WEST EXTENSION IRRIGATION DISTRICT
UMATILLA PROJECT
UMATILLA & MORROW COUNTY, OREGON

DUNS NO. 082619339

WATERSMART SMALL-SCALE
WATER EFFICIENCY PROJECT
GRANT PROGRAM FOR FY 2018
Funding Opportunity Announcement No. BOR-DO-18-F009

SUB-LATERAL 12 MILLER ROAD WATER CONSERVATION PIPING PROJECT

Applicant/Project Manager

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JULY 30, 2018

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EXECUTIVE SUMMARY

Date: July 30, 2018

Applicant: West Extension Irrigation District (WEID or District)
840 E. Hwy 730; P. O. Box 100, Irrigon, OR 97844
Morrow and Umatilla Counties, Oregon
Serving Cities of Umatilla, Irrigon and Boardman, Oregon

Project Summary: This construction project will replace 4200 feet of open concrete-lined and dirt sub-lateral into a piped delivery system and conserve 372 acre-feet of water. This project accomplishes the District's water management and conservation goals in its two major planning efforts – the Boardman Master Plan and the WEID Water Management and Conservation Plan. It allows for the landowners to apply for funding through NRCS in Morrow County to upgrade their irrigation systems. It meets the goals of this funding announcement by enabling the District to make more efficient use of its water supply and converting all irrigators to a metered pressurized irrigation delivery system.

Start & Completion Dates: Begin January 1, 2019. Completion March 31, 2020.

Federal Project: This project is part of a federally owned irrigation project – the West End of the Umatilla Project, authorized in 1905.

BACKGROUND DATA

West Extension Irrigation District (WEID or District) is located in the Umatilla Basin in North-eastern Oregon. The District was formed in 1919 under the Irrigation laws of Oregon which is now Chapter 545 of the Oregon Revised Statutes. It is under contract to the United States as part of the Umatilla Project, authorized in 1905. It diverts irrigation water from the Umatilla River and Columbia River for delivery to 9,235 acres on the federal project.

Describe the source of water supply, the total quantity of water managed and delivered, the water rights involved, current water uses, and the number of water users served.

Primary Source: Umatilla River
Supplement Sources: Columbia River
Return flows from McKay Reservoir
Water Use: Irrigation
Irrigators: 670
Acres Served: 9234.80

Table 1. Water Supplied and Managed, Past Eight Years in acre-feet

Source	2010	2011	2012	2013	2014	2015	2016	2017
Umatilla/Prim	27745	32209	28604	25772	27431	20565	23254	24120
Columbia/Supp	8417	4920	7827	9380	10678	16277	13985	9283
Other/Supp				489	100	348	689	1246
TOTAL	36162	37129	36431	35641	38209	37190	37928	34649

Table 2. WEID Water Right Certificates

Certificate	Permit	Priority Year	Source	Acres	Prim (P) Supp (S)	Max flow cfs	Duty Ac-ft/Ac
79924	Decree	1893	Umatilla River	1369.9	P	34.24	6
19925	Decree	1906	Umatilla River	347.1	P	8.64	6
79926	408	1909	Umatilla River	4121.7	P	295.67	10
79927	27941	1962	Umatilla River	20.0	P	.50	4.5
79928	33883	1968	Umatilla River	3248.1	P	81.20	4.5
79929	33883	1969	Umatilla River	128.0	P	3.20	4.5
79930	33883	1968	Columbia River	8516.6	S	90.0	4.5
87872	7400	1928	Return Flow McKay Resvr	5838.7	S	87.0	

Water is diverted from the Umatilla River at Three Mile Falls Dam into the 27-mile long West Extension Main Canal. As the natural and return flows in the Umatilla River decrease, the District turns on its Columbia River pumps for supplemental water.

The District is part of the Umatilla Basin Water Exchange program where water is left in the Umatilla River for fisheries purposes and is exchanged with water pumped from a federal pumping station. This is a bucket for bucket exchange.

