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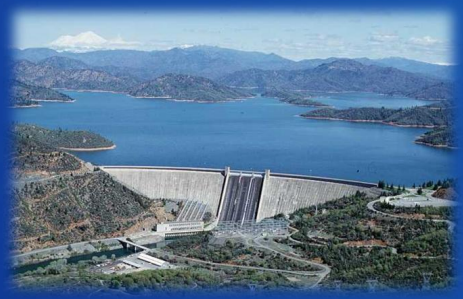
Managing Water in the West

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 Evaluation 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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