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MEMORANDUM

TO: Water Resources Commission

FROM: Thomas M. Byler, Director

SUBJECT: Agenda Item K, June 17, 2022
Water Resources Commission Meeting

Feasibility Study Grants Funding Recommendations

I. Introduction

The Feasibility Study Grants (Water Conservation, Reuse, and Storage Grant Program) supports studies to evaluate the feasibility of water conservation, reuse, and storage projects. This report describes the review process and Department recommendations for funding. The Commission will be asked to award funding.

II. Background

The Feasibility Study Grants funding opportunity was established by Senate Bill 1069 in 2008 to fund the qualifying costs of studies that evaluate the feasibility of developing water conservation, reuse, or storage projects. Grants require a dollar-for-dollar match. A feasibility study evaluates a proposed project to determine *if* and *how* the project should proceed to implementation. These studies typically take one to three years to complete.

The Department offered three grant cycles in the 2015-2017 biennium and funded twenty-nine studies for a total of approximately $2.1 million. Due to limited staff resources, the Department did not award funds in 2018. Therefore, only one funding cycle was presented for the 2017-2019 biennium and $446,773 in grant funding was awarded. The Department awarded $1,059,194 to fund seven studies in 2020 and $908,127 to fund eight studies in 2021.

Applications for the 2021-2022 cycle were due on November 3, 2021. The Department received seven complete applications. A total of $814,052 in grant funds was requested. Individual grant requests ranged from $60,000 to $336,807. Per statute, awards are capped at $500,000.

III. Grant Application Review Process

Applications are reviewed by an inter-agency Application Review Team (ART) which convened in March 2022 to evaluate the applications and provide funding recommendations to the Department. The ART consisted of representatives from the Oregon Department of Agriculture,

Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, Oregon Health Authority, Oregon Department of State Lands, as well as the Department. See Attachment 1 for evaluations of each application. Based on the ART evaluations, all seven of the applications reviewed are recommended for funding.

The funding recommendations were posted on the agency website for a 30-day public comment period that closed on April 29, 2022. No public comments were submitted to the Department.

Tribes were notified of the funding recommendation and also given the opportunity to provide comments for Commission consideration. No comments were received.

IV. 2021-2022 Grant Award Recommendations

Based on the ART recommendations, public comments, and Department review, the Department recommends all seven applications for grant funding. If approved by the Commission, Department staff will work with the grant recipients to develop grant agreements. Table 1 lists the funding recommendations for the proposed studies.

Table 1. Funding Recommendation

Study Name / Applicant Name	***Project Type***	***Funding Requested***	***Funding Recommendation***
City of Klamath Falls Beneficial Reuse Feasibility Study	Reuse and Storage	$336,807	Recommended
Farmers Canal Pipeline Design Study	Conservation	$60,000	Recommended
Goose Lake Basin Water Conservation Study	Conservation	$80,245	Recommended
Horsefly Irrigation District Modernization Study	Conservation	$75,000	Recommended
Klamath Irrigation District Water Conservation Study	Conservation	$72,000	Recommended
Langell Valley Irrigation District Modernization Study	Conservation	$75,000	Recommended
West Canal Pumpback Project Reuse Study	Reuse	$115,000	Recommended
	TOTAL REQUESTED	**$814,052**	

V. Summary

If approved, these funding recommendations will result in grant awards totaling $814,052. This would leave $902,761 available for future funding cycles.

VI. Alternatives

1. Adopt the staff funding recommendations contained in Section IV, Table 1 of this report.
2. Adopt modified funding recommendations.
3. Direct the Department to further evaluate the applications and return with a revised funding proposal.

VII. Recommendation

The Director recommends Alternative 1, to adopt the staff funding recommendations contained in Section IV, Table 1 of this report.

