



Oregon

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Water Resources Department

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MEMORANDUM

TO: Water Resources Commission

FROM: Tracy Loudon, Administrative Services Administrator

SUBJECT: Work Session Item F, November 14, 2013
Water Resources Commission Meeting

Update on Water Conservation, Reuse and Storage Grant Program

I. Background and Issue Statement

The Water Conservation, Reuse and Storage Grant Program (WCRS), established by Senate Bill 1069 in 2008, funds the qualifying costs of planning studies that evaluate the feasibility of developing water conservation, reuse or storage projects.

The program has awarded over \$2.4 million to 39 grantees since 2008. Technical reports from 36 of these grants have been submitted and approved. The legislature has approved continuation of this grant program with \$750,000 for the 2013-15 biennium. This report provides a summary of the outcomes of past grants and outlines a tentative timeline for the grant program for 2013-15.

III. Grant Activity Summary

The 2011-13 grant cycle is now complete. Of the 18 grants awarded, 15 final reports have been submitted and approved. Three of the remaining grantees requested extensions which are due November 30 and December 31, 2013 and June 30, 2014. The extensions were made to correspond with the end date of a matching grant, additional data collection, and approval of governing boards, respectively. A summary of the 2011-13 final reports is attached.

The Department is in its third grant cycle with an application deadline of November 1, 2013. Workshops were offered in Salem and Pendleton for those interested in applying for a grant. The workshops were also aired as webinars.

An application review team has been convened. Members of this team include Oregon Department of Agriculture, Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, Oregon Parks and Recreation Department, Business Oregon, Oregon Association of Water Utilities, and a technical specialist from the Department. Additional

program information can be found on the Department’s website under “Conservation and Supply Resources and Programs.”

IV. 2013-15 Grant Program Tentative Timeline

The tentative timeline for the 2013-15 Grant Program has been developed. This schedule will provide opportunity for applicants to develop materials, application review by a team with knowledge and interdisciplinary expertise, public review and comment, Commission approval, and issuance of agreements. Project reports are due June 30, 2015.

The table below represents a tentative schedule for November 2013 through June 2015.

2013/15 Grant Schedule	Nov '13	Dec '13	Jan '14	Feb '14	Mar '14	April '14	June '15
Grant Solicitation	XX						
ART Review and Scoring	XX						
Commission Update	XX						
Public Comment Period		XX					
Staff Report			XX				
Commission Decision				XX			
Sign Grant Agreements					XX	XX	
Final Reports Due							XX

V. Conclusion

No Commission action is necessary today. The Department will report at the March 2014 meeting on the status of the process and applications received. The Department will also recommend grant awards at the March meeting.

- Attachment 1: 2011-13 Report Summary
- Attachment 2: Feasibility Study Grant Program

Tracy Loudon, Administrator

Attachment 1
Water Conservation, Reuse and Storage Grant Program
Report Summaries
(Actual Fund Expenditures)
2011-13

City of Corvallis - Type: Reuse **\$38,632**

The study was conducted to evaluate the use of water recycled from the wastewater treatment plant at the Trysting Tree Golf Course by piping it across the Willamette River. Study results confirmed the feasibility of using recycled water to irrigate at the golf course. The city will now validate the pipe dimensions to determine the volume of water used, confirm the nitrogen level in the water for agronomic impacts, and ensure recycling of this effluent will not initiate a requirement for WRD to evaluate a stream flow reduction.

City of Dundee – Type: Reuse **\$28,500**

This feasibility study was initiated to evaluate the city's use of potable water, its future water demand, and the use of recycled water produced at the wastewater treatment facility to meet the future demand. The study shows that the city's existing capacity of potable water is unable to support the future anticipated demands. The recommended action is to implement a recycled water program from the wastewater treatment facility. Next steps will be for the city to communicate with their customers to develop local support.

City of Sisters – Type: Reuse **\$21,210**

The city of Sisters' goal was to develop an implementation plan to transition from surface water irrigation to effluent irrigation on the city's Lazy Z Ranch property. The study also evaluated the potential transfer of surface water rights instream to benefit Whychus Creek. Study results show this project is feasible once funds are available. The city is planning to develop a transition plan for a three phase approach to utilize wastewater discharges on its Lazy Z Ranch property. Under the plan, the city can transfer irrigation water rights on the property back to Whychus Creek to meet its mitigation obligations and restore flows in the creek. In exchange for the water right transfers, the city will irrigate the property with treated effluent, expanding its capacity to manage increasing wastewater discharges into the future. Crops to be established and managed on the property for this purpose include poplar trees and hay.