Starting in 2014, the District began receiving reclaimed water from the City of Hermiston's Water Treatment Plant (WTP). This is Class A water. Monthly, 130 acre-feet is received from May through October. City of Umatilla is currently negotiating with the District on a similar project.

Describe the current and projected water demand.

Table 3. Summary of Crop Demand Vs Available Water (based on 15-year records)

	Current Demand based on crop needs	Current Available All sources	Projected Demand Ten Years Out
Avg. Max Monthly (Ac-ft)	9,091	7,350	7,350
Avg. Max Delivery Rate (cfs)	164	135	115
Avg. Annual (Ac-ft)	37,582	37,200	36,000
Peak Monthly (Ac-ft)	10,495	7,878	7,878
Peak Delivery Rate (cfs)	167	145	125
Peak Annual (Ac-ft)	41,683	38,209	37,900

The District cannot meet the demands of its irrigators during the heat of summer. Irrigators are on rotation. It has tightened up water management to lower demand in the following ways:

- Installing meters on all deliveries 20 acres and over.
- Having a strict water order system for irrigators 20 acres and over
- Hiring additional seasonal staff for regulation and irrigator education
- Implementing a program to pipe open sub-laterals & convert flood irrigation to sprinkler
- Putting more money to main canal O&M to decrease operational losses

List type of use of water, describe major crops and total acres served.

Table 4. Crops grown in the WEID - 2018

Crop	Acres	Percentage
Pasture	2,542.40	27.5%
Alfalfa / Hay	2,100.40	22.7%
Corn	1,540.30	16.7%
Hemp (permitted)	437.00	4.7%
Cabbage	120.90	1.3%
Potato	497.20	5.4%
Onion	293.40	3.2%
Beans / Peas	117.70	1.3%
Mint/Spring Grain	252.30	2.7%
Fruits	423.90	4.6%
Fallow	78.30	0.9%
Lawn / Non-Ag	831.00	9.0%
TOTAL	9,234.80	100%

Table 5. Types of On-Farm Irrigation Systems - 2018

Irrigation Type	Acres	%
Drip	398.8	4.3
Flood	2123.8	23.0
Set Sprinkler	3049.5	33.0
Center Pivot Sprinkler	3662.7	39.7
TOTAL	9234.8	100

Identify potential shortfalls in water supply.

WEID is a return flow district and has seen its primary source water decrease from the Umatilla River. It is becoming more and more reliant upon its 90 cfs supplemental source in the Columbia River. Here are some changes affecting the availability of water in the Umatilla River.

- Conservation activities from upland irrigation districts
- Unregulated pumping in the alluvial aquifer
- Unmitigated loss of return flow water from federal exchange program

The table below shows how the availability of the District's primary source water from the Umatilla River has changed since 1980.

Table 6. Reliability of Primary Umatilla River water

Description	Period	Percentage Reliability of Supply to Meet Annual Use				
		25,000 afy	30,000 afy	35,000 afy	40,000 afy	45,000 afy
Prior to Umatilla Basin Project	1980- 1988	100%	100%	100%	56%	22%
After Umatilla Basin Project	1988 to 2004	93%	93%	47%	13%	0%
Last 13 Years	2005 to 2017	77%	31%	0%	0%	0%

Note: Reliability calculated as number of years specified water use was met divided by total years during specified period.

Describe the applicant's water supply system. For agricultural systems, please include the miles of canals, miles of laterals, existing irrigation improvements (i.e. type, miles, and acres).

Water is diverted at Three Mile Falls Dam which is located about two miles upstream from the mouth of the Umatilla River. Water is then gravity-fed into the District's main feature – it's 27-mile long concrete-lined main canal. There are seventeen booster stations along the canal and over 120 deliveries off the main canal. Many deliveries are piped and gravity-fed. There are 17 open sub-laterals totaling 23 miles. Buried pipelines total 25 miles.

