



OREGON WATER RESOURCE DEPARTMENT WATER CONSERVATION, REUSE AND STORAGE FEASIBILITY STUDY GRANT PROGRAM

I. Grant Information

Study Name: WISE water rights evaluation

Type of Feasibility Study: Water Conservation Reuse Above-Ground Storage
 Storage Other Than Above-Ground [Including Aquifer Storage and Recovery (ASR)]

Program Funding Dollars Requested: \$ \$162,000
Note: Request may not exceed \$500,000

Total Cost of Feasibility Study: \$ \$1,412,000

II. Applicant Information

Applicant Name: <u>Medford Water Commission (for WISE)</u>	Co-Applicant Name:
Address: <u>200 S. Ivy Street Room 177</u>	Address:
<u>Medford Oregon 97501</u>	
Phone: <u>(541) 774-2430</u>	Phone:
Fax: <u>(541) 774-2555</u>	Fax:
Email:	Email:

Principle Contact: <u>Bob Jones</u>
Address: <u>200 S. Ivy Street Room 177</u>
<u>Medford Oregon, 97501</u>
Phone: <u>(541) 774-2439</u>
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Email: <u>bob.jones@cityofmedford.org</u>

Certification:

I certify that this application is a true and accurate representation of the proposed work for a project feasibility study and that I am authorized to sign as the Applicant or Co-Applicant. By the following signature, the Applicant certifies that they are aware of the requirements of an Oregon Water Resources Department grant, have read and agree to all conditions within the sample grant agreement and are prepared to conduct the feasibility study if awarded.

Applicant Signature: _____

Date: Jan 29, 2016

Print Name: Larry Rains

Title: Manager

III. Feasibility Study Summary

Please give a brief summary of the feasibility study using no more than 150 words.

The activity proposed through this grant is a water rights evaluation of the WISE Project. The purpose of the evaluation is to both (1) confirm that the infrastructure changes proposed with WISE can be satisfied with the existing water rights and (2) to determine how the existing water rights could be modified to meet the demands of WISE. The WISE Project proposes to pipe the more than 600 miles of canals that serve the Medford, Talent and Rogue River Irrigation Districts which serve 35,000 acres. WISE is estimated to conserve up to 40,000 acre/feet of water in an average irrigation season. WISE will also include using reclaimed effluent for irrigation, a new pump station on the Rogue River that will have access to existing water rights through POD changes and contract water from Lost Creek Reservoir, and leave live flows instream that are currently used for irrigation. This proposed feasibility work will be part of the larger WISE Feasibility Study and NEPA work already underway.

IV. Grant Specifics

Section A. Common Criteria

Instructions: Please answer all questions contained in this section. It is anticipated that completed applications will result in additional pages.

1. Describe your goal and how this study helps to achieve the goal.

The study funded by this grant will determine both the capacity of the existing water rights to meet the needs of WISE and the methodology for adapting the water rights to meet the demands of WISE. The goals of the WISE Project are (1) to improve irrigation efficiency and effectiveness, (2) improve water quality, and (3) improve stream flow within the project area. The WISE project will change the existing infrastructure and how water is moved throughout the system as well as adding new sources of water (reuse and stored water from Lost Creek Reservoir) and converting some existing live flow water rights to instream rights. In order to implement the infrastructure proposed with WISE, it must be determined not only if the existing water rights can be used to meet all of the WISE demands, but also how the water rights will need to be modified in order to do so. The proposed study will also determine how contracted water from Lost Creek Reservoir could be used as well as reclaimed effluent from the Regional Wastewater Reclamation Facility (RWRf).

The current irrigation system for the three irrigation districts combined includes seven (7) reservoirs, over 250 miles of canals and more than 300 miles of laterals or stream reaches used to move irrigation water. This infrastructure system supplies water to over 35,000 acres of irrigated land. In a dry year, most of the irrigated lands operate at a shortage, not receiving the full amount of the water right or the needs for the crops being grown. Most of the canals and laterals are open earth structures, many of which are over 100 years old. Recent studies performed by the Districts and the Bureau of Reclamation (BOR) estimate that the canal infrastructure loses to leakage approximately %30 - %35 of the water conveyed by the system. Based on the preliminary engineering work conducted on WISE (WISE Preliminary Feasibility Study 2009) piping the entire distribution infrastructure will conserve more than 35,000 acre/feet of water in an average precipitation year. Conversion of the distribution infrastructure to a closed pipe system will also allow for generation of hydropower and provide pressurized water to much of the system. There is over 1,100 feet of elevation from the top of the irrigated area to the lowest.

WISE will also improve water quality and stream flow throughout the project area. Some diversions on tributaries to Bear Creek are proposed to be removed. This will both significantly reduce mixing of live flows and irrigation water in streams, thus improving water quality, as well as returning the tributaries to a more natural hydrograph. It is estimated that almost 10,000 acre/feet of water could be left instream in Bear Creek tributaries during an average precipitation year. One of the purposes of this grant is to determine how to protect water left instream. By piping the irrigation system as well as adding new lateral infrastructure so that streams are no longer used to carry irrigation water, water quality will be improved by reducing the amount of return flows from agricultural lands. This return flow reduction will increase over time as more irrigated lands switch to more efficient irrigation systems, facilitated by providing pressurized irrigation water throughout much of the project area.

There are two wastewater treatment plants within the project area boundaries, the RWRf and the Ashland Treatment Plant. The RWRf produces 12,000 acre/feet of treated effluent during the irrigation season while Ashland produces 2,000 acre/feet. Using this water would provide additional reliability and flexibility with the irrigation system as well as increase the ability of the WISE Project to improve instream conditions.

By constructing a pump station on the Rogue River, the WISE Project could be able to improve irrigation reliability and availability by gaining access to the irrigation water stored at Lost Creek Reservoir which is currently not available within the WISE Project area. The pump station will also provide opportunities to improve instream conditions in Bear Creek by changing the POD from the diversions in Bear Creek to the Rogue River pump station.

All of these infrastructure changes may require modifications to how water is managed with the WISE Project area. The proposed feasibility study will review the existing water rights, including stored and live flow rights, as well as examine the new opportunities, reclaimed effluent and Lost Creek Reservoir water, and determine the options for how existing water rights will need to be changed as well as what new contracts will need to be developed. This study will determine the methodology for developing the suite of water rights needed in order to implement the WISE Project, including how to protect water instream and alternatives for sharing the Project benefits.

2. Describe the water supply need(s) that the proposed project addresses. Identify any critical local, regional, or statewide water supply needs that implementation of the project associated with the feasibility study will address. **Responses should rely upon solid water availability and needs data/analysis.** For examples of water supply needs see “Criteria and Evaluation Guidance Document.”

