

WaterSMART Grant Application Small-Scale Efficiency Projects

FOA No. BOR-DO-20-F006

Talent Main Canal FY2020 Shotcrete Projects

**TALENT IRRIGATION DISTRICT
APPLICANT**



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TECHNICAL PROPOSAL AND EVALUATION CRITERIA

EXECUTIVE SUMMARY

March 2020

The Talent Irrigation District's project area includes land in and around the cities of Medford, Phoenix, Talent and Ashland in Jackson County in southwest Oregon. The District is requesting financial assistance to line two sections of the Talent Main Canal totaling approximately 1,770 linear feet. The canal through these sections is mainly an unlined channel. A small portion has an old concrete liner that dates to the early 1960s as part of the enlargement of the District's system through the Bureau of Reclamation's Rogue River Basin Project – Talent Division. The loss of water through these two sections of canal is estimated at 210 acre feet per irrigation season. The District proposes to line these sections with 4000psi shotcrete with fiber, a more durable material, with a construction start date of October 2020 and an estimated completion date of March 2021.



BACKGROUND DATA

The Talent Irrigation District is a special district government organized under Oregon Revised Statutes (ORS) 545 by order of the Jackson County Commissioners on May 22, 1916. By the late 1920s the District's original system was constructed which served approximately 10,000 acres.

In 1956 the water users of the District voted and approved the signing of a contract with the Bureau of Reclamation for the rehabilitation and enlargement of the system, which became known as the Rogue River Basin Project - Talent Division.

The District has storage in four Reclamation reservoirs: Howard Prairie, Hyatt Prairie, Keene Creek and Emigrant. The District's irrigation water supply comes from the flows of the following creeks: South Fork of Little Butte Creek and its tributaries; Grizzly Creek and Keene Creek above Hyatt Prairie and Keene Creek Reservoirs; Emigrant Creek and its tributaries above Emigrant Reservoir; Bear Creek and its tributaries below Emigrant Reservoir; as well as several other tributaries throughout the Federal Project area.

Irrigation water is provided to the District waterusers by an extensive collection, diversion, storage, and conveyance system. The District makes its water deliveries through 125 miles of canals and 113 miles of laterals. Approximately 15 percent of the canals are either piped or lined. Approximately 70 percent of laterals are piped with varying sizes, pressures and materials.

The District provides agricultural water for commercial and residential irrigation to land included within its boundaries. The District consists of approximately 3,000 waterusers with 3,520 tax lots over 15,500 irrigated acres. The estimated annual usage is 55,000 acre feet. The dominant crop is forage (hay) followed by tree fruits, grapes, vegetables and other crops.

During hot weather events and the timing of certain crop harvests, the District struggles to keep water to the end-users of each of its six canals. Even though the design capacity of the canals are adequate to serve the canal acreages, during these hot weather events when the aquatic vegetation is at its peak and demand is at its highest, it is difficult and at times impossible to serve the end-user. Patrons on the tail-end of the canals are hesitant to convert from flood irrigation to more efficient methods due in large part to the unreliability of holding a workable or steady head on their intake systems.

According to the District's Water Management and Conservation Plan (WMCP)¹, the District operates at a deficit during below-average water years. When snow pack and stream flows are below normal, the District often has to draw from its storage reservoirs earlier than normal; and depending on the starting storage capacity, can create a shortfall for that year, which can also extend into the following year. The District relies heavily on accumulated storage supply to provide a full irrigation season.

The Talent Main Canal is one of six canals the District uses to deliver water to its patrons. It begins at the Oak Street Diversion in Bear Creek located northeast of the City of Ashland and terminates southwest of the City of Medford. It serves approximately 865 patrons on 3,738 irrigated acres. Its main production is forage with some tree fruits and grapes. Approximately 30% of its 19.4 miles have been piped, nearly all of which is located on the lower end of the canal where piping is economically feasible. Canal lining has been used more frequently as a more economical means of conserving water.

