OREGON WATER RESOURCE DEPARTMENT
WATER CONSERVATON, REUSE AND STORAGE
GRANT PROGRAM

I. Grant Information

Study Name: *Radabaugh Water Reuse Pond Project*

Type of Grant Requested: ☐ Water Conservation ☒ Reuse ☐ Above-Ground Storage
☐ Storage Other Than Above-Ground [Including Aquifer Storage and Recovery (ASR)]
Note: A Water Conservation and Reuse study may be submitted as a joint application. All other applications must only include one application type.

Program Funding Dollars Requested: $ 8,637.00 Total cost of planning study: $ 17,274.00
Note: Request may not exceed $250,000

II. Applicant Information

Applicant Name: ***Central Oregon Irrigation District***		**Co- Applicant Name:**
Address	*1055 SW Lake Ct*	Address:
	Redmond, OR 97756	
Phone	*541-548-6047*	Phone:
Fax:	*541-548-0243*	Fax:
Email:	*lauraw@coid.org*	Email:

Principle Contact: ***Laura Wollam***	
Address:	*1055 SW Lake Ct*
	Redmond, OR 97756
Phone:	*541-504-7577*
Fax:	*541-548-0243*
Email:	*lauraw@coid.org*

Certification:

I certify that this application is a true and accurate representation of the proposed work for a project planning 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 and are prepared to conduct the planning study if awarded.

Applicant Signature: Carroll Penhollow Date: *04/11/2014*

Print Name: *Carroll Penhollow* Title: *COID Board President*

III. Planning Study Summary

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

The Radabaugh Pond Reuse Project will evaluate recent Dry Canyon irrigation water flow trends as well as the existing and potential future irrigation water rights for the Dry Canyon area that may benefit from this pond capture and reuse project. General geology and geotechnical information studies will also be completed for recommendations of material for potential pond embankment. Project design of the proposed pond, spillway, and drain system will be completed to determine effectiveness of the pond for reuse of captured tail water and storm runoff for irrigation in the Dry Canyon area.

IV. Grant Specifics

Section A. Common Criteria

Instructions: Answer all questions in this section by typing the answer below the question. It is anticipated that completed applications will result in additional pages.

1. Describe your goal (which must be based on evaluating the feasibility of developing a water conservation, reuse or storage project) and how this study helps to achieve the goal.

   This project, located in the Dry Canyon area of Powell Butte, Oregon, will determine the feasibility of building a capture pond at the tail end of the Dry Canyon to capture irrigation water, waste water, and storm water runoff to be reused for irrigation of the 29 acres of irrigation water rights located within the project area. The capture pond is also intended to significantly reduce the amount of runoff spilling into the Crooked River from the Dry Canyon, thereby improving water quality in the Lower Crooked River.

   The study will complete a Water Balance Evaluation that will include evaluations of recent Dry Canyon irrigation water flow trends, including maxima and minima, and existing and potential irrigation water rights for the area that may benefit from this reuse project. The data will be evaluated as it relates to proposed pond volume that will include a table of reconnaissance-level estimated pond water balance over an irrigation season.

   Upon completion of the Water Balance Evaluation, 100% design will be completed based on the findings of the evaluation. The final design will include the proposed pond, spillway, drain system, cross sections, and associated features.

   This study will provide necessary information to determine if building a capture pond at the end of the Dry Canyon is cost effective for the amount of water that will be captured for reuse. The study will also provide valuable information as to whether similar projects would be worthwhile and cost effective to pursue in other areas throughout the District's boundaries, and potentially for other irrigation districts in the Deschutes Basin.

2. Describe the water supply need(s) that the project associated with the planning study is intended to meet. Applicant should reference supporting documentation that would be available upon request.

   This reuse project is intended to capture irrigation water runoff at the end of the Dry Canyon, located in Powell Butte, and stop that runoff from entering the Lower Crooked River where it currently flows to. Even though studies have shown that the water that enters the Crooked River from the Dry Canyon is a lower temperature than the river itself in that area, the District is supposed to do all it can to keep runoff from entering natural bodies of water. This project would help COID in its proactive attempts to do all it can to keep runoff from entering the river.

   The pond will also benefit local irrigators by allowing them to more efficiently irrigate their lands by pumping from the pond to irrigate rather than using flood irrigation.

3. Explain how the project associated with the planning study 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% of your need will be met).