Currently the Bear Creek and Little Butte Creek basins are closed to new surface water rights. Hydrologic studies were performed for each of the seven reservoirs within the Rogue River Basin Project area (Medford, Talent, and Rogue River Valley Irrigation Districts). Only Agate Reservoir has the potential to store additional water. However, it has been determined that it makes much more sense to install a Rogue River pump station than to expand Agate Reservoir. A pump station is less expensive, provides access to more water via Lost Creek Reservoir and allows for greater improvement to instream conditions in Little Butte Creek and Bear Creek. Thus, since there are no new surface water rights available, conservation, access to other existing stored water, and reuse represent the greatest opportunity to meet the goals of the WISE Project.

The two most water shortage needs that the WISE Project will address are irrigation shortages and instream conditions. Under current conditions, the three Districts operate under water shortages during dry years. This is due to the extent of the open canal infrastructure and is exacerbated during extended periods of drought and low snowpack years. Current climate change models predict that conditions in the Project area will change over time with average temperatures increasing, reduced snowpack and more rain over a shorter period of rainfall. All of these conditions will exacerbate the shortages currently experienced by the Districts. Bear Creek and Little Butte Creeks are both listed for numerous factors on Oregon Department of Environmental Quality’s 303d list including temperature, nutrients and bacteria. Although conditions have been improved over the past decades, both streams still have very poor water quality, especially during the summer months.

3. Explain how the proposed project will meet the water supply need(s), and indicate what percentage of that need will be met. (For example: If your water supply need is 20,000 acre-feet of additional water and the project will supply 10,000 additional acre-feet, 50 percent of your need will be met).

The WISE Project will address both the irrigation water shortages and instream conditions within the project area. Piping the irrigation infrastructure and adding the 14,000 acre/feet of reclaimed effluent to the water supply will provide 35,000 to 40,000 acre/feet of water during an average precipitation year. These numbers will vary based on how much water is moved through the system. Irrigation water management by the Districts is also dependent upon the amount of water available in the reservoir system at the beginning of the year. Implementation of WISE will eliminate the entire (100%) irrigation shortages in most years. However, during extended drought conditions with minimal carryover in the reservoirs, WISE will not be able to provide one hundred percent of the water need. However, it will ensure that irrigation can continue throughout the drought, especially with access to Lost Creek Reservoir water. This is not the case under current conditions. Extended drought can cause severe water shortages for irrigation in excess of over 75%. Under these conditions orchards and vineyards in particular are at extreme risk. Implementation of WISE will significantly reduce that risk.

Additionally, adding approximately 10,000 acre/feet (this water becomes available by transferring live flow irrigation rights to instream rights as part of the proposed WISE Project) of water into Little Butte Creek, and Bear Creek and its tributaries will greatly improve water quality in those basins. It is unknown at this time exactly how much water quality will improve due to other variables including how much return flows will be reduced. Some water quality factors will be improved significantly such as flow, bacteria, and nutrients. Temperature will be improved but it is unknown to what extent.

4. Describe the technical aspects of the feasibility study and why your approach is appropriate for accomplishing the specific study goals and objectives.

The goal of the proposed study is to summarize the existing water rights and then determine how those water rights will meet the demands of the proposed infrastructure for WISE and instream requirements. This will require determining what changes will need to be made to existing rights and what new rights and contracts will be needed. This is vital to determine the feasibility of the WISE Project being implemented.

The first step will be to survey all of the existing water rights held by the WISE Project Partners. There are different types of water rights that will need to be evaluated including, storage, instream, primary and supplementary rights.

The second step will be to determine what water rights and contracts will be needed to manage the water within the proposed WISE infrastructure. This will include the existing water rights as well as the legal requirements to use reclaimed effluent for irrigation, change PODs from the Bear Creek tributaries down to the main stem of Bear Creek, create instream water rights, and have access to irrigation water from Lost Creek Reservoir via the Rogue River pump station.

The third step will be to determine how new water from piping, use of reclaimed water, use of Lost Creek water, and changes in points of diversion could be shared and protected for the intended beneficial uses. This will include determining the value of using the conserved water law or other opportunities.

The final result will be a plan for developing all of the water rights and contracts in order to meet the irrigation and instream rights necessary to implement the WISE Project.

5. Describe how the feasibility study will be performed. Include:
 - a. General summary statement that describes the study progression.
 - b. When the feasibility study will begin.
 - c. Listing of key tasks to be accomplished with each task having:
 - i. Title
 - ii. Timeline for completion
 - iii. Description of the activities to be performed in this key task
 - iv. Description of the resources necessary for accomplishing the key task

Example:

- (i) Streamflow measurement;
- (ii) September-April;
- (iii) Weekly streamflow measurements will be performed to gather hydrographic data for the hydrologic analysis to take place in May;
- (iv) A technician will be hired to perform the streamflow measurements.

(Key tasks listed here are to be placed in Section VI. Project Feasibility Study Schedule for a quick reference “graphical” representation of the schedule.)

The feasibility study will start with a review of existing water rights. It will then review the changes to the infrastructure and new beneficial uses proposed by WISE. It will conclude with the development of a plan to show how issues found in the first two steps as relate to water rights can be addressed. This work can begin immediately upon receipt of OWRD funds and will take approximately 9 months to complete. The general format for the implementation of this feasibility study is:

- Review the existing water rights*
 - o All of the water rights held by the Irrigation Districts will be summarized.*
 - o This work will begin upon signing of contract with consultant. This will take 1-2 months to complete.*

- o *The consultant will collect, organize and summarize of the water rights records from the three irrigation districts and the Bureau of Reclamation (BOR). The consultant will confirm the completeness of the records by reviewing OWRD records.*
- o *A consulting team will be hired for this project. For this step, the team will use a water rights specialist to complete the work.*
- *Review the proposed new infrastructure*
 - o *The preliminary engineering designs for the WISE Project alternatives will be reviewed to understand the water management requirements of the project.*
 - o *This work will take 2-4 weeks to complete.*
 - o *The consultant will coordinate with the irrigation district staff, Project engineering team, and the BOR in order to develop an understanding of the Project infrastructure. This will include review the preliminary designs developed for the WISE Project as well as current operation systems. Items to be included in review include:*
 - *Removal of existing Bear Creek tributary diversions*
 - *Piping of laterals and canals*
 - *Construction of new laterals where tributaries are used to convey irrigation water*
 - *Construction of a Rogue River pump station*
 - *Development of a reuse facility at the Regional Wastewater Reclamation Facility*
 - o *The consulting team hired will have the expertise to evaluate engineering plans for water right needs. This may include teaming with an engineering firm.*
- *Develop a plan for meeting the water right needs for the WISE Project*
 - o *This work will include determining what changes will need to be made to existing water rights as well as what new contracts and water rights will be needed.*
 - o *This step will take 3-4 months to complete.*
 - o *The consulting team will use the work from the first two steps to develop a plan for addressing issues that are identified in task 1. This will include:*
 - *Modifying water rights*
 - *Irrigation*
 - *Instream*
 - *Drafting contract for use of water from Lost Creek Reservoir*
 - *Drafting of rights to use reclaimed effluent for irrigation.*
 - *Receiving confirmation from OWRD that this plan will be implementable*
 - o *The consulting team hired will include the water law expertise to draft the new water rights and contracts.*

6. Please provide the following data and information for the proposed project and the project's sources of water supply:

- a. The location of the proposed project. Include the basin, county, township, range and section. Attach a **map** that identifies the project's implementation area to this application.

