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Managing Water in the West

Boise System Feasibility Study
Draft Expanded Scope of Work

November 18, 2016



U.S. Department of the Interior
Bureau of Reclamation

Purpose

Provide an overview of a proposed scope of work for an expanded feasibility study for increasing storage, and potentially reducing flood risk, in the Boise System

Discuss necessary actions/steps for Reclamation and partners to determine whether to move forward with expanded feasibility study or Anderson Ranch Dam raise feasibility study

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Agenda

- Background
- Proposed Expanded Scope of Work
 - Expanded Hydrologic and Climate Change Modeling Analysis
 - Go / No-Go Decision
 - Feasibility Study Authority
 - Feasibility Study Process, Estimated Schedule and Cost
 - Funding Strategy
 - Participation Commitment
- Next Steps
- Questions

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Background

- As population increases, water demands will increase
- Climate variability
 - decreased summer flows and snowpack
 - winter flows occurring earlier with higher peaks
- May 2016 presentation to IWRB
 - USACE's Boise GI Study alternative evaluation results
 - Reclamation's Potential Anderson Ranch Dam Feasibility Study
- USACE and Reclamation partnership to explore alternatives
 - May to October 2016
 - Possible raises at Anderson Ranch, Arrowrock, and/or Lucky Peak Dams

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Preliminary Hydrologic and Climate Change Modeling Results (Apr 2016)

Study Objective

Evaluate the probability of physical fill associated with the following:

- Anderson Ranch Dam – 6-ft raise, ~29,000 AF, 7% increase
- Arrowrock Dam – 10-ft raise, ~20,000 AF, 7% increase
- Lucky Peak – 4-ft raise, ~10,000 AF, 4% increase

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Preliminary Hydrologic and Climate Change Modeling Results (Apr 2016)

Boise Planning Model (RiverWare)

- Daily time-step (October 1982 - September 2009)
- Simulates competing water demands
- Adheres to legal water right and physical constraints
- Recently updated to reflect current reservoir operational objectives (Boise General Investigation Study, 2015)

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Preliminary Hydrologic and Climate Change Modeling Results (Apr 2016)

Study Approach

- Three (3) Storage scenarios
 - Baseline, do nothing
 - Expanded storage at Anderson, Arrowrock, and Luck Peak
 - Expanded storage at Anderson and Arrowrock
- Two (2) Hydrologic scenarios
 - Historical
 - Projected 2080s climate change hydrology
- Total of six (6) model runs

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Preliminary Hydrologic and Climate Change Modeling Results (Apr 2016)

Study Assumptions

- Model is based on current reservoir operations and historical demands (these have changed over time and will change in the future)
- New space starts out empty each year (i.e., carryover benefit not evaluated)

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Feasibility Study Go / No-Go Decision

- Anderson FS vs. Expanded FS?
- Who makes the decision?
- What's the outreach strategy?

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Feasibility Authority

Reclamation authority is from the Omnibus Public Land Management Act of 2009, PL111-11 SEC. 9001

- *“The Secretary of the Interior, acting through the Bureau of Reclamation, may conduct feasibility studies on projects that address water shortages within the Snake, Boise, and Payette River systems in the State of Idaho, and are considered appropriate for further study by the Bureau of Reclamation Boise Payette water storage assessment report issued during 2006...”*
- Appropriated ceiling \$3M
- Authority expires March 30, 2019

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Feasibility Study Process

Overview

- Supports formulation and evaluation of alternative plans to meet established objective
- Leads to selection of recommended plan
- Analyzes other alternatives

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Feasibility Study Process

Phase	Estimated Start	Estimated Duration	Estimated Cost
Selection of Appraisal Plans for Feasibility Study	Complete		
Expanded Hydrologic and Climate Change Modeling Analysis	Jan 2017	2-3 months	\$25,000
Go / No-Go Decision	Apr 2017	2 months	
Receive >50% Firm Funding Commitment; MOAs Executed; Study Team Formed	Jun 2017	6 months	\$250,000 to \$500,000
Feasibility Scoping / Initiate NEPA Process	Dec 2017	24 months	\$1,000,000 to \$1,500,000

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Feasibility Study Process

Phase	Estimated Start	Estimated Duration	Estimated Cost
Reclamation's Feasibility Study Authority Expires* <i>*Reclamation would need Cost Share Partners support to extend feasibility study authority</i>	Mar 2019		
Alternative Formulation and Evaluation	Dec 2019	24 months	\$1,500,000 to \$2,500,000
Recommended Plan to DEC and Policy Reviews / Completion of Combined Feasibility Report and NEPA Document	Dec 2021	12 months	\$750,000

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Feasibility Study Process

Phase	Estimated Start	Estimated Duration	Estimated Cost
Reclamation, Department of the Interior, Office of Management and Budget Reviews and Decision Documents <i>* Reclamation has very little control of how long the review processes at the Denver and D.C. levels may take</i>	Dec 2022	12 months*	
Record of Decision Issued and Submitted to Congress** <i>** Congressional authority to design and construct the recommended plan may take years</i>	Dec 2023	1 month	
TOTAL			\$3,775,000 to \$5,525,000

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Estimated Costs

Total Estimated Cost of Feasibility Study – \$5.525M

- 50% Reclamation share – \$2.76M
- 50% Non-Federal Cost Share Partner share - \$2.76M

Total Estimated Cost Range of Construction - TBD

- All non-Federally funded

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Funding Strategy

- Need MOAs for 50% non-Federal funding for the feasibility study in form of MOAs before the feasibility study can commence
- Firm funding commitment from non-Federal cost share partners needed for the duration of the study
- Reclamation is budgeting for 50% cost share

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Participation Commitment Needed

- Commitment letters requested by April / May 2017 timeframe
- If 50% or more non-Federal cost share is identified, Reclamation will develop funding MOAs with interested parties and obtain monies
- If MOAs are executed by August / September 2017, the expanded feasibility study would likely complete in January 2024
- Support for extension of feasibility authorization

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Next Steps

- Perform Expanded Climate Change Modeling Analysis
- Public Outreach
- Make decision on FS scope
- Plan FS
 - Complete MOAs
 - Initiate FS
 - Refine schedule and budget
 - Initiate plan of study
 - Establish project team
 - Secure service provider commitments
- Perform Study

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Questions

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