

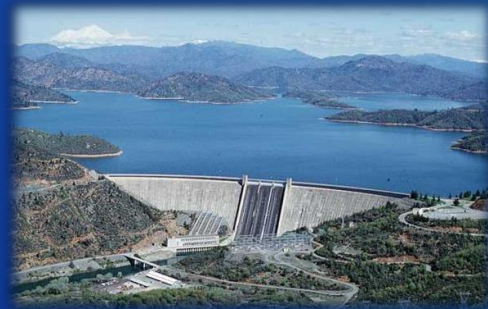
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Managing Water in the West

NMFS – Reclamation Stakeholder Workshop #2

Shasta RPA Draft Proposed Amendment

May 2, 2017



U.S. Department of the Interior
Bureau of Reclamation

Introductions

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Workshop Objectives

Learn about, discuss, and provide input on:

- 1. Temperature management planning for the 2017 Sacramento River temperature management season**
- 2. System-wide analyses of draft proposed amendment (issued January 19, 2017) to the Reasonable and Prudent Alternative of the 2009 NMFS Biological Opinion for the long-term operation of the Central Valley and State Water Projects related to Shasta Reservoir operations**

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Workshop Agenda

- **Introductions**
- **Meeting Purpose**
- **Overview of 2017 Temperature Management Planning**
- **Overview of System-Wide Evaluations of Draft Proposed Shasta RPA**
- **Discussion Q&A**



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Proposed Ground Rules

- **Participate!**
- **Be respectful**
- **Help us stay on track**
- **Speak into microphone**
- **Take comments in batches – in room then on phone**
- **Cell phones off/silent**

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2017 Sacramento River Temperature Management Planning

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Sacramento River Temperature Management Planning

- **Sacramento River Temperature Management required under:**
 - **SWRCB Order 90-5**
 - Meet temperatures of 56° F DAT at compliance location
 - **NMFS 2009/2011 BiOp, Action I.2.4**
 - Development of annual plan
 - 56° F DAT at compliance location between Balls Ferry and Bend Bridge May 15 – Oct 31

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2017 Planning

- **Compliance**
 - 56° F DAT
 - Location between Balls Ferry - Bend Bridge
 - May 15 – Oct 31
- **Target (Operational Study)**
 - 53° F DAT as surrogate to 55° F 7DADM
 - CCR Gage as surrogate to most downstream redd
 - Subject to further discussion and analysis if most downstream redd ends up significantly farther downstream
 - May 15/onset of spawning through emergence
 - Subject to further discussion and analysis if late emergence has potential to cause impacts to future cold water pool and/or significant fall run dewatering risk
 - Offramp if significant impacts

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2017 Planning (continued)

- **Modeling**
 - 52° F DAT from Keswick Dam
 - High likelihood of achieving compliance and target
- **Past performance of Keswick Dam release temperatures**
 - 2006
 - 2011

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Discussion

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System-wide Evaluations of Draft Proposed Amendment

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Storage and Flow Targets/Restrictions

- **Spring/Fall Storage Targets**
 - Vary by water year type
 - Spring storage: ranges between 3.5 to 4.2 MAF
 - Fall storage: ranges between 1.9 to 3.2 MAF
- **Spring Flow Restrictions**
 - Vary by water year type
 - April flow: ranges between 4,000 to 8,000 cfs
 - May flow: ranges between 7,500 to 12,000 cfs
 - (June through October forecast flow run scenario)
- **Action I.2.1**
- **Action I.2.3**
 - Actions I.2.3.A-C

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Analyses – Storage and Flow Targets/Restrictions

- **CalSim analysis**
 - **Feasibility of targets/restrictions**
 - Independent
 - Together
 - **Impacts/changes to other parts of the CVP/SWP system required to meet targets/restrictions**

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Temperature Compliance (location/value/metric)

- **55° F 7DADM and/or 53° F DAT at CCR (May 15->)**
 - Action I.2.3.A-C
 - Action I.2.4
- **61° F 7DADM and/or 58° F DAT at Jellys Ferry (March 1 – May 15)**
 - Action I.2.3

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Analyses – Temperature Compliance (location/value/metric)

- **HEC-5Q analysis**
 - **Feasibility/frequency**
 - Existing
 - In conjunction with storage/flow targets/restrictions
 - **Potential impacts of meeting the requirements (requires additional formulation)**
- **Data from 2016/2017**

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Analyses – Biological Impacts

- **SacPas, SAIL, MAST**
 - Potential biological impacts on other species residing in other components of system
 - Sacramento/American salmon, steelhead, Delta smelt, others

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Biological Objectives

- **Temperature-dependent mortality objectives**
 - **Varies by water year type**
 - **3% to 30%**
 - **Action I.2.1**

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Analyses – Biological Objectives

- **Analyses into feasibility based on outputs of CalSim/HEC-5Q model runs**

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Analyses – Others

- **Wilkins Slough Operations**
 - Action I.4
 - Discussions with SRSC/North-of-Delta water users
 - Potential screening-level review for other impacts (and further analyses)
- **Others?**

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Discussion

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Next Steps

- **Notes and Responses to Questions**
- **Future Workshops**
 - **June 22 – Status/Updates**
 - **September 21 – Status/Results**

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