

Ochoco Irrigation District  
Rye Grass Canal System Improvement Project  
Crook County  
Prineville, Oregon

April 24, 2019

Ochoco Irrigation District  
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## Executive Summary

The Rye Grass Canal System Improvement Project (Project), proposed by Ochoco Irrigation District (OID or District) and located in the city of Prineville, Crook Country Oregon, will convert 1,790 feet of open Rye Grass canal (Canal) to pipe. Piping this section of the Canal will have multiple benefits, including: increasing water delivery efficiency on the Canal, reducing tailwater spills into the Crooked River, improving water quality, increasing public safety and reducing OID liability, decreasing canal maintenance and associated costs to the District and its patrons, and enhancing a planned expansion of the City's Rail to Trails program.

The Project will begin in November 2019 and end in January 2020. The Project is not located on a federal facility.

## Background Data

The Ochoco Irrigation District, with headquarters in Prineville, Oregon, manages an average annual diversion of 80,000 AF and an average annual delivery of 47,159 AF of agricultural and industrial water rights with priority dates ranging from 1869 to 1986. OID's primary sources of water are Ochoco Creek and the Crooked River. The District also holds water rights on Johnson Creek, Dry Creek, McKay Creek, Lytle Creek and unnamed sources that it uses to augment flows from the primary sources, mainly in the spring when water is available. OID has two principal sources of stored water: Ochoco Reservoir, formed by Ochoco Dam constructed on Ochoco Creek, and Prineville Reservoir, created by Bowman Dam constructed on the Crooked River. See Table 1 below for more information on OID's water right certificates.

Table 1: OID Water Rights

Certificate	Date	Source	Use	Rate	Duty
82246	1916, 1917	Ochoco, McKay, Dry, Lytle and Johnson Creeks, and all waste flow and return water flowing in all unnamed waterways, and Ochoco Reservoir	Primary irrigation (16614.3 acres) and industrial use (160.2 acres)	209.7 cfs	4 AF/acre
82247	1914	Crooked River and Prineville Reservoir	Primary irrigation (3087.3 acres) and supplemental irrigation (12011.9 acres)	190 cfs	4 AF/acre
82248	1986	Ochoco Creek and Reservoir	Industrial use (200 acres)	2.75 cfs	4 AF/acre
82249	From 1869 to 1916	Crooked River, Ochoco Creek and springs, McKay Creek	Supplemental irrigation (4601.87 acres)	59.93 cfs	4 AF/acre
55973	1914	Ochoco Creek	Storage of 46,400 AF for irrigation, 600 AF for industrial	N/A	N/A
57612	1914	Crooked River	Storage of 155,000 AF for irrigation; OID contract for 60,639 AF	N/A	N/A