Diversion facilities also include a pump station on the Columbia River that provides supplemental water to the WEID. A second Columbia River pump station is federally owned and operated, by the Bureau of Reclamation and is part of the Umatilla Basin Exchange program. Both pump stations pump water directly into the WEID main canal.

The final nine miles of the 27-mile long main canal deliver water to the Boardman area. The Boardman area accounts for 4,548 acres (49% of District) and has 35% of the District landowners. 44% of the Boardman Project area is flood-irrigated. The Boardman sub-laterals are mainly open channel. The District has piped two of its open Boardman sub-laterals and will pipe a third this fall.

Table 7. Conservation Projects Completed Years 2001 – 2017 Main Canal / Sub- laterals

Service Area Description	Comments	Pipe Details (Feet)	Cost of materials (no labor)	Estimated Savings	Year Completed
Main Canal	Automated gates and SCADA Data loggers, canal weirs		$799,911	Water Accounting	2001-06
County Line Project (35 Ac)	Replace concrete line/ Convert from flood to sprinkler	1800 ft. 6"	$4,500	80 A.F.	2005
Main Canal (4373 Ac)	Landowner Meters	132 meters		300 AF	2004 - 06
Depot Lane	Replace open sub-lateral system	3800 ft. 6"-12"	$72,000	150 AF	2004
Relocation Canal Sub-sub-lateral s	Replace open sub-lateral /install VFD booster station.	4740 ft, 4" – 10"	$77,700	225 AF	2009 2010
Sub-lateral 79 (40 AC)	Convert from flood to sprinkler	2200 ft 8 "	$7,500 pipe Owner installed	140 AF	2013
Sub-lateral 78 (68 AC)	Convert from flood to sprinkler	1,500 ft 8"	$6,500 pipe Owner installed	170 AF	2014
Irrigon/Boardman	Installed VFDs on existing pump stations & add irrigators to existing pump station for efficiency		Varies $6500 - $8,000	60 AF	2013-2014
Stiffler LLC (80 AC)	Purchase and convert land from flood irrigation to drip For blueberry farm		Unknown – Landowner cost	360 AF	2013-2015
Boardman Project Phase IA	Pipe Sub-lateral 7 and meter deliveries	4860 ft 6" – 21"	$191,167	435 AF	2016
Boardman Project Phase II	Pipe & pressurize Sub-lateral 9, convert 84.5 flood acres to sprinkler, meter deliveries	4560 ft 6" – 15"	$167,152	278 AF (est)	2017

Identify any past working relationships with the Bureau of Reclamation including any previous grants. Include the dates, relationship and the projects.

West Extension Irrigation District (WEID) is a federal project in the Umatilla Basin, authorized in 1905 and built in 1914-1916. The WEID has a 1926 O&M contract and a 1954 repayment contract.

Table 8. List of federal grants managed by WEID

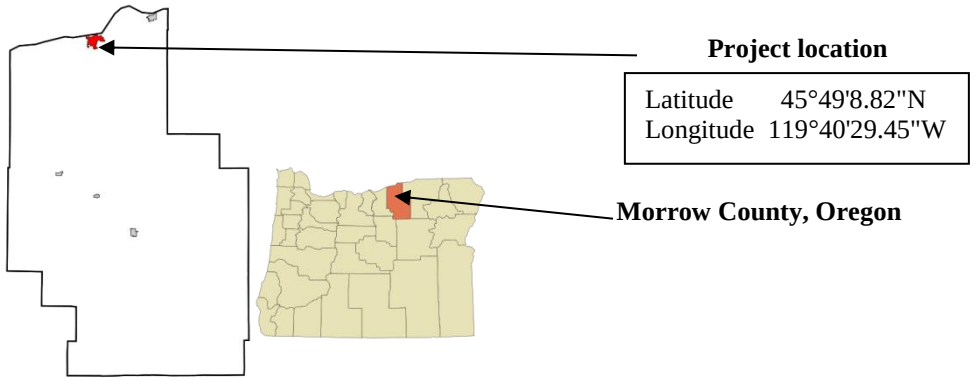
Grant No	Dates	Type	Purpose	Federal $$$
1425-08-FG-10-04810	FY2001-2002	Fish & Wildlife Coordination Act	Canal Control, Monitoring & Measurement	$85.000
1425-02-FC-10-8960	FY 2003 - 2006	Multi Year	Canal Control, Measuring, conservation Planning	$220,00
1425-08-FG-1L-1378	FY 2008-2011	Water 2025	System Optimization Review	$34,000
1425-08-FG-1L-1355	FY2008-2011	WCFSP	GIS Conversion	$12,915
R15AP00059	FY2015-2016	WCFSP	Piping Sub-lateral 7	$25,000
R16AP00068	FY2016-2017	WCFSP	Piping Sub-lateral 11	$25,000
R17AP00202	Awarded – in contract phase	WaterSMART SWEP	Piping Rippee Rd East & West	$70,000