The WISE Project is located in the Rogue Valley of southern Oregon in Jackson County. This includes the Little Butte Creek and Bear Creek watersheds. There are seven reservoirs that are part of the WISE Project, four of which are in the Klamath Basin (Keene Creek Reservoir is a very

small reregulation reservoir). Most of the changes in infrastructure will occur within the lower Little Butte Creek watershed and the Bear Creek watershed.

- b. The name(s) and river mile(s) of the source water and what they are tributary to, if applicable.

The source waters for the WISE Project will be fully described in the Feasibility Study proposed in this application. They include The upper tributaries to South Fork Little Butte Creek, Fourmile Creek, North and South Fork Little Butte Creek, Antelope Creek, Keene Creek, Emigrant Creek, Bear Creek and its tributaries. Bear Creek and Little Butte Creek are tributaries to Bear Creek. Fourmile Creek flows into Klamath Reservoir. Keene Creek is a tributary to Jenny Creek.

- c. Whether the project will be off-channel or on-channel (for above-ground storage only).

There are no changes proposed to the current storage system.

- d. Water availability to meet project storage. For above-ground storage the Department typically evaluates availability using a 50 percent exceedance water availability analysis.

There are no changes proposed to the existing storage system.

- e. Proposed purposes and/or uses of conserved or stored water.

The project will conserve water through piping as well as use reclaimed effluent. Reclaimed effluent and conserved water will be used for irrigation within the Project area. By conserving water, live flow from tributaries will be converted to instream rights from an irrigation use. Water from the Rogue River pump station will be used for irrigation.

- f. Environmental flow needs and water quality requirements of supply source water bodies.

Currently, Little Butte and Bear Creek are listed for multiple water quality parameters on DEQ's 303d list including nutrients, temperature, flow, and bacteria. There is currently a WISE monitoring study underway, funded by multiple partners including OWEB, to determine the baseline conditions within the project area. WISE will improve water quality conditions throughout the streams within the project area by reducing return flows, transferring live flow irrigation rights to instream, reducing use of stream channels to convey irrigation water of irrigation and live flows and removing dozens of diversions within the Bear Creek tributary system.

7. What local, state or federal project permitting requirements/issues/approvals do you anticipate in order for the feasibility study to be conducted? If approvals are required, indicate whether you have obtained them. If you have not obtained the necessary permits/governmental approval, describe the steps you have taken to obtain them. If no permits are needed, please provide explanation.

The proposed water right feasibility study will not require any local, state or federal permits. The proposed action is to develop a plan for a new water right package to meet the needs of the WISE Project. The implementation of the WISE Project will require permits including NEPA, but the proposed water analysis will not.

8. Describe the level of involvement, interest and/or commitment of local entities associated with the feasibility study. Describe how the feasibility study and/or proposed project will benefit/impact these entities. Attach letters of support if available.

From the beginning, the WISE Project has been a collaborative effort of the many water stakeholders in the Rogue Valley. This includes the six WISE Partners (Medford, Talent, and Rogue River Valley Irrigation

Districts, City of Medford, Medford Water Commission and Jackson County) and members of the advisory committees including more than twenty local, state and federal agencies and NGOs. To strengthen the collaborative effort and provide an additional method of participation for stakeholders, WISE participated in the Oregon Solutions process. More than 30 stakeholders signed on to the Oregon Solutions Declaration of Cooperation in support of the WISE Project.

9. Identify when matching funds will be secured, from whom, and the dates of matching funds availability.

The WISE Project currently has matching funds in hand for this proposed water rights feasibility study. These include funds from the Oregon State Legislature that are currently being used to implement the WISE Feasibility Study and NEPA work. These funds are available immediately to match any funds made available through this grant proposal. The matching funds are being used to fund the WISE Feasibility and NEPA work being managed by the Bureau of Reclamation. The feasibility work proposed in this grant application is part of the larger effort to show the feasibility of the WISE Project. The costs for the WISE Feasibility Study and NEPA work (\$1,250,000) will be used at a 1:1 rate and are available immediately.

10. Provide a description of the relevant professional qualifications and/or experience of the person(s) that will play key roles in performing the feasibility study. If the personnel have not been decided upon, include a description of the professional qualifications and/or experience of the person(s) you anticipate will play key roles in performing the feasibility study.

This Feasibility study can be started as soon as funds from OWRD become available. A consulting team will be hired to perform the required work of the proposed water right feasibility study. The consulting team will have multiple specialties including water law and CWRE which will require varying hourly rates. This work will cost \$150,000 (not including grant administration) to complete but the breakdown of rates will be determined upon receipt of proposals from consulting teams in response to the RFP that will be advertised upon signing a grant agreement with OWRD. The consulting team will be required to have the following expertise: water rights law, water rights evaluation, and a CWRE. The team will have to be able to evaluate existing water rights and then develop a package to meet the requirements of the new WISE Infrastructure. The consulting team will also need to coordinate with the engineering firm that has developed the preliminary designs for the WISE Project. The team will not be required to include an engineer.

11. If the project concept is ultimately deemed feasible, describe how the project will be implemented. Response should include a tentative funding plan for project implementation (e.g. other state or federally sponsored grant or loan programs) and the project proponent's track record in implementing similar projects.

The WISE Project is unique in the complexity and scope of what is being proposed. However, projects similar to each of the components of WISE have been implemented numerous times throughout the western United States and Oregon including water conservation through piping, development of reuse irrigation and construction of a pump station. To implement WISE, a new governance structure is being developed. A WISE organization will be able to take in and expend funds to construct the WISE Project. The funding and financing plan for WISE will be a package of local state and federal funds. Funds will also be generated by the project itself through the hydropower component. The Feasibility and NEPA work will be completed in 2017. The Project Partners including the Bureau of Reclamation have all constructed and managed large infrastructure projects as part of

their required operations. For the construction and implementation of WISE, the WISE Partners would be collaborating to ensure a successful project.

