



RECLAMATION
Managing Water in the West

Reinitiation of Consultation on the Coordinated Long-Term Operation (ROC on LTO) of the Central Valley Project (CVP) and State Water Project (SWP)

Status

Bureau of Reclamation

September, 2019

ROC on LTO Overview

- **Consultation on long-term operations reinitiated in August 2016 based on many factors**
- **Reclamation's Biological Assessment (Jan 2019)**
 - **Determined that the overall effects of the Proposed Action (PA) are beneficial**
 - **PA will adversely affect individual fish resulting in incidental take**
- **Comments on the Public Draft EIS closed Aug. 26**
- **Biological Opinions (September 2019)**

Proposed Fish Strategies

Fish Intervention

Predict adverse conditions and implement standard contingency plans to address potential extinction risks to fish populations.



Non-Flow

Promote production of sufficient numbers of juveniles per adult to enable the rebuilding of fish populations.



Flow

Operate water projects to support adult returns.



Proposed Action Components

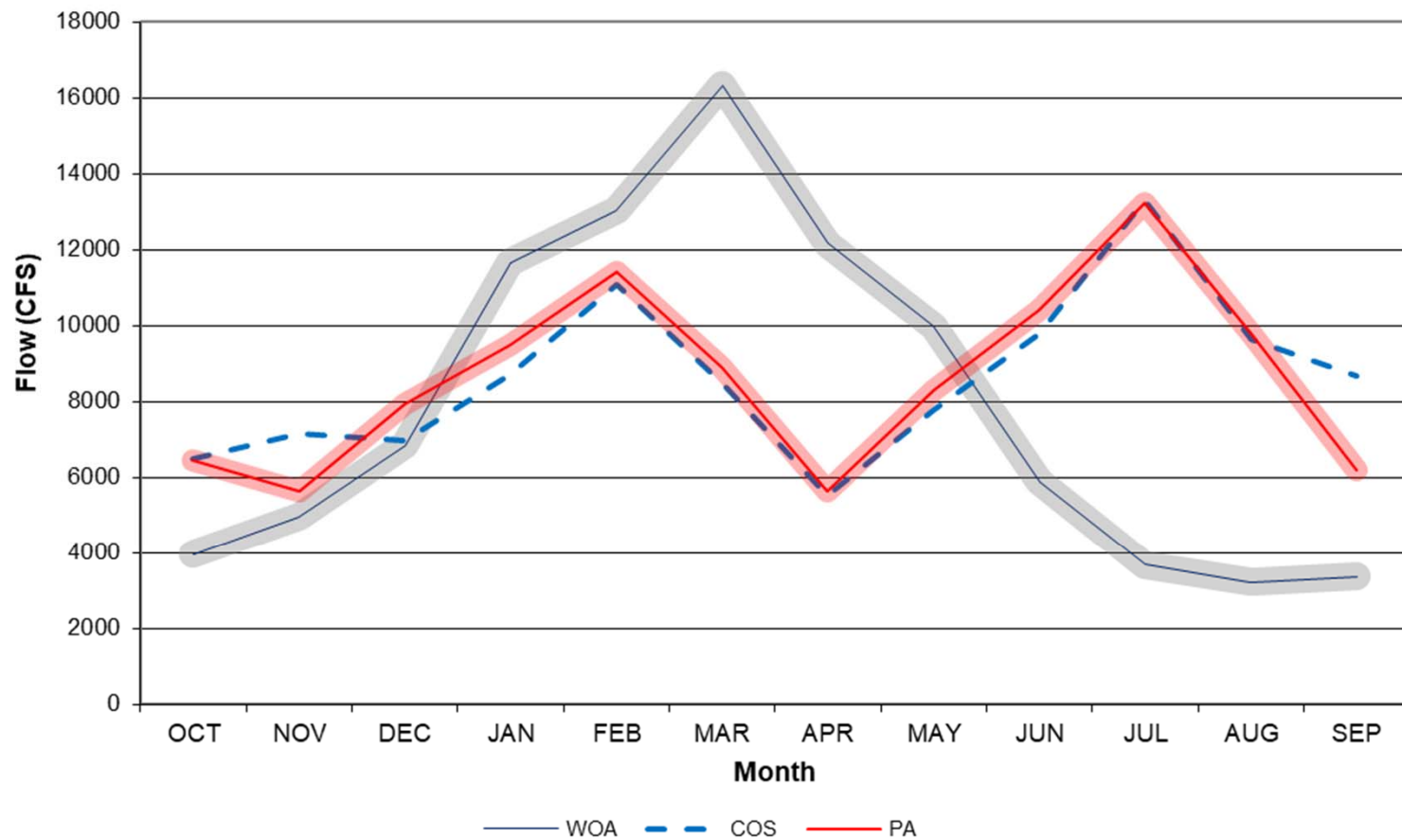
Combination of flow-related actions, habitat restoration, and intervention measures

