

**WaterSMART Grant Application
Small-Scale Efficiency Projects
for Fiscal Year 2019
FOA No. BOR-DO-19-F005**

**Talent Main Canal
Frink Orchard Shotcrete Project**

**TALENT IRRIGATION DISTRICT
APPLICANT**



JIM PENDLETON
PROJECT MANAGER
104 West Valley View Road
PO Box 467
Talent, Oregon 97540
541-535-1529
Fax 541-535-4108
tid@talentid.org

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TECHNICAL PROPOSAL AND EVALUATION CRITERIA

EXECUTIVE SUMMARY

April 2019

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 a 960' section of the Talent Main Canal through the Frink Orchard. The original concrete liner 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. It is estimated that 150 acre feet per irrigation season is lost through this section. The District proposes to line this section with 4000psi shotcrete with fiber, a more durable material, with a construction start date of October 2019 and an estimated completion date of September 2020.



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 three Reclamation reservoirs: Howard Prairie, Hyatt Prairie 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 120 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 2,970 waterusers with 3,495 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 860 patrons on 3,765 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. This 960' section of the Talent Main Canal has several areas where cracks in the concrete have developed. In some sections the canal is not lined at all. Several leaks have developed, and it is estimated that 150 acre feet of water per season is lost.

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

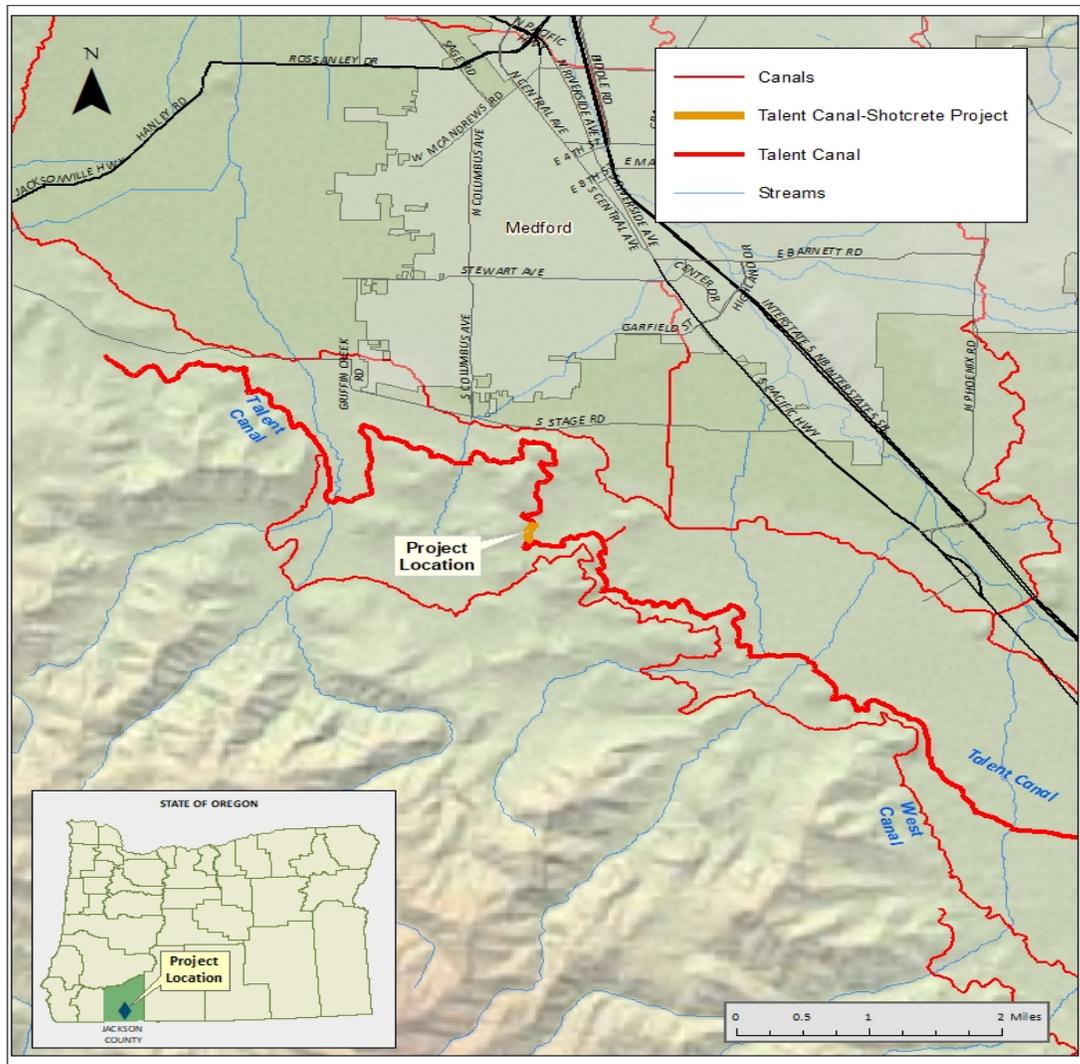
¹ Talent Irrigation District – Water Management & Conservation Plan – April 2018