Since the District's irrigation water is delivered primarily through canals that are open channels that are subject to high seepage losses and periodic canal bank failures, continued monitoring of the delivery system helps to identify areas of concern, and high seepage areas are given higher priority status. These two sections, totalling 1,770' of the Talent Main Canal are mainly unlined earthen channels. A small section has an old concrete liner where cracks have developed. Several leaks have appeared in these sections, and it is estimated that 210 acre feet of water per season is lost. After employing the usual methods of sealing off the leaks with no long-term success, the District would like to employ a more effective solution by lining the canal with shotcrete mixed with fiber.

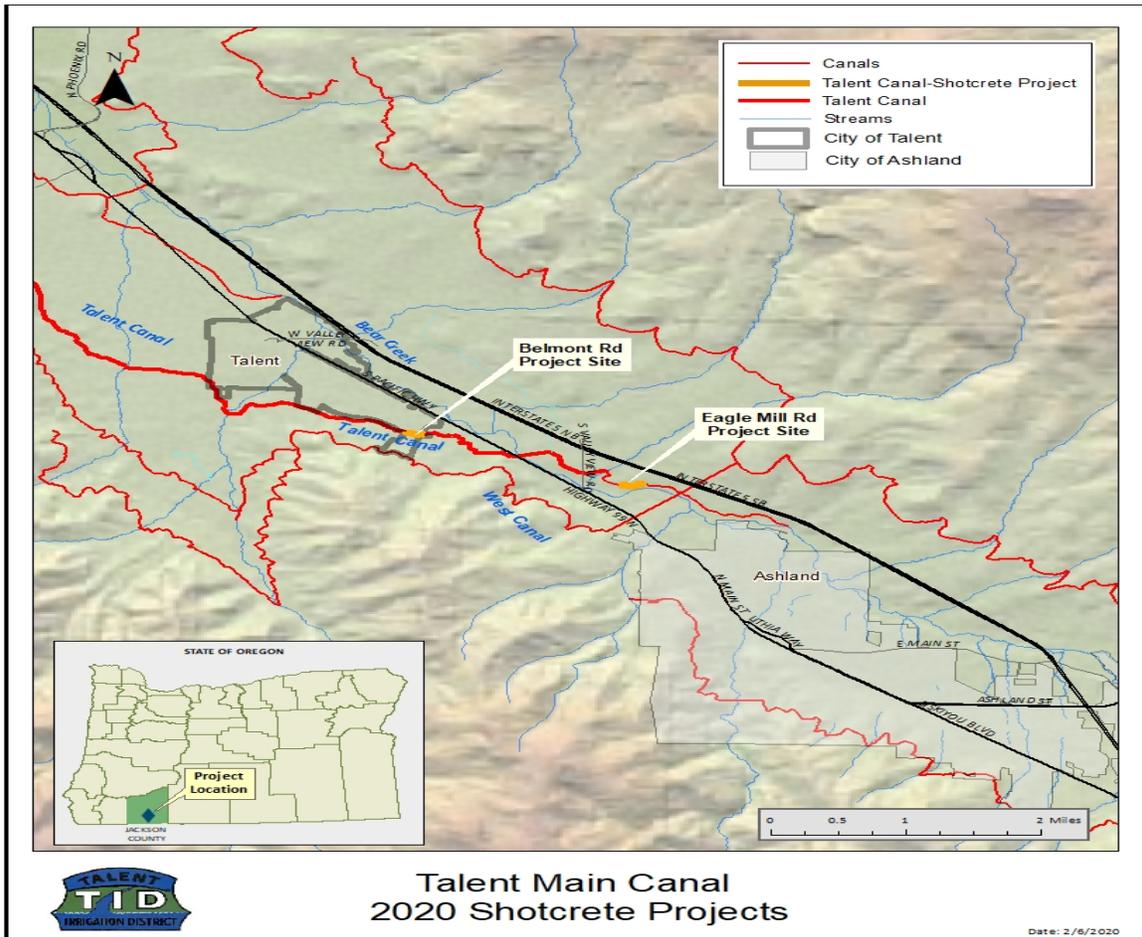
¹ Talent Irrigation District – Water Management & Conservation Plan – April 2018

Through Reclamation grant opportunities the District has been able to pair scarce District dollars with Federal funds to make improvements to the District’s system that have resulted in conserving water, controlling soil erosion and increasing efficiency in water deliveries. Without continued financial assistance from the Bureau of Reclamation, the District would need to delay the majority of its capital improvement projects to find other funding sources. Below is a list of recent projects funded with Reclamation grant funds.