Central Oregon Irrigation District – Type: Conservation	\$11,485
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The goal of Central Oregon Irrigation District was to evaluate the location and amount of water loss within a canal system in central Oregon; then evaluate the feasibility to pipe versus line the canal. The study results from a cost benefit analysis that indicates that lining or piping the canal is feasible at this time. COID Board of Directors has requested additional evaluation of the project, specific elements of reducing water loss in the canal, as the next step.

Deschutes River Conservancy –Type: Conservation	\$49,404
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The Deschutes Conservation Initiative Study proposed to develop up to twenty irrigation district water conservation projects in the upper Deschutes Basin. The projects would improve the water supply of the Deschutes and Crooked River to better meet agricultural and environmental water demand. The study initially reviewed 25 projects. Upon further analysis, 4 of the 25 projects were identified as nonviable. Of those that remained, 11 were prioritized as high, warranting further review to determine how to reduce or eliminate seepage. The next step is for the respective irrigation district to confirm seepage loss measurements prior to piping or lining the canals.

East Valley Water District – Type: Above Ground Storage	\$71,664
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The Drift Creek Storage Project II study evaluated the development of a new water reservoir impoundment on Drift Creek, a tributary to the Pudding River in Marion County. This is the second of two phases of analyzing the feasibility of constructing a reservoir impoundment on Drift Creek. The facility would be the cornerstone of a new surface water supply system for the East Valley Water District. The new water would be used for irrigation purposes and would require development of a new water distribution piping system to deliver water to members. The study indicates that this storage project is feasible meeting target storage capacity of 12,000 acre feet. Data shows cooler summer water flow into Drift Creek, benefiting fish and wildlife resources. It is expected that this capacity will also mitigate the groundwater limitations experienced by the District.

Fessler – Type: Other than Above Ground Storage (ASR)	\$11,405
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The study was initiated to determine the feasibility of using aquifer storage and recovery as an alternate source of water for the Fessler Nursery. The study evaluated whether the source water met drinking water standards, and was chemically compatible with the basalt aquifer, and 2) if the aquifer had the capacity to sustainably store the necessary volume. The results of the study show that the project is feasible using one well as the source well and another well as the injection well.

Grande Ronde Model Watershed-Type: Other than Above Ground Storage (ASR) \$49,600

This Grande Ronde Model Watershed study evaluated the potential for underground storage techniques in the Upper Grande Ronde Watershed to augment late season streamflows. The goal of the study was to provide an alternative to mitigate declining groundwater levels in the Columbia River Basalt Group aquifers in the upper Grande Ronde Valley. The result of the study indicates that a recharge and recovery project between the communities of Hilgard and Starkey has a high likelihood of success. This would provide significant water back into the streams during critical times of the year.

Hood River County – Type: Above Ground Storage & Conservation Project Deadline Extended \$225,000

The Hood River Basin Surface Water Storage Feasibility Study evaluated the potential to store winter water flows in above-ground reservoirs to provide operational flexibility for irrigation diversions, while enhancing late-season streamflows for aquatic species.

The study results are expected by June 30, 2014.

Jefferson County SWCD – Type: Conservation \$15,345

The South Juniper Butte Feasibility Study evaluated: 1) opportunities to conserve water by piping open irrigation canals and modifying farm irrigation equipment; 2) locations where adequate water pressure exists to improve on-farm energy conservation; and 3) options to manage tailwater reuse irrigation water. The study concluded that the cost-benefit ratio for this project is not financially viable over the 20-year payback period set by the district. The project may become viable in time with additional funding and analysis, and if the value of conserved water increases.

La Creole Orchards – Type: Reuse \$6,200

The planning study evaluated the feasibility of three on-farm water storage projects to irrigate a 50-acre truffle, fruit, and nut orchard. Potential projects included pumping groundwater into small storage ponds, developing a spring into a storage pond, and constructing a bio-swale to reclaim polluted stormwater runoff. The study concluded that an above-ground storage tank could address short-term irrigation needs. The storage tank would be fed year round by two low-yielding wells. It was also recommended that the owner consider the benefit vs cost for the development of the sump-well. If the sump-well were developed, a small expansion of the hole would slightly improve the storage capacity of the sump-well. Treatment and storage of stormwater was not recommended due to the high risk of contamination to the truffle crop. The next step is for La Creole Orchards to implement the recommendations in phases, beginning with the construction of the above ground storage tank.