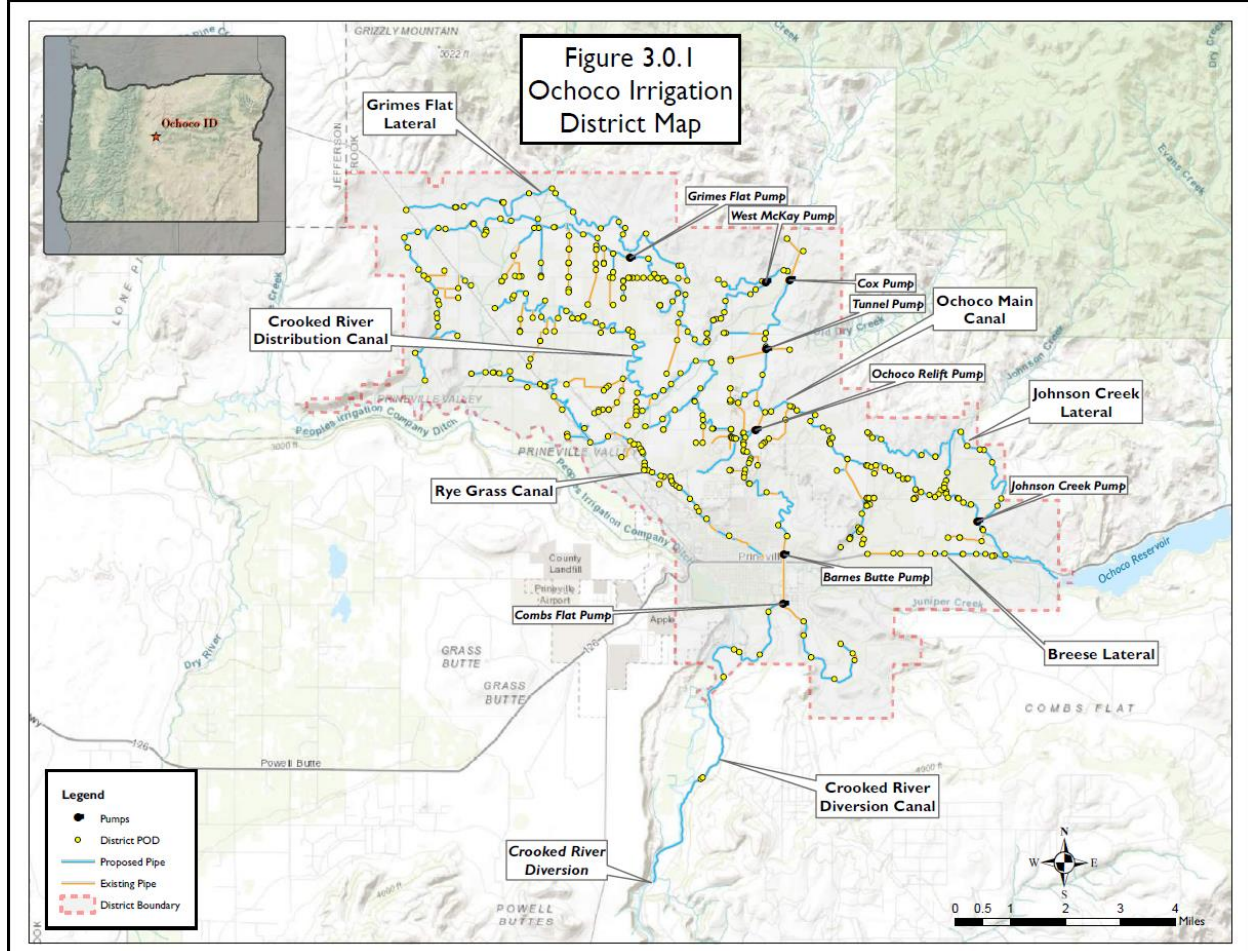
OID currently serves approximately 620 patrons and 18,349 acres in the Prineville area including 606 patrons and 17,989 acres of irrigated agricultural lands and 14 patrons and 360 acres of manufacturing and industrial lands. OID's boundary generally spans from about 5 miles east of Prineville at the Ochoco Reservoir to approximately 12 miles west of Prineville and is approximately 6 miles in width, bounded by the Crooked River on the southwest. Principal agricultural crops grown in OID are grain, hay, pasture, garlic, carrot seed, and mint. The District has a contractual relationship with the United States Bureau of Reclamation (BOR) regarding ownership and operation of elements of OID's water delivery system and associated reservoirs.

Water supply is generally sufficient to meet water demand in OID, which is projected to remain constant for the foreseeable future. While urbanization may result in modest changes in water demands, the effect of these changes on the District's available water supply is not expected to be significant and can be accommodated within the District's current water rights. Recent modeling conducted as part of the Upper Deschutes Basin Study (funded in part by BOR) confirmed this. Though the reliability of OID's water is already stable owing in part to "first-fill" priority provisions outlined in the Crooked River Collaborative Water Security and Jobs Act of 2014 (Public Law 113-244, December 18, 2014), it is expected to increase as the District modernizes its delivery system and implements conservation measures outlined in various District planning documents. Improvements to OID's delivery system will result in the ability to measure and manage water more efficiently.

The District operates and maintains over 122 miles of main canals and laterals, eight pumping plants, and Ochoco and Prineville Reservoirs. OID's main canals are: Crooked River Diversion Canal, Crooked River Distribution Canal, Ochoco Main Canal, and Rye Grass Canal. OID has approximately 50 miles of main canals, approximately 7 miles of which are concrete or clay lined. OID has approximately 71 miles of lateral canals—35 miles open and 34 miles piped.

The District's service area is across sloping terrain. It's three primary canals traverse the sloped terrain with each canal terraced below the next. There are five intermittent tributaries of the Crooked River within the bounds of the District. Irrigation water is delivered into the tributaries at various points as the District uses all five as part of their conveyance system and for operational spills. Four of the tributaries totally dry up after the end of the irrigation season when irrigation delivery water is shut off. Ochoco Creek has flow after the close of the season due to seepage from Ochoco Dam. This flow may be supplemented with releases from Ochoco Reservoir for fish and wildlife purposes and to maintain stream riparian growth. See Map 1: OID Map

## Map 1: OID Map



The geology of the area is mixed and while seepage loss exists in the system, it is not as significant as in other parts of the Deschutes Basin. However, tailwater, runoff, and returning flows from the system are more pronounced within OID. Of the approximate 80,000 AF diverted annually, approximately 18,000 AF are lost to returning flows from the system.

Over the last 20 years, the Ochoco Irrigation District has implemented programs to modernize many of its facilities including projects involving lining and piping portions of its system, implementation of compliant automated fish screening facilities at its Crooked River Diversion, implementation of SCADA/Telemetry flow measurement systems, installation of public and employee safety devices, and maintenance and upgrades of its existing facilities, including Bowman Dam. Additionally, the District has invested in efforts to upgrade its mapping and GIS capabilities. See Table 2: OID Irrigation Efficiency Projects below.

