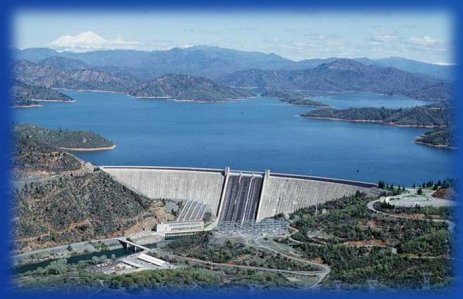
RECLAMATION

Managing Water in the West

NMFS – Reclamation Stakeholder Conference Call

Shasta RPA Draft Proposed Amendment

September 21, 2017



U.S. Department of the Interior
Bureau of Reclamation

Conference Call Objectives

Provide status updates on:

1. Coordinated Modeling Update
2. Science Plan Update

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NMFS and Reclamation Sacramento Division Science and Monitoring Plan

Similar approach to science and monitoring planning as during WY15-17

- Coordinated Effort between difference Science Disciplines (i.e. field, modeling)
- Multi-year timeframe (WY19-21)

Also

- Will integrate input from CVP participants
- Will consider additional disciplines (i.e. experimental)

WY 2015 Drought Contingency Plan
Central Valley Project and State Water Project
Drought Contingency
Biological Monitoring Plan
For Water Year 2015 and Beyond

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Science Plan Purpose

- Identify near-term monitoring, modeling, and analysis and synthesis needs to improve fish and water management decisionmaking regarding Action Suite I.2.
- Reduce uncertainty on the conditions necessary to achieve desired fish and water management goals
- Coordinate activities from agencies, stakeholders, and other interested parties.

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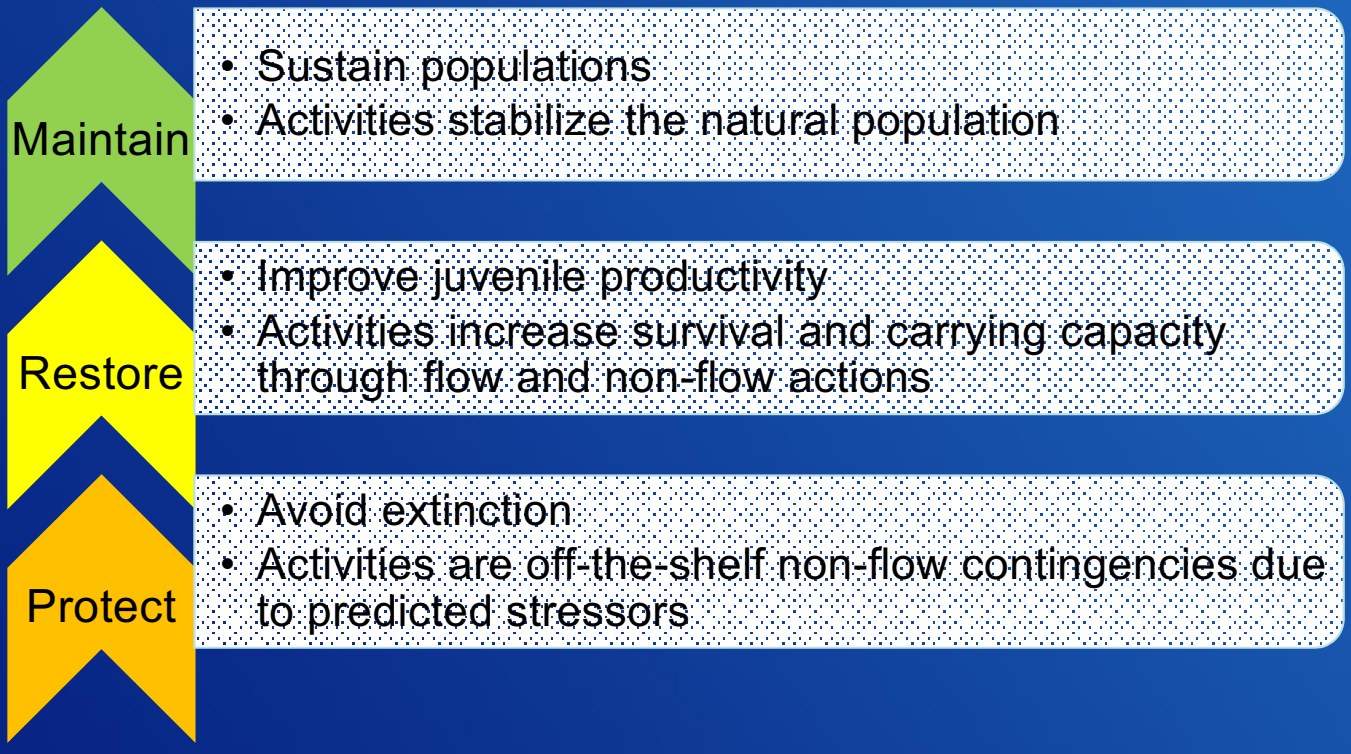
Environmental Watering Approaches