- R16AP00067 Canal Lining & Piping – \$25,000 grant - Completed April 20, 2018 – Lined 700’ of canal and piped 560’ for a cost of \$50,133.
- R15AP00058 EMC Canal Lining Project - \$15,670 grant – Completed January 29, 2018 – Lined 1,140’ of canal for a cost of \$34,180.
- R09AP13423 2009 Canal Lining & Piping - \$126,709 grant – Completed March 9, 2014 – Lined 2,980’ of canal and piped 5,000’ for a cost of \$253,418.

PROJECT LOCATION

The Talent Main Canal FY2020 Shotcrete Projects site locations are in Jackson County, Oregon. Site 1 is located on Eagle Mill Road, approximately 1.25 miles from the City of Ashland and begins at latitude 42°13’19.46”N and longitude -122°43’53.38”W and terminates at latitude 42°13’18.23”N and longitude -122°44’06.00”W. Site 2 is located on Belmont Road within the City of Talent and begins at latitude 42°13’47.09”N and longitude -122°45’48.36”W and terminates at latitude 42°13’48.254”N and longitude -122°45’58.02”W.



TECHNICAL PROJECT DESCRIPTION

There are two sections of the Talent Main Canal where several leaks have developed. Site 1 is located near Eagle Mill Road just northwest of the City of Ashland, and Site 2 is near Belmont Road in the City of Talent. The usual remedies of cutting brush, coring and slipping the canal prism were successful for short periods of time; but inevitably the leaks would return. The District desires a more permanent solution and proposes to line these sections, totaling 1,770', with 445 cubic yards of shotcrete reinforced with Fibermesh® 150, homopolymer polypropylene multifilament fibers. Fibermesh® inhibits and controls the formation of intrinsic cracking, reinforces against impact forces, abrasions and the effects of shattering forces. The reinforced shotcrete will be more durable and resistant to water migration.² The installation of shotcrete with Fibermesh prevents seepage through the earthen channel and will improve the efficiency and effectiveness of the operation of the canal.



Site 1: Eagle Mill Road

Site 2: Belmont Road

Several leaks in these locations have been identified. The loss of water is estimated at 210 acre feet annually.

District personnel will prepare the sites by removing vegetation and bringing in fill material from the District’s stock-pile to repack and reshape the canal prism. All work will be completed within the existing canal easement. Then the District’s crew will apply the shotcrete with fiber supplied by a local vender. Site restoration should be minimal requiring only the regrading of the canal road.

Milestone / Task / Activity	Planned Start Date	Planned Completion Date
Complete environmental and cultural compliance – completed by Reclamation	6/1/2020	9/30/2020
Mobilization and site prep	10/1/2020	10/31/2020
Apply shotcrete with fiber	11/1/2020	12/31/2020
Demobilization and site restoration	1/1/2021	3/31/2021

² <https://kuert.com/wp-content/uploads/2016/01/Propex-Fibermesh-150-TDS.pdf>

Expected outcomes of this project are:

- reduces leaks and seepage in 1,770' of canal, estimated at 210 acre feet annually;
- reduces the risk of canal failure by making the canal embankment more structurally sound;
- improves the stability of the canal by applying a crack-resistant liner over the earthen channel.