   This project does not address specific water supply needs of the Deschutes Basin for conservation. Rather it addresses a need for irrigators in the area to be better able to efficiently irrigate their lands and meet beneficial use requirements of the State.

As this project is for the purpose of capturing tail water and storm water runoff for reuse, no water conservation will be realized because the runoff is coming from irrigators upstream of the project area due to irrigation practices and the topography of the lands in the Powell Butte area. There will also be no need to increase the amount of water diverted from the Deschutes River to deliver water to any lands downstream of the project area, as this property is the last property on the conveyance system to receive water from COID. Therefore no changes will be realized to the amount of water diverted from the Deschutes River through the Central Oregon Canal.

4. Describe the technical aspects of the planning study and why your approaches are appropriate for accomplishing the goal of the planning study.

The technical aspects of the study are broken out into tasks below, including a description of what each task entails.

COID feels that this approach is appropriate for accomplishing the goal of this planning study based on previous experience with a similar project and approach. When the Malott Tail Water Recovery Project was being considered for feasibility as well as during project planning, a very similar approach was taken to complete the study and project plans. The Malott Project was completed in the 2012/2013 off season and was successfully implemented and used throughout the entire 2013 irrigation season as planned.

Task 1: Field Surveying
Using survey grade cell technology, COID will gather field elevation and horizontal data per the criteria established by Black Rock Consulting, Inc. (BRC) for the proposed capture pond site and surrounding area. The survey will include 50-FT canal cross section intervals to a minimum of 75-FT beyond canal banks on the east and west sides. The survey length will be approximately 0.5 mile. Existing features within the survey area including concrete structures, utility poles, mainlines, and other noted features will also be included. COID will reduce the data and provide it to BRC in spreadsheet format using Oregon Grid Coordinates for use in developing the design documents.

Task 2: Water Balance Evaluation
COID will provide BRC the available records for Dry Canyon flows from its compound weir and ramp flume located below and above the project site respectively. BRC will evaluate the data to determine recent Dry Canyon irrigation water flow trends including maxima and minima. COID will also provide BRC the existing and potential irrigation water rights for the area that may benefit from the capture pond project. BRC will evaluate this data as it relates to proposed pond volume. BRC will develop a table of reconnaissance-level estimated pond water balance over an irrigation season based upon the above data.

Task 3: Base Mapping
From available District and/or free-ware aerial imagery and the results of the Field Surveying, BRC will develop base mapping at no less than 1"=50-FT scale.

Task 4: Potholing
Based upon a plan developed by BRC, COID will excavate holes in the vicinity of the proposed capture pond to determine general geology. Geotechnical engineering services may be contracted by COID through the NRCS or private consultant to enhance geotechnical information and to make recommendations regarding use of material for potential embankment.

Task 5: Conceptual Design
Based upon the Water Balance Evaluation, Survey, and Base Mapping, BRC will develop a conceptual design of the capture pond. It is anticipated that this will include pond limits, pond depth, pond sidewall slopes, berm location and geometry, overflow considerations, and drainage considerations. The Conceptual Design will be prepared at a

minimum of 1"=50' scale in AutoCAD format. The design will be developed assuming COID construction and will be presented to COID for review and comment.

Task 6: Final Design
BRC will incorporate comments from the Conceptual Design review and will develop the Final Design for the project including a plan view of the proposed pond, spillway, drain system, cross sections, and associated features. The design will be based upon an irrigation impoundment that complies with irrigation purposes and will not exceed criteria that would trigger an Oregon State Dam Safety review and approval (i.e., less than 10-FT in height or less than 9 AF of storage).

Task 7: Cost Estimates
A preliminary opinion of costs will be developed for the conceptual design and final design based upon recent project experience as well as equipment and personnel rates provided by COID.

Task 8: Reporting
COID will have primary reporting responsibility to the Water Conservation, Reuse, and Storage Grant Program. BRC will provide periodic progress updates and reports and will support final reporting to OWRD with information inputs required by COID.

Once the study is complete, COID will have the necessary information to determine if the completion of a capture pond in the Project area is feasible. If it is determined that this project is feasible, COID will move forward with completing this Project using COID project budgeted funds in the 2014/2015 off season.

5. Describe how the planning study will be performed. Include:
    a. General summary statement that describes the study progression.
    b. When the planning study could 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

        Example: Seepage Loss Measurements: June to July – Measurements will be taken to determine… (Key Tasks listed here are to be placed in Section VI. Project Planning Study Schedule for a quick reference "graphical" representation of the schedule.)