Section B. Unique Criteria

Instructions: Address the set of items below that applies to the type of feasibility study that this grant will fund.

Water Conservation or Reuse

1. Water Conservation or Reuse projects that are identified by the Department in a statewide water assessment and inventory receive a preference in the scoring process. Contact the Department's Grant Specialist to include your project on the inventory.

OWRD has provided WISE with the application form to be identified by OWRD in a statewide water assessment and inventory. This completed form is included with this grant application.

2. Explain how the associated project will either: (a) mitigate the need to develop new water supplies and/or (b) use water more efficiently. Reference documentation and/or examples of the success of similar or comparable water conservation/reuse projects that would be available upon request.

The WISE Project has been developed because of the water needs within the Rogue Valley cannot be met successfully by existing management systems. Additionally, both Little Butte and Bear Creek are fully appropriated and closed to new water rights. There is very limited opportunity for increasing storage within the Project area. WISE will more efficiently manage the existing water through conservation by piping and encouraging on-farm irrigation improvements. WISE will also make possible the use of other local sources of water including reclaimed effluent as well as provide access to existing storage outside the Project area (Lost Creek Reservoir). The effectiveness of WISE has been evaluated in the WISE Pre-Feasibility Study (HDR, 2009) and is currently being studied in the WISE Feasibility Study and NEPA work being conducted by the Bureau of Reclamation. All of this documentation is available upon request.

3. Provide a description of: (a) Local, state and/or federal permitting requirements and issues posed by the **implementation** of the project associated with the feasibility study and (b) property ownership status within the project implementation area. If permitting or other approvals are not needed please indicate and provide an explanation.

Implementation of the WISE Project will include piping canals within existing right-of-ways, removal of irrigation diversions, construction of hydropower stations within the piped canal system, construction of a pump station on the Rogue River, and development of a reuse facility at the Regional Wastewater Reclamation Facility. All of this work will require local, state and federal permitting.

WISE is currently addressing the NEPA requirements with the Bureau of Reclamation acting as lead agency. This work currently includes the development of an environmental assessment based on the limited work proposed outside of the existing canal infrastructure. Additional permitting will include fill and removal permitting for the diversion removal in the tributaries and the Rogue River pump station, and FERC licensing for the hydropower stations within the system (these will be off channel systems which will simplify the licensing). The reuse facility will require the City of Medford to update its current permitting package for discharge into the Rogue River.

There are approximately 35,000 acers of irrigated lands served by the proposed WISE Project. Most of the property within the Project boundaries is not irrigated lands including ownership by private landowners, industry and municipalities. Most of the proposed infrastructure changes will occur in existing right-of-ways. However, the NEPA process will include working with local landowners and municipalities in those areas where changes will occur outside of existing right-of-ways. This includes addressing changes to storm water management (the proposal includes leaving the necessary canals open and piping alongside or underneath these canal reaches),

and potential impacts to shallow wells within the Project area. The WISE Project is being designed to minimize negative impacts and maximize benefits. This includes providing new irrigation turnouts to irrigation landowners in locations that they feel best serve their needs.

Above-Ground Storage

Please answer the following three questions **BEFORE** proceeding:

- Will the project divert more than 500 acre-feet of surface water annually? Yes No
- Will the project impound surface water on a perennial stream? Yes No
- Will the project divert water from a stream that supports sensitive, threatened or endangered species? Yes No

If you answered "Yes" to any of these questions, by signature on this application, you are committing to include the following required elements in your feasibility study.

Describe how you intend to address the required elements in your feasibility study:

- a) Analyses of by-pass, optimum peak, flushing and other ecological flows of the affected stream and the impact of the storage project on those flows.

- b) Comparative analyses of alternative means of supplying water, including but not limited to the costs and benefits of water conservation and efficiency alternatives and the extent to which long-term water supply needs may be met using those alternatives.

- c) Analyses of environmental harm or impacts from the proposed storage project.

Is the proposed storage project for municipal use?

Yes No

If “Yes,” then please describe how you intend to address the following required element in your feasibility study:

- e) For a proposed storage project that is for municipal use, analysis of local and regional water demand and the proposed storage project’s relationship to existing and planned water supply projects.

Proceed in addressing the following items:

1. Underground storage projects that are identified by the Department in a statewide water assessment and inventory receive a preference in the scoring process. Contact the Department’s Grant Specialist to include your project on the inventory.

2. Provide a review of: (a) Local, state and/or federal permitting requirements and issues posed by the **implementation** of the project associated with the feasibility study and (b) property ownership status within the project implementation area.

V. Match Funding Information

Applicants must demonstrate a minimum dollar-for-dollar match based on the total funding request. The match may include a) secured funding commitment from other sources, b) pending funding commitment from other sources, and/or c) the value of in-kind labor, equipment rental, and materials essential to the feasibility study. For secured funding, you must attach a letter of support from the match funding source that specifically mentions the dollar amount shown in the “Amount/Dollar Value” column. For pending resources, documentation showing a request for the matching funds must accompany the application.

<p>In the “type” column below matching funds may include:</p>	<p>In the “status” column below matching funds may have the following status:</p>
<ul style="list-style-type: none"> • Cash - Cash is direct expenditures made in support of the feasibility study by the applicant or partner*. 	<ul style="list-style-type: none"> • Secured - Secured funding commitments from other sources.
<ul style="list-style-type: none"> • In-Kind - The value of in-kind labor, equipment rental and materials essential to the feasibility study provided by the applicant or partner. 	<ul style="list-style-type: none"> • Pending - Pending commitments of funding from other sources. In such instances, Department funding will not be released prior to securing a commitment of the funds from other sources. Pending commitments of the funding must be secured within 12 months from the date of the award.

*”Partner” means a non-governmental or governmental person or entity that has committed funding, expertise, materials, labor, or other assistance to a proposed project planning study. OAR 690-600-0010.

Match Funding Source (if in-kind, briefly describe the nature of the contribution)	Type (✓ One)	Status (✓ One)	Amount/ Dollar Value	Date Match Funds Available (Month/Year)
<i>Oregon State Legislature provided \$1,500,000 for the WISE Feasibility Study and NEPA phase. \$1,250,000 are being managed by the Oregon Infrastructure and Finance Authority for the WISE Feasibility Study currently under way.</i>	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in-kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	\$1,250,000	January 16
	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
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	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		

VI. Feasibility Study Schedule

Estimated Study Duration: January 1, 2016 to June 30, 2017

Place an "X" in the appropriate column to indicate when each Key Task of the project will take place.