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 Frink Orchard Shotcrete project site is located in Jackson County, Oregon, approximately a mile south of the Medford. The project begins at latitude 42.277362° and longitude -122.880000° and terminates at latitude 42.279810° and longitude -122.879051°. The project site begins at 14.8 miles of the 19.4 mile long canal.



Talent Main Canal Frink Orchard Shotcrete Project

Date: 3/28/2019

TECHNICAL PROJECT DESCRIPTION

The District proposes to replace the existing slip-line concrete in 960’ of the Talent Main Canal with 250 cubic yards of shotcrete reinforced with Fibermesh®, homopolymer polypropylene multifilament fibers. Frequent mowing operations during irrigation season have cracked the existing lining allowing water to penetrate the liner. Freezing during the winter months expanded the cracks, further deteriorating the concrete liner. 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 should increase the efficiency and effectiveness of the operation of the canal over the original slip-line concrete.



Several leaks in the project location have been identified. The loss of water has been estimated at 150 acre feet annually.

District personnel will prepare the site by removing the broken concrete, repacking and reshaping the canal prism and digging cut-off walls using an excavator while remaining within the canal easement. Then the crew will apply the shotcrete with fiber, supplied by a local vender, to the site with the District’s concrete pump. Site restoration should be minimal requiring only the regrading of the canal road.

Milestone / Task / Activity	Planned Start Date	Planned Completion Date
Environmental and cultural compliance – TO BE COMPLETED BY RECLAMATION	10/01/2019	12/31/2019
Mobilize to site and complete construction	01/01/2020	03/31/2020
Demobilization and site restoration	04/01/2020	04/15/2020

² <https://fibermesh.com/wp-content/uploads/2016/10/Fibermesh-150-Data-Sheet.pdf>

Expected outcomes of this project are:

- reduces leaks and seepage in this 960' section of canal, estimated at 150 acre feet annually;
- reduces the risk of canal failure by making the canal embankment more structurally sound;
- improves the stability of the canal by using a liner that resists cracks.

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 150 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 replacement of the concrete liner with reinforced shotcrete in this 960’ section of the 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 this section 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 compared to the benefits it provides which include the conservation of water.
- The project site is located on a commercial orchard. Leaks and seepage have the potential to cause damage and affect crop production.

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	2019	2020	
	Oct - Dec	Jan - Mar	Apr - Sept
Regulatory Compliance – Reclamation			
Administrative			
Bid shotcrete w/fiber			
Grant Reporting			
Construction			
Site Prep - Excavation, repack canal prism			
Apply shotcrete w/fiber			
Demobilize & Site Restoration			
Monitor site for leaks/seepage			

- **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.
- **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 a more effective water management tool for canal lining over the traditional slip-line concrete liner because of its elasticity properties provides for 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.**
 - The existing concrete lining has cracked allowing water to escape the canal prism. Replacing the concrete liner with reinforced shotcrete will reduce the water loss and the buildup of sediment in the canal prism which promotes vegetation growth.