The project is slated to begin no later than June 1st with the initial field surveying in the identified project area. COID and Black Rock Consulting (COID's engineering contractor) anticipate the project will move forward from the field surveying and progress through evaluation, mapping, potholing, preliminary conceptual design, cost analysis, and then final design. A final report will be completed after all of the tasks are completed and will be submitted to COID for review and submission to OWRD. At this time, COID is anticipating the project will have a favorable outcome for project completion, and the District plans to complete the pond construction during the 2014/2015 off season. When the construction is complete, the land owner will purchase and install the necessary irrigation equipment to irrigate all areas with appurtenant water rights on the property beginning in the 2015 irrigation season.

The planning study is scheduled to run from June 1, 2014 through January 15, 2015. This time frame includes all of the tasks listed below and the reporting as required by OWRD. COID anticipates that the final report for this funding opportunity will be filed with OWRD by January 15, 2015.

The following is a list of activities that will be performed for this study, broken out by key tasks.

Task 1: Field Surveying: June 1 – July 15, 2014

a. *Using survey grade cell technology, field elevation and horizontal data will be gathered per the criteria established by Black Rock Consulting, Inc. (BRC) for the proposed capture pond site. The survey will include 50-FT canal cross section intervals to a minimum of 75-FT beyond canal banks on the east and west sides. The survey length will be approximately 0.5 mile. Existing features within the survey area including concrete structures, utility poles, mainlines, and other noted features will also be included. –* ***COID***
b. *Data will be reduced and provided to BRC in spreadsheet format using Oregon Grid Coordinates for use in developing design documents. –* ***COID***

Task 2: Water Balance Evaluation: June 1 – July 15, 2014

a. *Available records for Dry Canyon flows from its compound weir and ramp flume located below and above the project site respectively will be provided to BRC. –* ***COID***
b. *Data evaluation will be conducted to determine recent Dry Canyon irrigation water flow trends including maxima and minima. –* ***BRC***
c. *Existing and potential irrigation water rights within the project area that may benefit from the project will be provided to BRC. –* ***COID***
d. *Data evaluation will be conducted as it relates to proposed pond volume, and a table of reconnaissance-level estimated pond water balance over an irrigation season based upon the above data will be developed. –* ***BRC***

Task 3: Base Mapping: July 15 – August 1, 2014

a. *From available District and/or free-ware aerial imagery and the results of the Field Surveying, base mapping at no less than 1"=50-FT scale will be developed. –* ***BRC***

Task 4: Potholing: August 1 – August 15, 2014

a. *Based upon a plan developed by BRC, holes will be excavated in the vicinity of the proposed capture pond to determine general geology. –* ***COID***
b. *Geotechnical engineering services may be contracted through the NRCS or private consultant to enhance geotechnical information and to make recommendations regarding use of material for potential embankment. –* ***COID***

Task 5: Conceptual Design: August 1 – September 15, 2014

a. *Based upon the Water Balance Evaluation, Survey, and Base Mapping, a conceptual design of the irrigation pond will be developed. It is anticipated that this will include pond limits, pond depth, pond sidewall slopes, berm location and geometry, overflow considerations, and drainage considerations. The conceptual design will be prepared at a minimum of 1"=50' scale in AutoCAD format. The design will be developed assuming COID will perform the construction. –* ***BRC***
b. *The conceptual design will be presented to COID for review and comment. –* ***BRC***

Task 6: Final Design: September 15 – October 31, 2014

a. *Comments from the conceptual design review will be used to develop the final design for the project including a plan view of the proposed pond, spillway, drain system, cross sections, and associated features. The design will be based upon an irrigation impoundment that complies with irrigation purposes and will not exceed criteria that would trigger an Oregon State Dam Safety review and approval (i.e., less than 10-FT in height or less than 9 AF of storage). –* ***BRC***

Task 7: Cost Estimates: August 1 – October 31, 2014

a. *A preliminary opinion of costs will be developed for the conceptual design and final design based upon recent project experience as well as equipment and personnel rates provided by COID. –* ***BRC***

Task 8: Reporting: September 1, 2014 – January 15, 2015

a. *Periodic progress updates and reports will be submitted to COID. – BRC*
b. *Final feasibility study will be completed and submitted to COID, which will include final project design and cost estimates. –* ***BRC***

c. *Quarterly and final reporting, including the feasibility study report will be submitted to the Water Conservation, Reuse, and Storage Grant Program as required by OWRD. – **COID***

6. Provide data and information on the associated project and the project's sources of water supply:

   a. The location of the associated project. (Include the basin, county, township, range and section.)