Most recently, the District completed system-wide improvement planning efforts (System Optimization Review and System Improvement Plan) and is participating in a basin wide effort to develop a comprehensive Habitat Conservation Plan for threatened and endangered aquatic species within the Crooked River subbasin.

Table 2: OID Irrigation Efficiency Projects (asterisk denotes BOR-funded projects)

<b>Diversion Projects</b>	<b>Description</b>
Jones Dam	Installed siphon, automate fish screen and ladder
*Reynolds Dam	Installed siphon and automated regulating gate
Battles Dam	Abandoned dam, installed pipeline from main canal
Pine Products Dam	Installed siphon
Smith Dam	Installed inverted weir and pump boxes
Rye Grass Dam	Installed inverted weir and piping
Slaughter House Dam	Abandoned dam, installed infiltration gallery, installed piping
Schnoor Dam	Abandoned dam, installed infiltration gallery, installed piping
Breese Dam	Installed inverted weir, 2 pumps, and pump boxes
Cook Dam	Installed inverted weir, piping, and delivery boxes
Red Granary Dam	Built new automated dam complete with fish ladder and screen
Ochoco Main Canal #3	Construct new check dam in Ochoco Main Canal
<b>Piping &amp; Lining Projects</b>	
*Lanius Pipeline	Installed pipe resulting in large water savings and pressure to patron pumps eliminating flood irrigation on this lateral
301 Pipeline	Concrete changed to PVC, tight lined
Breese Pipeline	Piped open lateral, added delivery boxes
Battles Pipeline	Install piping off Main Distribution Canal, replace Battle Dam on McKay Creek
Main Canal	Upgraded 600' of Main Canal with shotcrete to reduce seepage
*Various canal lining	Installed bituminous, rubber, and geosynthetic clay canal liners
* Various pipeline replacements, lateral piping, relocations	Concrete to PVC, new installations, tight lining patron pumps for efficiency
<b>Telemetry &amp; Alarm System</b>	
The Gap telemetry	Real time flow measurement, sent directly to OID
Lytle Creek telemetry	Real time flow measurement, sent directly to OID
Crooked River telemetry	Real time flow measurement, sent directly to OID
Relift alarm system	Alarm alerts OID office of system failure
Main Plant alarm system	Alarm alerts OID office of system failure
<b>Pumps</b>	
*Johnson Creek Pumping Plant	Installed variable frequency drive, pump and motor

Ochoco Irrigation District has a long-standing relationship with the Bureau of Reclamation (BOR). OID's partnership with BOR began in the 1940s when Ochoco Dam was rehabilitated, was strengthened with the construction of the Crooked River Project in 1958 and continues today with the implementation of water delivery improvements and planning efforts funded by the agency. OID efficiency projects funded, in part through BOR are denoted in Table 2 above.