PROJECT BUDGET

Funding Plan

The estimated cost of this project is \$66,286. The District is requesting a 50% cost-share of \$33,143 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 and use of District equipment estimated at \$22,835*, and monetary contributions, estimated at \$10,308 derived from the District’s general operating funds. 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		\$33,143
Labor*	\$17,520	
Equipment (District Owned)*	\$3,239	
De minimus 10%*	\$2,076	
Monetary Contribution	\$10,308	
REQUESTED RECLAMATION FUNDING		\$33,143

Budget Proposal

Table 2. Estimated Project Costs

BUDGET ITEM DESCRIPTION	\$/Unit	Quantity	Qty Type	TOTAL COST
Management/Administration				
Salaries & Wages				
Manager	\$49.04	5.0	hour	\$245
Assistant Manager	\$32.48	5.0	hour	\$162
Bookkeeper	\$25.79	10.0	hour	\$258
Total Salaries & Wages				\$666
Fringe Benefits				
Manager	\$31.43	5.0	hour	\$157
Assistant Manager	\$21.18	5.0	hour	\$106

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Bookkeeper	\$18.89	10.0	hour	\$189
Total Fringe Benefits				\$452
Total Management/Administration				\$1,117
Construction				
TASK: Mobilization/Construction				
Salaries & Wages				
Foreman	\$23.50	15.0	hour	\$353
Laborer #5	\$15.82	72.0	hour	\$1,139
Laborer #6	\$17.50	48.0	hour	\$840
Laborer #8	\$17.50	72.0	hour	\$1,260
Laborer #11	\$23.47	72.0	hour	\$1,690
Laborer #12	\$15.50	72.0	hour	\$1,116
Laborer #13	\$16.91	72.0	hour	\$1,218
Laborer #14	\$15.50	72.0	hour	\$1,116
Total Salaries & Wages				\$8,731
Fringe Benefits				
Foreman	\$17.63	15.0	hour	\$264
Laborer #5	\$15.08	72.0	hour	\$1,086
Laborer #6	\$12.92	48.0	hour	\$620
Laborer #8	\$14.48	72.0	hour	\$1,043
Laborer #11	\$18.77	72.0	hour	\$1,351
Laborer #12	\$14.95	72.0	hour	\$1,076
Laborer #13	\$9.19	72.0	hour	\$662
Laborer #14	\$9.45	72.0	hour	\$680
Total Fringe Benefits				\$6,783
Equipment (District Owned)				
#8 1988 Peterbilt Equip Hauler	\$47.09	5.0	hour	\$235
#25 2006 Chevy 2500 4x4 Truck	\$11.46	10.0	hour	\$115
#36 2008 Ford F350 4x4 Truck	\$12.64	10.0	hour	\$126
#55 2012 Ford F150 4x4 Truck	\$9.24	10.0	hour	\$92
#58 2013 Ford F150 4x4 Truck	\$9.32	10.0	hour	\$93
#83 1999 Zieman Trailer	\$3.47	5.0	hour	\$17
#121 2004 Kubota Excavator	\$11.61	20.0	hour	\$232
#185 1985 I/R Air Compressor	\$13.07	30.0	hour	\$392
#204 1985 Thomsen Concrete Pump	\$25.98	30.0	hour	\$779
#313 2009 Cat Excavator	\$33.70	20.0	hour	\$674
Total Equipment Use				\$2,757
Supplies and Materials				
4000psi Shotcrete w/Stealth Fiber	\$145.00	250.0	cubic yard	\$36,250
Total Material				\$36,250
TOTAL TASK: Mobilization/Construction				\$54,521
TASK: Demobilization & Site Restoration				
Salaries & Wages				
Foreman	\$23.50	5.0	hour	\$118
Laborer #11	\$23.47	10.0	hour	\$235

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Laborer #13	\$16.91	10.0	hour	\$169
Total Salaries & Wages				\$521
Fringe Benefits				
Foreman	\$17.63	5.0	hour	\$88
Laborer #11	\$18.77	10.0	hour	\$188
Laborer #13	\$9.19	10.0	hour	\$92
Total Fringe Benefits				\$368
Equipment (District Owned)				
#8 Equipment Hauler	\$47.09	5.0	hour	\$235
#25 2006 Chevy 2500 4x4 Truck	\$11.46	2.0	hour	\$23
#36 2008 Ford F350 4x4 Truck	\$12.64	2.0	hour	\$25
#83 Ziemann Trailer	\$3.47	5.0	hour	\$17
#121 2004 Kubota Excavator	\$11.61	4.0	hour	\$46
#313 Case Excavator	\$33.70	4.0	hour	\$135
Total Equipment Use				\$482
TOTAL TASK: Demobilization & Site Restoration				\$1,371
Total Construction Costs				\$55,892
TOTAL DIRECT COSTS				\$57,010
Indirect Costs				
de minimus (Direct Costs Less Shotcrete)	10%		\$20,760	\$2,076
Environmental Compliance to be completed by Reclamation				\$7,200
TOTAL ESTIMATED PROJECT COSTS				\$66,286

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 employees.

