

## Boise River Basin Feasibility Study Frequently Asked Questions

August 2019

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### 1. Why is water supply a concern in the Treasure Valley?

Management of the Boise River system is highly dependent upon storage of water in the snowpack. Climate studies project more winter rain and less winter snow in the future, reducing water stored in the snowpack. Existing water storage facilities may not be capable of offsetting the loss of water storage previously provided by the snowpack. Therefore, additional water storage may be necessary to support existing and future water supply needs.

In addition, significant growth is anticipated in the Treasure Valley and surrounding areas; projections indicate Treasure Valley population increasing to 1.57 million people by 2065. As a result, future demand for water supply is expected to increase. While there is a significant amount of water supply available from both the Boise River and the Treasure Valley aquifer system, this supply is not always available where and when it is needed. A significant amount of surface water not otherwise captured in existing reservoirs or diverted during the summer months for irrigation purposes often flows downstream out of the watershed. As a result, this water is not available for year-around use or for use in subsequent years when water supply is limited (e.g. drought years). In addition, parts of the aquifer system have limited supply, thereby restricting potential growth and development in portions of the Treasure Valley.

### 2. Where does the projected future water demand number come from?

A water demand projection study completed for the Idaho Water Resource Board (IWRB) in 2016 predicted population in the Treasure Valley would increase to 1.57 million people by 2065. The report concluded there would be a water demand increase for Domestic, Commercial, Municipal and Industrial (DCMI) uses of 109,000 to 188,000 acre-feet by 2065 (Treasure Valley DCMI-Water Demand Projections 2015-2065, SPF Water Engineering, LLC, August 8, 2016).

### 3. What is the purpose of a feasibility study?

The purpose of a Reclamation feasibility study is to determine the viability of a proposed plan or project based on an evaluation of:

- How well the planning objectives are met
- The economic justification
- The validity of the scientific, technical, and design assumptions
- The ability to construct a project, implement a non-structural plan, or both, according to Reclamation standards and practices, within the estimated cost and schedule
- The reliability of the estimated costs and benefits
- The reliability of the proposed construction schedule
- The capability and willingness of project partner(s) to financially support the project

### 4. What are the high-level steps of a feasibility study?

The high-level steps of a feasibility study are as follows:



- Scoping and screening
- Technical analysis
- Formulation of alternatives
- Analysis of alternatives
- Preparation of feasibility report
- Environmental compliance
- Secretary of the Interior approval of environmental impact statement and feasibility *report*

## **5. What are you studying in this feasibility study?**

This feasibility study is exploring the feasibility of increased storage behind Reclamation's Anderson Ranch Dam by raising the dam approximately six feet, resulting in approximately 29,000 acre-feet of new space.

## **6. Why are you still studying storage?**

Additional surface water storage can be an important element for addressing water supply needs in the Treasure Valley and surrounding areas.

Water users in the Boise River basin rely heavily on the existing reservoir system as well as the snowpack to store and manage surface water supplies. Despite the reservoirs and additional storage provided by the higher elevation snowpack, an average of 1.1 million acre-feet of water leaves the Boise River basin annually. Ground water rights are limited in some areas and the interconnectivity between ground and surface water has resulted in restrictions on new ground water development in parts of the Treasure Valley. In addition, predictions of changes in precipitation and runoff patterns due to climate variability may require additional surface water storage capacity to capture rainfall previously held as snowpack, as well as excess water generated in wet years to offset dry years.

In general, additional water storage would enhance and sustain long-term water supply for critical irrigation, domestic, industrial, and municipal needs, while continuing to meet endangered species and power generation needs. It would also have the potential to provide additional flood risk protection and store additional runoff in high water years similar to 2017.

## **7. Why are you only looking at storage?**

Public Law 111-11 authorized Reclamation to perform feasibility studies on storage projects identified in Reclamation's 2006 Boise/Payette Water Storage Assessment Report. Reclamation has received additional authority and funding under Public Law 114-322 – the Water Infrastructure Improvements for the Nation (WIIN) Act. This authority is limited to storage projects.

The Idaho Water Resource Board (IWRB), Reclamation's feasibility study partner, has authority to participate in the project under House Joint Memorial 8 which focuses on storage projects. The 2019 Idaho State Legislature passed House Joint Memorial 4 and House Bill 285 affirming support for the feasibility study and identified a raise of Anderson Ranch as a high priority for the State of Idaho.

## **8. Are you looking at potential non-structural solutions for additional water?**

Yes, as part of the feasibility study process, we will evaluate increasing irrigation efficiencies through additional automation in Water District 63 as a non-structural alternative.

## **9. Are you looking at flood risk reduction?**

Reclamation's authority to perform this study focuses on additional storage for water supply purposes. Any improvements to flood risk reduction will be analyzed as a secondary benefit.

## **10. What about dam safety?**

As part of Reclamation's Dam Safety Program, Reclamation action(s) must not increase dam safety risks.

A qualitative risk analysis is suitable for this feasibility level design. Should a dam raise be determined feasible and construction authorized, Reclamation would perform a quantitative risk analysis as part of the final design process.