      *The project is located in the Deschutes Basin; Crook County; Township 14 S, Range 14 E, Section 27; Powell Butte, Oregon. The pond will be located in the NE ¼ of the SW ¼ of Section 27. See attached project map (**Exhibit A**).*

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

      Middle Deschutes River – COID pulls into its Central Oregon Canal from the south end of Bend near the COID Siphon Power Plant. The Central Oregon Canal runs through Bend, Alfalfa, and Powell Butte, terminating at the end of the Dry Canyon (the project area).

   d. Whether the project will be off-channel or on-channel.

      The project will be off-channel.

   e. Water availability to meet project storage. (Typically, the Department evaluates new storage projects using a 50 percent water availability analysis.)

      Not applicable to this project.

   f. Proposed purposes and uses of stored water.

      Not applicable to this project.

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

      Not applicable to this project.

7. What local, state or federal project permitting requirements/issues/approvals do you anticipate in order for the planning 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.

   There are no permitting requirements/issues anticipated for the study to be conducted.

8. Describe the level of involvement, interest and/or commitment of different entities associated with the planning study (attach letters of support). Describe how these entities will benefit or be impacted by the planning study.

Crook County Soil and Water Conservation District (SWCD)
COID has actively worked in partnership with the Crook County SWCD for many years in the Powell Butte area, and more recently focusing on the Dry River Canyon, to find ways to improve water quality, noxious weed management, and irrigation practices including runoff and tail water reuse. Crook County SWCD is very committed to maintaining its relationship with COID and supporting projects that promote the goals of the Crooked River Agricultural Water Quality Management Area Plan. The most recent COID project in Powell Butte (Malott Tail Water Recovery Project) was completed as a partnership with Crook County SWCD and the Malott Ranch (land owners for the project location). The SWCD assisted with funding the project and working closely with the on-the-ground project work. COID and the SWCD anticipate working as closely on this project, and in a similar manner as the Malott project, once the project moves forward to the construction phase. See attached letter of support from Libby Stahancyk, Crook SWCD Project Manager ***(Exhibit B)****.*

Crooked River Watershed Council
Although COID was unable to obtain a letter of support for the project from the Crooked River Watershed Council prior to submitting this application, it should be noted that they also share a high level of interest and involvement in this project, as the project will potentially contribute to the Dry River Canyon watershed's strategic plan for water quality improvements, reduced flow returns to the Crooked River, and tail water reuse.

Christian Radabaugh, Owner – Radabaugh Ranch
The capture pond is to be located on the Radabaugh Ranch property. COID and Crook County SWCD approached Christian Radabaugh with the prospect of doing a reuse project to capture storm water and tail water runoff for use in irrigating the property where the irrigation rights are located. Mr. Radabaugh has expressed his support for the project on his land, and has also relayed to COID that he is willing to invest in the necessary irrigation equipment to irrigate from the retention pond and reuse the captured water once construction is complete. Construction of the capture pond will allow Mr. Radabaugh to upgrade his irrigation system from flood irrigation to a more efficient sprinkle irrigation system. See attached email of support from Christian Radabaugh ***(Exhibit C)****.*

9. Identify when matching funds will be secured and the term of matching funds availability.

Matching funds for this project are secured through COID Capital Funds in the 2014 budget. Funds 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 planning 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 planning study.

The following personnel and contractors are expected to be the key players in the study:

Larry Roofener – COID Operations Manager
Larry has been the COID Operations Manager for 9 years. During his time as Operations Manager, Larry has seen many projects come to realization including the Juniper Ridge Hydroplant and Piping Project – a 5 MW hydropower plant that produces electricity during the irrigation season and winter stock runs and is sold to

Pacific Power, and a 2.5 mile piped section of the canal that leads to the hydropower plant. Other projects completed while Larry has been with the District include the I-Lateral feasibility study, West F-Lateral Feasibility Study, Deschutes Conservation Initiative, C-Lateral piping project, automated gates at the PBC headworks, H-14 and H-14-1 piping projects, and many other projects. Larry also manages the District's maintenance and operations staff consisting of 15 employees. He also works very proactively with the local Soil and Water Conservation Districts in the Deschutes Basin.

