



Feasibility Grant Applications

Evaluation Summaries –2019



Background

Feasibility Study Grants provide funding for qualifying costs of project planning studies that evaluate the feasibility of developing a water conservation, reuse, or storage project. A feasibility study is an evaluation of a proposed project or plan and can be used to determine *if* and *how* a project should proceed to the implementation phase. This funding opportunity will cover up to 50% of the total study cost.

Document Description

The following are evaluations summaries for complete grant applications received by the October 17, 2018 deadline for the current Feasibility Study Grant funding cycle. The evaluation summaries include a project summary, feedback from the Application Review Team (ART), and the ART's funding recommendations.

Next Steps

Applications and the ART recommendations will be posted on the Department's website for a 30-day public comment period from March 15, 2019 to April 14, 2019. The Department will present funding recommendations and the comments received to the Water Resources Commission at its meeting tentatively scheduled for June 2019. The funding recommendation will be based on the ART recommendations and public comments received. The Commission will make the final funding decisions.

More Information

Additional information about this funding opportunity is available at [the Water Resources Development Program website](#). If you have questions please contact Grant Program Coordinator, Becky Williams, at 503.986.0869 or WRD_DL_feasibilitystudygrants@oregon.gov.

List of Applications Received

Study Name	Project Type	County	Funding Requested	Total Cost of Study ¹
Enhancing the Reliability of the Alluvial Groundwater Supply in the Walla Walla Basin	Below-ground Storage	Umatilla	\$77,715	\$155,799
Lundy Ditch Irrigation Efficiency Feasibility Study	Conservation	Deschutes	\$43,857	\$87,714
Talent Irrigation District Water Conservation Study	Conservation	Jackson	\$49,000	\$153,000
Tower Ditch Sleeving Feasibility Study	Conservation	Deschutes	\$17,180	\$35,196
Upper John Day Irrigation Water Conservation Feasibility Study	Conservation	Grant	\$151,758	\$303,516
Water & Energy Conservation with Variable Speed Drives on the Rogue River	Conservation	Josephine	\$43,264	\$86,527
White Ditch Sucker Creek Water Conservation Study	Conservation	Josephine	\$64,000	\$129,400
City of Umatilla Hydraulically Connected Wells	Conservation	Umatilla	\$364,000	\$728,387
		Total	\$810,773	\$1,679,538

¹Studies require at least a dollar-for-dollar cost match.

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Enhancing the Reliability of the Alluvial Groundwater Supply in the Walla Walla Basin

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Walla Walla Basin Watershed Council

County: Umatilla

Funding Requested: \$77,715

Total Project Cost: \$155,799

Study Summary: The purpose of the study is to evaluate the feasibility of three alternative methods to recharge the alluvial aquifer in the Oregon portion of Walla Walla Basin and to compare the three alternatives against recharge methods used for the last 14 years by Walla Walla Basin Watershed Council, landowners, irrigation districts and other cooperators. The three alternatives include: (1) increasing irrigation-induced infiltration to the shallow aquifer by increasing the number of acres to which irrigation water is applied during the winter; (2) increasing natural seepage losses in the Little Walla Walla River by not shutting off all flows to the Little Walla Walla River at the headgate during the winter; and (3) developing larger-scale managed aquifer recharge sites to be located on private properties purchased for the purpose of providing reliable recharge. Technical, political, regulatory, and economic feasibility would be assessed.

Evaluation Summary

The study proposal seemed to build on past studies showing a potential to address continuing concerns and to evaluate three alternatives. The significant number of sources for match funding represents broad community support. The study proposal demonstrated strength in its preparedness by proposing to evaluate alternatives within water rights and adequately addressing the storage-specific requirements. The proposed data collection has the potential to answer important questions for the area. The study could be improved by explaining how the information would be used.

The review team acknowledged that it was a strength of the application to propose working with the OSU Extension Service. The study would be improved by 1) addressing the potential for groundwater quality impacts from application of water that may promote nutrient migration and result in groundwater contamination, and 2) including plans to monitor groundwater for those potential impacts. The study is encouraged to engage the Oregon Department of Environmental Quality regarding questions and concerns related to water quality. The application identified working with the Department on water right and aquifer recharge details. The review team encourages the applicant to follow through on this recommendation to ensure that all regulatory questions are identified and addressed to achieve the study's goals.

The application would be strengthened by discussing the connections between past work and the proposed work, and how the comprehensive results would be used to address the study's goal and water needs. The study could be improved by considering the timing of water withdrawals to limit impacts on fish. A strength of the application is the intention to explore solutions that might help delay or prevent regulating off junior water rights.

Lundy Ditch Irrigation Efficiency Feasibility Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Deschutes Soil and Water Conservation District and Arnold Irrigation District

County: Deschutes

Funding Requested: \$44,070

Total Project Cost: \$189,870

Study Summary: The proposed study would comprehensively examine the feasibility of converting a private open lateral (Lundy Ditch) to pipe. In addition, the study would examine the potential to consolidate other private laterals into the Lundy Ditch and improve on-farm irrigation water efficiency and management. The study would assess the potential water and energy savings, technical feasibility, and estimated costs with the goal of future on-demand pressurized irrigation water. The potential water savings would contribute to the goal of maintaining and sustaining Spotted Frog habitat in the upper Deschutes River system as addressed in the Upper Deschutes Basin Study.