1. Shasta Cold Water Pool Management
2. Old and Middle River-Based Entrainment Management
3. Summer/Fall Delta Smelt Habitat
4. Habitat Restoration
5. Facility Modification
6. Intervention



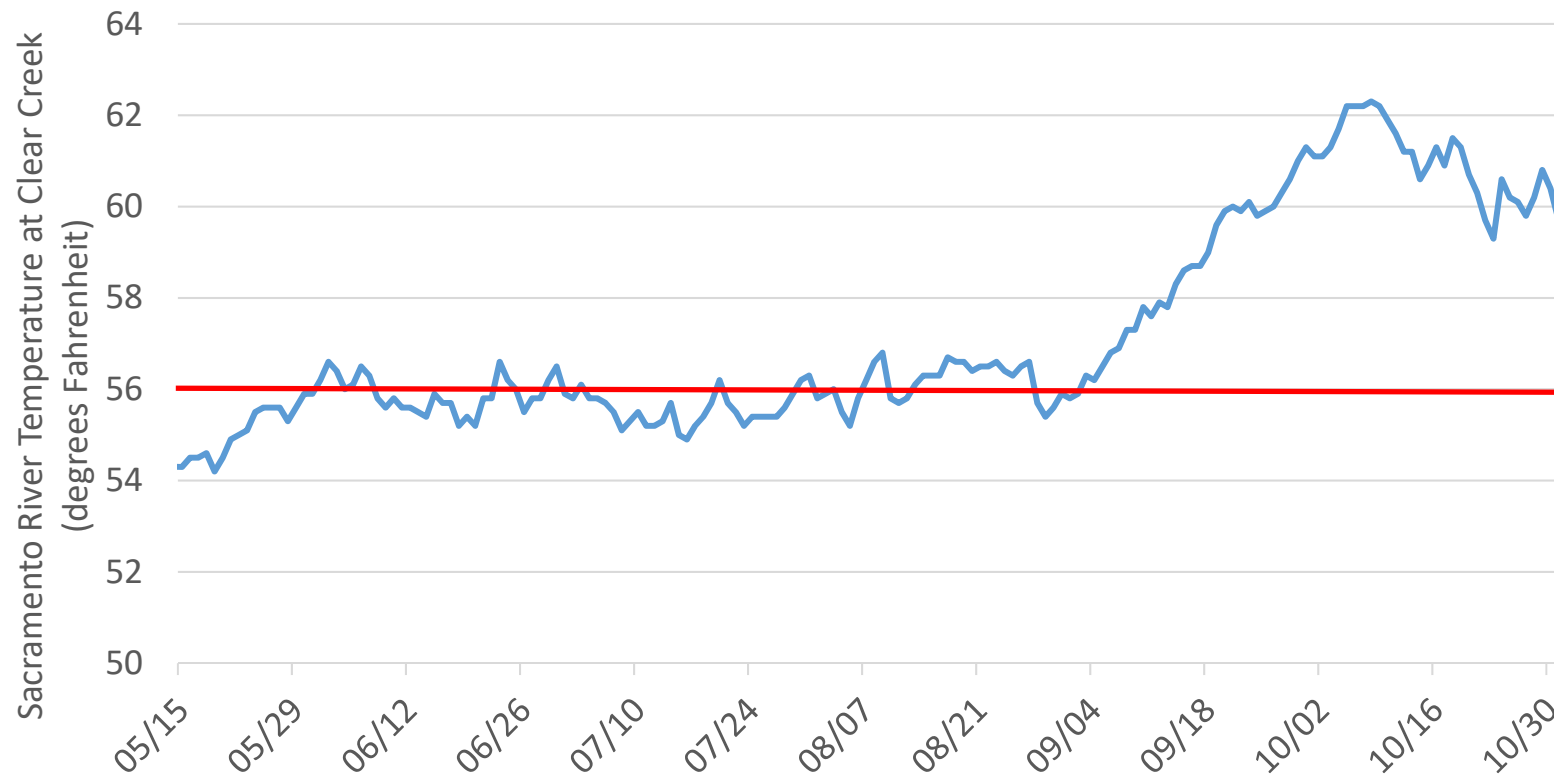
Proposed Reservoir Operations

Sacramento River Flow below Keswick Dam Averages

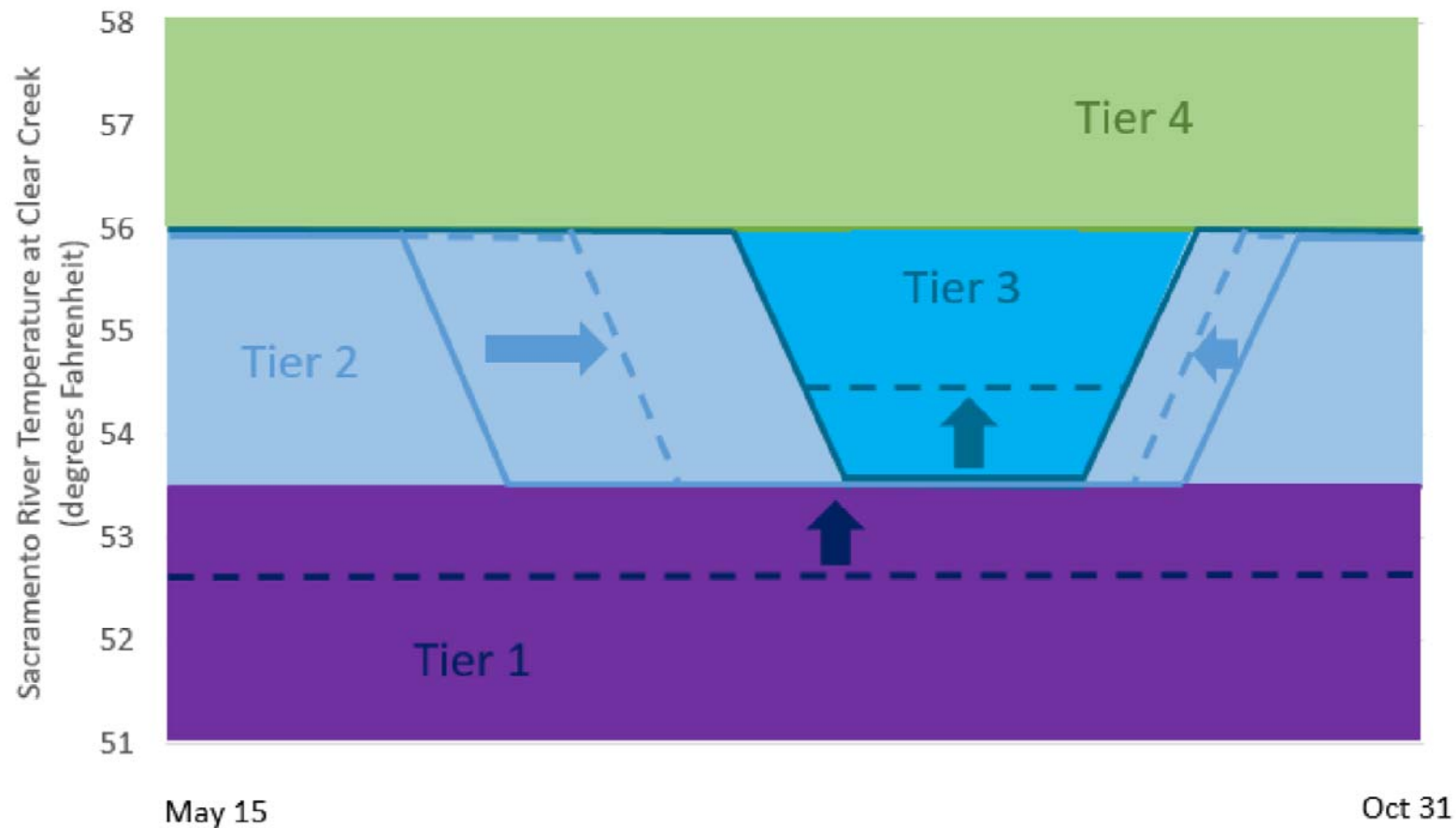


2014 Operations – Critical Year

- Ran out of cold water in September



Cold Water Pool Management – Proposed Action Approach



Operational Actions

