



Feasibility Grant Applications

Study Summaries – November 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 study cost.

Document Description

The following are study summaries for grant applications received by November 13, 2019 for the current funding cycle. The study summaries are adapted from submitted applications. The application summaries are listed below in alphabetical order.

Next Steps

Feasibility Grant applications are currently being evaluated by the Application Review Team (ART). In 2020, applications and the associated ART recommendations will be posted on the Department's website for a public comment period. The Department will present funding recommendations and the comments received to the Water Resources Commission at either the April or June 2019 meeting. The funding recommendation will be based on the ART recommendations and public comments received. The Commission will then make 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 Study¹ |
|--|----------------------|------------------|--------------------------|--|
| City of Umatilla Feasibility Study for Hydraulically Connected Wells | Conservation | Umatilla | \$370,000 | \$777,800 |
| Drewsey Reclamation Ditch: Can we pipe it? | Conservation | Harney | \$ 24,750 | \$ 57,060 |
| Falcon Cove Beach Water District ASR Study | Below-ground Storage | Clatsop | \$10,000 | \$20,000 |
| Gordon Creek Aquifer Storage and Recovery Feasibility Study | Below-ground Storage | Multnomah | \$ 284,300 | \$ 586,400 |
| Harney Basin Groundwater Market Feasibility Study | Conservation | Harney | \$41,168 | \$87,112 |
| Pine Creek Reservoir Feasibility Study | Above-ground Storage | Umatilla | \$105,976 | \$304,826 |
| Stayton Aquifer Storage and Recovery Feasibility Study | Below-ground Storage | Marion | \$154,000 | \$308,000 |
| Upper John Day Aquifer Management Feasibility Study | Below-ground Storage | Grant | \$385,875 | \$777,877 |
| Westland Irrigation District Water Conservation Study | Conservation | Umatilla, Morrow | \$79,000 | \$204,000 |
| | | Total | \$1,455,069 | \$3,123,075 |

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

2019 Applications

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City of Umatilla Feasibility Study for Hydraulically Connected Wells

Study Information (adapted from application)

Applicant Name: City of Umatilla

County: Umatilla

Funding Requested: \$370,000

Total Project Cost: \$777,800

Study Summary:

The proposed feasibility study is needed to confirm whether the completion of a new well hydraulically connected to the Columbia River would supply the quality of water needed to conserve water. 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 data centers can only recirculate such water back through their cooling systems a limited number of times before clogging occurs. To address this issue, the City conducted a Beneficial Reuse Feasibility Analysis which proposed developing a low-silica content source of water from the City's unused surface water right. The feasibility of this solution must be determined. Additional conservation opportunities may be identified based on information gained by conducting a potability determination under the Oregon Health Authority standards in a preliminary engineering feasibility study.

Drewsey Reclamation Ditch: Can we pipe it?

Study Information (adapted from application)

Applicant Name: Malheur Watershed Council

County: Harney

Funding Requested: \$24,750

Total Project Cost: \$57,060

Study Summary: The purpose of the study is to determine the feasibility of piping all or part of the Drewsey Reclamation Ditch to stop ditch losses, which in turn would require less water to be diverted from the Malheur River. The water saved could be protected in-stream to benefit aquatic habitat, listed fish species, and water quality. The proposal seeks to hire an engineer to complete a survey to assess an alternate route, conduct a water-loss analysis, investigate water rights, and develop alternatives, cost estimates, and a 60% design from the selected alternatives.

Falcon Cove Beach Water District ASR Study

Study Information (adapted from application)

Applicant Name: Falcon Cove Beach Water District

County: Clatsop

Funding Requested: \$10,000

Total Project Cost: \$20,000

Study Summary: Based on concern due to historically low water production from the Primary Water Source – the North Spring the Water District declared a moratorium on new water connections and seeks potential solutions. One alternative is to investigate Aquifer Storage and Recovery as a possible solution that could provide an opportunity to store water during the October through June when the North Spring has robust water production and store this water for use in the dry summer months.

Gordon Creek Aquifer Storage and Recovery Feasibility Study

Study Information (adapted from application)

Applicant Name: Corbett Water District

County: Multnomah

Funding Requested: \$284,300

Total Project Cost: \$586,400

Study Summary: This proposed study would assess the feasibility of using Aquifer Storage and Recovery (ASR) to store water from Gordon Creek for use during the source limited times of the year in support of municipal water supply for the Corbett Water District (CWD). The study would 1) design and construct an exploratory test well to evaluate the hydraulic properties of the aquifer and the geochemical compatibility between the surface water and the groundwater, and 2) assess the feasibility of the groundwater resource and an ASR well. The study would also provide the storage-specific study requirements as required for projects that divert water from a stream that supports sensitive, threatened or endangered species. Information from the study would guide the CWD with its decision on whether to proceed with utilizing groundwater to supplement the existing surface water supply because other water supply alternatives are not available.

