



# Feasibility Grant Applications

## 2023-2024 Cycle Evaluation Summaries and Review Team Funding Recommendations

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February 6, 2024  
*Revised February 16, 2024*

### **Background**

Feasibility Study Grants provide funding for 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 covers up to 50% of the study cost.

### **Document Description**

The following are evaluation summaries for grant applications received by October 18, 2023 for the current funding cycle. The evaluation summaries include a project summary, feedback from the Application Review Team (ART), and the ART's funding recommendation. The application summaries are listed below in alphabetical order.

### **Next Steps**

Applications and the ART recommendations will be posted on the Oregon Water Resource Department's (OWRD) website for a 30-day public comment period from February 6, 2024 to March 7, 2024. OWRD will present funding recommendations and the comments received to the Water Resources Commission at its meeting tentatively scheduled for March 21-22, 2024. The funding recommendations 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 on the program [website](#). If you have questions please contact Grant Coordinator, Adair Muth, at 971-301-0718 or [OWRD.Grants@water.oregon.gov](mailto:OWRD.Grants@water.oregon.gov).

**List of Applications Received**

<b>Study Name</b>	<b>Project Type</b>	<b>County</b>	<b>Funding Requested</b>	<b>Total Cost of Study<sup>1</sup></b>
Brophy Ditch Big Butte Creek Water Conservation Project	Conservation	Jackson	\$82,679	\$166,585
Clackamas Water Environment Services MBR Water Reuse Feasibility Study	Reuse	Clackamas	\$75,000	\$150,000
Lower Willow Creek Managed Aquifer Recharge Feasibility Study	Below ground storage	Morrow and Gilliam	\$52,500	\$105,000
Tickle Creek, Tributary of Clackamas River - Reuse Study	Reuse	Clackamas	\$75,000	\$150,000
		<b>Total</b>	<b>\$285,179</b>	<b>\$571,585</b>

<sup>1</sup>Studies require at least a dollar-for-dollar cost match.

**2023-2024 Applications**

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# Brophy Ditch Big Butte Creek Water Conservation Project

Recommended for Funding

## Study Information (adapted from application)

**Applicant Name:** Trout Unlimited

**County:** Jackson

**Funding Requested:** \$82,679

**Total Project Cost:** \$166,585

### Study Summary:

The proposed study would evaluate current conditions and water use of Brophy Ditch on the North Fork Big Butte Creek in Jackson County. The goal of the study is to identify opportunities to conserve water instream and provide efficient water delivery through conveyance efficiencies to benefit the irrigators as well as ESA-listed threatened Coho salmon, state-listed Spring Chinook, summer and winter steelhead, Pacific Lamprey, and cutthroat trout. Brophy Ditch has high transmission losses. The ditch would be surveyed and the amount of conserved water evaluated through a seepage study, water rights assessment, and crop water requirement evaluation. The proposed study would identify and quantify opportunities to permanently dedicate conserved water from this senior water right instream for the benefit of fish, wildlife, and the public.

## Evaluation Summary

The proposed study seeks to address both instream and out-of-stream needs in a highly productive stream with quantified water quality and quantity challenges. The study goals are well-defined, and the application clearly described how the study would accomplish the goals.

The review team appreciated the application cited multiple plans that identify low streamflow as a limiting factor for species recovery, as well as identifying improved flows as a recovery action. The proposed study site was compared with other representative ditches to quantify potential benefit and the potential for a beneficial project is high if deemed feasible. The application was strengthened with numerous letters of support.

The review recommends funding the application as proposed and offers the following feedback for the applicant to consider if the Commission awards funds and the applicant proceeds with its investigation and potential implementation if the project is feasible. The application would have been improved by including more details in specific tasks. Additional information on the potential portion of water and desired method for protecting water instream would have improved the application.

# Clackamas Water Environment Services MBR Water Reuse Feasibility Study

Recommended for Funding

## Study Information (adapted from application)

**Applicant Name:** Clackamas Water Environment Services

**County:** Clackamas

**Funding Requested:** \$75,000

**Total Project Cost:** \$150,000

### Study Summary:

The proposed study would determine the feasibility of reusing water from the Tri-City Water Resource Recovery Facility (WRRF). The study would determine how much Class A recycled water the Tri-City facility could make available at various times of the year (summer and winter) without negatively impacting the effluent quality and National Pollutant Discharge Elimination System (NPDES) discharge permit. The Tri-City Plant treats municipal wastewater providing retail sanitary sewer services to the communities of Gladstone, Happy Valley, Milwaukie, Oregon City, West Linn and unincorporated Clackamas County. The effluent is treated and currently discharged to the Willamette River in compliance with Tri-City's NPDES permit. The goal is to reuse some or all of this effluent for beneficial reuse.

## Evaluation Summary

The proposed study structure and tasks are appropriate to accomplish the study goal, which is focused solely on determining the quantity of water that can be made available for reuse. The review team appreciated the linkage between the study goal and Oregon's Integrated Water Resource Strategy to promote water reuse and the two letters of support provided with the application.

The review recommends funding the application as proposed and offers the following feedback for the applicant to consider if the Commission awards funds and the applicant proceeds with its investigation and potential implementation if the project is feasible. The application would have been improved by increased detail. For example, the application would have been strengthened by identifying the source water rights that will be investigated for reuse. The cities have water rights, but if the purpose is to explore the quantity of water that could be reused, that source water is a critical component to that calculation and should be identified in the study work.