EVALUATION CRITERIA

Criterion A – Project Benefits (35 points)

- **Describe the expected benefits and outcomes of implementing the proposed project.**
 - **What are the benefits to the applicant's water supply delivery system?**
 - Seals the canal prism reducing the likelihood of leaks and seepage.
 - Provides a more efficient water delivery system.
 - Improves the flow of water by reducing friction/turbidity.
 - Provides a smooth surface which discourages the collection of silt and debris that encourages growth of both aquatic and terrestrial vegetation that can choke the canal.
 - Reduces the frequency of canal cleanings through this section.
 - Reduces the likelihood of a canal failure from burrowing rodents or leaks and seepage undermining the canal.
 - Reduces the likelihood of damage to downslope properties.
 - **If other benefits are expected explain those as well.**
 - Conserves an estimated 210 acre feet of water annually.
 - Improves delivery reliability by preventing the loss of water in the delivery system, providing a more reliable supply to the end user.
 - Improves the water supply since the water saved can be held in the reservoirs for future use.
 - Increases the storage in the reservoirs, allowing for additional recreational use.
 - Increases the reliability of water for other uses, such as augmenting the operational stream flow enhancement as determined by the requirement of the Biological Opinion.³

Criterion B – Planning Efforts Supporting the Project (35 points)

- **Describe how your project is supported by an existing planning effort.**
 - **Does the proposed project implement a goal or address a need or problem identified in the existing planning effort?**
 - As stated in the District's Water Management and Conservation Plan (WMCP), Executive Summary, Page 11, GOALS, "General goals include development and implementation of conservation

³ Endangered Species Act Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Future Operation and Maintenance of the Rogue River Basin Project (2012-2022), Rogue and Klamath River Basins (HUCs: 18010206, 17100308, 17100307), Oregon and California.

projects according to criteria that accounts for financial capacity of the TID, time, operational risk priorities, and environmental and regulatory consideration. Project objectives include:

1. Improvements to water distribution system;
2. Improvements in water measurement, management and control;
3. Reductions in seepage losses;
4. Reductions in operations and maintenance costs; and
5. Improvements in water delivery accountability; and
6. Reduce liabilities to the TID.”

The placement of reinforced shotcrete in the 1,770’ of canal will assist in the accomplishment of most of these WMCP’s objectives. This project will:

1. Improve the efficiency of the water distribution system by providing a smooth surface, thereby reducing friction loss;
2. Improve water management and control by reducing canal losses allowing more accurate measurements of on-farm use;
3. Reduce leaks and seepage losses by sealing the canal prism;
4. Reduce operation and maintenance costs by discouraging the accumulation of sediment which promotes growth of aquatic and terrestrial vegetation in the canal prism requiring frequent removal;
5. Improve water delivery accountability by minimizing water loss through these sections which provides
 - a. a more reliable flow to the end users and/or
 - b. for the conserved water to be held in storage;
6. Reduce District liability by decreasing the risk of damage to downslope properties.

○ **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 is cost effective in relation to the benefits it provides, such as the conservation of water.
- The project sites are located near buildings. Leaks and seepage have the potential to cause damage to downslope structures.
- Site 2 Belmont Road is listed in Reclamation’s Canal Hazard Program Inspection Report⁴

⁴ Bureau of Reclamation, Managing Water in the West, Canal Hazard Program Inspection Report, Talent Canal CRID 172, Talent Irrigation District, Talent OR, December 2019

Criterion C – Project Implementation (10 Points)

- **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.**
 - District personnel will perform all of the tasks detailed below with the exception of the regulatory compliance requirements which will be performed by Reclamation staff. District personnel are familiar with this type of project.

Project Schedule

TASK DESCRIPTION	2020			2021
	June - Sept	Oct	Nov - Dec	Jan - Mar
Regulatory Compliance – Reclamation				
Administrative				
Bid shotcrete w/fiber				
Grant Reporting				
Construction				
Site Prep - Excavation, repack canal prism				
Apply shotcrete w/fiber				
Demobilize and site restoration				

- **Describe any permits that will be required.**
 - No permits are required.
- **Identify and describe any engineering or design work.**
 - No engineering or design work is required.
- **Describe any new policies or administrative actions required to implement this project.**
 - No new policies or administrative actions are required. The District will use the existing policies and procedures for procurements.
- **Describe how the environmental compliance estimate was developed.**
 - District staff consulted with Reclamation staff who supplied the estimate for the regulatory compliance costs.