Jeremiah Fender – COID Land Use/Technology Coordinator

Jeremiah is a Land Use Specialist for COID with 8.5 years of experience in this position. He is also a Telemetry Technician with 4 years of experience in this area. As a Telemetry Technician, Jeremiah tracks the daily readings from the telemetry stations and builds reports from the data that calculate the amount of water delivered at the telemetry stations. He is also responsible for operating the Doppler boat and the data collected from the boat readings to determine high-loss areas within COID's canal system. Based on data collected and loss reports produced, Jeremiah assists other staff members with recommendations for and evaluations of future conservation projects and system improvements.

Daniel Downing – GIS Technician

Daniel is a GIS Technician for COID with 2 years of experience in this position. As the GIS technician, Daniel is responsible for the spatial data collection of the mapping software. He assists in the process of generating maps. Daniel is also involved in digitizing original documents into the COID data base. He has also assisted in loss prevention studies within the canal systems, operates the Doppler boat, and performs data collection. Dan is also responsible for determining if utility locates interfere with COID canal systems and operations.

Laura Wollam – COID Water Use/Grant Specialist

Laura is the Water Use Specialist/Grant Specialist for COID with 9.5 years of experience in water use matters for an irrigation district and 13 years overall experience in grant writing. Laura has prepared grant applications/proposals for COID for many projects that have been successfully funded including the I-Lateral feasibility study, West F-Lateral Feasibility Study, C-Lateral piping project, and the Juniper Ridge piping projects. She has also been involved with the DEQ loan applications for the Juniper Ridge Hydroplant piping projects funding process. Along with preparing COID's funding applications and proposals, Laura also successfully runs the beneficial use program and instream lease program for the District. This process requires diligent record keeping of beneficial use on all 42,935.058 certificated water rights in the District and includes notifying the District's patrons per State requirements when their water rights have not been beneficially used as required.

Kevin Crew – Black Rock Consulting, Inc. - P.E., President

Kevin is a civil engineer with 30+ years of experience in personnel management, project design and management, hydroelectric power feasibility and implementation, hydraulic analysis, construction management, and public presentations. Kevin has prepared water master plans and water conservation plans for various agencies in Oregon. He plans, manages and designs domestic and irrigation water supply, hydropower, fish screening and passage, grading, sewer, and stormwater facility projects. His focus is on irrigation piping projects, hydropower projects, fish screening and fish passage projects. Mr. Crew has completed large and small multifaceted projects for the public sector, including the military, and for private developers. He has prepared a variety of engineering feasibility studies, rate studies, and facility master plans. Mr. Crew has managed as many as 63 permanent staff. He is an experienced plan checker. Kevin has been in responsible charge of over $175 million in water resources related projects. Recent work on behalf of COID includes feasibility studies for hydroelectric power generation, management and implementation of the Juniper Ridge Hydroelectric Power Generation Project (5.0 MW and 2.5 miles of 9-FT diameter steel pipeline), the I-Lateral feasibility study, Siphon Power Project intake improvement design, fish return improvements, C-Lateral pipeline and conservation design and implementation, and a variety of other projects. Recent work on behalf of the North Unit Irrigation District includes the Feather Drive piping conservation study, hydroelectric power generation feasibility studies, design, bidding and construction management of the North Unit Irrigation Main Canal Lining Project (5-miles of bank lining to mitigate seepage losses), design and implementation of the 5-mile long 58-11 lateral (48-inches in diameter down to 21-inches in diameter) and re-regulating pond project, design and implementation of the 58-9 lateral project. Other recent

basin work by Black Rock Consulting includes the Ochoco Irrigation District System Optimization Review and the Rock Creek Irrigation District (Wasco SWCD) conservation and piping design for 14 miles of irrigation systems.

Engineering Technician – Black Rock Consulting, Inc.

The engineering technician will work closely with Kevin Crew to complete their portions of the Radabaugh Pond Reuse Project. All work completed by the technician at Black Rock Consulting will be reviewed and approved by Kevin Crew before being submitted to COID.

Section B. Unique Criteria

Instructions: Answer the set of questions below that applies to the type of planning study that this grant will fund.

☐ Water Conservation or ☒ Reuse

1. Water Conservation or Reuse projects that may result from this planning study are requested to be included in the Water Resources Department's "Inventory of Potential Conservation Opportunities". Though you may have already submitted this information earlier in the year through a separate survey, we ask that all applicants complete the information on the form provided at the end of this application. ☒ I have filled out the application or ☐ I have not filled out the application.