Attachments:

1. Study Evaluation Summaries

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OREGON WATER RESOURCES DEPARTMENT

Feasibility Grant Applications

2021-2022 Cycle Evaluation Summaries and Review Team Funding Recommendations

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 evaluations summaries for complete grant applications received by the November 3, 2021 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 28, 2022 to April 29, 2022. The Department will present funding recommendations and the comments received to the Water Resources Commission at its meeting tentatively scheduled for June 16-17, 2022. 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 Program Coordinator, Becky Williams, at 503.509.7938 or WRD_DL_feasibilitystudygrants@water.oregon.gov.

List of Applications Received

Study Name	Project Type	County	Funding Requested	Total Cost of Study[1]
City of Klamath Falls Beneficial Reuse Feasibility Study	Reuse and Storage	Klamath	$336,807	$673,614
Farmers Canal Pipeline Design Study	Conservation	Hood River	$60,000	$120,000
Goose Lake Basin Water Conservation Study	Conservation	Lake	$80,245	$161,850
Horsefly Irrigation District Modernization Study	Conservation	Klamath	$75,000	$152,500
Klamath Irrigation District Water Conservation Study	Conservation	Klamath	$72,000	$146,500
Langell Valley Irrigation District Modernization Study	Conservation	Klamath	$75,000	$152,500
West Canal Pumpback Project Reuse Study	Reuse	Klamath	$115,000	$230,000
		Total	**$814,052**	**$1,636,964**

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

2021 Applications

City of Klamath Falls Beneficial Reuse Feasibility Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: City of Klamath Falls Public Works Department

County: Klamath

Funding Requested: $336,807

Total Project Cost: $673,614

Study Summary:

The proposed study seeks to evaluate the feasibility of year-round reuse of the Spring Street Sewage Treatment Plant's effluent for landscape, agricultural irrigation, and/or artificial groundwater recharge in lieu of the Plant's current river discharge. The study goal is to identify the high level preferred beneficial reuse alternative, and to establish the parameters and identify the next steps needed to design the preferred alternative. The reuse study proposes two phases of investigation. One to identify and conduct a high-level evaluation of winter and summer reuse alternatives for the effluent by comparing costs, environmental impacts, permitting issues, water supply benefits, environmental justice and other critieria. The second phase will further develop the preferred alternative concept and develop preliminary engineering information.

Evaluation Summary

The application describes a two-phase approach to evaluate the feasibility of reusing treatment effluent for landscape/agricultural irrigation and/or artificial groundwater recharge in lieu of river discharge. The goal of the study is clear, and tasks are thoroughly described and appropriate to achieve the goal. Community concerns are identified and integrated into the study, though the review team commented that a broader engagement effort could have been included in phase 2. The review team noted that the proposal to evaluate the seasonality of use, including summer months, winter months and year-round options, is a strength of the approach.

While the proposal addresses analyzing water quality requirements for each discharge option, the review team noted that an assessment of potential benefits to water quality and a comparison to potential impacts based on water quantity would strengthen the study. The review team recommends investigating options in addition to discharging to the Klamath Drainage District (KDD), so that potential benefits might be more broadly distributed. The review team noted that the presence of jurisdictional wetlands should be assessed prior to project implementation.

Farmers Canal Pipeline Design Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Farmers Irrigation District

County: Hood River

Funding Requested: $60,000

Total Project Cost: $120,000

Study Summary:

The goal of the proposed feasibility study is to complete a sediment analysis for Farmers Irrigation District and to determine the feasibility of piping the remaining open sections of the Farmers Canal to limit seepage losses. The open canal's heavy sediment load causes many operational challenges and limits water supplies for the District and its patrons. The purpose of the study is to answer key questions and understand how the District can effectively manage increasing sediment loads and operate the system in low flow conditions, and how the canal can be piped given stormwater inflows and accessibility issues. To address these concerns the study would conduct several analyses related to sediment control, stormwater management, easements and permitting.

Evaluation Summary

The Farmer's Irrigation District has faced chronic operational challenges due to the Hood River glacial system and the high sediment loads. The study goals and scope were well-developed, and tasks were clearly outlined for conducting the technical work to investigate options to addressing the need. The Confederated Tribes of the Warm Springs Reservation noted the importance of addressing the sediment loading concerns to conserve water and improve water quality. The review team noted the potential for protecting conserved water instream and supports use of the Allocation of Conserved Water if feasible in future project planning efforts.