WEID is a partner with Reclamation, the local fish agencies, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and Bonneville Power Administration (BPA) for Phase I of the 1988 Umatilla Basin Act, an exchange program to benefit the fisheries.

FY 2008-2016: The District and Reclamation worked with the City of Hermiston to allow for reclaimed or reuse water to enter the irrigation canal. EPA, Oregon Department of Environmental Quality, Oregon Water Resources Department and the fisheries agencies all had oversight.

PROJECT LOCATION

The WEID is located in NE Oregon and covers portions of Umatilla and Morrow counties. Included in the service area are the cities of Umatilla, Irrigon and Boardman. The 9,235 acres extend from the confluence of the Umatilla and Columbia Rivers, westward for 27 miles, to form a long, narrow irrigated band lying south of the Columbia River. It is 160 miles east of Portland, Oregon and 220 miles west of Boise, Idaho.



TECHNICAL PROJECT DESCRIPTION

Describe the work in detail including specific activities that will be accomplished.

The project will enclose the open Sub-lateral No. 12 into a pipeline sized from 6 to 10 inches. Landowners currently taking water from flood Sub-lateral 13, a concrete and dirt-lined ditch, will be added to the new pipeline, eliminating use of Sub-lateral 13. A pump station will be installed to provide pressurized delivery to the landowners. All deliveries will be metered. A rotating screen will be put in the headworks to prevent weeds and algae from entering the system. When complete, 4340 feet of pipe will have been installed with a variable frequency drive pump station providing pressurized, metered delivery to ten patrons. This work will save 372 acre-feet of water annually.

Identify the problems and needs

WEID is a water-short District. It relies upon return flows from upland irrigators and these flows continue to diminish. With a tribal water right settlement looming, the District is concerned about meeting its irrigator demands, droughts and climate change.

The District has had water shortages during its existence and has taken active steps in the last 25 years to address those shortages. Measurement, automated systems, education and scheduling have been implemented. Now, it's time to pipe the rest of the sub-laterals and convert remaining flood irrigators to sprinkler for actual "on-the-ground" water savings.

Describe how the project is intended to address the problems and needs.

The Miller Road piping project will save 372 acre-feet of water. It will:

- Eliminate the seepage and delivery losses, thus conserving water
- Eliminate the tailwater losses, thus conserving water
- Convert 94.5 acres of land from flood irrigation to sprinkler irrigation, thus conserving water
- Allow the landowners to work with NRCS to increase on-farm efficiency
- Allow for the District to conserve water to adapt to climate change and droughts
- Save operational time for the District and landowners
- Eliminate two concrete diversion boxes within the county road easement, which have created hazards for the County crew and drivers.

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Identify the expected outcomes.

There is an expected water savings of 372 acre-feet. This water will be used to shore up the District's water supply needs. When not used, it will be left in the Umatilla or Columbia River for fisheries benefit.

Landowners will receive pressurized irrigation water. They will work with NRCS folks who will provide technical assistance and funding for on-farm improvements.