- **Trinity: No Change**
- **Clear Creek (Similar to Current Operations)**
 - Minimum flows and ramping rates
 - Targets of: (1) 60°F at the Igo gage from June 1 through September 15; and (2) 56°F or less at the Igo gage from September 16 to October 31.
 - Spring attraction flows: 10 TAF, with daily release up to the safe release, in all except Critical years
 - Channel maintenance flows: 10 TAF, with a daily release up to the safe release capacity, except for Dry and Critical years

Conservation Measures



Before (top) and After (bottom) Spawning and Rearing Habitat
2014 Construction below Nimbus Dam, American River

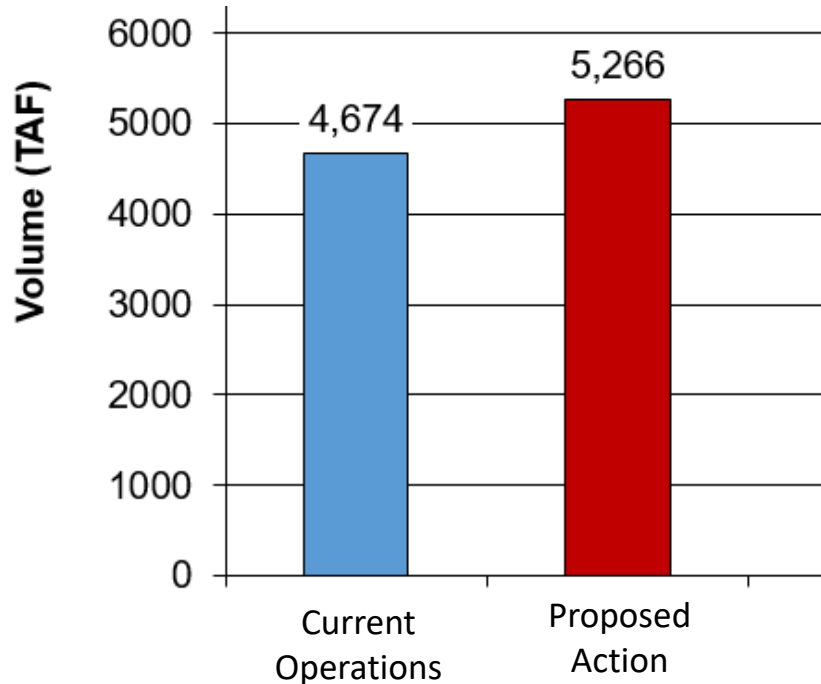
- Approximately \$1.4 billion to 2030
- Sacramento, American, Delta, and Stanislaus spawning and rearing habitat
- Delta Cross Channel Improvements
- Fish Facility Improvements
- Battle Creek Restoration
- Fish Passage on Non-CVP Tributaries
- Knight's Landing Barriers for the Flood System
- Predator measures at Head of Old River and elsewhere
- Small Screen Program