Feasibility Study Key Tasks	2016			2017				2018 & Beyond
	2 nd Qtr	3 rd Qtr	4 th Qtr	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	
<i>Review existing water rights(This work can begin as soon as OWRD funds become available)</i>	X	X						
<i>Review proposed WISE infrastructure</i>		X	X					
<i>Develop plan for meeting WISE water right needs</i>			X	X	X			
<i>WISE Feasibiliyy and NEPA (for entire WISE Project including work not funded by this grant program - this work is currently underway)</i>	X	X	X	X	X	X		

- **Please Note:** Successful grantees must include all invoices and identify which key tasks are associated with each invoice when requesting financial reimbursement.

VII. Feasibility Study Budget

Section A

Please provide an estimated line item budget for the proposed feasibility study. Examples would include: labor, materials, equipment, contractual services and administrative costs.

Line Items	Number of Units* <i>(e.g. # of Hours)</i>	Unit Cost <i>(e.g. hourly rate)</i>	In-Kind Match	Cash Match Funds	OWRD Grant Funds	Total Cost
Staff Salary/Benefits						
Contractual/Consulting		\$1,400,000.00 <i>See note in text above (A10)</i>		\$1,250,000	\$150,000	\$1,400,000
Equipment (must be approved)						
Supplies						
Other:						
Administrative Costs**					\$12,000	\$12,000
Total for Section A				\$1,250,000	\$162,000	\$1,412,000
Percentage for Section A				89%	11%	100%

* Note: The "Unit" should be per "hour" or "day" – not per "project" or "contract." $Units \times Unit\ Costs = Total\ Cost$

** Administrative Costs may not exceed 10 percent of the total funding requested from the Department

Section B

If grant amount requested is \$50,000 or greater, you **MUST** complete Section B. Key Tasks in Section B should be the same as the Key Tasks in Section VI (Feasibility Study Schedule).

APPLICATION CHECKLIST

Instructions: Use this checklist to ensure that your application is complete. An incomplete application will jeopardize your application's review. **This form does not need to be included in your application packet.**

General

If submitting electronically, the preferred format is either a Microsoft word or Adobe pdf

- Only one application is included with the packet (other applications must be sent separately).

Paper submissions only

- The application and attachments are on 8 ½" x 11" paper.
- The application and attachments are single-sided.
- The application and attachments are not stapled or bound.

Section I – Grant Information

- All questions in this section have been answered.
- The Grant Dollars Requested and the Total Project Cost mirror the totals shown in Section VII.

Section II – Applicant Information

- All contact information for the applicant(s) and fiscal officer is complete and current.
- The certification is signed by an authorized signer.

Section III – Feasibility Study Summary

- A brief summary, of no more than 150 words, is complete.

Section IV – Grant Specifics

- All questions in Section A have been answered.
- If the type of feasibility study is water conservation, reuse or storage other than above-ground, you have contacted the Department and requested project be added to the Oregon Water Resources Department's statewide water assessment and inventory.
- All applicable questions for the type of grant requested have been answered.

Section V – Match Funding Information

- Applicant has identified that at least 50 percent match has been sought, secured or expended.
- Letters of support are included for "secured" match funding sources.
- Documentation is included for "expended" match funds.
- Documentation is included for "pending" match funds.

Section VI – Feasibility Study Schedule

- Estimated project duration dates have been supplied.
- All Key Tasks of the project are listed.

Section VII – Feasibility Study Budget

- Section A is complete.
- Administration costs do not exceed 10 percent of the requested OWRD Grant Funds.
- If grant amount requested is \$50,000 or greater, Section B has been completed.
- All Key Tasks listed in Section B mirror the Key Tasks listed in Section VI.

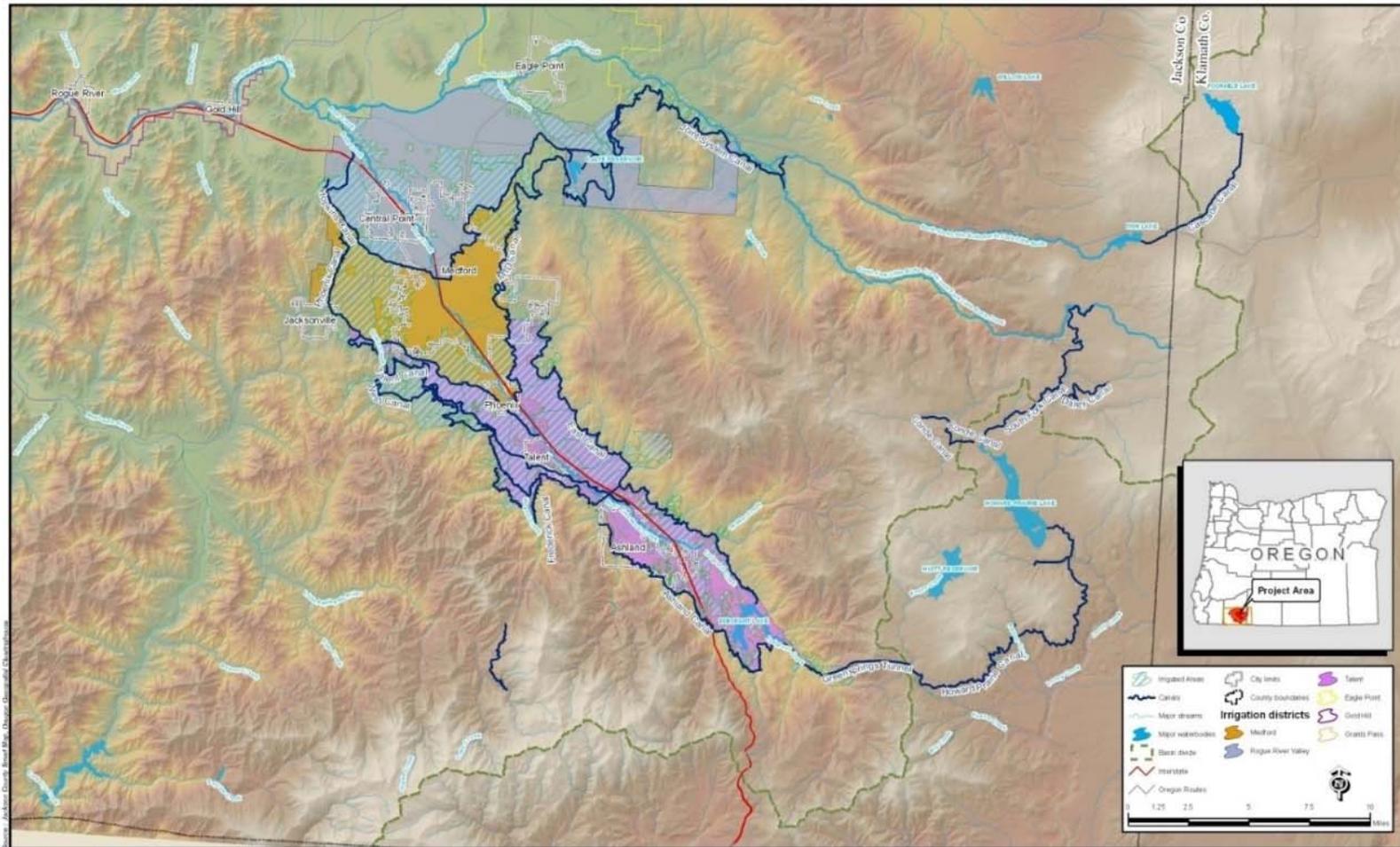
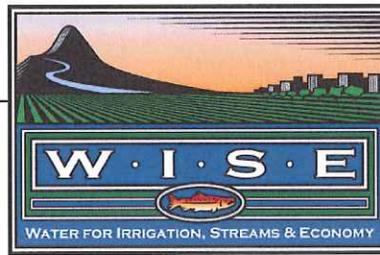