Harney Basin Groundwater Market Feasibility Study

Study Information (adapted from application)

Applicant Name: The Nature Conservancy

County: Harney

Funding Requested: \$41,168

Total Project Cost: \$87,112

Study Summary: The over-allocation of groundwater rights has led to significant aquifer declines in the Harney Basin, Oregon, resulting in economic, social, and ecological impacts. The goal of this Groundwater Market Feasibility Study is to develop the legal, logistical, and technological foundation necessary to develop and implement a market-based solution. A groundwater market in the Harney Basin would directly and equitably conserve water via a decreasing annual allocation of water shares. This market based strategy would provide year-to-year flexibility for water users while reducing overall water use in a transparent and predictable way. A well-designed groundwater market, based on this feasibility study, would increase economic resilience to drought and limit the economic, social, and ecological consequences of over allocation. This feasibility study was approved by consensus of the Harney Basin Community-Based Water Planning Collaborative (CBWP), a diverse stakeholder group that includes ranchers, domestic well users, Burns-Paiute Tribal members, land managers, conservation nonprofits, and federal, state, and local government staff.

Pine Creek Reservoir Feasibility Study

Study Information (adapted from application)

Applicant Name: Walla Walla Basin Watershed Council

County: Umatilla

Funding Requested: \$105,976

Total Project Cost: \$304,826

Study Summary: The Pine Creek Reservoir storage feasibility study funding would include the following work needed to evaluate the feasibility of the reservoir site: 1) complete geotechnical investigations, 2) seismic analysis, 3) further analysis of Walla Walla River water availability, and 4) Pine Creek geomorphology, biology, and hydrology analyses necessary to complete the Oregon storage-specific study requirements. The goal is to determine if this Pine Creek Reservoir site in Umatilla County on an intermittent stream can store a portion of the abundant winter and early spring flows of both the Walla Walla River and Pine Creek in order to provide an alternative source of irrigation water to Walla Walla valley irrigation districts. The irrigation districts would then leave a corresponding amount of their existing irrigation water rights instream during late spring, summer, and the fall when limited Walla Walla River stream flows impact fish passage, rearing habitat, and water quality for federally protected Endangered Species Act listed steelhead and bull trout, and for chinook salmon reintroduced to the Walla Walla River by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). This Pine Creek Reservoir project has been identified as a priority project to be investigated by the ongoing Walla Walla Basin Integrated Flow Enhancement Study.

Stayton Aquifer Storage and Recovery Feasibility Study

Study Information (adapted from application)

Applicant Name: City of Stayton

County: Marion

Funding Requested: \$154,000

Total Project Cost: \$308,000

Study Summary: The proposed study would evaluate the feasibility of an Aquifer Storage and Recovery (ASR) system to provide a redundant municipal drinking water source for the City of Stayton to meet seasonal peak demands and when the North Santiam surface supply is offline. The study would assess the Columbia River Basalt Group aquifer storage characteristics, provide a regulatory review, identify candidate sites, conduct hydraulic testing via an exploratory borehole, and develop preliminary system design. The study would result in a report detailing the evaluation and recommendation for the City of Stayton on whether to move forward with ASR.

Upper John Day Aquifer Management Feasibility Study

Study Information (adapted from application)

Applicant Name: Grant Soil and Water Conservation District

County: Grant

Funding Requested: \$385,875

Total Project Cost: \$777,877

Study Summary: The goal of this feasibility study is to assess and quantify the groundwater aquifer characteristics of the Upper Mainstem John Day River Basin to support active infiltration of surface water at times of surplus to enhance seasonal stream flow discharge and supplement irrigation withdrawals. The study would apply an Airborne Electromagnetic Method (AEM) survey to create a 3D hydrogeologic framework for the project area to supplement and correlate existing hydrogeologic and borehole data resources to forecast aquifer characteristics, groundwater flow paths, potential recharge areas, and calculate water storage capacity. Data findings would be presented at a public event and be made available through the Grant Soil and Water Conservation District and its website. The collected survey information would further provide a permanent geologic record of the assessment area to be available for other related evaluations.

Westland Irrigation District Water Conservation Study

Study Information (adapted from application)

Applicant Name: Farmers Conservation Alliance

County: Umatilla and Morrow

Funding Requested: \$79,000

Total Project Cost: \$204,000

Study Summary: The goal of the proposed feasibility study is to produce a comprehensive System Improvement Plan for Westland Irrigation District, which is located in Umatilla County. The study would identify and evaluate opportunities to modernize the District's infrastructure in a manner that benefits agriculture, the environment, and the community. The result of the study would be a comprehensive evaluation of improving the District's infrastructure with associated high-level engineering designs, cost estimates, projected water savings, and projected hydroelectric power generation and energy conservation potentials.