Oregon
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Oregon Water Supply and Conservation Initiative
June 2008 Update

I. Issue Statement

The state of Oregon faces very real pressures with regard to water quantity. Surface water is almost completely allocated in the state, and ground water resources are under stress as well. While surface water and ground water shortages make it increasingly difficult to meet water needs, there are two additional and growing pressures on water supplies. First, the U.S. Census Bureau projects the arrival of another 1 million people in Oregon by 2030. Secondly, scientific models from the Climate Impacts Center at the University of Washington predict that climate change will significantly change the timing and form of precipitation in Oregon in the future (i.e., rainfall instead of snow, earlier arrival, earlier run-off, less opportunity for ground water recharge).

Given these pressures, it will become increasingly difficult to meet Oregon's demands for water. However, meeting instream and out-of streams needs continue to remain a co-equal goal for the Water Resources Commission and Department. Only through long-term planning, based on sound science and local input, can we ensure these needs are met.

With $750,000 from the 2007 Oregon Legislature, the Water Resources Department has begun a modest data collection effort and a community grant program called the Oregon Water Supply and Conservation Initiative (OWSCI). These efforts represent the beginning stages of a long-term, integrated water supply and conservation strategy for the state of Oregon.

II. Background

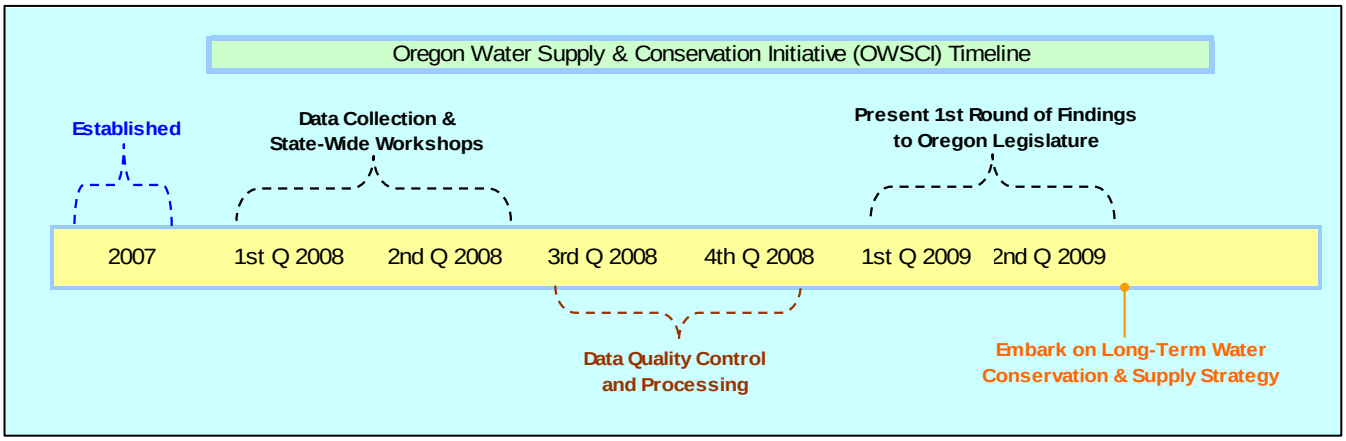
The Oregon Water Supply and Conservation Initiative has five components, the first four of which were funded by the 2007 Legislature:

1) a state-wide water demand assessment
2) an inventory of potential conservation projects
3) an inventory of potential above- and below-ground storage projects
4) grant funding for community and regional planning efforts, and
5) a continuation of the Department's basin yield and peak flow analyses (not yet funded).

In addition to the data, two important products that will result from this Initiative include the methodology used to collect and process information, and also the database structure into which the Department will place future data.

Below is a timeline for work conducted under the Initiative. The Department plans to complete data collection during July 2008, and will spend the remainder of the year conducting data

quality checks and processing the data into a user-friendly format on the WRD website. By January 2009, the results will be available to the public on-line, with a description of the Initiative, its methodology, important caveats, and an interactive map of results. Users will be able to access results at the county or administrative basin level.