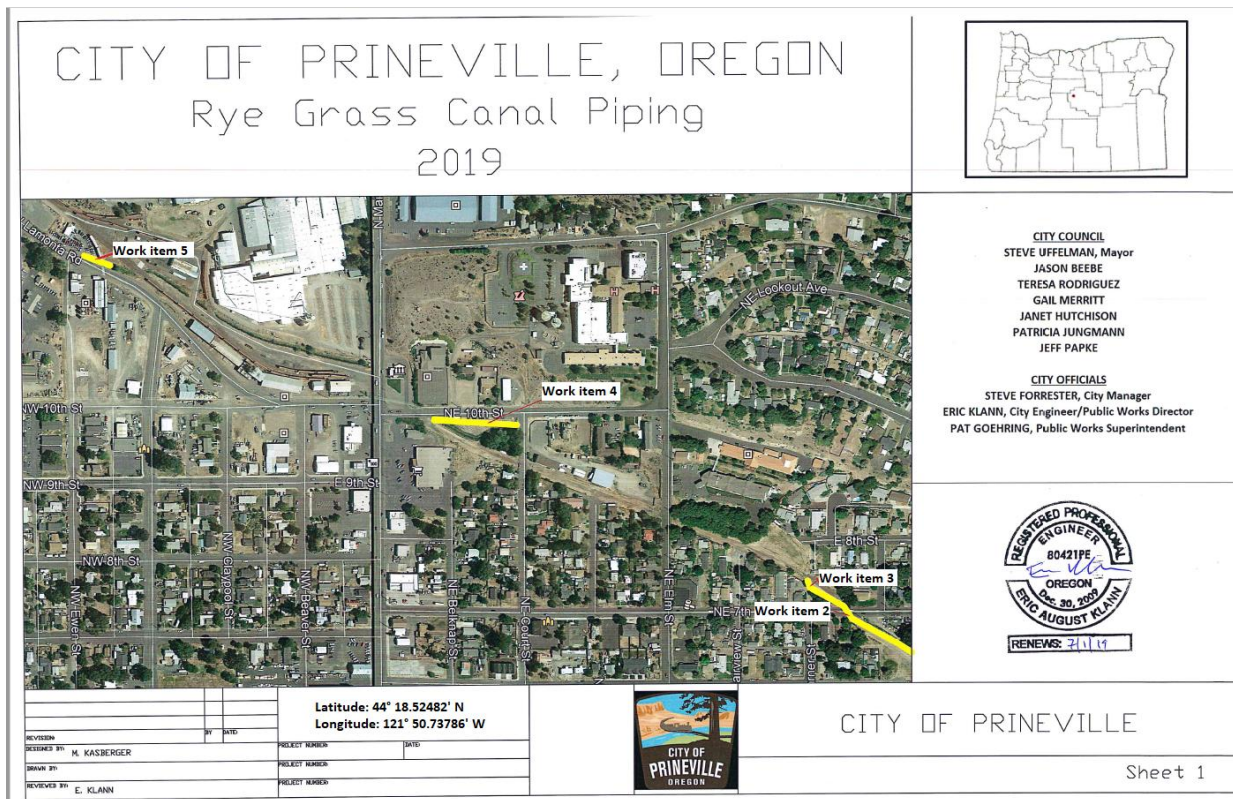
### **Project Location**

The Project is located in Crook County, Oregon within the limits of the City of Prineville. The Project latitude and longitude are approximately 44° 18.39528' N and -121 50.37078' W (see more specific locations for each Project section on Map 1 and Map 2 below).

Map 2: Project Location



Map 3: Project Location



## Technical Project Description and Milestones

### Identify the problems and needs

The Rye Grass canal (Canal) is a main canal in OID's distribution system. It is approximately 9.5 miles long and services 36 patrons on approximately 1,271 acres. The Canal is one of OID's main re-diversions, conveying co-mingled Ochoco Creek and Crooked River water diverted from Ochoco Creek. (See Map 3). During the irrigation season, the Canal also conveys the combined flow of springs, surface run-off and tailwater from the Ochoco Canal. The Canal travels from east-to-west through the District, eventually joining with Lytle Creek, which flows to the Crooked River.

Addressing water management and tailwater issues on the Canal are projects OID has previously identified and documented in its System Optimization Review (SOR, 2012) and more recently in its System Improvement Plan (SIP, revised 2018). The open Canal presents many management challenges for OID, including significant issues with water delivery due to the growth of vegetation in the Canal. Aquatic weeds and moss become a big problem in the Canal during mid to late summer as water temperature increases. If left unchecked, vegetative growth can drastically reduce canal capacity, causing overflow and/or slowing water delivery. To compensate for slower water deliveries, the District often conveys more "carry water" to move past vegetation and serve its patrons. This creates a significant volume of tailwater spill. OID's recently completed SIP estimates tailwater loss on the Canal at 3,500 AF. Adding to Canal capacity issues, vegetation and debris cause clogged screens, trash racks and inlets to pumps. OID struggles to control vegetation on its open canal system in the summer months, and maintenance time and cost to the district is a major concern. OID also uses chemical methods to control vegetative growth, impacting water quality in the Canal and ultimately, in the Crooked River.

This Project proposes to pipe 1,790 LF (.3 miles) of the Canal in a section that runs through the City of Prineville, adjacent to the City park. Piping this section of the Canal contributes to a larger effort to modernize the District through system improvements, increasing water delivery efficiency and water supply reliability. When the Canal was built in the 1920's, the section proposed in this Project was surrounded primarily by agricultural land and adjacent to the City of Prineville Railway. The section of Canal proposed for piping in this Project is now surrounded by residential and urban development—including the City park and an unimproved bikeway over the now abandoned railway line—creating more opportunities for the public to interface with the Canal. This urban environment has created additional management issues for OID including safety risks from potential drowning in the open Canal, and littering which compounds the clogging of screens, trash racks and inlets to pumps.

Recently, the City of Prineville secured funding from the Oregon Department of Transportation for its Rails to Trails Program, which converts decommissioned City railway sections to multi-use parks. The City is in the process of designing a 3,700-foot bicycle and pedestrian pathway at the Project site. The City and OID are excited to partner on this opportunity that not only alleviates some water management issues for OID but also provides multiple benefits to the community. While lessening a public safety risk is a primary public benefit of the Project, piping the canal at this location would also provide design and construction savings to the City, eliminating the need to plan for stormwater treatment and public safety concerns.



### **Describe how the project is intended to address the problems and needs**

This Project contributes to OID’s comprehensive plan to maximize water conveyances, reduce tailwater spill and improve overall water reliability by piping most of its District. Piping part of the Canal will ease public safety risks associated with an open canal in an area of high public use, eliminate many access points for trash and debris to enter the canal, eliminate water lost to evaporation in this section of the canal, help reduce tailwater spill at the end of the canal, and eliminate the need to treat vegetation in this section of Canal with herbicides.