Lane Council of Governments – Type: Conversation & Reuse**\$48,126**

The Lane Council of Governments initiated this study to develop a water conservation and reuse policy tool kit for eight cities in the upper and middle regions of the Willamette River Basin interested in reducing water demand. The study focused on the cities of Creswell and Cottage Grove. Alternatives suggested for the tool kit include: block rate pricing adjustments; exploring options to reuse water; limitations on outdoor water use during peak demand; and residential, commercial/industrial, water audits. Next steps will be for the Lane Council of Governments to work with the individual city staff to develop and adopt the applicable policies and strategies.

Medford Water Commission – Type: Conservation**Project Deadline Extended \$75,000**

The planning study will generate coordinated water conservation strategies that can be incorporated into water management and conservation plans for participating cities within the Rogue Valley.

The results of the study illustrates that expanded and more coordinated water conservation efforts by all the communities served by Medford Water Commission is a feasible and cost-effective means of assuring adequate future water supplies and potentially deferring costly infrastructure improvements. The next steps for the Commission is to prepare an outline for development of the plan which includes a budget, prioritize measures for implementation, develop an annual work plan, update applicable codes and ordinances, and identify where contract services will assist in accelerating implementation of the plan.

Metro Wastewater Management Commission – Type: Reuse**\$47,807**

The Eugene/Springfield Metropolitan Wastewater Management Commission (MWMC) studied the feasibility of providing recycled water to industrial aggregate partners in-lieu of river and groundwater sources. The potential demand is over three million gallons per day (mgd). Results of the study indicate the overall project is highly feasible. Several short and long-term goals were established for the Commission to pursue, beginning with a demonstration site to foster community support for recycled water use.

Polk County – Type: Above Ground Storage**\$48,290**

Polk County pursued this study as a continuation of the 2009/11 Valsetz Water Storage Concept Analysis report, which indicated additional information was required to determine the feasibility of constructing a dam to divert water to Lincoln and Polk counties. The 2011/13 study provided an analysis of site specific data such as elevation modeling, potential locations for the proposed reservoir, future water demand and conservation alternatives. The study indicates that there is a need for additional water supply to meet future water demand in both counties. For the short term, a potential exists to develop cooperative agreements to store water between providers and water right holders with excess water. The long-term water supply needs, however, still need to be addressed.

Talent – Type: AllProject Deadline Extended **\$218,700**

The study will evaluate options to improve water reliability and availability for agriculture, while increasing streamflow and water quality throughout the Bear Creek and Little Butte Creek watersheds. The proposed projects include piping the entire irrigation system, increasing storage at one of the irrigation reservoirs, and using reclaimed effluent for agriculture uses.

The results of this study expected by November 30, 2013.

Tri-City - Type: Above Ground Storage**\$16,473**

The primary objective of this study was to evaluate above ground water storage options and the relative feasibility of various conservation strategies. Study results were inconclusive. Investments to improve the water treatment facility could prove to be more prudent than enhancing the existing facility. The study also showed that an additional storage tank would be beneficial. The conclusion and next step for the Tri City Water & Sanitary Authority is to evaluate the situation in greater detail.

Umatilla Basin Watershed Council – Type: ConservationProject Deadline Extended **\$30,618**

The Dillon Ditch Conversion and Dam Removal Feasibility Study evaluated removal of the Dillon Dam, relocation of the point of diversion along the Dillon Ditch, and piping the open ditch system. Another study will evaluate removing water from a portion of the Umatilla River, and identify return flows resulting from the 1.75 mile unlined delivery system.

Results of this study are expected December 31, 2013.

Total Award for 2011-13	\$1,099,690
Total Actual Expenditures as of 11/1/2013	\$1,013,459



Feasibility Study Grant Program

HELPING OREGON COMMUNITIES EVALUATE WATER RESOURCES PROJECTS



OUR MISSION

To serve the public by practicing and promoting responsible water management through two key goals:

- (1) to directly address Oregon's water supply needs, and
- (2) to restore and protect streamflows and watersheds in order to ensure the long-term sustainability of Oregon's ecosystems, economy, and quality of life.