FIGURE 1-1
 WISE Study Area and Land Use Features
 WISE Preliminary Feasibility Study | City of Medford

WISE Project Area Map. The WISE Project is located in Jackson County in southern Oregon. The infrastructure to be ungraded is within the Little Butte Creek and Bear Creek watersheds. There are seven reservoirs within the system. Four of the reservoirs are in the Klamath basin and facilitate interbasin transfer.



January 29, 2016

Dear Jon Unger,

Attached is a Feasibility Grant Application for the development of a water rights plan for the Water for Streams and Irrigation Project (WISE). This is a vital part of the development of the WISE Project, a regional collaborative water management project here in the Rogue Valley. The Medford Water Commission, one of six WISE Partners acting as a Board of Directors for WISE, is the applicant for the grant.

Please find included in this application the grant application, a map, letters of support, and a completed project inventory form. Support reference files have been mailed separately on flash drives to facilitate sharing information with the grant review team.

Thank you for considering our application to your feasibility grant program.

Sincerely,

A handwritten signature in black ink that reads 'Robert C. Jones'. The signature is written in a cursive style.

Robert C. Jones
WISE Board President

Harry & David

1-26-2016

Dear OWRD Feasibility Grant Review Team
Attn. Jon Unger

After reviewing the Vision and Mission Statement of the Oregon Water Resource Department it is hard to imagine a project more appropriate than the WISE Project to meet the departmental objectives, or qualified to receive supporting funds. Harry & David (Bear Creek Orchards) is one of the largest farming operations in the Rogue Valley and at the core of the agriculture production is nearly 2000 acres of fruit trees grown and processed here locally. There is no way to separate the viability of the operation with that of the health and sustainability of the Bear Creek and Little Butte watersheds. The Wise Project represents a rare collaborative effort between stakeholders not frequently seen on the same side of the table, and with a goal to improve water management across the region there seems to be little reason for Harry & David not to support the project. Please consider The Wise Projects application for funds as critical support needed to see the project to a beneficial conclusion.

Sincerely,

Matt Borman



Director of Orchard Operation

Harry & David (Bear Creek Orchards)





81 Central Ave.
Ashland, OR 97520
(541) 708-0934

January 27, 2016

Subject: Water for Irrigation Streams and Economy (WISE) water right review and plan.

To Whom It May Concern:

The Freshwater Trust is a strong supporter of the Water for Irrigation Streams and Economy (WISE) project. WISE will create important water savings that benefit local agriculture, the recovery of threatened and endangered aquatic species, and the sustainable growth of the Rogue valley.

The Freshwater Trust is an Oregon based conservation organization that currently works on a number of local restoration programs including riparian and in-stream fish habitat projects for the Southern Oregon, Northern California Coastal Coho (SONCCC) Biological Opinion. The Freshwater Trust is a big believer in innovative approaches that create win-wins for local economies and the environment – of which WISE is a great example.

The Freshwater Trust is highly supportive of the WISE leadership team's endeavor to evaluate existing water rights in the project service area. The planned infrastructure upgrades for WISE – canal piping, reuse, hydropower to name a few – will require a comprehensive analysis of water rights within the Medford, Talent, and Rogue River Valley irrigation districts. Coupled with the ensuing water rights plan the proposed project is a critical step toward initiating WISE.

We at The Freshwater Trust strongly encourage Oregon Water Resources to fund this project in full.

Sincerely,

Denis Reich
Southern Oregon Programs
Director
503-213-0692
denis@thefreshwatertrust.org

Eugene Wier
Project Manager
Rogue Basin
541-227-9858
eugene@thefreshwatertrust.org

65 SW Yamhill Street, Suite 200
Portland, Oregon 97204
503.222.9091 MAIN OFFICE
www.thefreshwatertrust.org



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CITY OF MEDFORD

**PUBLIC WORKS DEPARTMENT
ENGINEERING & DEVELOPMENT DIVISION**

**200 S. IVY STREET
MEDFORD, OREGON 97501**
www.ci.medford.or.us

**TELEPHONE (541) 774-2100
FAX (541) 774-2552**

January 27, 2016

OWRD Feasibility Grant Review Team
Attn: Jon Unger

The City of Medford is very excited to be participating in the Water for Irrigation Streams and Economy Project (WISE). The City has been fully supportive of the WISE project and has been involved with preliminary planning of the WISE project for over a decade. With "Oregon Solutions" involvement, and a positive Cost Benefit Analysis, the project is gaining momentum. At this time monies are need to develop a water rights plan. The City of Medford supports and requests your support for funding to continue our regional effort to improve water efficiency for agriculture, while improving water quality and availability for salmonids, including the endangered Coho species. Your funding at this time is needed to assist the WISE project past the planning stage and into reality.

Please feel free to contact us regarding our support of this grant application.

Sincerely,

Roger E. Thom, PE
Utilities Engineer
City of Medford
541/774-2129



Jackson Soil & Water Conservation District
89 Alder Street, Central Point, Oregon 97502
Telephone: (541) 664-1070 FAX: (541) 727-7471
web-site: www.jswcd.org

January 26, 2016

Dear OWRD Feasibility Grant Review Team,
Attn: Jon Unger

The WISE Project is a regional collaborative proactive effort to improve water management here in the Rogue Valley in Jackson County. WISE will improve irrigation and instream conditions through conservation and reuse. The Jackson Soil and Water Conservation District (District) fully supports the WISE Project and its goals. The implementation of this project aligns extremely well with the mission and goals of the District and once completed will be very beneficial to the work that the District is doing with private landowners to convert from flood irrigation to pressurized systems. The WISE project will have a large positive impact on both the ecology and economy of Jackson County. Therefore, the District is supplying this letter of support with the WISE application for funds to develop a water right plan that will meet the needs of WISE.