2. Explain how the associated project will mitigate the need to develop new water supplies and/or 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.

   This project is intended to help improve water use efficiency in the Dry Canyon area of Powell Butte by constructing a retention pond to capture irrigation tail water and storm water runoff from the end of the Dry Canyon, then pumping the water out of the pond for irrigating existing water rights located within close proximity of the project area. This project is also intended to reduce the amount of runoff water that is transferred to the Lower Crooked River from the Dry Canyon, thereby increasing water quality in the river.

   A similar project recently completed in Powell Butte is the Malott Tail Water Recovery Project, completed in 2013. The Malott project constructed a retention pond to capture irrigation water and storm water runoff on the Malott Ranch property to eliminate swamp lands that were caused from the runoff and allow the land owner to utilize the water that built up in the project area for irrigation purposes. This project was completed prior to the 2013 irrigation season, and was considered successful after the 2013 irrigation season saw the continued use of the pond for capturing and pumping water to a large pivot to irrigate lands that were previously flood irrigated. This increased hay production for the land owner and allowed him to also irrigate areas that were very difficult to irrigate through flood irrigation and obtain beneficial use of the full water right. COID and Crook County Soil and Water Conservation District monitored the water use and the levels of runoff downstream from the project throughout the entire 2013 irrigation season to document the results of the project's completion.

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 resources, b) previously expended resources, and/or c) pending resources. For secured funding, you must attach a letter of support from the match funding source that specially 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. For resources that have been previously expended, the expenditure must have occurred on or after July 1, 2013. Resources expended prior to July 1, 2013 are not eligible for match purposes.

The Type of matching funds may include:	The Status of matching funds may include:
• The value of in-kind labor, equipment rental and materials essential to the planning study provided by the applicant or partner*.	• Secured funding commitments from other sources.
• Cash is direct expenditures made in support of the planning study by the applicant.	• Associated and documented expenditures for the planning study from non-program sources incurred on or after July 1, 2013.
	• 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 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)*
Central Oregon Irrigation District	☒ cash ☐ in kind	☒ secured ☐ expended ☐ pending	*$6,257.00*	*April 2014*
Central Oregon Irrigation District – In-kind labor	☐ cash ☒ in kind	☒ secured ☐ expended ☐ pending	*$2,380.00*	*April 2014*
	☐ cash ☐ in kind	☐ secured ☐ expended ☐ pending		
	☐ cash ☐ in kind	☐ secured ☐ expended ☐ pending		
	☐ cash ☐ in kind	☐ secured ☐ expended ☐ pending		
	☐ cash ☐ in kind	☐ secured ☐ expended ☐ pending		
	☐ cash ☐ in kind	☐ secured ☐ expended ☐ pending		
	☐ cash ☐ in kind	☐ secured ☐ expended ☐ pending		
	☐ cash ☐ in kind	☐ secured ☐ expended ☐ pending		
	☐ cash ☐ in kind	☐ secured ☐ expended ☐ pending		

VI. Project Planning Study Schedule

Estimated Project Duration: June 1, 2014 to January 15, 2015

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

Project Planning Study Key Tasks	2014				2015				2016 & Beyond
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	
Task 1: Field Surveying		X	X						
Task 2: Water Balance Evaluation		X	X						
Task 3: Base Mapping			X						
Task 4: Potholing			X						
Task 5: Conceptual Design			X						
Task 6: Final Design			X	X					
Task 7: Cost Estimates			X	X					
Task 8: Reporting			X	X	X				

VII. Project Planning Study Budget

Section A

Please provide an estimated line item budget for the project planning study. An example would include: labor, materials, equipment, contractual services and administrative costs.

Line Items	Number of Units* *(e.g. # of Hours)*	Unit Cost *(e.g. hourly rate)*	In-Kind Match	Cash Match Funds	OWRD Grant Funds	Total Cost
Staff Salary/Benefits	*60 hrs.*	*$35.00*	*$2,100.00*	*$0.00*	*$0.00*	*$2,100.00*
Contractual – BRC Project Engineer	*64 hrs.*	*$145.00*	$0.00	*$3,450.00*	*$5,830.00*	*$9,280.00*
Equipment	*N/A*	*N/A*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Other: BRC Technician (Contractual)	*67 hrs.*	*$82.00*	*$0.00*	*$2,747.00*	*$2,747.00*	*$5,494.00*
BRC Clerical (Contractual)	*2 hrs.*	*$60.00*	*$0.00*	*$60.00*	*$60.00*	*$120.00*
Administrative Costs**	*8 hrs.*	*$35.00*	*$280.00*	*$0.00*	*$0.00*	*$280.00*
Total for Section A			*$2,380.00*	*$6,257.00*	*$8,637.00*	*$17,274.00*
Percentage for Section A			*14%*	*36%*	*50%*	*100%*