OID chose this Project, not only for the practical management problems piping this section of Canal will abate (delivery issues, excessive tailwater, public safety concerns, littering, and water quality), but also for the added benefit this Project provides to the community: better design for a 3,700-foot bicycle and pedestrian pathway through the City’s Rails to Trails program, a safer space to recreate and design and construction savings to the City.

### **Identify the expected outcomes**

Expected outcomes of this Project include a 1,790 LF intermittent section of the Canal, piped with ADS series 65 water tight mega green pipe and galvanized culvert. The pipe will be buried at an average depth of three feet. Crook County Parks and Recreation will landscape and maintain work items 1 & 2, and the City will reseed work item 3 and reinstall railroad track in work item 4 (see Maps 1 & 2). In work item 4 (see Map 2), the Canal will be straightened to provide more contiguous recreation space.

The Project will also provide multiple beneficial outcomes to OID, the City of Prineville and Crook County. OID will be able to better manage flow throughout the Canal system, ease community safety risks, improve water quality, reduce maintenance costs, and reduce tailwater spill into the Crooked River. The City of Prineville and the local community benefit from access to a safe recreation area within City limits and can eliminate some of the costs associated with designing and constructing features necessary to accommodate the open Canal. This Project provides a great opportunity for OID, the City of Prineville and Crook County to partner on a water conservation collaborative project.

## **Evaluation Criteria**

### ***E.1.1. Evaluation Criterion A—Project Benefits (35 points)***

#### **Describe the expected benefits and outcomes of implementing the proposed project.**

Expected outcomes of this Project include a 1,790 LF piped section of the Canal, covered with 3’ of dirt and rehabilitated to design specifications. In work item 4 (see Map 2), the Canal will be straightened to provide more contiguous recreation space.

Expected benefits of the Project for OID include the following: increased water management and delivery efficiency through the elimination of vegetation in this section of the Canal, reduced tailwater spill into Crooked River, reduced operation and maintenance costs for the District, improved water quality resulting from the decrease in herbicide application to control vegetation, decreased liability by reducing public safety risk, and some water savings associated with evaporative loss. Expected benefits of the Project for the community include the following: access to a safe recreation area within city limits and elimination of the costs associated with designing and constructing features necessary to accommodate the open Canal.

- **What are the benefits to the applicant’s water supply delivery system?**

As described above, this Project will allow OID to better manage flow throughout the entire length of the Canal by alleviating water delivery challenges—and maintenance costs—associated with vegetative growth and littering, including decreased canal capacity (causing canal overflow, constrained water delivery and excessive tailwater), and clogged screens, trash racks and pump inlets.

- **If other benefits are expected explain those as well. Consider the following:**

- **Extent to which the proposed project improves overall water supply reliability**

Piping this section of Canal helps alleviate vegetative growth that drastically reduces canal capacity, causing canal overflow and/or slowing water delivery. To compensate for slower water deliveries, the District often conveys more water in an effort to carry it past vegetation and serve its patrons. OID’s recently completed SIP estimates tailwater loss on the Canal at 3,500 AF. Decreasing overflow and tailwater losses will improve the overall water supply reliability for OID on the Canal. Additionally, this Project contributes to OID’s comprehensive plan to convert more of its open ditches and canals to pipe, increasing water supply reliability across the entire District.

- **The expected geographic scope benefits from the proposed project (e.g., local, sub-basin, basin)**

District patrons (36) on the Canal, in the lower Crooked River subbasin, will benefit from increased water delivery efficiency and improved water reliability. The lower Crooked River will also benefit from an increase in water quality associated with the reduction in herbicide use on the section of Canal associated with this Project. Local benefits of the Project include the expansion of improved trails through the City’s Trails to Rails Program and a reduced risk to public safety from open canals.

- **Extent to which the proposed project will increase collaboration and information sharing among water managers in the region**

OID, City of Prineville and Crook County Parks and Recreation are collectively working on water conservation and habitat improvement projects, strengthening the partnership between these regional water managers. This Project is an outcome of that collaborative effort and is illustrative of these entities’ commitment to pursuing opportunities that provide multiple benefits to the community.

- **Any anticipated positive impacts/benefits to local sectors and economies (e.g., agriculture, environment, recreation, tourism)**

This Projects provides many positive benefits to local sectors including agriculture, environment and recreation.

**Agriculture:** District patrons (36) on the Canal—primarily agricultural producers—will benefit from increased water delivery efficiency and improved water reliability as the Project alleviates water delivery challenges—and maintenance costs—associated with vegetative growth and littering, including decreased canal capacity (causing canal overflow, constrained water delivery and excessive tailwater), and clogged screens, trash racks and pump inlets.