The Department will present overarching results of the Oregon Water Supply and Conservation Initiative to the 2009 Oregon Legislature, identifying any information gaps, lessons learned, and observations about water demand forecasts, conservation opportunities, and storage potential in Oregon. The report will make recommendations about the level of resources and general approach needed to continue to build Oregon's long-term, integrated water conservation and supply strategy.

III. Updated Discussion

Component #1: Assessment of Existing and Future Water Supply Demands

This water demand forecasting work is being led by a private contractor, with Department staff part of the project team. The team is using Oregon-centered reports and data (e.g., population projections, irrigated acreage projections, etc.) to broadly characterize what Oregon's future water needs will look like, and will aggregate data from across all water-use categories, including municipal/residential, agricultural, self-supplied industrial, and instream needs such as hydropower flows and fish flows.

The project team is "ground-truthing" the more statistical work with surveys and interviews of large water users themselves (e.g., cities, drinking water districts, irrigation districts, etc.). As of June 2008, the project team had more than 100 survey responses from water users throughout the state, providing water-use statistics for the past few years.

The project team will use these data to forecast Oregon's water demands to the years 2025 and 2050, and will allow on-line users to view results on an interactive map at the county or basin level. On-line users will also have some tools that allow them to see whether water demand may rise more sharply or gently, depending on differing assumptions related to population growth, conservation, temperature, etc.

This first round of demand assessments helped the project team create the data structure, refine the methodology, convene the Department's stakeholders, and identify any data gaps that we should plan to address in the future. The Department's meetings with stakeholders during Spring 2008 greatly helped to refine the methodology.

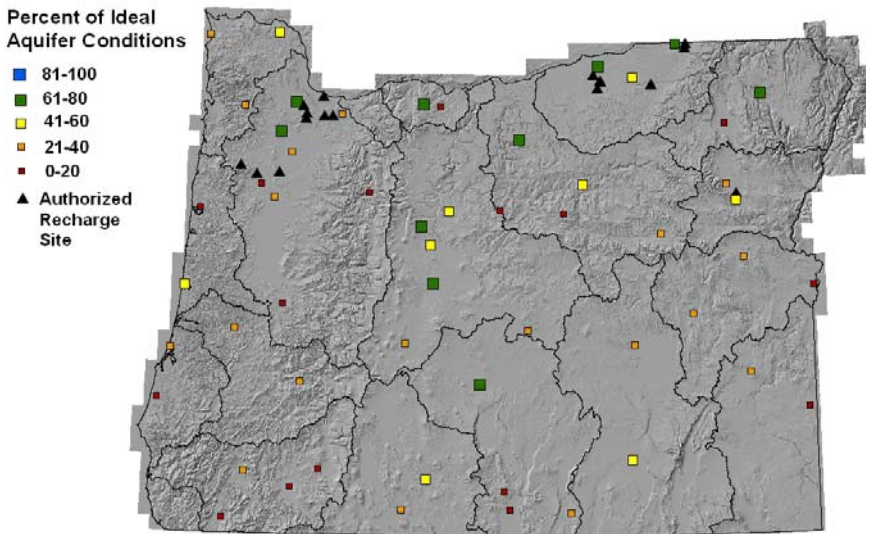
Component #2: Inventory of Conservation Opportunities

The same private contractor and project team also surveyed water users to determine what potential conservation opportunities have been identified in Oregon but not yet pursued because of institutional, regulatory or other barriers. The purpose of this question was to identify what types of public policies or resources might increase the amount of water conservation in Oregon. More than 30 respondents participated by defining the type of conservation project they had in mind, the location of the project, the potential public benefits, potential water savings, and estimated costs.

Again, the project team will compile these results and the Department will display them on an interactive map by county.

Components #1 and #2 also benefitted from the advice of a three-member technical review group convened by the Department. As of June 2008, the group had met twice to review and critique project methodology and provide suggestions about next steps.

Component #3: Inventory of Potential Storage Opportunities



Department staff members are constructing an inventory of potential water storage opportunities in Oregon, including both above and below-ground sites in the project. In this first phase, the project team wants to collect as much existing information as possible, from Federal agencies, other state and local partners, and private firms as well, so that the Department can serve as a clearinghouse for storage information. Whether development of the site was determined to be feasible or not, the Department plans to post this information so that communities can avoid "reinventing the wheel," in terms of site investigation. This information will also help the state identify and prioritize possible future projects.