Criterion D – Nexus to Reclamation (10 Points)

- **Is the project connected to a Reclamation project or activity?**
 - Yes. The District is part of the Reclamation’s Rogue River Basin Project – Talent Division. The District signed a contract with Reclamation for the rehabilitation and enlargement of the system. As a result, the District in 1960 quitclaimed the system to the Bureau of Reclamation recorded in Vol. 495 Page 375 of the Official Records of Jackson County, Oregon. The U.S. has an easement interest in the canal.
- **Will the project benefit any tribe(s)?**
 - This project will not benefit any tribe.

Criterion E – Department of the Interior Priorities (10 Points)

- **Creating a conservation stewardship legacy second only to Teddy Roosevelt**

- The use of shotcrete reinforced with Fibermesh® is an effective water management tool for preventing leaks in earthen canals. Its resilient properties provide for flexibility and durability.
- By conserving water, this project can improve the water storage of Reclamation Project reservoirs and improve the distribution system by reducing turbidity and the accumulation of sedimentation that increases moss growth. Both of these benefits help resolve water conflicts in our region by allowing stored water for future use and an uninterrupted flow of water through this section.
- **Modernizing our infrastructure.**
 - By lining the earthen canals with reinforced shotcrete assists in modernizing the infrastructure that was quitclaimed to the Bureau of Reclamation in 1960.

PROJECT BUDGET

Funding Plan

The estimated cost of this project is \$153,717. The District is requesting a 50% cost-share with a maximum of \$75,000 under this grant opportunity. No other funding sources have been identified. The District will provide at least 50% of the estimated project costs by supplying the labor, value of District owned equipment and de minimus costs. The District does not anticipate any pre-award costs and has not included any in the proposed budget.

Table 1. Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	AMOUNT
Non Federal Entities	
1) Talent Irrigation District in the form of labor, labor costs, value of District owned equipment and de minimus	\$78,717
REQUESTED RECLAMATION FUNDING	\$75,000

Budget Proposal

Table 2. Estimated Project Costs

TALENT MAIN CANAL FY2020 SHOTCRETE PROJECTS			SITE 1 EAGLE MILL ROAD		SITE 2 BELMONT ROAD		ESTIMATED PROJECT COST
BUDGET ITEM DESCRIPTION	\$/Unit	Unit Type	# of Units	COST	# of Units	COST	
Salaries & Wages							
Foreman	\$24.20	hour	10.0	\$242	10.0	\$242	
Laborer #4	\$17.30	hour	120.0	\$2,076	80.0	\$1,384	
Laborer #5	\$17.00	hour	120.0	\$2,040	80.0	\$1,360	
Laborer #6	\$18.02	hour	120.0	\$2,162	0.0	\$0	
Laborer #8	\$18.02	hour	120.0	\$2,162	80.0	\$1,442	
Laborer #11	\$24.18	hour	120.0	\$2,902	80.0	\$1,934	