Background

Development of water projects can be time-consuming, complicated, and expensive. The early planning stages often qualify for grant funding, while construction and implementation phases often have access to bonds or other capital. Often missing, however, is the ability to fund feasibility studies, allowing communities to determine the environmental, engineering, economic, and social implications of proposed water supply projects.

The Water Resources Department is requesting continued funding for its Feasibility Study Grant Program. The Water Conservation, Reuse and Storage Grant Program, established by Senate Bill 1069 (2008), is designed to fund the qualifying costs of planning studies that evaluate the feasibility of developing water conservation, reuse, or storage projects. Results of the Program range from direct implementation of projects to phased programs carried out over a period of years. Some projects are self-funded and others have been awarded additional implementation grants or loans by state, federal, or other partners.

2008-2009 Grantees

During 2008 and 2009, the Program awarded 21 grants statewide for a total of close to \$1.4 million. The grant awards covered a broad geographic area and ranged from approximately \$10,000 to \$260,000 each. Grant funds supported six surface water storage studies, three groundwater storage studies, six water reuse studies and nine water conservation studies.

Examples of Recent Feasibility Studies

Grande Ronde Model Watershed

The feasibility study considered whether artificial recharge and aquifer storage options are available in the upper Grande Ronde Valley. The goals were to determine feasible ways to augment late season streamflows and to help mitigate declining groundwater tables in the upper Grande Ronde Valley. The study recommended that a recharge and recovery project would have a high likelihood of success with significant benefits to streamflow during critical times of the year. Implementation discussions are underway with financing from the U.S. Bonneville Power Administration.

City of Hillsboro/City of Beaverton

The study provided an estimate of potential water savings that could be achieved through the implementation of six variations of a WaterSense® Rebate Program. This study assisted in program and policy revisions aimed at reducing the overall per capita demand on the water system. The study helped facilitate greater water conservation efforts. The City of Beaverton now has a rebate program in place for customers to purchase water-efficient clothes washers.

2012 Grantees

In 2012, the Water Resources Commission awarded 18 grants totaling approximately \$1.1 million. Grant agreements were developed and work is now nearing completion.

Feasibility studies are important for determining various aspects of water supply projects. As recommended in Oregon's Integrated Water Resources Strategy (Recommended Action 13.C.), Oregon should commit to helping local communities bridge the funding gap by continuing to provide modest grants for evaluating the feasibility of water conservation, storage, and reuse projects.

Contact

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2012 Grant Awards

Conservation

\$11,485	Central Oregon Irrigation District
\$50,000	Deschutes River Conservancy
\$15,350	Jefferson County SWCD
\$48,126	Lane Council of Governments
\$100,000	Medford Water Commission
\$34,020	Umatilla Watershed Council
\$243,000	Talent Irrigation District

Storage

\$71,665	East Valley Water District
\$11,405	Fessler Nursery
\$56,000	Grande Ronde Model Watershed
\$250,000	Hood River County
\$6,200	La Creole Orchards
\$48,290	Polk County
\$16,500	Tri Cities Water & Sanitary Authority

Reuse

\$38,632	City of Corvallis
\$30,000	City of Dundee
\$21,210	City of Sisters
\$47,807	Eugene/Springfield Metropolitan Wastewater Management Commission

Project Highlight: From Studies to Implementation

Central Oregon Irrigation District used a 2008 Grant Award to assess the feasibility of lining or piping a section of its I-Lateral canal, which serves approximately 1,700 acres in Alfalfa, Oregon. This water conservation study determined it was cost effective to pipe or line a 1.5 mile section of the I-Lateral. It is estimated that up to 4.5 cubic feet per second (cfs) of water could be conserved, of which at least 2.25 cfs could be permanently converted to instream water rights in the Deschutes River through use of the Allocation of Conserved Water Program. Construction recently began on this water conservation project. The District hired a local pipe supply company and brought on temporary staff, as well as contracted services with a neighboring irrigation district, bringing economic benefits to Central Oregon.



"We really see this program as a great asset to Oregon."

~ Laura Wollam, Water Use Specialist, Central Oregon Irrigation District

Photo: L. Wollam, COID