Proposed Action Refinements

- PA refined February-July 2019 through consultation with NMFS and USFWS
- Key refinements:
 - Language edits and clarifications
 - Addition of specific habitat and facility projects
 - Performance Metrics
 - Shasta Temperature
 - Salvage at the Export Pumps
 - Independent panels
 - Steelhead monitoring activities

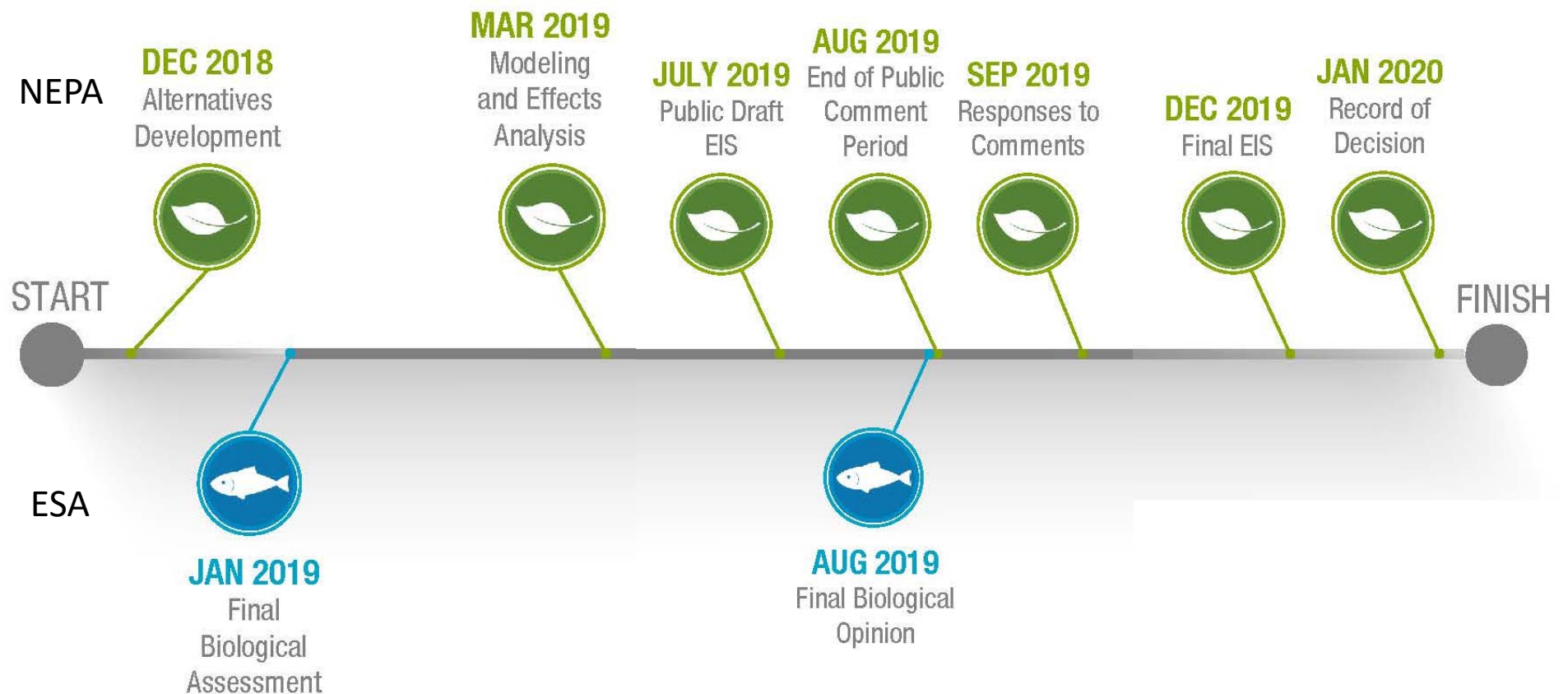
Water Supply Benefits

March-February Total Exports SWP and CVP Averages



- **Proposed Action provides approximately 500 TAF additional water supply**
- **Proposed Action text includes rice decomposition smoothing, opportunities for pulse flows, and other aspects that may be part of Voluntary Agreements.**

Schedule





Questions?

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