

Willamette Basin Review – Reservoir Study Stakeholder Meeting

Oregon Water Resources Department
U.S. Army Corps of Engineers

July 22, 2013



Willamette Basin Review – Reservoir Study

- Small Scale Reallocation Report
 - ▶ Modeling
 - ▶ System Pricing
- WaterSMART Plan of Study
- Budget Updates
- FY14 Planned Work
- General Discussion



Small Scale Reallocation Report

- 60% Draft Quality Control Review Complete
- Finalizing 90% Draft Report
 - ▶ District Review
 - ▶ Agency Technical Review
- Modeling
- System Pricing



Willamette Basin Review – Reservoir Study

Small Scale Modeling

■ Small Scale Reallocation

- ▶ 499 acre-feet from Dorena and Cottage Grove
- ▶ Equates to about 2 cubic feet per second (cfs) from June - September



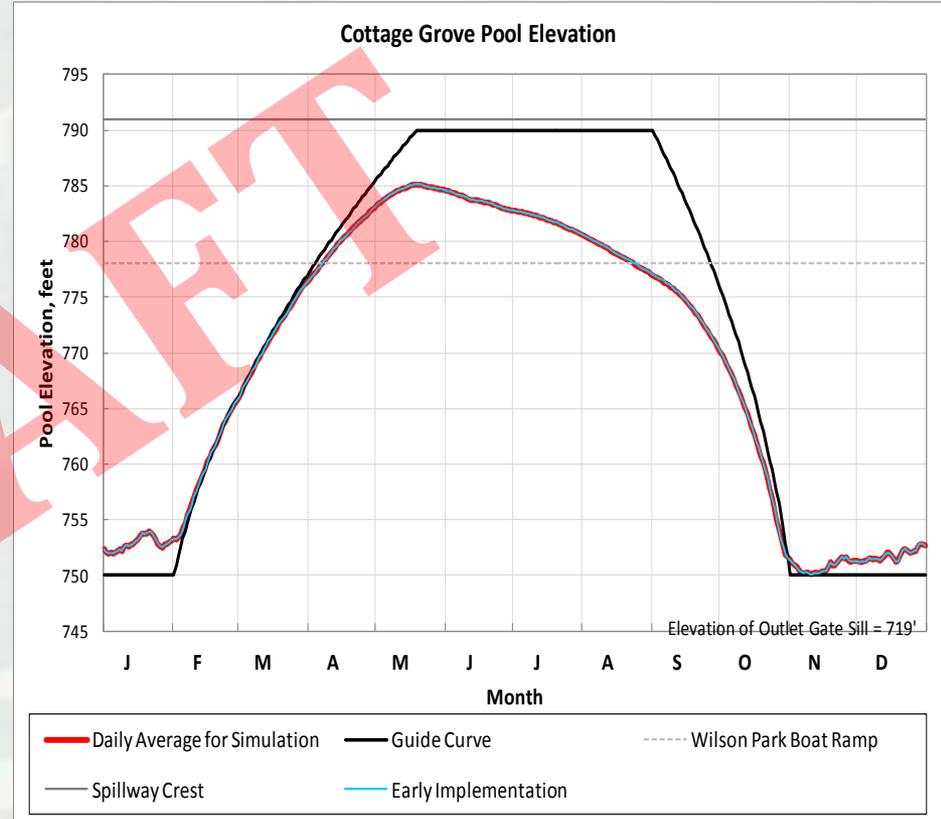
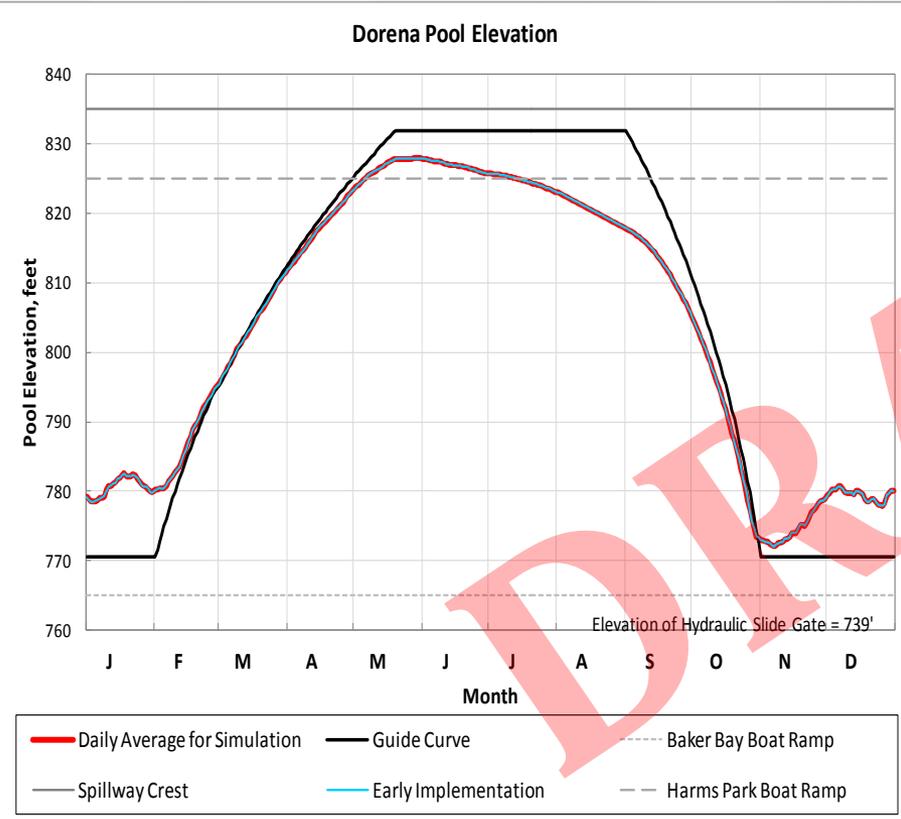
Modeling – Small Scale (cont.)

