



Oregon Water Resources Department

Water Conservation, Reuse and Storage Grant Applications – 2015-2017

The following grants have been determined to have met grant application requirements

Entity	Project name and description (as provided by Applicant)	Type	Amount
Bert Siddoway	<p><i>Alder Creek Reservoir Feasibility Study</i></p> <p>The goal of the feasibility study is to close data gaps pertaining to the geology of the area and hydrologic and economic feasibility of the project. The geologic portion will include: geologic reconnaissance and mapping, preliminary analysis and schematic layout of onsite geology and laboratory testing of on-site materials. The geology element is crucial to the determination of the type of dam and treatment for the foundation. Hydrology will be reviewed in order to determine if enough water is available to feasibly pay for the construction of the reservoir with crops and livestock as the main source of revenue. Economic analysis will include comparing the construction of a reservoir with crops and livestock as the main source of revenue. Economic analysis will include comparing logical alternatives, estimating and evaluating the volume of materials required, analysis of the costs associated with foundations, abutments, spillway (includes analysis of hydrology) and outlet area. Considerations of the dam’s safety and potential environmental stipulations addressed through agency coordination also be evaluated with regards to feasibility.</p>	Storage	\$ 58,747
Bandon, City of	<p><i>Bandon Off-Channel Raw Water Storage Reservoir</i></p> <p>The City of Bandon is seeking funding to conduct a feasibility study to develop an off-channel raw water storage reservoir as a means to store 50 acre-feet of water to be used as municipal drinking water during the dry summer months. The objectives of this study will be to determine: whether the proposed site is geological and seismic stable; whether the proposed source is adequate to provide the necessary volume of water to supply the reservoir; whether diverting this water would have detrimental effects to other users. The feasibility study would include the following tasks: geotechnical exploration; hydrology investigation; land ownership and right-of-way investigations; wetlands delineation; assess environmental impacts; detailed engineering feasibility study; cost estimate; comparison to other alternatives to provide raw water storage for municipal use; water rights administration.</p>	Storage	\$ 39,418

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Echo, City of	<p><i>City of Echo Land Feasibility Study for Water Storage and Reuse</i></p> <p>The City of Echo, Oregon wastewater system is permitted as a surface water discharging system. The existing wastewater system has several deficiencies that continue to cause the City to violate the conditions of the City's National Pollutant Discharge Elimination System (NPDES) Permit issued by the Oregon Department of Environmental Quality (DEQ). As such, to assist with bringing the system into compliance, the DEQ issued a Mutual Agreement and Order (MAO) to the City. The city must complete the action items required by the MAO and address the non-compliance issues. The City completed a Wastewater Facilities Plan (WWFP) Update in 2015 and identified a preferred alternative for wastewater disposal that include the storage, treatment, and reuse of wastewater. A feasibility study is needed to identify local land parcels for potential water reuse and storage sites. The City has generally identified three potential locations for evaluation. The feasibility study will consider the feasibility of each potential site.</p>	Reuse	\$ 20,000
East Valley Water District	<p><i>Drift Creek Water Supply Development Project</i></p> <p>For over twenty years, East Valley Water District (District) has worked toward a long-term stable water supply for its membership. 18,560 of the District's service area lies within two Groundwater Limited Areas (GLA's); Mt. Angel and Glad Tidings. The District is currently served through a combination of time limited permits, temporary transfers – both from strained surface and groundwater sources. The Drift Creek Water Supply Development Project would store 12,000 acre-feet of water in a reservoir on Drift Creek near Silverton.</p> <p>The District invested significant resources toward evaluation and study toward water supply development, and has made substantial progress on feasibility studies of the reservoir. In early 2015, the District performed investigations for hydrology, cultural resources, wetlands, fisheries and elk. In the next phase of analysis, the District will (1) evaluate off-channel storage alternatives; (2) investigate water supply distribution alternatives; (3) further investigate elk; (4) further cultural resources investigations.</p>	Storage	\$ 76,320

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Hood River Soil & Water Conservation District Middle Fork Irrigation District	<i>Laurance Lake Reservoir Expansion and Management Study</i> The Middle Fork Irrigation District will assess the feasibility of increasing storage capacity in Laurance Lake Reservoir and changes to reservoir management in order to meet several goals. These include: 1) Maintaining the ability to consistently provide irrigation water and generate hydropower into the future; 2) Improving downstream flows and stream temperatures for anadromous fish; and 3) Maintaining rearing habitat for bull trout within Laurance Lake Reservoir. The technical aspects of this study include: 1) an evaluation of instream flow and salmonid spawning and rearing habitat under proposed storage management changes; 2) determination of water conservation opportunities; 3) an evaluation of water supply, demand, and rights; 4) a temperature model predicting water temperatures in reservoir and downstream under different storage and management scenarios; and 5) an assessment of the safety and technical and economic feasibility of seasonally raising the spillway crest height.	Storage	\$ 81,500
Wasco County Soil and Water Conservation District	<i>Mosier Valley Commingling Well Evaluations</i> Results of two jointed funded USGS and OWRD studies, show the principal cause of 40 years of declining aquifers in Mosier to be commingling wells which allow flow between aquifers through existing boreholes. This study refines that predicted hydrological analysis by gathering site-specific data to determine the extent of commingling within the zone predicted to have the highest impact on aquifer declines. These data will then be evaluated to determine the cost of repairing priority wells and whether any other mechanisms are significant, to maximize the amount of conserved water. Evaluation will consist of reviewing well logs to determine the likelihood of commingling followed by field evaluation of wells to confirm commingling. This will produce a prioritized well remediation list to stop the declines and begin to restore the aquifer, making efficient use of the \$1 million recently established for that purpose by the Oregon legislature.	Conservation	\$ 132,900

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Keating Soil and Water Conservation District	<p><i>Thief Valley Restoration Feasibility Study</i></p> <p>The Thief Valley Feasibility Study will be a joint effort with several partnering agencies, including Bureau of Reclamation, to fully explore the possibility of restoring the lost storage capacity of Thief Valley Reservoir by installing an inflatable rubber dam on the existing spillway. A study was completed in 2001 that suggested that the installation of a rubber dam was the most viable option for re-establishing water storage capacity. The planning study proposed in this application will complete the feasibility portion of this project and will provide an initial design to ensure the project is feasible. This study will take into consideration several factors including: stability of the structure, cultural resource issues, permitting requirements, social and economical impacts, and will provide a final cost estimate for construction. The above listed factors are an important, necessary, and required steps that will need to be fulfilled prior to installation of the rubber dam.</p>	Storage	\$ 239,520
Trout Unlimited	<p><i>Upper Klamath Basin Irrigation Conservation Assessment</i></p> <p>This study will evaluate the potential water savings and technical feasibility of piping two large, unlined irrigation ditches in the Upper Klamath Basin in order to conserve water. The conserved water will be used to improve instream flows in this ecologically critical area to support the recovery of multiple ESA listed species, and to improve irrigation efficiency and effectiveness on the ranches served by these irrigation systems. The project will result in a feasibility determination, preferred option for the piping design, and estimated cost for project implementation. Preliminary surveys suggest that 12cfs of water could be conserved through completion of the proposed projects.</p>	Conservation	\$58,000
Total			\$706,405