The application would have been improved by noting what other work has been undertaken or explored to meet those future growth needs or better documenting the need for additional water. For example, it would improve the application to note what (if any) efficiency/conservation work has been completed to help meet water needs or to explain how the current discharge of effluent impacts water quality in the Willamette River. The review team appreciated the note that the applicant is looking to move its outfall, so the timing of this investigation could help that decision as well.

The proposed study would be improved by considering the potential benefits and impacts to the environment, economy, and community. This is not a required part of a study but is critical information for pursuing implementation. For example, reducing discharge of water to the Willamette River may have negative impacts to the river due to the decrease in return flows.

# Lower Willow Creek Managed Aquifer Recharge Feasibility Study

Not Recommended for Funding at This Time

## Study Information (adapted from application)

**Applicant Name:** Morrow Soil and Water Conservation District, Gilliam Soil and Water Conservation District

**County:** Morrow and Gilliam

**Funding Requested:** \$52,500

**Total Project Cost:** \$105,000

### Study Summary:

The proposed study would assess the feasibility of developing a managed aquifer recharge (MAR) project in the Lower Willow Creek Basin area to improve the reliability of groundwater supplies for irrigation which is anticipated to provide economic and environmental benefits for both instream and out-of-stream water uses. Morrow Soil and Water Conservation District and Gilliam Soil and Water Conservation District have identified twenty landowners interested in MAR who are willing to investigate the feasibility of constructing MAR facilities on their properties along Willow Creek. The study would develop the aquifer recharge concept for the Lower Willow Creek area by evaluating the water needs, available lands, hydrogeology, water availability, permitting pathway and developing the general concept for treatment and infrastructure applicable to interested landowner parcels. The outcome of the study would be a set of prioritized site(s)/property(s) for developing MAR project(s), and a preliminary work plan for conducting the field investigation for the next phase of feasibility study.

## Evaluation Summary

This application is not recommended for funding due to concerns about technical preparedness associated with the disconnect between the goal and tasks of the study and the water need the applicant seeks to address. The study proposes to explore managed aquifer recharge, which solely recharges groundwater. However, other parts of the application describe a need for out of stream water use for irrigation, or extraction of water stored in the aquifer. The goal and tasks of the study are focused on managed aquifer recharge; however other parts of the application describe pumping recharged water out of the aquifer, which is aquifer storage and recovery. Different work is needed to explore the feasibility of aquifer recharge versus aquifer storage and recovery, particularly in identifying potential sites.

Additional agency coordination would improve the technical preparedness of the application and increase confidence in study success. For example, the applicant notes that there are no sensitive, threatened, or endangered fish species present in Lower Willow Creek. However, the Oregon Department of Fish and Wildlife noted that there have been documented steelhead in Willow Creek as high as Heppner and a resident population of native Redband trout is present.

The review team recommends a Kaizen meeting with the Department of Environmental Quality (DEQ) as a potential helpful resource for the applicants to get more information about the permitting required and feasibility of that permitting. The review team noted there is a Total Maximum Daily Load (TMDL) in Willow Creek and therefore the timing of water withdrawals would be an important item considered in DEQ's contribution to any public interest review.

*Text added February 16, 2024:*

The study as proposed does not meet the Storage Specific Study Requirements (SSSR) as required by statute. Specifically, the application does not adequately address the required: 1) Estimation of ecological triggering flows, 2) Analysis of Environmental Harm or Impact (impacts to Sensitive, Threatened, and Endangered Species and impacts on Limiting Ecological Factors), and 3) Evaluation of the need and ability to augment instream flows based on ecological flows (i.e., triggering flows). The applicant's claim about the lack of sensitive, threatened, or endangered (STE) species in Lower Willow Creek is unsupported. STE species are present and the flows from Willow Creek support STE species in the Columbia River as well.

# Tickle Creek, Tributary of Clackamas River - Reuse Study

Recommended for Funding

## Study Information (adapted from application)

**Applicant Name:** City of Sandy

**County:** Clackamas

**Funding Requested:** \$75,000

**Total Project Cost:** \$150,000

### Study Summary:

The proposed study would assess the feasibility of utilizing Class A recycled water as year-round flow augmentation to Tickle Creek, a tributary to the Clackamas River. The first goal of the study would be to assess and document the current water quality of Tickle Creek and establish the baseline of both flow and quality. The second goal would be to establish the quality and quantity of reclaimed water from the City of Sandy Wastewater Plant and characterize its positive impacts on both water quality and instream flow of Tickle Creek. The third goal would be to document the positive and negative impacts on fisheries, habitat and reliable instream flow augmentation for downstream water users on the Clackamas River through a series of workshops and summits.

## Evaluation Summary

The application describes a proposal to establish the baseline water quality and quantity of Tickle Creek, baseline water quality and quantity of the effluent from the City of Sandy Wastewater Plant, and document potential positive and negative impacts of flow augmentation in Tickle Creek. The review team appreciated the clear and defined need for the study.

The review recommends funding the application as proposed and offers the following feedback for the applicant to consider if the Commission awards funds and the applicant proceeds with its investigation and potential implementation if the project is feasible. The application acknowledges Tickle Creek is subject to DEQ's Three Basin Rule (OAR 340-041-0350), which prohibits the addition of any additional pollutants via discharge of effluent water to the Clackamas River basin. Consultation with DEQ is identified as an early task in the study, which the review team appreciated. The review team agreed consultation and close coordination with DEQ will be critical to the study's success to determine if a permitting path is possible.

The application would have been improved with additional detail on how many measurements would be taken to create a baseline of streamflow for evaluating water quantity impacts. The review team agreed that additional monitoring would be beneficial to support study success though acknowledged the short timeline for data collection due to the fact that grant dollars are only available for work through the end of the 2023-25 biennium.