Sincerely,

Randy White, District manager



MEDFORD IRRIGATION DISTRICT

P.O. BOX 70
5045 Jacksonville Hwy
Jacksonville, Oregon 9
Office (541)899-9913

Dear OWRD Feasibility Grant Review Team,

Jan. 22, 2016

Attn: Jon Unger

The WISE Project is a regional collaborative proactive effort to improve water management here in the Rogue Valley in Jackson County. WISE will improve irrigation and instream conditions through conservation and reuse. Medford Irrigation District fully supports the WISE Project and its goals.

Therefore, Medford Irrigation District is supplying this letter of support with the WISE application for funds to develop a water right plan that will meet the needs of WISE.

Sincerely,





University Outreach and Engagement

Southern Oregon Region (Jackson, Josephine Counties & Southern Oregon
Research & Extension Center)

Oregon State University, 569 Hanley Road, Central Point, Oregon 97502
T 541-776-7371 | F 541-772-5110 | <http://outreach.oregonstate.edu/>

Attn: Jon Unger

January 21, 2016

Dear Oregon Water Resources Department (OWRD) Feasibility Grant Review Team,

The Southern Oregon Research & Extension Center (SOREC) has long recognized the need for improving stream habitat in the Rogue Valley while protecting the regional agricultural economy. Additionally, SOREC supports the WISE Project as a means to meet these irrigation infrastructure improvements while also improving instream conditions, recreation opportunities, and local economies.

For this reason SOREC is supplying this letter of support with the WISE application for funds to develop a water right plan that will meet the needs of WISE.

Should you have any questions please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Philip Van Buskirk".

Philip Van Buskirk, Director of OSU-SOREC

January 26, 2016

Dear OWRD Feasibility Grant Review Team,
Attn: Jon Unger

The Rogue Basin Partnership (RBP) is providing this letter in support of the Water for Irrigation, Streams and Economy (WISE) Feasibility Study application to the Oregon Water Resources Department (OWRD) for funds to develop a water right plan that will help meet the needs of WISE. This feasibility study would summarize the existing WISE water rights and then determine how those water rights will meet the demands of the proposed infrastructure for WISE, along with instream requirements.

RBP fully supports the WISE Project and its goals to improve water conservation and management here in the Rogue Basin. RBP was recently created to serve as a convening entity for natural resource management in the Rogue Basin, and to facilitate collective success through coordinated implementation of conservation and restoration actions. Specifically, RBP will coordinate implementation of the recently completed Rogue Restoration Action Plan. The Action Plan articulates priority actions to effectively manage our natural resources for the benefit of local communities, the economy and native species. WISE is focused on one of the identified priority areas of the Action Plan (Little Butte and Bear Creeks). The efforts of WISE to advance more efficient water management in those watersheds compliments the recommendations in the Action Plan.

With RBP now established, we look forward to collaborating with WISE, and we are committed to supporting the WISE effort through our role as a backbone organization for restoration work in the 3.3 million acre Rogue Basin.

Sincerely,



Robert Coffan
RBP Board Chair

Rogue River Valley Irrigation District

3139 Merriman Road
Medford, OR 97501

Phone: (541) 773-6127
Fax: (541) 773-5420
Email: rrvid@rrvid.org
www.rrvid.org

January 13, 2016

Dear OWRD Feasibility Grant Review Team,

Attn: Jon Unger

The WISE Project is a regional collaborative proactive effort to improve water management here in the Rogue Valley in Jackson County. WISE will improve irrigation and instream conditions through conservation and reuse. Rogue River Valley Irrigation District fully supports the WISE Project and its goals. Therefore, Rogue River Valley Irrigation District is supplying this letter of support with the WISE application for funds to develop a water right plan that will meet the needs of WISE.

Sincerely,



Brian Hampson
Secretary/Manager

TALENT IRRIGATION DISTRICT

P.O. Box 467

Phone: 541-535-1529

104 W. Valley View Rd.

Website:

Fax: 541-535-4108

Talent OR 97540-0467

www.talentid.org

Email: tid@talentid.org

January 26, 2016

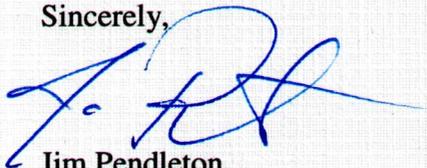
Jonathan Unger
Water Supply Development Coordinator
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266

Dear OWRD Feasibility Grant Review Team:

The WISE Project is a regional collaborative proactive effort to improve water management here in the Rogue Valley in Jackson County. WISE will improve irrigation and instream conditions through conservation and reuse. Talent Irrigation District fully supports the WISE Project and its goals. Therefore, Talent Irrigation District is supplying this letter of support with the WISE application for funds to develop a water right plan that will meet the needs of WISE.

Thank you for your consideration.

Sincerely,



Jim Pendleton
Secretary-Manager



January 29, 2016

Attn: Jon Unger
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301

Re: WISE Grant Application

Dear OWRD Feasibility Grant Review Team,

WaterWatch of Oregon is pleased to support the Water for Irrigation, Streams and Economy (WISE) Project's application for funds to develop a water right plan to meet the needs of WISE.

The WISE Project is a regional, collaborative, proactive effort to improve water management in the Rogue Valley in Jackson County. The WISE Project has tremendous potential to improve efficiencies in irrigation distribution systems thereby improving water availability for streamflow and irrigation, while improving water quality. WaterWatch of Oregon is a strong supporter the WISE Project and its goals, and is a participant in the Project.

If you have any questions about our support, please contact me at 541-708-0731 or jim@waterwatch.org.

Sincerely,

Jim McCarthy
Communications Director & Southern Oregon Program Manager
WaterWatch of Oregon

Cc: John DeVoe, Executive Director
Bob Hunter, Board Member



United States Department of the Interior

BUREAU OF RECLAMATION
1375 SE Wilson Avenue, Suite 100
Bend, Oregon 97702-2607

IN REPLY REFER TO:

BFO-1400
ENV-7.00

Water For Irrigation, Streams & Economy (WISE)
Steve Mason – Project Coordinator
Smason@wiseproject.org

Re: Support Letter for WISE's Proposal to Secure Funding

Dear Mr. Mason ,

I am writing in support of the Water for Irrigation, Streams and Economy (WISE) proposal to secure funding from the Oregon Water Resources Department (OWRD) Feasibility Program (SB1069).

These funds are intended to help WISE continue its role evaluating the existing water rights and changes necessary to those rights for the betterment of the Rogue River Basin. The community in the Rogue River Basin believes strongly that we must address future water needs in a collaborative way that balance municipalities, economies, and agricultural users as well as instream needs. Aligning diverse interests around something as contentious as the future use of water and conservation on a regional scale takes significant time and process.