EVALUATION CRITERIA

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

*Up to **35 points** may be awarded based upon evaluation of the benefits that are expected to result from implementing the proposed project. This criterion considers a variety of project benefits, including the significance of the anticipated water management benefits and the public benefits of the project. This criterion prioritizes projects that modernize existing infrastructure in order to address water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflict in the region.*

- *Describe the expected benefits and outcomes of implementing the proposed project.*
  - *What are the benefits to the applicant's water supply delivery system?*
  - *If other benefits are expected explain those as well. Consider the following: Extent to which the proposed project improves overall water supply reliability*

Benefits of Piping Sub-lateral 12 and 13:

Technical Table 1 – Quantifiable Water Savings in Acre-feet (AF) for the Project area

Lateral	**Existing Length Feet**	**Op Loss AF / Day**	**Seepage Loss AF / Day**	**Evap Loss AF / Day**	**Total Loss AF / Season**
12	3400	< 0.1	0.10	< 0.1	20.0
13	800	0.20	0.15	< 0.1	68.0
				TOTAL	**88.0**

Water will be saved from conversion of 94.50 acres of land from flood to sprinkler. 3.0 acre-feet for each acre will be saved for 284 acre-feet.

Piping this sub-lateral would make 372 cfs of water available for use elsewhere in the District to meet its water supply shortage.

Technical Table 2 – Operational Savings

Activity	Comment	Time	Cost / Day	Annual Savings	
Winter cleaning	Inmate crew	2 days	$530	$ 1060	District
Winter cleaning	WEID crew	2 days	$200	$ 400	District
Mowing/Spraying	WEID crew/equip	1.5 days	$240	$ 360	District
Monitoring water	WEID crew	.5 hrs/daily	$208	$ 676	District
Managing water	Landowners	6/hrs week	$120	$ 2160	Landowners
			TOTAL ANNUAL SAVINGS	$ 4656	

Drought Resiliency Benefit

Northeast Oregon has experienced moderate to severe drought conditions on a yearly basis since the District was formed in 1919. This Water Efficiency Grant application is one important step in the District reducing its' drought risk. The grant will improve the reliability and consistency of the water supply, especially during drought years. By reducing drought risk, the District will decrease the possibility of crop loss due to drought. In addition, this important conservation project will help preserve the limited water supply for irrigation, wildlife, and the environment.

Other Project Benefits:

- Improve water supply consistency: Piping Sub-lateral 12 and 13 will provide a consistent and continuous flow of water to the irrigators. Currently, the flow rises and falls with the water level in the main canal.
- Make water available to an economically disadvantaged area: The Boardman area is a small agricultural area. The growth of the Port of Morrow (including Tillamook Cheese Plant, data processing centers, and the ag processing industry) and the expansion of the Three Mile Dairy Farm facility just west of Boardman are adding to the necessity of Boardman to develop and address its housing needs. Some of the smaller farms are dividing into two-acre lots and more is expected. Piping the sub-laterals will make it easier for growth to occur and for those future landowners to receive their water. District policies already require the properties to provide community irrigation systems when they develop. The 2010 census identified a Hispanic or Latino population in Boardman of 61.7%.
- Groundwater contamination problems: According to Oregon DEQ's Lower Umatilla Basin Groundwater Investigation, local activities in the area – such as irrigated agriculture, livestock operations, domestic sewage and other – have contributed to the degradation of area groundwater. The ODEQ declared the lower Umatilla Basin a "Groundwater Management Area" in 1990 when groundwater sampling during the mid-1980's found high nitrate concentrations in local groundwater. They found that irrigated agriculture is the dominant land use in the basin. Estimates indicate that irrigated agriculture releases the most nitrogen to the basin's land surface. Poor irrigation techniques, such as flood irrigation and seepage, are a contributor to the problem, along with many other factors. Enclosing the open sub-laterals and converting land from flood to sprinkler irrigation will make the canal water less available to affect the nitrate and groundwater issues in Boardman.