** Note: The "Unit" should be per "hour" or "day" – not per "project" or "contract." Units x Unit Costs = Total Cost*
*** Administrative Costs may not exceed 10% 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 (Project Planning Study Schedule).

Project Planning Study Key Tasks	In-Kind Match	Cash Match Funds	OWRD Grant Funds	Total Cost
Total for Section B				

Totals in Section B must match the totals in Section A

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.

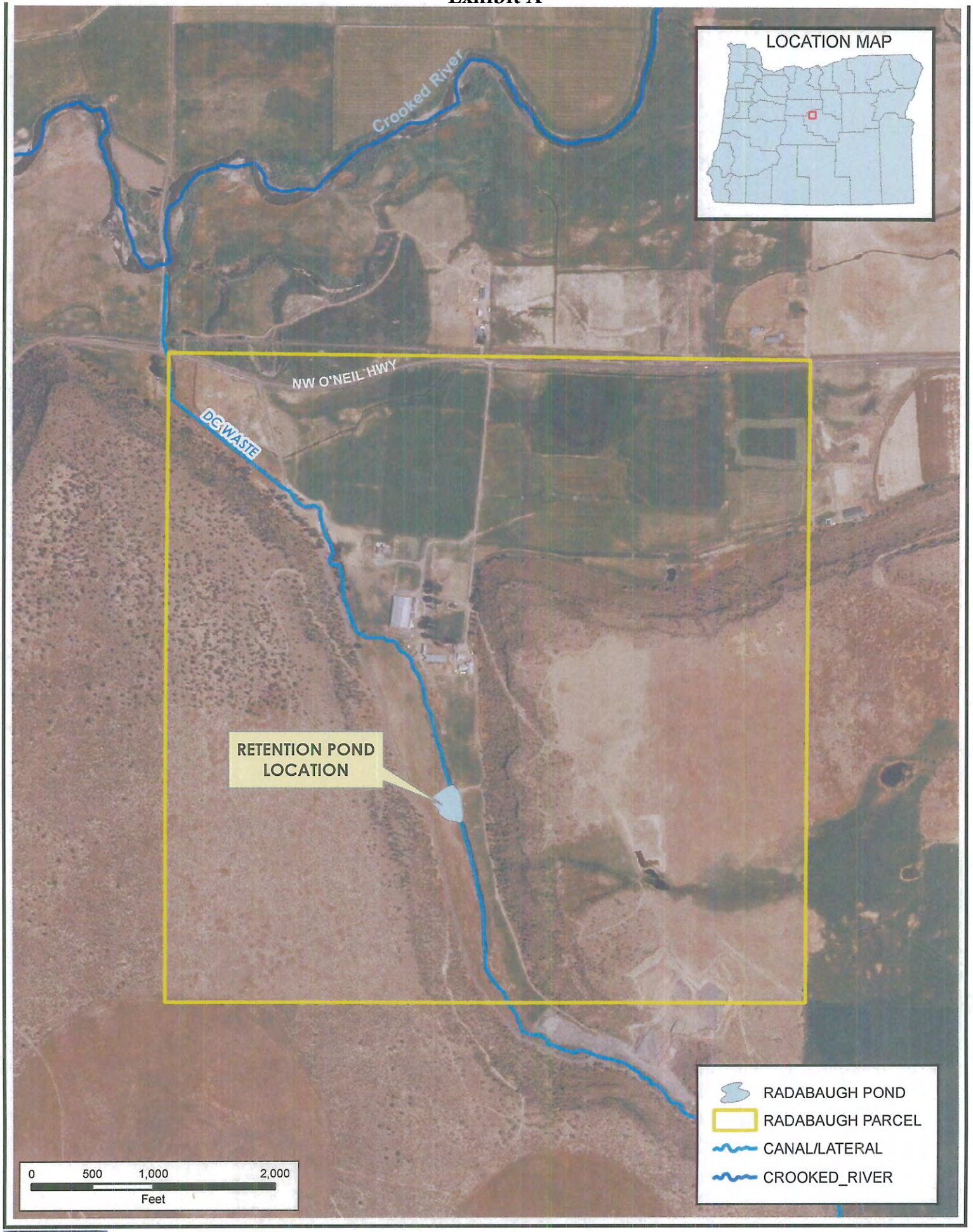
	Example **Capital Conservation Project**	**Example** **Programmatic Conservation Project**
Project Description Provide brief sentence	Line 3 miles of unlined ditch.	Toilet rebate program for residential customers
Estimated Future Savings Provide brief sentence, including information regarding savings 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 ☒ Capital Conservation Project ☐ Programmatic Conservation Project	
Project #/Name	**Radabaugh Water Reuse Pond Project**
Project Description	Construct a retention pond to capture irrigation tail water and storm water runoff from the Dry Canyon for reuse for irrigation practices and to decrease the amount of runoff that currently enters the Lower Crooked River from the Dry Canyon.
Estimated Future Savings	Unknown at this time.
Seasonality	Peak (Irrigation) season.
Estimated Future Costs	To be determined during the feasibility study, but not expected to exceed $50,000.
Implementation Schedule	2014 – 2015 irrigation off season.
What are the barriers to implementation, e.g. funding?	Funding will be provided through COID's budgeted capital funds for 2014/2015 if project is found to be cost effective and able to capture a significant amount of runoff for irrigation practices.
This is a ☐ Capital Conservation Project ☐ 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 -