To identify and prepare to address potential issues, the review team recommends earlier engagement with stakeholders and permitting agencies. The fish screen referenced in the application is more complex than standard fish screens and would require coordination with the Oregon Department of Fish and Wildlife to meet requirements. The review team recommends ensuring that natural resource expertise is involved in analyzing any impacts of redirecting natural springs and seeps from a piped system. Additionally, the application would have been strengthened by describing any outreach with properties downslope of the springs and seeps.

Goose Lake Basin Water Conservation Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Lake County Umbrella Watershed Council

County: Lake

Funding Requested: $80,245

Total Project Cost: $161,850

Study Summary:

The proposed study would develop foundational information to assess the feasibility of modernizing the Lakeview Water Users Inc.'s (LWU) irrigation infrastructure. The study would develop current geographic information for the irrigation network; assess existing water losses and potential water savings; prioritize water conservation opportunities; and incorporate a planning process to determine LWU's preferred alternatives for system modernization. The study's goal includes developing and presenting information to inform LWU's decision-making process leading to improved irrigation system function, water conservation and improved habitat for migratory waterfowl and endemic fish species in the Goose Lake Basin. The study would provide water users with a prioritization plan for future water conservation options and serve as the foundation for a System Improvement Plan.

Evaluation Summary

The application strongly articulated the urgent water need noting that Goose Lake has dried up several times and the current lakebed is nearly dry due to the 2021 drought. The proposed study goal addresses the water need, and the study process was clearly described and likely to achieve the goal. The proposal was strengthened by including a comparison of potential impacts and benefits to fish and wildlife habitat in the alternatives analysis.

The review team noted that the proposal identified engagement efforts and commented that the study would benefit from increased and earlier engagement with interested and impacted parties. The application would have been strengthened with additional letters of support. Describing how this study relates to ongoing discussions between the Oregon Department of Fish and Wildlife and Lakeview Water Users would improve the application.

Horsefly Irrigation District Modernization Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Horsefly Irrigation District

County: Klamath

Funding Requested: $75,000

Total Project Cost: $152,500

Study Summary:

The goal of the proposed feasibility study is to assess infrastructure modernization opportunities in Horsefly Irrigation District and create the foundation for developing a System Improvement Plan. The study would identify and evaluate opportunities to modernize the District's infrastructure, and it would collect the data necessary to develop a design for a modern system based on these opportunities. The study would produce an initial assessment of infrastructure modernization opportunities; water loss data and report; and geospatial data and report critical to developing a comprehensive System Improvement Plan.

Evaluation Summary

The study would assess opportunities to modernize infrastructure and meet agricultural and environmental needs. The study approach to perform an initial opportunities assessment and collect water loss data would be an important first step towards modernization. The proposed study builds off of prior regional plans and contributes to strategies identified in those plans to address water needs.

The application would have benefited with additional technical details being included in the study scope. The application's demonstration of community support would be improved by including letters of support and the review team noted a lack of public involvement in the process to-date. The review team recommends including sufficient time for District staff to be involved in community engagement to promote positive outcomes. The potential ecological benefits of the project are likely limited because ESA-listed species are only in the Clear Lake Reservoir and not currently present in the Lost River.

Klamath Irrigation District Water Conservation Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Klamath Irrigation District

County: Klamath

Funding Requested: $72,000

Total Project Cost: $146,500

Study Summary:

The goal of the proposed feasibility study is to produce a System Improvement Plan (SIP) for Klamath Irrigation District. The study would identify and evaluation opportunities to modernize the District's infrastructure in a manner that benefits agriculture, the environment, and the community. The study would build on an initial assessment of irrigation modernization opportunities in the District and would result in a comprehensive evaluation of improvements to the District's infrastructure with associated high-level engineering designs, cost estimates, GIS mapping and geodatabase development, and projected water savings. The SIP would enable the District to evaluate the relative costs and benefits of different potential modernization projects throughout its water delivery system and decide upon near-term and longer-term priorities.

