biological resources

Effect Area	Impacts Requiring Mitigation	Significant and Unavoidable Impacts
Operations Effects on Winter-Run, Spring-Run, Fall-Run/Late Fall-Run Chinook Salmon and Central Valley Steelhead	All Alts – Implement Wilkins Slough Flow Protection Criteria whereby Project diversions would not occur from March through May of all water year types if flows in the Sacramento River at Wilkins Slough are below or would be reduced below 10,700 cubic feet per second	None
Operations Effects on Delta Smelt	All Alts – Evaluate and prevent potential detrimental water temperature and dissolved oxygen effects to Delta Smelt associated with moving Colusa Basin Drain water through the Yolo Bypass by monitoring and ceasing flows through the Yolo Bypass if detrimental effects are projected to occur	None

Planning & Permitting Considerations and Schedule

Ali Forsythe/John Spranza

Schedule Through 2030

- Current schedule of overall key project components
- Final EIR/EIS and ESA consultation with the agencies may lag slightly based on recent discussions focused on exchanges



Current Permit and Coordination Schedule



Additional Topics

Action Items and Next Steps

Thank you!