**Environment:** In addition to the more efficient delivery of water, the Project will help reduce the District’s application of herbicides to combat vegetation growth on the Canal. This will help improve the quality of the water conveyed in the Canal, and ultimately into the Crooked river

**Recreation:** Recently, the City of Prineville secured funding from the Oregon Department of Transportation for its Rails to Trails Program, which converts decommissioned City railway sections to multi-use parks. The City is in the process of designing a 3,700-foot bicycle and pedestrian pathway at

the Project site. This Project will reduce littering in the water system and direct bike and pedestrian use to improved recreation pathways. Piping the Canal will also alleviate public safety risks at the Project site.

- **Extent to which the project will complement work done in coordination with NRCS in the area (e.g., with a direct connection to the district’s water supply). Describe any on-farm efficiency work that is currently being completed or is anticipated to be completed in the future using NRCS assistance through EQIP or other programs.**

N/A

***E.1.2. Evaluation Criterion B—Planning Efforts Supporting the Project (35 points)***

- **Does the proposed project implement a goal or address a need or problem identified in the existing planning effort?**

This Project contributes to the implementation of OID’s most recent System Improvement Plan, aimed at maximizing water conveyances, reducing tailwater spill and seepage loss, and improving overall water reliability by piping most of its District. Addressing water management and tailwater issues on the Canal are projects OID has previously identified and documented in its System Optimization Review (SOR, 2012) and more recently in its System Improvement Plan (SIP, revised 2018).

- **Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.**

This Project contributes to the resolution of high tailwater spill from the Canal—a problem identified as a high priority in the District’s recent planning efforts. While this Project will not eliminate tailwater spill from the Canal, it initiates the District’s effort to address this problem and contributes to the District’s overall System Improvement Plan to convert more of its open canals to pipe.

Recently, the City of Prineville secured funding from the Oregon Department of Transportation for its Rails to Trails project, which converts decommissioned City railway sections to multi-use parks. The City is in the process of designing a 3,700-foot bicycle and pedestrian pathway at the Project site. While lessening a public safety risk is a primary public benefit of the Project, piping the canal at this location would also provide design and construction savings to the City, eliminating the needs to plan for stormwater treatment and public safety concerns. The District chose to implement this Project now due to the opportunity to partner with the City on its Rails to Trails program, leveraging funding and maximizing benefits.

***E.1.3. Evaluation Criterion C—Project Implementation (10points)***

- **Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.**

Canal piping will occur in November 2019 to January 2020. Rails to Trails construction will start early summer 2020 with an expected end date of August 2020. See Table 3: Project Work Elements & Timeline.

**Table 3: Project Work Elements & Timeline**

<b>Project Elements</b>	<b>Nov 2019</b>	<b>Dec 2019</b>
Purchase pipe	X	
Prepare canal	X	
Install pipe	X	X
Cover pipe		X
Rehabilitate piped area		X

- **Describe any permits that will be required, along with the process for obtaining such permits.**

No permits are required for this project.

- **Identify and describe any engineering or design work performed specifically in support of the proposed project.**

The Project is general enough that it does not require design work. However, the City’s engineering department has provided drawings of the project location and specifications. The City engineer reviewed project details and provided a letter of support (in attachments).

- **Describe any new policies or administrative actions required to implement the project.**

No new policies or administrative actions are required to implement the project.

- **Describe how the environmental compliance estimate was developed. Have the compliance costs been discussed with the local Reclamation office?**

No environmental compliance is required as part of this Project.

***E.1.4. Evaluation Criterion D— Nexus to Reclamation (10 points)***

- **Is the proposed project connected to a Reclamation project or activity? If so, how? Please consider the following:**

- **Does the applicant receive Reclamation project water?**

OID currently receives BOR water from Prineville Reservoir under the Crooked River Project Act, authorized by Congress on August 6, 1956 (70 Stat. 1058-9, Public Law 84-992). The 1956 Act authorized the Crooked River Project for irrigation and other beneficial purposes. OID contracted with the BOR for the irrigation use of percentages of the storage space in Prineville Reservoir in contracts executed in 1958, 1966, and 1968, pursuant to the Crooked River Project Act and the Crooked River Project Extension Act. The total percentage of storage space contracted for was originally equivalent to 59,600 ac-ft, however this was reduced to 57,899 ac-ft as a result of a BOR 1998 reservoir sedimentation survey. The Crooked River Collaborative Job Security Act of 2014 affirmed this allocation and added an additional 2,740 AF for OID’s expansion on McKay Creek. [insert something about first-fill].

- **Is the project on Reclamation project lands or involving Reclamation facilities?**

The proposed Project is not on Reclamation project lands. The Project involves the piping of part of OID’s water delivery system which conveys water from BOR’s Crooked River Project (Prineville Reservoir, see above). [ insert information from Bruce on what parts of OID’s conveyance system BOR jointly-owns].