Evaluation Summary

The system experiences significant water loss and if the proposal is deemed feasible, modernization of the system would likely result in water savings and improved water management. The study proposes to better understand costs associated with piping open ditches, which is a strength of this proposal. The study proposes to actively engage the district patrons in the study progress, information and results, and in understanding the design alternative selection. The application could be improved by discussing the need to assess consolidating lateral piping. The study is recommended as proposed and the following evaluation comment is not a condition of funding, however, the review team commented that the application could be improved by including a hydrologic analysis to determine how much water would be saved to refine the current estimate of water loss. In general, the application could be improved with greater clarity and improved connections between the study description, study goals, identified tasks, and the consistent use of terms.

Talent Irrigation District Water Conservation Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Farmers Conservation Alliance

County: Jackson

Funding Requested: \$49,000

Total Project Cost: \$153,000

Study Summary: The proposed study would analyze the District's existing water delivery infrastructure and evaluate one or more alternatives for modernization. The proposed study would identify and evaluate modernization opportunities that benefit agriculture, the environment, and the community. The result of the study would be a comprehensive plan for improving the District's infrastructure with associated high-level engineering designs, cost estimates, projected water savings, projected hydroelectric power generation and energy conservation potentials, and fish screening and passage opportunities. The technical components would be combined with an engineering cost assessment to develop a comprehensive System Improvement Plan and determine project feasibility by quantifying the effect of piping on water conservation, operations, and maintenance costs.

Evaluation Summary

The study proposal is likely to identify the conservation potential and opportunities resulting in water quality improvements. A strength of the application is the connection and support of the study goal and task details to the Water Management and Conservation Plan and Water System plan. The study fits into a regional effort of irrigation districts working together to address regional water needs.

The application included appropriate technical approaches which created confidence in the likelihood of reaching the study's goal. The application identified qualified personnel indicating strong readiness and preparedness to conduct the proposed study. The review team commented that the proposal was comprehensive and broad in scope.

A strength of the application is the proposal to assess the potential for additional benefits of improvements to energy efficiency, fish passage, and connections to water conservation opportunities. The list of potential permits that may be necessary shows strong planning and technical preparedness. The application could be improved with documented support letters from conservation groups.

Tower Ditch Sleeving Feasibility Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Deschutes Soil and Water Conservation District and Swalley Irrigation District

County: Deschutes

Funding Requested: \$17,180

Total Project Cost: \$35,196

Study Summary: The proposed study would determine the technical feasibility of sleeving (lining) a segment of the Tower Ditch private lateral pipeline with high pressure, high density polyurethane pipe to avoid excavation and costly replacement of infrastructure. In addition, the study would examine estimated costs with the goal of future on-demand pressurized irrigation water that will reduce water usage, and increase on-farm irrigation water efficiency and management. The potential water savings would contribute to the goal of improving aquatic habitat in the upper Deschutes River system as addressed in the Upper Deschutes Basin Study.

Evaluation Summary

The proposal to assess modernization methods on Tower Ditch represents one phase of work to investigate options for infrastructure and water delivery improvement. A strength of the application was a clear goal to assess sleeving of the current pipeline. The application could be improved by providing information on the reasons and causes for the deteriorated pipe condition that would better document the need. A strength of the application was that an explanation was provided for the reasons to pursue this solution versus other potential alternatives. The review team noted that a similar analysis has been previously done and there may be potential benefits from using available information. In general, the application could be improved with clear language and consistently providing background information to support the recommended actions.

Upper John Day Irrigation Water Conservation Feasibility Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: The Freshwater Trust

County: Grant

Funding Requested: \$151,758

Total Project Cost: \$303,516

Study Summary: The Upper John Day River basin is home to two icons of Oregon culture: a strong agricultural community and important runs of salmon and steelhead. As climate change progresses in the 21st century, both agricultural producers and native fish will be impacted. This proposed study is intended to identify potential water-saving infrastructure upgrades that will allow agricultural producers to prosper while ensuring adequate instream flows are maintained for the region's federally listed fish species in the face of climate change. Current irrigation methods in the region are based almost entirely on flood irrigation (91% of surveyed fields) via unlined earthen canals and show significant potential for water conservation. The proposed study would develop a prioritized list of potential on-farm irrigation efficiency and conveyance upgrade projects in the Upper John Day River basin. Potential projects would be prioritized based on cost, instream and on-farm benefit, and landowner interest. The highest priority project(s) would have 50% design(s) completed.