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Laborer #12	\$16.24	hour	120.0	\$1,949	80.0	\$1,299	
Laborer #13	\$17.43	hour	120.0	\$2,092	80.0	\$1,394	
Laborer #14	\$15.50	hour	120.0	\$1,860	80.0	\$1,240	
Total Salaries & Wages				\$17,485		\$10,296	\$27,780
Fringe Benefits							
Foreman	\$19.22	hour	10.0	\$192	10.0	\$192	
Laborer #4	\$9.78	hour	120.0	\$1,174	80.0	\$782	
Laborer #5	\$16.67	hour	120.0	\$2,000	80.0	\$1,334	
Laborer #6	\$14.10	hour	120.0	\$1,692	0.0	\$0	
Laborer #8	\$15.73	hour	120.0	\$1,888	80.0	\$1,258	
Laborer #11	\$20.27	hour	120.0	\$2,432	80.0	\$1,622	
Laborer #12	\$17.31	hour	120.0	\$2,077	80.0	\$1,385	
Laborer #13	\$10.33	hour	120.0	\$1,240	80.0	\$826	
Laborer #14	\$9.45	hour	120.0	\$1,134	80.0	\$756	
Total Fringe Benefits				\$13,829		\$8,155	\$21,984
Equipment (District Owned)							
#3 1981 International 5yd Dump Truck	\$23.78	hour	80.0	\$1,902	0.0	\$0	
#4 1980 Kenworth 10yd Dump Truck	\$61.99	hour	80.0	\$4,959	18.0	\$1,116	
#8 1988 Peterbilt Equip Hauler	\$52.12	hour	10.0	\$521	4.0	\$208	
#16 1998 Dodge Truck	\$9.81	hour	5.0	\$49	0.0	\$0	
#25 2006 Chevy 2500 4x4 Truck	\$13.44	hour	20.0	\$269	10.0	\$134	
#26 2005 Ford F350 4x4 Truck	\$14.61	hour	20.0	\$292	4.0	\$58	
#36 2008 Ford F350 4x4 Truck	\$14.63	hour	20.0	\$293	10.0	\$146	
#55 2012 Ford F150 4x4 Truck	\$10.67	hour	0.0	\$0	10.0	\$107	
#58 2013 Ford F150 4x4 Truck	\$10.74	hour	20.0	\$215	0.0	\$0	
#83 1999 Ziemann Trailer	\$3.52	hour	10.0	\$35	4.0	\$14	
#91 2008 Kubota Excavator	\$10.60	hour	80.0	\$848	40.0	\$424	
#121 2004 Kubota Excavator	\$12.31	hour	80.0	\$985	0.0	\$0	
#185 1985 I/R Air Compressor	\$14.94	hour	50.0	\$747	30.0	\$448	
#204 1985 Thomsen Concrete Pump	\$27.32	hour	50.0	\$1,366	30.0	\$820	
#313 2009 Cat Excavator	\$35.10	hour	80.0	\$2,808	40.0	\$1,404	
#314 2015 Cat Excavator	\$31.98	hour	80.0	\$2,558	0.0	\$0	
Total Equipment Use				\$17,848		\$4,880	\$22,728
Supplies and Materials							
4000psi Shotcrete w/Stealth Fiber	\$155.00	cubic yard	250.0	\$38,750	195.0	\$30,225	
Total Material				\$38,750		\$30,225	\$68,975
TOTAL DIRECT COSTS				\$87,911		\$53,556	\$141,467
Indirect Costs							
de minimus (Direct Costs Less Materials)	10%		\$49,161	\$4,916	\$23,331	\$2,333	\$7,249
Environmental Compliance to be completed by Reclamation							\$5,000
TOTAL ESTIMATED PROJECT COST							\$153,717

Budget Narrative

Salaries and Wages and Fringe Benefits

The Program Manager is the District Manager, Jim Pendleton. The budget proposal includes personnel that are likely to be on the work crew for this project. However, situations may arise where one or more laborers may be substituted. Therefore, the direct labor and fringe benefit rates are included below on all District work crew employees.

Position	Direct Labor Rate	Retire -ment	FICA	Health Ins	St Emp Ins	Workers Comp Ins	Leave Accrual	Fringe Rate
Foreman	24.20	6.78	1.88	7.97	.02	.94	1.63	19.22
Laborer #4	17.30	3.44	1.34	3.76	.02	.67	.55	9.78
Laborer #5	17.00	3.38	1.32	10.75	.02	.66	.54	16.67
Laborer #6	18.02	3.52	1.38	7.52	.02	.70	.96	14.10
Laborer #8	18.02	5.02	1.40	7.52	.02	.70	1.07	15.73
Laborer #9	20.33	5.87	1.63	7.52	.02	.79	1.44	17.27
Laborer #11	24.18	6.96	1.94	8.17	.03	.94	2.23	20.27
Laborer #12	16.94	3.18	1.24	11.68	.02	.63	.56	17.31
Laborer #13	17.43	3.41	1.33	4.09	.02	.68	.80	10.33
Laborer #14	15.50	1.39	1.15	5.91	.02	.61	.37	9.45

These rates are to be taken as estimates only. Increases to wages and salaries are determined annually by the Board of Directors during the budgeting process. If given, they become effective on October 1st of each year. Since this project will take place after October 1, 2020, actual labor costs applicable to that time period will be used in determining the District’s in-kind contribution.