- Ran the Early Implementation Baseline.
- Added a single diversion on the Coast Fork to represent the water needs addressed in this study.
- Specified greater outflows from Dorena and Cottage Grove reservoirs to meet the diversion, proportional to size of reservoir.
- Compared results to the Baseline results to assess impacts to the system and the individual projects.
- Indistinguishable effects.



Modeling – Small Scale (cont.)

Daily Averages from Period of Record Flows



System Pricing

- Projects are operated as a system for both flood risk management and conservation purposes.
- Retain operational flexibility to supply stored water.
- Improves availability of stored water for users.



Willamette Basin Review – Reservoir Study

User Costs

- Capital Investment Cost
 - Highest of:
 - benefits / revenues foregone
 - replacement cost
 - updated cost of storage
 - One time cost
- Annual Operations and Maintenance (O&M)
- Major Repair, Replacement, and Rehabilitation (RR&R)



Capital Investment Cost

Benefits/Revenues Foregone

- Evaluated benefits/revenues foregone based on the “worst-case scenario”
 - ▶ Hydropower impacts assessed by drafting the big hydropower projects to supply demand
 - ▶ Recreation and irrigation benefits/revenues foregone assessed by calculating complete loss of those benefits/revenues



Replacement Costs

- Applicable only if the reallocated storage is being taken from the flood control pool or hydropower pool
- Therefore this method is not applicable



Capital Investment Cost

Updated Cost of Storage

- Escalate the initial total cost of construction to present day value for joint-use purposes only
- Calculate weighted average of the updated cost of storage for the 11 storage projects based on the total usable storage for each respective project



Operations, Maintenance, and Major Repairs

- Annual Operations and Maintenance (O&M) based on the previous fiscal year
- Repair, Replacement, and Rehabilitation (RR&R) costs are charged when incurred



Payment for Storage

	1 acre – foot	499 acre-feet
Capital Cost, lump sum	\$2,257	\$1,126,243
Capital Cost repaid over 30 years*, Annual	\$153	\$76,272
Annual O&M (FY12)	\$10	\$4,990
RR&R	---	---
Total Annual Payment	\$163	\$81,262



*Using the 2013 interest rate of 5.357%

Note: Repayment amounts must be readjusted every five years



Questions?