Investment from OWRD will provide necessary support to the WISE program ensuring it can engage and build trust with the diverse interests around water. Collaboration, trust, information and resources are central to WISE's ability to develop a water right plan to help solve water needs into the future. Please consider their application to fund this important task.

Sincerely,

Douglas DeFlicht
Bend Field Office Manager

cc: Steve Mason, WISE CCA-1002 (Chad); PN3010 (Horsburgh); PN-3800 (Hessman)



February 8, 2016

Oregon Water Resources Department
Attn: Jon Unger, Grant Program Coordinator
725 Summer Street NE – Suite A
Salem, OR 97301

RE: 2015-2017 Water Conservation, Reuse and Storage Feasibility Study Grant Program - Applicant –
Medford Water Commission on behalf of Project WISE

Dear Mr. Unger:

The Oregon Legislature, upon request of the Governor's Regional Solutions Team (RST) appropriated \$1,500,000 of Regional Solutions Team (RST) funds for the WISE project. It was determined that the Oregon Business Development Department's – Infrastructure Finance Authority (OBDD-IFA) would become the administrating pass through agency for the funds.

On March 10, 2014 OBDD-IFA and the U.S. Bureau of Reclamation (USBR) entered into a \$1,250,000 intergovernmental agreement (IGA #C2014010) providing the necessary funds for the USBR to complete: a full Feasibility Study meeting USBR requirements, and a National Environmental Policy Act (NEPA) level Environmental Assessment. The funded work may also include a preliminary design and economic analysis. December 22, 2015, the IGA was amended, increasing the award amount to \$1,355,214.39, and extending the effective date of the IGA to December 31, 2017.

To date, (as of December 31, 2015) the USBR has expended \$522,000, leaving a balance of \$833,214.39 for approved project activities.

OBDD-IFA supports the project and if you should need any additional information regarding the RST funds awarded to the USBR please do not hesitate to contact me at 541-882-1240 or by email mary.a.baker@oregon.gov

Sincerely,



Mary Baker, Regional Coordinator
Infrastructure Finance Authority

c: Brian Drake, USBR
Carolyn Chad, USBR
Steve Mason, Watersheds Systems Consulting, LLC
Robert Jones, Medford Water Commission

Request to be added to the Oregon Water Resources Department's
Inventory of Potential Conservation Opportunities

The purpose of this inventory is to catalogue potential conservation projects that water users themselves have identified but not yet pursued because of financial, institutional, or other barriers. For the purpose of this application, water storage other than above-ground are included as conservation opportunities and are most likely capital conservation projects.

As a water provider or user, you know your water demands and water conservation opportunities better than anyone. We would appreciate your assistance with this important data collection effort by completing this survey. Your participation will help provide the building blocks we need to begin to identify and achieve potential future water supplies. Please answer the questions as completely as possible, to the best of your ability. We appreciate your help with this important effort.

This inventory of already-identified, potential conservation projects includes both capital and programmatic projects. Capital projects are defined as one-time, large investments resulting in water savings. Examples include reclaimed water plants, reservoir covering, transmission line upgrades reducing leaks, or industrial engineering modifications to re-use process water. Programmatic projects are defined as ongoing investments resulting in water savings. Examples include facilitating upgrades to more efficient water using devices (e.g., distributing free showerheads, toilet rebates) and distribution system leak detection programs. The conservation inventory is primarily intended to include "planned" projects rather than projects that are currently being implemented. However, currently active programmatic projects may be listed if they will continue or expand in future years. The inventory of projects submitted will be compiled by county or basin.

Examples are provided below.

	Example Capital Conservation Project	Example Programmatic Conservation Project
Project Description Provide brief sentence	Line 3 miles of unlined ditch.	Toilet rebate program for residential customers
Estimated Future Savings Provide brief sentence, including information regarding savings seasonality.	20 acre feet of water per year	If we spend our full budget each year, we estimate 50,000 gallons of water save per year
Seasonality Indicate what part of the year savings are generated (e.g. year-round; summer only; etc.).	Peak (irrigation) season savings.	Savings should occur throughout the year.
Estimated Future Costs Provide brief sentence.	\$500,000 total project costs.	\$40,000 a year.
Implementation Schedule Provide brief sentence.	Not set. Have conducted cost and savings estimate, but still seeking funding.	We started the program in 2005 and plan to implement until 2015.
Project Funded? Designate either "yes", "no", or provide brief sentence if necessary	No. Pursuing grant funding.	Yes. IN our CIP through the next 5 years.

To add a project to the inventory of potential conservation opportunities, please provide the following information for each conservation project.

This is a <input checked="" type="checkbox"/> Capital Conservation Project <input type="checkbox"/> Programmatic Conservation Project	
Project #/Name	Water for Irrigation Streams and Economy (WISE)
Project Description	The WISE Project proposes to pipe the more than 600 miles of canals that serve the Medford, Talent and Rogue River Irrigation Districts which serve 35,000 acres of irrigated lands. WISE is estimated to conserve up to 40,000 acre/feet of water in an average irrigation season while leaving up to 10,000 acre/feet of water instream for habitat improvement. WISE will also include using reclaimed effluent for irrigation, a new pump station on the Rogue River that will have access to existing water rights through POD changes, and contract water from Lost Creek Reservoir.
Estimated Future Savings	Piping of pipes can conserve up to 1/3 of the water diverted into the system leading to savings of up to 40,000 acre/feet of water. The pressure generated within the system will also incentivise on-farm irrigation efficiency improvements which will further increase water savings.
Seasonality	The project benefits will mostly occur during the irrigation season (April through October 15 th). However, some benefits such as recreation at the reservoirs within the sytem will be improved throughout the year due to greater carryover in the reservoirs.
Estimated Future Costs	Being dertermined at this time with a Feasibility Study. Preliminary estimate is \$200M to \$400M for construction of the entire new infrastructure including reuse plant at the Regional Wastewater Reclamation Facility.
Implementation Schedule	Complete Feasibility Study and NEPA during 2017. Permitting and Design completed during 2018. Construction from 2019 through 2022.
What are the barriers to implementation, e.g. funding?	The largest barrier is funding. A funding and Financing plan is under development at this time. Initial stages of the Feasibility Study and NEPA work show no significant barriers in the regulaory process. The large size of the project creates an inertia that must be fought against.
This is a <input type="checkbox"/> Capital Conservation Project <input type="checkbox"/> Programmatic Conservation Project	
Project #/Name	
Project Description	
Estimated Future Savings	
Seasonality	
Estimated Future Costs	
Implementation Schedule	
What are the barriers to implementation, e.g. funding?	

- Include this form with your application -