Evaluation Summary

Current limiting factors such as low summer streamflows and inefficient, labor intensive irrigation practices indicate that potential improvements, for both irrigators and fish habitat, may be available if the study is deemed feasible. The review team commented that the study proposal was very comprehensive in the broad scope and approach described in the application. A strength of the application was the well-described value to the community and broad suite of benefits if the project is deemed feasible. The study proposal is well detailed, showing comprehensive planning and thoughtfulness in the description of each step and systematic approach. The study proposal clearly supports the goal of evaluating opportunities for water savings potential.

The review team commented that careful attention to outreach process may help promote landowner participation. A concern of the study is that later tasks hinge on the outcomes of landowner interest and participation.

Water & Energy Conservation with Variable Speed Drives on the Rogue River

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Grants Pass Irrigation District

County: Josephine

Funding Requested: \$43,264

Total Project Cost: \$86,527

Study Summary: In an effort to conserve water, reduce the District's electrical carbon footprint, and ensure the sustainability of the local economic and cultural benefits of irrigation in the Rogue Valley, this proposed study would evaluate the potential replacement of medium voltage electrical systems with more efficient variable speed drive of pumps. The study would assess the water conservation, technical considerations, potential energy savings, as well as short and long-term financial feasibilities of a variable speed drive system. These outcomes would be evaluated within the framework of long-term sustainability for the District and the continuation of our work with agencies to improve in-stream water flows at critical times in the life cycle of protected species.

Evaluation Summary

The study application is well-documented and thoroughly prepared indicating readiness and technical preparedness. Results of the proposed study would determine the potential water and energy savings resulting from reduced pumping of water. The irrigation district provides water to a mix of patrons, which includes school districts, farms, city lots and vineyards, and is dependant of the reliability of the pumping station and conservation of the water resource. If the proposal is deemed feasible, it has the potential to improve future security of water delivery. The proposed tasks clearly support reaching the feasibility study goal. The study could be strengthened with an emphasis on quantifying the amount and benefit of water to be conserved, and by ensuring that the potential for water conservation is a clear outcome of the study findings.

White Ditch Sucker Creek Water Conservation Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Illinois Valley Soil and Water Conservation District

County: Josephine

Funding Requested: \$64,000

Total Project Cost: \$129,400

Study Summary: The proposed study area is the agricultural lands served by the White Ditch, which diverts water from Sucker Creek, a tributary to the Illinois River in the Rogue Basin. The goal of this study is to determine the quantity of water that could be conserved to enhance instream flows in Sucker Creek. To achieve this goal, the project proposes to investigate options for implementing ditch and on-farm improvements to increase instream flow for Endangered Species Act Coho salmon and benefit agricultural producers. The proposed study would seek to clarify water rights, evaluate current infrastructure and system efficiency, assess improvement alternatives, as well as result in preliminary design and construction cost estimates for the preferred alternative.

Evaluation Summary

Assessing water losses, and methods and options for irrigation efficiencies, is critical to determine the opportunities for water conservation and streamflow enhancement. The study proposal indicated strong preliminary preparation by holding a community meeting prior to application submission. The review team commented that the proposal format was very comprehensive and clearly identified all study activities and deliverables demonstrating a well prepared concept. The application clearly identified the need to coordinate with the Department to ensure an accurate understanding of current water rights and landowner information. The application could be improved with additional letters of support from the community indicating support of the concept from involved landowners. Sucker Creek is an important fish habitat area and potential conservation outcomes could benefit fish species if the proposal is deemed feasible.

City of Umatilla Hydraulically Connected Wells

Not Recommended for Funding at this time

Study Information (adapted from application)

Applicant Name: City of Umatilla

County: Umatilla

Funding Requested: \$364,000

Total Project Cost: \$728,387

Study Summary: The City of Umatilla provides a supply of groundwater which industrial facilities currently use in non-contact cooling tower systems. Because the City's groundwater has a high silica content and salinity, the same water continuously passing through the system results in clogging. Based upon the increased water replacement rate and demand, higher volumes of water are required to avoid fouling the system. The City has identified the possibility of developing a low silica content hydraulically connected well to utilize the City's unused surface water right, but the feasibility of this solution must be determined. The evaluation would include drilling exploratory boreholes, testing and monitoring the water quality to determine hydraulic connection, constructing a single test well, and regulatory coordination regarding the results to determine project feasibility. A goal of the proposal is determining whether water that is lower in mineral content is available and would result in lowering the water demand for the industrial processes.

Evaluation Summary

The goal of water conservation by finding a water source more conducive to additional reuse was met favorably by the review team. The potential improvement of water conservation and reuse represents an economic opportunity for the City.

The City of Umatilla currently has a development limitation on the water right identified for use in the feasibility study and is in need of an updated Water Management Conservation Plan. The study proposal did not identify actions to address the development limitation or the Water Management Conservation Plan and, therefore, the review team did not consider the application to contain all tasks needed to show technical preparedness and readiness of the study to achieve the identified goals. Further, the application would be improved by identifying the need for a permit amendment to address the well location.

The review team commented that the study proposal represented an interesting and innovative concept and looks forward to these concerns being addressed in a future application.