By the submittal of this application, I, Jim Pendleton, certify that at the time this budget is presented, the labor rates in the budget proposal for the Talent Main Canal FY2020 Shotcrete Projects are consistent with the compensation paid to personnel in those positions and are equally applied to Federal and non-Federal activities. The benefits included in the proposed rates are required by law, employee agreement, or an established policy of the Talent Irrigation District and the budgeted rates are consistent with what is contributed or expended for those personnel.

The administrative staff will prepare the documents necessary for compliance with the reporting requirements of this agreement, including the final project report, with oversight by the Program Manager. Since this proposed project is scheduled to be completed within a 12 month period, the District anticipates producing one semi-annual report and a final report.

Travel

No travel expenses are anticipated and are not included in the proposed budget.

Equipment

The District will use its own equipment on this proposed project. The usage rates have been calculated using the United States Army Corps of Engineers Construction Equipment Ownership and Operating Expenses Schedule.

The District's equipment rates for 2020 are below:

EQUIPMENT RATES USING THE ARMY CORP OF ENGINEERS CONSTRUCTION EQUIPMENT OWNERSHIP & OPERATING SCHEDULE FOR REGION VIII DATED 11/30/2018 (most recently available)			
REVISED 01/01/2020			
#	DESCRIPTION	HOURLY	STANDBY
3	1981 INTL DUMP TRK - 5 YD	23.78	2.70
4	1980 KENWORTH DUMP TRK - 10 YD	61.99	5.89
8	1988 PETERBILT LOWBOY	52.12	5.81
10	1978 MILITARY TRK/BOOM	30.96	1.06
11	1978 FORD TRK/BOOM	30.96	1.06
16	1998 DODGE RAM 3500 4X4 TRUCK	9.81	1.46
25	2006 CHEVROLET 2500 4X4 TRUCK	13.44	1.13
26	2005 FORD F350 4X4 TRUCK	14.61	1.38
36	2008 FORD F350 4X4 TRUCK	14.63	1.46
37	2014 FORD F150 4X4 TRUCK	11.16	1.32
52	2011 FORD F250 4X4 TRUCK	11.53	1.37
53	2011 FORD F150 4X4 TRUCK	10.54	1.09
55	2012 FORD F150 4X4 TRUCK	10.67	1.17
56	2018 DODGE RAM 1500 4X4 TRUCK	11.03	1.34
58	2013 FORD F150 4X4 TRUCK	10.74	1.20
59	2016 FORD F150 4X4 TRUCK	11.26	1.39
75	2013 KUBOTA TRACK LOADER	16.98	2.24
83	1999 ZIEMAN TRAILER	3.52	0.92
91	2008 KUBOTA EXCAVATOR	10.60	2.28
121	2004 KUBOTA EXCAVATOR	12.31	2.16
135	CEMENT MIXER	2.40	0.21
185	1985 ING RAND AIR COMPRESSOR	14.94	1.26
200	WELDER	1.17	0.13
204	1985 THOMSEN CONCRETE PUMP	27.32	3.36
207	1995 MORBARK E-Z BEAVER CHIPPER	15.64	1.54
312	1997 CAT EXCAVATOR	31.63	5.79
313	2009 312DL CAT EXCAVATOR	35.10	7.75
314	2015 312E CAT EXCAVATOR	31.98	6.92
550	1995 JD CRAWLER/DOZER	42.12	5.88
580	1990 CASE BACKHOE	17.69	1.67
600	1965 D-6 CAT/DOZER	45.56	2.07

Materials and Supplies

A quote for the shotcrete with fiber was obtained from a local vendor. If this project is awarded, the District will follow its policies and procedures for the procurement of materials and supplies.

