

Reservoir Committee Meeting

Agenda Item 3-1, Revised Draft EIR/
Supplemental Draft EIS Briefing, Part 3 –
Operations-Related Effects and Growth Inducement

June 23, 2021



Agenda

- Operations-related Analysis
- Growth Inducement Analysis

Preliminary Determinations

Chapter (# and Title)	Impacts Requiring Mitigation	Significant and Unavoidable Impacts
5, Surface Water Resources	None	None
11, Aquatic Resources	All Alts – Tidal habitat restoration to address operations effects on Longfin Smelt	None
20, Air Quality*	All Alts – Increase in criteria pollutant for which region is nonattainment during construction; odors from asphalt batch plant during construction and operations; recreational boat emissions during operations	Some air quality modeling is still underway and any additional effects will be reported at the July meeting
21, Greenhouse Gas Emissions (GHG)	All Alts – Develop a GHG Reduction Plan to achieve net-zero emissions during construction and operations	None

Growth Inducing

- No impact determination
- Evaluates direct and indirect growth inducing effects from construction and operations
- Approach considers:
 - Water supply reliability describing simulated deliveries to agriculture and M&I uses by hydrologic regions
 - Population growth over last 20 years and projected growth
 - Local authority of governments over land use planning
- Alternatives are not growth-inducing and would not induce secondary growth impacts

Chapters Remaining for July Briefing

- Surface Water Quality
- Air Quality (final analysis)
- Climate Change (NEPA only)
- Indian Trust Assets (NEPA only)
- Socioeconomics and Environmental Justice (NEPA only)
- Cumulative Impacts
- EIR/EIS Document Distribution

Process for Approval of Release of the Revised Draft EIR

- April – Part 1 Overview
 - CEQA overview and process presentation
- May – Part 2, Key Sections
 - Construction-Related Sections and Local Issues
- June – Part 3, Key Sections
 - Operations-Related Sections and Growth Inducement
- July – Request approval
 - All Remaining Chapters, including Cumulative
 - Request approval from the Reservoir Committee and Authority Board for release of the public RDEIR in August
- August 2021 – Release of RDEIR
 - Schedule assumes parallel review and release of SDEIS as joint document

Questions



Preliminary Determinations – Chapters with Only Less Than Significant Impacts

- Surface Water
- Fluvial Geomorphology
- Groundwater Resources
- Minerals
- Recreation
- Energy
- Noise
- Population and Housing
- Public Services and Utilities
- Public Health and Environmental Hazards

Preliminary Determinations – Chapters with Impacts Requiring Mitigation

- Air Quality
- Greenhouse Gases
- Aquatic Biological Resources
- Cultural Resources
- Vegetation and Wetlands
- Wildlife
- Geology and Soils
- Agricultural Resources
- Tribal Cultural Resources
- Environmental Justice

Preliminary Determinations – Chapters with Significant Unavoidable Impacts

- Air Quality
- Vegetation and Wetlands
- Wildlife
- Geology and Soils
- Agricultural Resources
- Land Use
- Cultural Resources
- Visual Character and Quality
- Tribal Cultural Resources
- Transportation and Traffic
- Environmental Justice

Aquatic Biological Resources – Overview

- Evaluated 20 Impacts
 - Impact FISH-1: Construction
 - Impact FISH-2 through -19: Operation effects on listed species and special status species of concern, including Killer Whales
 - Impact FISH-20: Maintenance Effects
- Impact assessments rely primarily on modeled hydrologic changes in SWP and CVP operations that would occur as a result of Project operations
- Depending on the species and location, the specifics of the assessment methodologies differ

Aquatic Biological Resources – Examples of Analyses

- **CALSIM II:** Monthly flow output used to assess changes in reservoir water surface elevation, storage, and instream flows associated with implementation of the alternatives. The CALSIM II monthly flow output also served as input to many of the other models used to analyze potential impacts to aquatic resources.
- **Weighted Usable Area:** Provides estimates of the amount of suitable spawning and rearing habitat of fishes available in rivers and streams at various levels of flow.
- **SALMOD:** Used to evaluate flow and temperature related mortality of early life stages and overall production of each race of Chinook salmon in the Sacramento River.
- **Juvenile Stranding:** Juvenile stranding is computed using USRDOM daily flow estimates for Alternatives 1–3 and the NAA at three locations in the upper Sacramento River: Keswick Dam, Clear Creek, and Battle Creek.
- **Martin and Anderson:** Winter-Run Chinook Salmon eggs are positively correlated with water temperature.
- **HEC5Q:** Used for Sacramento River and American River daily water temperature analysis
- **Reclamation Temperature Model:** Used for Feather River temperature analysis

Aquatic Biological Resources – Species Evaluated

Listed Species	Other Species
Delta smelt, Longfin Smelt	California Bay Shrimp
Killer Whale	Starry Flounder, Northern Anchovy
Green Sturgeon	Pacific Lamprey, River Lamprey
Steelhead	Native Minnows
Fall-run/Late Fall-run Chinook	Striped Bass, Black Bass
Spring-run Chinook	American Shad, Threadfin Shad
Winter-run Chinook	White Sturgeon

Aquatic Biological Resources – Examples of Key Drivers of Less than Significant Determination

- **Weighted Usable Area:**
 - Indicates that Alternatives 1 and 2 would have little effect on **late fall–run** spawning WUA and Alternative 3 would have moderate, primarily beneficial, effects
 - Indicates that the Alternatives would result in frequent minor reductions in spawning habitat WUA for **fall-run**, and occasional somewhat greater reductions, primarily for Alternative 3
 - The Alternatives are expected to have little effect on **spring-run** spawning in the Sacramento River
 - The Alternatives are not expected to substantially affect **winter-run** spawning WUA
- **SALMOD:** Overall results show a minimal effects of Alternatives on salmon mortality and potential production in the Sacramento River
- **HEC5Q:** Mean monthly temperatures by water year type between alternatives in the Sacramento, American, and Feather rivers indicates that water temperatures would be similar among alternatives during the period of presence of (where applicable):
 - Winter-run, spring-run, fall-run/late fall–run Chinook salmon, steelhead
 - Native Minnows
 - Lamprey
 - Sturgeon (white and green)
 - Striped Bass
 - American Shad

Aquatic Biological Resources – Mitigation Measures

- Mitigation Measure FISH-9.1: Tidal Habitat Restoration for Longfin Smelt
 - Tidal habitat restoration mitigation for longfin smelt was calculated based on the same method recently applied by DWR (2019d: 5-5). The method is described in more detail in Appendix 11F, *Smelt Analysis*. The mitigation requirement for each alternative varies between 11 and 15 acres, depending on the alternative

Aquatic Biological Resources – BMPs and Plans

- Example BMPs
 - Develop and implement an underwater sound control, abatement, and monitoring plan to avoid and minimize the effects of underwater construction noise on fish
 - Worker Environmental Awareness Program (WEAP)
 - Develop and Implement Fish Rescue and Salvage Plans
- Sediment Technical Studies Plan and Adaptive Management
 - Sediment Monitoring
 - Sediment Modeling
 - Sediment Reintroduction
- Fish Monitoring and Technical Studies Plan and Adaptive Management
 - 4 Technical Studies: Fish Distribution and Density; Juvenile Salmonid Survival Rates; Predator Density and Distribution; Long-Term Hydraulic Fish Screen Evaluation
 - 3 Types of Aquatic Monitoring: Rotary Screw Traps; Entrainment and Impingement; and Stranding Behind Screens