



# Oregon

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## Water Resources Department

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### MEMORANDUM

**TO:** Water Resources Commission

**FROM:** Tom Paul, Deputy Director

**SUBJECT:** Agenda Item I, February 8, 2013  
Water Resources Commission

### **Update on Willamette Basin Reservoir Study**

#### **I. Introduction**

This is the fifth update to the Commission on the Willamette Basin Reservoir Study since the release of the 2008 Willamette Biological Opinion (BiOp). The U.S. Army Corps of Engineers (Corps) and the Oregon Water Resources Department (Department) are partners in a general investigation of the reservoirs operated by the Corps in the Willamette Basin. The Willamette Basin Reservoir Study began in 1996 under a cooperative cost-share agreement with the Corps. Funds for the Study were provided by the Federal Government, the State of Oregon, and more than 60 cities, special districts, organizations and commercial and industrial firms. The Study was placed on hold to allow for a federal consultation process related to several fish species listed under the Endangered Species Act (ESA).

Funding for a Small-Scale Reallocation Study has been included in the President's FY2013 Budget, and work is already underway. This Study, which focuses on the reallocation of up to 499 acre-feet of storage for municipal and industrial uses, will help reinitiate and inform the process for the larger-scale Willamette Basin Reservoir Study, planned for 2014 and beyond. The Corps and the Department are in the process of finalizing tasks and costs for the 2013 workplan.

#### **II. Background**

The thirteen federal reservoirs in the middle and upper Willamette Basin were authorized for construction beginning in the late 1930s. The dams were built from 1941 to 1969 (Fern Ridge Dam was rebuilt in 2005). The Willamette Project provides important benefits of flood damage reduction, navigation, hydropower, irrigation, water supply, flow augmentation for pollution abatement and improved fishery conditions, and recreation. The U.S. Bureau of Reclamation (Reclamation), the federal agency authorized to issue stored water contracts for irrigation, filed applications for water rights in 1954 and 1968. Subsequent water right certificates have been issued to authorize the storage of more than 1.6 million acre-feet for irrigation uses only. Less than 5 percent of the total storage is currently under contract for irrigation. Recreational use at many of the reservoirs is significant. Releases of water from the reservoirs provide instream benefits for fish, wildlife, navigation and water quality.

Under the 1996 Feasibility Cost Sharing Agreement, the Corps and the Department established five goals for the Willamette Reservoir Study (see below). The estimated cost of the study at that time was \$3 million.

- Authorize a full range of beneficial uses (including anadromous fishery and water quality needs, municipal and industrial water supply, recreation).
- Develop an operational agreement for low-flow years.
- Determine appropriate institutional arrangements.
- Investigate options to improve reservoir refill and reduce downstream erosion during reservoir drawdown.
- Address municipal and industrial water demands and constraints.

### **III. Discussion**

The Department and Corps continue to maintain a strong relationship. Since the last update to the Commission in January 2012, the Department and Corps have held several meetings, including three meetings with municipal, agricultural, and conservation stakeholders to discuss the Small-Scale Reallocation Study.

Some of the participants involved in the stakeholder meetings have met with state legislators, staff at Corps Headquarters, and with members of the Oregon Congressional delegation, advocating for funding to enable the Corps and Department to complete both studies.

Since 2000, there have been changes in federal law and litigation that impact the 1996 Feasibility Cost Sharing Agreement between the Corps and the Department. The Agreement was recently amended by the agencies to reflect these changes.

The focus of the 2013 workplan is on the Small-Scale Reallocation Study, although many of the tasks will inform the larger Willamette Reservoir Study. The estimated total cost for 2013 is \$400,000, with costs split evenly between the Corps and the Department.

#### **2013 Workplan Tasks:**

1. Modeling Reservoir Operations
2. Data Collection\*
3. System Pricing\* (i.e. determining the cost of stored water)
4. Environmental Assessment
5. Dam Safety Review and Write-Up
6. Update Feasibility Cost Sharing Agreement\*
7. Issue Paper for System Pricing\*
8. Coordination/Administrative Duties\*
9. Report on the Small-Scale Reallocation

*\* These tasks inform both the Small-Scale Reallocation Study and the Willamette Reservoir Study.*

Updated demand information, including potential diversion locations, is needed. This information will be used to prepare the Small-Scale Reallocation report, which will also include project data, water supply

needs analysis, cost of storage analysis, the environmental assessment, and a recommendation from the Corps District Commander.

The Department and the Corps are currently working to better understand the relationship between the actions being taken under the BiOp and products that would apply to the Willamette Basin Reservoir Study and other actions of the Department. Some of the tasks originally developed to achieve the five study goals may be more appropriately addressed under the BiOp.

The Department, Corps, Reclamation, and basin stakeholders have been discussing the WaterSMART Basin Study Program as a potential opportunity to analyze demands, particularly agricultural demands, in the Willamette Basin. The Department submitted a letter of interest to Reclamation in mid-January, in hopes that such a study could fill data needs and further efforts under the Willamette Basin Reservoir Study.

During the next few months, the Department and the Corps (in cooperation with stakeholders) will be designing the workplan for 2014 and beyond. The Study partners plan to take advantage of existing information, where possible, and utilize modeling efforts completed under the 2008 BiOP, which should result in additional cost savings and efficiencies.

#### **IV. Conclusion**

Although the Willamette Basin represents only 14 percent of the land area in the state, it is the heart of the state's economy and home to more than 70 percent of Oregon residents. Improving access to built storage, including water stored behind federal dams to serve a full range of beneficial uses, is a recommended action of the Integrated Water Resources Strategy (Recommended Action 10B). Completing the Willamette Basin Reservoir Study will help the state achieve the broader goal of meeting Oregon's instream and out-of-stream needs, today and in the future.

#### **V. Recommendation**

This is an informational item, no action is needed.

Attachment 1: The Willamette River Basin: Project Facilities Map

Attachment 2: Willamette Conservation Storage: Percent of Conservation Storage by project

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# The Willamette River Basin



**US Army Corps  
of Engineers®**  
Portland District



# Willamette Conservation Storage

Total = 1.6 million Acre-feet