Exhibit A



CENTRAL OREGON IRRIGATION DISTRICT

RADABAUGH WATER RE-USE POND PROJECT

N

APRIL 2014

Exhibit B

498 SE Lynn Blvd.
Prineville, Oregon 97754

Phone: (541) 447-3548 Fax: (541) 416-2115

Libby.rodgers@oregonstate.edu

March 26, 2014

Dear Oregon Water Resources Department:

I am writing you today in regards to Central Oregon Irrigation District's "Water Conservation, Reuse, and Storage grant" proposal.

Since 2010, the Crook County Soil & Water Conservation District has geared education, outreach, and restoration efforts toward agricultural water quality concerns within the Dry River Canyon, a sub-basin to the Lower Crooked River. Due to the valid interest, management, and leadership within this watershed, it is essential to continue Central Oregon Irrigation District's (COID) efforts and forward thinking.

As these efforts have emerged the Crook County SWCD has formed a partnership with COID, the Crooked River Weed Management Area, and the Crooked River Watershed Council to implement a strategic planning process focused specifically within the Dry River Canyon watershed. Over the next two years this strategic plan will include water quality monitoring, water flow data collection, noxious weed surveying, and current tail water reuse. Once the data is collected and analyzed potential options will be developed for water conservation, reuse, storage, and filtration (i.e. artificial wetlands).

As we are looked upon as Oregon Department of Agriculture's local technical assistance we feel comfortable saying that this proposal fully supports the Crooked River Agricultural Water Quality Management Area Plan, the mission of which is to 'Promote cost-effective agricultural management practices that maintain or enhance water quality in the Crooked River Management Area."

Again, we are pleased to support Central Oregon Irrigation District's grant proposal and look forward to implementing a multi-parameter land management approach with COID and Crooked River Watershed landowners (public and/or private) in the very near future.

Best Regards,

Libby Stahancyk
Project Manager, Crook SWCD

Exhibit C

Laura Wollam

From: Laura Wollam <lauraw@coid.org>
Sent: Friday, April 11, 2014 9:19 AM
To: Laura Wollam
Subject: FW: Radabaugh Capture & Reuse Pond Project

From: Larry [mailto:larryr@coid.org]
Sent: Friday, April 11, 2014 7:11 AM
To: COID Laura Wollam
Subject: Fwd: Radabaugh Capture & Reuse Pond Project

Sent from my Verizon Wireless 4G LTE DROID

-------- Original Message --------
Subject: RE: Radabaugh Capture & Reuse Pond Project
From: Christian Radabaugh <radranch@msn.com>
To: Larry Roofener <larryr@coid.org>
CC:

ToWhom this may concern,
As a new owner of the property at 15334 Ne Oneil Hwy. I am in full support of the COID Radabaugh Water Reuse Project. Once the the project is constructed, I am willing to invest in irrigation equipment for water reuse on this property.
Thank you
Christian Radabaugh