Again, the project team intends to show results on an interactive map. Above is a sample map of the work the Department has conducted thus far, on the potential for aquifer and storage recovery sites in Oregon, based on existing hydro-geological conditions.

Component #4: Regional and Community-Based Water Supply Planning

During April 2008, WRD awarded grants to 11 communities for use in their water supply planning efforts. These awards total $155,000 and are meant to help communities that are taking a regional approach to meeting their current and future water needs. Applicants were eligible for up to $20,000 per project and had to provide at least an additional 25 percent cost share. More than 30 applicants responded, requesting more than $600,000 in total.

Projects were scored according to four grant criteria:
(1) demonstration of a regional approach;
(2) involvement of local officials;
(3) involvement of diverse stakeholders;
(4) closely tied to land-use, climate change, water quality or other related water supply issues.

The communities receiving grants represent diverse locations across the state, as well as a mix of counties, cities, and districts. The list features a wide variety of water supply projects, ranging from water conservation, banking, storage, and transmission, to policy road-maps, instream (environmental) issues, and out-of-stream (municipal and agricultural) demand forecasts.

The recipients of 2008 Oregon Water Supply and Conservation Grants are listed below, with a brief description of each proposed project.

Recipients of 2008 Community Water Supply Planning Grants

Grant Recipient	Brief Project Description
1. Baker County	Undertake hydrologic analysis of the Powder River Basin, including storage of winter water.
2. Benton County	Conduct a county-wide water analysis and demand forecast.
3. Central Oregon Cities Organization (COCO), with the Deschutes Basin Board of Control and the Deschutes River Conservancy	Market the Deschutes Water Alliance Water Bank.
4. Clackamas River Water Providers	Model streamflows in the Clackamas River, including the effect that releases from Timothy Lake may have on water quality and quantity.
5. Crook County	Determine how unallocated water in the Prineville Reservoir can be utilized, while maintaining existing reservoir uses.
6. East Valley Water District	Identify potential pipeline routes, for water delivery
7. Southern Willamette Valley Municipal Water Providers, led by Eugene Water and Electric Board (EWEB)	Develop a plan to address technical and policy obstacles to using U.S. Army Corps of Engineers reservoirs in the Willamette Basin for municipal and industrial purposes.
8. Northwest Coastal Water Supply Task Force, led by the City of Seaside	Forecast water demands at the municipal and county level in Clatsop County.
9. Oregon Water Trust in Jackson County	Assess the possibility of a water bank in Jackson County.
10. Polk County and Lincoln County	Study water needs in Polk and Lincoln counties; conduct feasibility study of a storage project on the Upper Siletz River
11. Umatilla County	Map potential beneficiaries of a project to replace ground water rights with available surface water.

Component #5: Basin Yield and Peak Flow Analysis
This component remained unfunded during 2008. Previously, the Department has conducted water availability studies to determine the rate of stream flows, but has not conducted detailed basin yield and peak flow analyses to estimate the volume of water that will run off from each Basin each month. The Department will request resources from the 2009 Legislature to conduct these basin yield and peak flow analyses.

This information is crucial for fulfilling the Agency's mission to address Oregon's water supply needs, by assessing the viability of new water conservation, supply or storage projects and for assuring that scenic waterway flows and peak fish flows are protected. Although the raw data already exist in-house, no staff resources are available to produce the analysis required to determine basin yield or peak flows. This analysis is a multi-year effort, updated thereafter with additional data layers as they become available.

Although this work was not funded in 2007, the Department believes that the information generated by a basin yield and peak flow analysis will provide baseline information the state needs to track the effects of climate change, the monthly availability of water, and peak flows for fish and environmental needs.

IV. Summary

Data collection efforts under the Oregon Water Supply and Conservation Initiative are well underway and scheduled for completion at the end of the 2008. The information gleaned from the Initiative will serve as early steps in Oregon's long-term, integrated water conservation and supply strategy.

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