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Winter- run Chinook Salmon Management Conceptual Model

(Windell et al 2017)

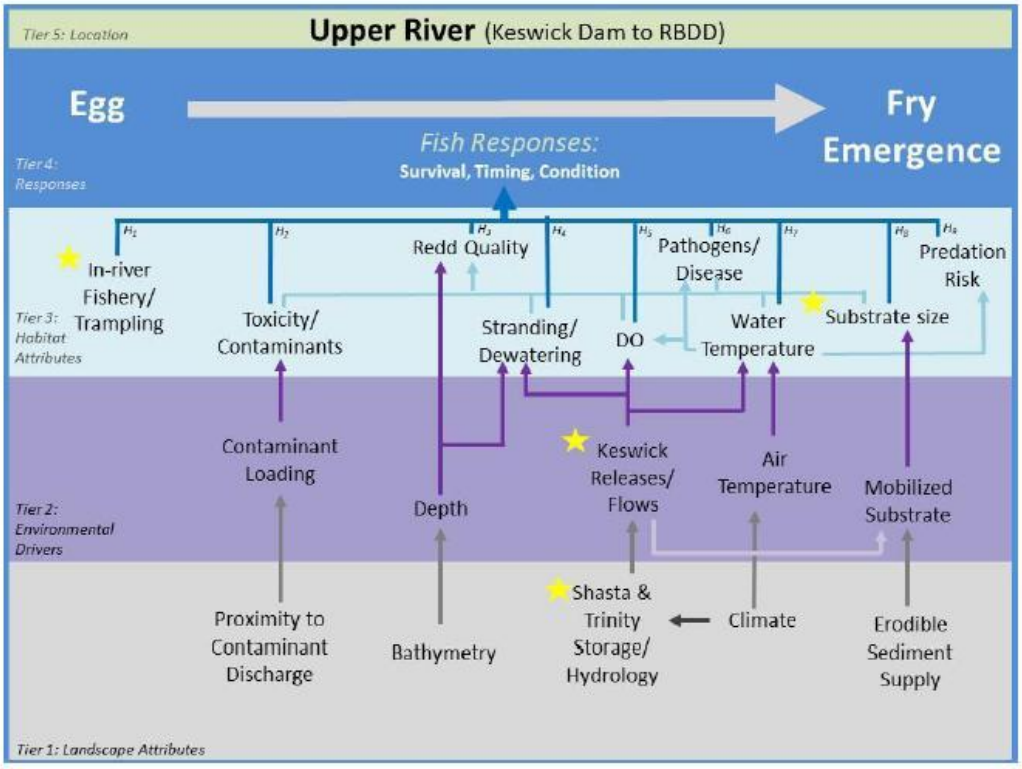

Figure 3. Conceptual model of drivers affecting the transition of SRWRC from egg to fry emergence in the Upper Sacramento River. Hypotheses referenced by the "H-number" are identified in the conceptual model 1 (CM1) narrative. Management actions are denoted by stars and are described in Table 1.

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Management Questions

Facilities

- Does permanent temperature gages provide greater flexibility in temperature operations?
- Can we improve confidence in decisions with permanent temperature infrastructure?
- What changes to temperature management occur when there is power peaking, power bypassing, alternate Whiskeytown and Trinity operations?
- Can the leaks in the TCD be permanently sealed?
- Can an “elephant trunk” be added to the TCD to tap into currently unreachable cold water?

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Management Questions

Operations

- How does climate and storage affect coldwater availability?
- How do we prioritize biological needs with limited coldwater?
- How can the duration of coldwater availability be increased when coldwater is limited?
- How can we minimize the number of years when we need to stretch the coldwater pool?
- How do we develop tools incorporating recent conditions and do not rely on past averages?

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Management Questions

Fisheries

- What are appropriate biological objectives for temp. dependent mortality?
- What biological mechanisms need to be modeled to estimate egg to fry survival?
- How do we prioritize biological needs with limited coldwater?
- What are the non-temperature dependent factors that affect coldwater management?
- Can winter run Chinook salmon be managed to have temperature dependent mortality that will lead to receovery?

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Core Monitoring

15 Activities: Adult and juvenile abundance & data accessibility.

Location	Adult escapement	Juvenile productivity
Upper Sacramento	WR,SR,FR/LFR	WR,SR,FR/LFR, disease sampling
Clear Creek	SR,FR/LFR, STH	SR, STH
Battle Creek	WR,SR,STH	
Mill Creek	SR, STH	
Deer Creek	SR, STH	
Yolo Bypass	Stranding rescues	
Tisdale and KL		WR,SR,FR/LFR

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Coordination and Timeline

Steps to Success	Target Dates
Collect input on management questions and Science Plan	September-October 2017
Final version of Science Plan	November-December 2017
Study prioritization and planning	January- June 2018-2020
Study funding and implementation	October 2018- September 2021
Study Status Reporting	Semiannually WY 2019-2021
Monitoring Status Reporting	Open data approach
Biological Review Panel (Independent review of final findings and monitoring)	September 2019, 2021, 2023

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