## **11. Why are you only focusing on Anderson Ranch at this time?**

Based on results of initial data collection from Anderson Ranch, Arrowrock, and Lucky Peak Dams, Reclamation and IWRB have agreed to focus the feasibility study on increased storage in Anderson Ranch at this time due to its relatively low complexity and projections that it will provide the most water for the investment. Potential raises at the other two dams may be evaluated in future years.

## **12. How is the environmental compliance process incorporated into the feasibility study?**

The environmental compliance process will evaluate alternatives from the feasibility study to determine any associated environmental impacts and appropriate mitigation. Environmental impacts and mitigation costs will be incorporated into the feasibility study.

## **13. How will the public be engaged in the feasibility study process?**

Reclamation and IWRB hosted a public open house on November 8, 2018 in Boise, Idaho and shared early-stage information about the feasibility study.

Further public engagement on the feasibility study will be a part of public engagement for the NEPA process.

## **14. How will the public be engaged in the NEPA process?**

### **Public Scoping Period:**

The 30-day public scoping period began on August 9, 2019, with Reclamation's Notice of Intent to prepare an Environmental Impact Statement in the Federal Register. The public can comment on the proposal and provide input on alternatives during the scoping period.

### **Public Scoping Open Houses are being held on the following dates:**

August 27, 2019, 1:00 p.m. to 3:00 p.m., Pine, Idaho

- Boise River Senior Center, 350 North Pine Featherville Road, Pine, Idaho 83647  
August 28, 2019, 6:00 p.m. to 8:00 p.m., Boise, Idaho
- Wyndham Garden Boise Airport Hotel, 3300 South Vista Avenue, Boise, Idaho 83705  
August 29, 2019, 6:00 p.m. to 8:00 p.m., Mountain Home, Idaho
- American Legion, 515 East 2<sup>nd</sup> South Street, Mountain Home, Idaho 83647.

### **Public Comment Period:**

The draft Environmental Impact Statement and draft Feasibility Report are tentatively scheduled for release in February 2020, which will begin the 45-day public comment period. Public meetings during the public comment period are planned to be held in Mountain Home and Boise, Idaho. The public can review and provide comments on the draft Environmental Impact Statement and draft Feasibility Report during the public comment period.

## **15. What is the duration of the feasibility study?**

Reclamation is performing this feasibility study under WIIN Act authority, which requires feasibility determination by January 1, 2021. Reclamation plans to complete the study prior to that date.

## **16. What alternatives are you considering?**

Currently, Reclamation is considering:

- 6-ft raise of Anderson Ranch Dam
- Increase irrigation efficiencies through additional automation in Water District 63
- No-action alternative

### **17. How is the Boise River system operated?**

The Boise River System includes Anderson Ranch, Arrowrock, and Lucky Peak reservoirs. The current total active storage of the system is 949,700 acre-feet. The reservoir system is operated for multiple purposes including irrigation and municipal water supply, flood risk management, power, recreation, and fish and wildlife.

In general, water is balanced between the Upper System (Anderson Ranch) and the Lower System (Arrowrock and Lucky Peak) to meet flood risk management space requirements, irrigation demand, and other purposes. During the flood risk management season (typically January through July), water supply forecasts are used to determine flood risk management space requirements and guide releases from the reservoir system. During this period, the reservoir system is jointly operated by USACE and Reclamation. Outside of the flood risk management season, Reclamation works closely with the Water District 63 watermaster to operate the reservoirs to meet downstream demands.

### **18. Who will get the additional water / how would the additional water supply be allocated?**

The Federal government may reserve some space for Federal needs; other potential spaceholders include existing Reclamation contractors and IWRB, which could in turn contract water to existing Water District 63 water users and/or may offer water through the Idaho water supply bank's Water District 63 rental pool.

### **19. How will the study consider changes to the reservoir system operations?**

As part of the analysis of alternatives, the study will analyze changes to the operation of the reservoir system necessary to meet identified and potential purposes of any new storage, including water supply, flood control, fish and wildlife, power generation, and recreation. The operations manual for the system would be revised if an alternative is implemented.

### **20. How will the feasibility study value the new water?**

Through the feasibility study process, Reclamation is performing an economics analysis which will use approved methodologies to evaluate the benefit of the potential new water in the Treasure Valley. The analysis will include potential benefits to domestic, municipal, and industrial water supply, agriculture, power, recreation, fish and wildlife, and flood protection.

### **21. How much will this cost?**

The feasibility study is currently developing total project costs.

### **22. Who would pay for a raise of Anderson Ranch Dam?**

In general, entities assigned the space would pay for the raise, proportionate to their share of the space.

### **23. How long would it take to build the raise of Anderson Ranch Dam?**

Initial feasibility-level designs estimate a 39-month construction window for the proposed raise of Anderson Ranch Dam. As part of the feasibility study process, Reclamation will perform a Design, Estimating, and Construction (DEC) review associated with the potential dam raise, which will review the initial feasibility-level design to confirm the potential construction schedule.