Contractual

There is no contractual cost budget for this project.

Third-Party In-Kind Contributions

There are no third-party participants in this project.

Environmental and Regulatory Compliance Costs

The District contacted the Bureau of Reclamation for cost estimates relating to environmental and cultural resources compliance. The following estimates were provided:

- Environmental and Regulatory Compliance: \$2,000
- Historical and Cultural Resources Compliance: \$3,000

Other Expenses

No other expenses are anticipated for this project.

Indirect Costs

Included in the District's budget is a *de minimis* rate of 10%. The Talent Irrigation District has never requested or received a Federal negotiated indirect cost rate.

ENVIRONMENTAL AND CULTURAL RESOURCE COMPLIANCE

- **Will the proposed project impact the surrounding environment (i.e. soil [dust], air, water [quality and quantity], animal habitat, etc.)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.**

The District will excavate, repack and reshape the canal prism before applying the reinforced shotcrete material. The project will have no impact on the surrounding environment as all work will be completed within the canal easement. Since this project will occur during the off-season, no water will be in the canal. Dust should not be a problem as all activities will occur during the fall and winter months.

- **Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area?**

No.

- **Are there wetlands or other surface waters inside the project boundaries that potentially fall under Clean Water Act (CWA) jurisdiction as “Waters of the United States?”**

No.

- **When was the water delivery system constructed?**

The Talent Main Canal was constructed in the early 1920s and enlarged in the early 1960s.

- **Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals or flumes). If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.**

The earthen canal, initially constructed in the 1920s and enlarged in the 1960s, will be lined with reinforced shotcrete. The canal is cleaned annually with the use of an excavator.

- **Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.**

Yes, the canals themselves are eligible in addition to many structures of the irrigation system.

- **Are there any known archeological sites in the proposed project area?**

There are no known archeological sites within the proposed project area.

- **Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?**

This project will have no effect on low income or minority populations.

- **Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?**

No.

- **Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?**

No.

REQUIRED PERMITS OR APPROVALS

No permits are required for this project.

OFFICIAL RESOLUTION

Separate attachment.

**OFFICIAL RESOLUTION
OF THE BOARD OF DIRECTORS OF
TALENT IRRIGATION DISTRICT**

WHEREAS, the Bureau of Reclamation requests an official resolution to commit applicants of WaterSMART: Small-Scale Water Efficiency Projects, Funding Opportunity No. BOR-DO-20-F006 to the financial and legal obligations associated with receipt of WaterSMART grant financial assistance,

WHEREAS, the Talent Irrigation District must maintain, provide for, and service our existing irrigation water delivery system,

WHEREAS, the District desires to conserve water and manage its water supply more efficiently by applying reinforced shotcrete lining on two sections of the Talent Main Canal located near Eagle Mill Road in Ashland and Belmont Road in Talent, totaling 1,770’,

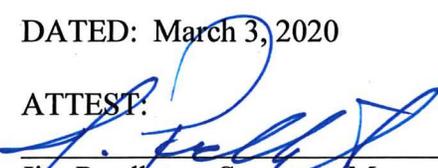
WHEREAS, the District desires to obtain grant funding from the Bureau of Reclamation through the WaterSMART: Small-Scale Water Efficiency Projects, Funding Opportunity No. BOR-DO-20-F006.

NOW THEREFORE, BE IT RESOLVED that the Board of Directors of the Talent Irrigation District agrees and authorizes that:

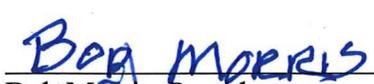
- They have the legal authority and can authorize, Jim Pendleton, Secretary/Manager, to enter into this agreement;
- They have reviewed and support the application submitted;
- The Talent Irrigation District is capable of providing the amount of funding specified in the funding plan; and
- The Talent Irrigation District will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

DATED: March 3, 2020

ATTEST:



Jim Pendleton, Secretary-Manager



Bob Morris, President



Michael S. Winters, Vice-President



Jeff Bohn, Director
Constituting the Board of Directors of
the Talent Irrigation District