- **Is the project in the same basin as a Reclamation project or activity?**

The Project is in the Crooked River subbasin, where BOR’s Crooked River Project facility (Bowman Dam and Prineville Reservoir) is located. Reclamation has one additional project, Wickiup Reservoir, located in the upper Deschutes Basin.

- **Will the proposed work contribute water to a basin where a Reclamation project is located?**

The proposed Project will not contribute additional water to the subbasin, however, it will increase the delivery efficiency and reliability of BOR water contracted to OID from the Crooked River Project.

- **Will the project benefit any tribe(s)?**

The Project will not benefit any tribal entities.

***E.1.5. Evaluation Criterion E— Department of the Interior Priorities (10 points)***

**1) *Creating a conservation stewardship legacy second only to Teddy Roosevelt***

**a) Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment:**

OID utilized standard water measurement practices to determine tailwater spill and seepage loss rates for the Canal and the District generally. OID's SOR and SIP identify piping and pump-back projects to mitigate for these losses and help OID to better manage water delivery in its system.

**b) Examine land use planning processes and land use designations that govern public use and access:**

While this Project will not directly examine planning processes and land use designations that govern public use and access, it will contribute to greater—and safer—public use and enjoyment of City-owned land by piping an open Canal adjacent to the City's planned 3,700-foot bicycle and pedestrian pathway at the Project site.

**c) Revise and streamline the environmental and regulatory review process while maintaining environmental standards:**

N/A

**d) Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity;**

This Project utilizes information from previous studies of OID's water delivery system (SOR, SIP) to resolve management challenges by piping a section of the Canal that was plagued with issues related to vegetation growth and littering, including decreased canal capacity (causing canal overflow, constrained water delivery and excessive tailwater). In general, piping open canals allows OID to better control water delivery in its system and efficiently use existing capacity.

**e) Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands;**

OID, City of Prineville and Crook County are collectively working on water conservation and habitat improvement projects with the support of conservation organizations such as Deschutes River Conservancy. The Deschutes River Conservancy supports the implementation of water efficiency projects that provide benefits to multiple interests including the environment (increased streamflow and improved habitat), irrigators (increased water supply reliability) and the community (greater and safer access to public spaces). This Project will provide an opportunity for continued collaboration as more efficiency improvement projects arise within the District and subbasin.

**f) Identify and implement initiatives to expand access to DOI lands for hunting and fishing;**

N/A

**g) Shift the balance towards providing greater public access to public lands over restrictions to access.**

This Project will facilitate greater and safer public access to the City's property through its Rails to Trails program. The City is in the process of designing a 3,700-foot bicycle and pedestrian pathway at the Project site.

**2) *Utilizing our natural resources***

**a) Ensure American Energy is available to meet our security and economic needs: N/A**

**b) Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications: N/A**

- c) **Refocus timber programs to embrace the entire ‘healthy forests’ lifecycle:** N/A
- d) **Manage competition for grazing resources:** N/A

3) ***Restoring trust with local communities***

- a) **Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands:**

The District chose to implement this Project now due to the opportunity to partner with the City on its Rails to Trails program, leveraging funding and maximizing public benefits. Recently, the City of Prineville secured funding from the Oregon Department of Transportation for its Rails to Trails project, which converts decommissioned City railway sections to multi-use parks. The City is in the process of designing a 3,700-foot bicycle and pedestrian pathway at the Project site. While lessening a public safety risk is a primary public benefit of the Project, piping the canal at this location would also provide design and construction savings to the City, eliminating the needs to plan for stormwater treatment and public safety concerns. As a partner in this Project, the District is continuing its collaborative dialogue with the City regarding their collective work on water conservation and habitat improvement projects, strengthening the partnership between these regional water managers and with the public that uses the City’s parks.

- b) **Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.**

4) ***Striking a regulatory balance***

- a) **Reduce the administrative and regulatory burden imposed on U.S. industry and the public:**  
N/A
- b) **Ensure that Endangered Species Act decisions are based on strong science and thorough analysis:** N/A

5) ***Modernizing our infrastructure***

- a) **Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure:**

This Project contributes to OID’s comprehensive plan (as documented in its SOR and SIP) to maximize water conveyances, reduce tailwater spill, reduce seepage/evaporative losses, and improve overall water reliability by piping most of its District. The SIP evaluated the primary canals and laterals for seepage loss using state-of-the-art measurement equipment and found an approximately 53 CFS loss at the time of measurements. Of the 53 CFS, the SIP determined that approximately 41 CFS could be conserved if the system were completely piped. Furthermore, fully piping the District system will accomplish low to moderate pressurization of the District resulting in the estimated reduction of 2,687,650 kWh in patron pumping costs each season.

- b) **Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs:** N/A
- c) **Prioritize DOI infrastructure needs to highlight:**
  - i) **Construction of infrastructure:** This Project involves the construction of 1,790 LF of pipe.
  - ii) **Cyclical maintenance;**
  - iii) **Deferred maintenance.**



## **Community Development**

387 NE Third Street – Prineville, OR 97754

Email: [jsmith@cityofprineville.com](mailto:jsmith@cityofprineville.com)

541.447.2367

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To whom it may concern:

The City Community Development Department is in support of the proposed OID piping project for two reasons; safety and efficient land use.