Evaluation Summary

The application clearly described the water need in the Klamath Basin and for the Klamath Irrigation District since they are subject to the Bureau of Reclamation determination of water allocation. The proposed study goal addresses the water need, and the study process was clearly described and likely to achieve the goal. The proposed study builds off of previous regional plans and included detailed tasks.

The application demonstrated community support with attached letters of support. The review team recommends including sufficient time for District staff to be involved in community engagement. Evaluating impacts to downstream users would improve the study approach and promote community engagement. It was unclear how the WaterSMART grant for installing SCADA (Supervisory Control and Data Acquisition) systems relates to timeline of the SCADA systems described in the proposed study.

Langell Valley Irrigation District Modernization Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Langell Valley Irrigation District

County: Klamath

Funding Requested: $75,000

Total Project Cost: $152,500

Study Summary:

The proposed study would identify and evaluate opportunities to modernize the Langell Valley Irrigation District's infrastructure and would collect the necessary data to develop a design for a modern system based on assessing the potential options. The study would produce an initial assessment of infrastructure modernization opportunities, water loss data and report, and geospatial data and report critical to developing a comprehensive System Improvement Plan. The results of the feasibility study would help the District prioritize proposed projects in order to address water needs for its patrons and improve the water conveyance system.

Evaluation Summary

The study proposes to investigate foundational information as the District seeks options to modernize infrastructure and meet agricultural and environmental needs. The application describes the need for the water loss data and geospatial information as a key step towards prioritizing potential modernization opportunities. The proposed study builds off of previous regional plans and included detailed task descriptions.

The review team noted the application would have benefited by more clearly describing the water need since the District is not subject to regular calls by senior water rights holders. Additional technical details would strengthen the study scope. The application's demonstration of community support would be improved by including letters of support and the review team noted a lack of public involvement in the process to-date. The review team advises the District staff to be involved in community engagement efforts. The potential ecological benefits of the project are likely limited because ESA-listed species are only in the Clear Lake Reservoir and not currently present in the Lost River.

West Canal Pumpback Project Reuse Study

Recommended for Funding

Study Information (adapted from application)

Applicant Name: Wood River Improvement District

County: Klamath

Funding Requested: $115,000

Total Project Cost: $230,000

Study Summary:

The goal of the West Canal Pumpback Project is to reuse irrigation water to improve agricultural water supplies in the Wood River District Improvement Company and reduce return flow of nutrient-enriched water into the Upper Klamath Lake potentially benefiting two species of federally-listed endangered suckers. The West Canal Pumpback Project, when constructed, would pump agricultural drainage water from the District's West Canal, convey it via a pipeline and deliver it to lands in the Wood River District Improvement Company for reuse. The purpose of the proposed feasibility study is to further develop the project by producing a 30% design and associated engineering drawings. The study would also analyze preliminary benefits from the project, conduct stakeholder outreach, and identify potential funding partners.

Evaluation Summary

The feasibility study would review existing reports and collect additional data to develop preliminary engineering designs to pump back the water collected in West Canal for flood irrigation purposes. The application described the West Canal as being a major source of phosphorous and other nutrients entering into Upper Klamath Lake and having a detrimental impact on water quality. Acknowledging the proposed project's positive impact on water quality, the review team noted that the proposal would be improved by including a comparison of the potential water quality improvements to the impacts of the reduction in water quantity flowing into Upper Klamath Lake.

The proposed pipeline appears to go through wetlands in agricultural production, which would require permitting from Department of State Lands and US Army Corps of Engineers. The review team advises the applicant to include an electrical cost estimate for pumping the reuse water in the cost analysis. The application's demonstration of community support would be improved by including letters of support. The review team encourages the applicant in a future effort to consider conservation measures and accessing the Department's Allocation of Conserved Water program.