Next Agenda Item:

4. WaterSMART Plan of Study



WaterSMART Basin Study Program

- Implements SECURE Water Act, Section 9503
- 50/50 cost share, not a financial assistance program
- States, Tribes, water districts, cities, & other local govt's with water delivery or management authority
- Since 2009, 22 studies →

2009

Colorado River Basin
Milk/St. Mary Rivers Basin
Yakima River Basin

2010

Niobrara River Basin
Truckee River Basin
Santa Ana River Basin
Henrys Fork of Snake River
SE California Regional Basin

2011

Lower Rio Grande River Basin
Santa Fe Basin
Klamath River Basin
Hood River Basin

2012

Upper Washita River Basin
Sacramento-San Joaquin Rivers
Republican River Basin
Pecos River Basin
L.A. Basin

2013

Carson River Basin (POS)
San Diego Watershed
Arkansas River Basin (POS)
Willamette River Basin (POS)
West Salt River Basin



Timeline of Events

- *Fall 2012*
Interest in WaterSMART
- *January 2013*
OWRD submits letter of interest
- *March 2013*
Proposal submitted, with letters of support from agencies and stakeholders
- *May 2013*
Willamette selected for “Plan of Study”

Letters of Support

Association of Oregon Counties
League of Oregon Cities
Oregon Assoc. of Nurseries
The Freshwater Trust
Oregon Environmental Council
Oregon Water Resources Congress
Oregon Dept. of Fish & Wildlife
Oregon Farm Bureau
Oregon Water Utility Council
Santiam Water Control District
Special Districts Assoc. of Oregon
Tualatin Valley Water District
U.S. Army Corps of Engineers
WaterWatch of Oregon
Willamette Water 2100



The Framework for Basin Studies

Four Elements:

- Water supply and demand projections
- Analysis of impacts (e.g., climate change, population growth)
- Develop options
- Look at trade-offs

Major Themes:

- Basins are unique, no two studies are the same
- Basin Study Program is flexible to meet the needs of the basin
- Build capacity and collaboration within the basin



Study Steps

- ★ Step 1 – Sign MOA
 - ★ Step 2 – Design Plan of Study
 - Step 3 – Conduct the Study
 - Step 4 – Review & Finalize
- within 1 year
- within 2 years
-



Study Steps (cont.)

Step 2 – Design Plan of Study

“A plan of study helps a cost-share partner define the outcomes and set the scope and focus for a potential future Basin Study.

Reclamation and the cost-share partners in each case will develop the plan of study jointly.”



Plan of Study for the Willamette Basin

Step 2 – Design Plan of Study

- Develop a pathway for acquiring:
 - agricultural needs
 - instream needs*
 - municipal needs*
 - incorporating climate change efforts (WW2100)
- ...to support the Reservoir Study



Next Steps

- Develop MOA & and begin Plan of Study this summer
 - ➔ BOR Study Manager: Toni Turner, Hydraulic Engineer
(current working on Hood River Basin Study)
- Re-apply for Basin Study in Jan. 2014 (to carry out Plan of Study)
- Plan of Study can be submitted in draft form
- Explore other options (SB1069, SB839), if needed



Next Agenda Item:

5. Budget Updates



Willamette Basin Review

Budget Updates

- Corps
- OWRD



Next Agenda Item:

6. FY14 Planned Work



Willamette Basin Review

FY14 Planned Work

- Complete Small Scale Reallocation
 - ▶ Finalize System Pricing White Paper
 - ▶ Obtain Reallocation Report Approval
 - ▶ Transfer Storage Certificates (499 ac-ft only)
 - ▶ Execute M&I Storage Agreement

- Continue Public and Basin Coordination
 - ▶ Stakeholder Meetings
 - ▶ WaterSMART
 - ▶ Instream Flow Studies



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FY14 Planned Work (cont.)

- Develop Detailed Project Management Plan (PMP) for Full Study
 - ▶ Detail Schedule and Cost for Activities:
 - Environmental Impact Statement (EIS)
 - H&H Modeling Needs for Impacts Analyses
 - Recreation Analysis and Potential White Paper
 - Irrigation Impacts and Potential White Paper
 - Hydropower impacts and coordination with BPA
 - Storage -Yield Calculations



Next Steps and General Discussion

- Next Steps?
- Open Discussion
- Closing Comments