The safety of our citizens, especially children is a concern because of easy access to the open canal. The largest section of the piping project will occur near one of the City's largest parks including a bike park and future rails-to-trails project. Piping the canal will eliminate access and any potential issues with children playing in or around the open canal.

Efficient land use is desirable for many properties along the canal that have limited access; or use due to the open canal. The rails-to-trails project is actually separated from the bike park by the open canal which could create potential conflicts and safety concerns. Several vacant lots adjacent to the canal would benefit greatly from a reduction in the maintenance road that serves the canal. The City's transportation plans for the 10<sup>th</sup> street intersection and the 9<sup>th</sup> street extension will require piping of several sections identified in this project.

Please feel free to call or e-mail at the above information with any questions concerning the proposed project or how it will impact our community.

Joshua Smith  
Planning Director



*Crook County Parks & Recreation District*

296 S Main Street Prineville, OR 97754

541-447-1209

March 14, 2019

To whom it may concern,

Crook County Parks and Recreation District would like to express support for grant funding to pipe open portions of the Ochoco Irrigation District canal running through Prineville Oregon. The District is increasingly concerned over public safety as an open portion of this canal runs adjacent to Ochoco Creek Park and the Prineville Bike Park.

We are currently working on plans to construct additional bike park facilities in this area. The new plans include a new asphalt pump track, mountain bike obstacle course, additional paved trail (rails to trails) parking, and restroom facilities. This area is already well used by the public and is only going to increase in pedestrian traffic at time goes on.

If grant funds could be secured to pipe this canal, it would address our concerns over public safety, it would conserve water, and provide a much better recreation experience for the residents in Prineville.

Sincerely

Duane Garner  
Executive Director  
Crook County Parks and Recreation District



To whom it may concern,

DOWL Engineering has been procured to provide professional design and development service to the Oregon Department of Transportation on their locally sponsored City of Prineville Rails to Trails project.

The project includes design and construction of approximately 3,700 feet of multi-use bicycle and pedestrian pathway, includes a typical asphalt width of 10-foot with two-foot aggregate shoulders. The path extends from Prineville's NE 7th St. south to SE Combs Flat Rd with an alignment positioned along the abandoned City of Prineville Rail Road corridor centerline. Of particular interest and consideration during development our design team must address an approximate 1000-foot section of open Ochoco irrigation canal line within our project's area of project impact. The irrigation canal is specifically located between NE Juniper Street and NE 7<sup>th</sup> Street and runs parallel along our proposed paths southern alignment, ranging approximately 10-30 foot from its proposed paved edge.

It has come to our attention that the City of Prineville is seeking grant funding to support operational efforts to pipe the open canal located adjacent to the proposed path system.

Acquiring funding and performing this operation, especially prior to our installation of the proposed multi-use path, provides for design and construction savings to the project and city stakeholders.

As the paved path is considered an impervious surface, our design team is required to address its impact from a stormwater treatment standpoint. As we planned to engineer the path with traversable shed slope away from the canal alignment through this subject area, it was still anticipated that we were going to have to consider use of special infiltration materials and design due to the canal's proximity to the path. If the canal system becomes enclosed, we then are granted design opportunity to eliminate those considerations along with the associated materials and project funds to install. Additionally, piping the canal system through this area, especially prior to our multi-use path construction activities provides us opportunity to consider eliminating the need to install 1000-foot of right of way safety fencing along the canal through the corridor as well as eliminating the need to implement enhanced erosion control design measures to protect this section during our construction activities.

The design team will be following the status of this irrigation canal system enclosure as its implementation would redirect our design approach efforts through the subject area.



DESCHUTES RIVER  
CONSERVANCY

April 17, 2019

Re: Ochoco Irrigation District Rye Grass System Improvement Project

To Whom It May Concern:

I am writing in support of the Ochoco Irrigation District Rye Grass System Improvement Project, which will pipe 1,790 feet of open canal near Ochoco Creek Park in Prineville, Oregon. Piping this section of the canal will have multiple benefits, including: increasing water delivery efficiency on the canal, reducing tailwater spills in to the Crooked River, improving water quality, increasing public safety and reducing the district's liability, decreasing canal maintenance and associated costs to the District and its patrons, and enhancing a planned expansion of the City's Rail to Trails program. Irrigation district modernization projects that conserve water are critical to ensuring that both agriculture and fish and wildlife have sufficient water into the future in our community.

We support efforts to modernize irrigation district infrastructure to improve water supply availability, to improve water quality and to support the basin's rural agricultural values.

Sincerely,

Kate Fitzpatrick  
Program Director  
Deschutes River Conservancy