Position	Direct Labor Rate	Retire-ment	FICA	Health Ins	St Emp Ins	Workers Comp Ins	Leave Accrual	Fringe Rate
Manager	49.04	13.00	3.97	10.89	.05	.12	3.40	31.43
Assist. Mngr	32.48	10.00	3.06	5.78	.04	.06	2.24	21.18
Bookkeeper	25.79	6.75	2.06	7.62	.03	.04	2.39	18.89
Foreman	23.50	5.97	1.82	7.43	.02	.94	1.45	17.63
Laborer #4	16.65	2.82	1.29	3.50	.02	.67	.53	8.83
Laborer #5	15.82	2.68	1.23	10.02	.02	.64	.49	15.08
Laborer #6	17.50	2.92	1.34	7.01	.02	.70	.93	12.92
Laborer #8	17.50	4.46	1.36	7.01	.02	.70	.93	14.48
Laborer #9	19.73	5.19	1.58	7.01	.02	.79	1.25	15.84
Laborer #11	23.47	6.15	1.88	7.62	.02	.94	2.16	18.77
Laborer #12	15.50	1.77	1.16	10.89	.02	.61	.50	14.95

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Laborer #13	16.91	2.80	1.29	3.81	.02	.68	.59	9.19
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, 2019, 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 the labor rates in the budget proposal for the Talent Main Canal Frink Orchard Shotcrete Project 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 2019 are below:

EQUIPMENT RATES USING THE ARMY CORP OF ENGINEERS CONSTRUCTION EQUIPMENT OWNERSHIP & OPERATING SCHEDULE FOR REGION VIII DATED 11/30/2016 (most recently available)			
REVISED 03/27/2019			
#	DESCRIPTION	HOURLY	STANDBY
3	1981 INTL DUMP TRK - 5 YD	22.03	2.50
4	1980 KENWORTH DUMP TRK - 10 YD	56.40	5.43
8	1988 PETERBILT LOWBOY	47.09	5.35
10	1978 MILITARY TRK/BOOM	25.76	0.99
11	1978 FORD TRK/BOOM	25.76	0.99
16	1998 DODGE RAM 3500 4X4 TRUCK	9.32	1.37
25	2006 CHEVROLET 2500 4X4 TRUCK	11.46	1.06
26	2005 FORD F350 4X4 TRUCK	12.64	1.30
36	2008 FORD F350 4X4 TRUCK	12.64	1.37

37	2014 FORD F150 4X4 TRUCK	9.71	1.24
52	2011 FORD F250 4X4 TRUCK	10.12	1.29
53	2011 FORD F150 4X4 TRUCK	9.12	1.03
55	2012 FORD F150 4X4 TRUCK	9.24	1.09
56	2018 DODGE RAM 1500 4X4 TRUCK	9.61	1.27
58	2013 FORD F150 4X4 TRUCK	9.32	1.13
59	2016 FORD F150 4X4 TRUCK	9.83	1.31
75	2013 KUBOTA TRACK LOADER	15.47	2.10
83	1999 ZIEMAN TRAILER	3.47	0.86
91	2008 KUBOTA EXCAVATOR	10.17	2.14
121	2004 KUBOTA EXCAVATOR	11.61	2.03
135	CEMENT MIXER	2.09	0.20
185	1985 ING RAND AIR COMPRESSOR	13.07	1.18
200	WELDER	1.19	0.13
204	1985 THOMSEN CONCRETE PUMP	25.98	3.20
207	1995 MORBARK E-Z BEAVER CHIPPER	14.04	1.46
312	1997 CAT EXCAVATOR	30.37	5.43
313	2009 312DL CAT EXCAVATOR	33.70	7.26
314	2015 312E CAT EXCAVATOR	30.39	6.48
550	1995 JD CRAWLER/DOZER	40.37	5.42
580	1990 CASE BACKHOE	16.20	1.54
600	1965 D-6 CAT/DOZER	43.27	1.90

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: \$2,200
- Historical and Cultural Resources Compliance: \$5,000

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 and has never 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 original concrete lining was placed in early 1960s. No other existing structures will be impacted.
- **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

Due to the timing of the Talent Irrigation District's board meeting, the official resolution will be submitted at a later date, within 30 days of this application's deadline of April 24, 2019.