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

*Up to **35 points** may be awarded based on the extent to which the proposed on-the-ground project is supported by an applicant's existing water management plan, water conservation plan, System Optimization Review (SOR), or identified as part of another planning effort led by the applicant. This criterion prioritizes projects that are identified through local planning efforts and meet local needs.*

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

The WEID developed its Boardman Master Plan (BMP) in 2004 and updated it in 2016. The purpose of the BMP is to plan for growth in the Boardman area, to prioritize District activities, to obtain conservation funding and to provide information to irrigators and developers with a blueprint for irrigation upgrades. Specific recommendations were made for each sub-lateral service area. The recommendations are based on zoning classifications, irrigation demand calculations, modeling, engineering judgment, and discussions with landowners.

The WEID adopted its Water Management and Conservation Plan (WMCP) in December 2011, which includes its System Optimization Review. It not only meets the requirements of the State of Oregon and Bureau of Reclamation for such a document, but is an excellent resource for the District

for current and future management activities. The WMCP quantified the water savings that could be gained from various piping projects and prioritized the projects. Sub-laterals 12 and 13 were identified as medium priority projects. However, they lay the stage for the next phases of higher priority projects with more acres and potential for more water savings.

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

*Up to **10 points** may be awarded based upon the extent to which the applicant is capable of proceeding with the proposed project upon entering into a financial assistance agreement. Applicants that describe a detailed plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion. 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.*

Project Schedule

Task	Jan - March 2019	April – June 2019	July – Sept 2019	Oct - Dec 2019	Jan – March 2020
Meet with landowners to Obtain easements	XXXX	XXXX			
Complete engineering design		XXXX			
Complete land survey		XXXX			
Order & receive pipe and materials			XXXX		
Final project design			XXXX		
Site Preparation				XXXX	
Do canal work				XXXX	XXXX
Install pipe				XXXX	XXXX
Complete hookups					XXXX
Cleanup					XXXX

Project Activity – Sub-lateral 12 Miller Road Project, Boardman

- **Project Permits:** No permits will be required.
- **Engineering Design:** A preliminary design has been done for the project. A design with sufficient detail for the District crews will be needed from the District engineer, JUB, Inc, in Kennewick, WA. They have provided a bid for this work has been accomplshed.
- **Policies / Administrative Action**: All policies and procedures are in place for this project.
- **Environmental Compliance:** The District is in the process of preparing the environmental compliance for all of the Boardman area. Work with the local officer, Warren Hurley and Chet Sater is ongoing. We anticipate the environmental compliance to be completed by the end of 2018. This will be before the start of this project.

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

*Up to **10 points** may be awarded based on the extent that the proposal demonstrates a nexus between the proposed project and a Reclamation project or activity. Describe the nexus between the proposed project and a Reclamation project or activity, including:*
• Is the proposed project connected to a Reclamation project or activity? Yes, the 1905 Umatilla Project, Oregon and the 1988 Umatilla Basin Act, Exchange Program.

If so, how? Please consider the following:

- *Does the applicant receive Reclamation project water?* Yes.
- *Is the project on Reclamation project lands or involving Reclamation facilities?* Yes
- *Is the project in the same basin as a Reclamation project or activity?* Yes.
- *Will the proposed work contribute water to a basin where a Reclamation project is located?* Yes, the Umatilla Basin, Oregon.

Will the project benefit any tribe(s)? Yes, saved water will be left in the Umatilla River and Columbia River and will benefit the Confederated Tribes of the Umatilla Indian Reservation.

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

*Up to **10 points** may be awarded based on the extent that the proposal demonstrates that the project supports the Department of the Interior priorities. Please address those priorities that are applicable to your project. Points will be allocated based on the degree to which the project supports one or more of the Priorities listed, and whether the connection to the priority(ies) is well supported in the proposal.*

This project will modernize the delivery system in the Boardman area and allow the affected irrigators to develop the most efficient irrigation methods available on their properties. The District will install a metered pressurized delivery system that will allow the irrigators to take water on demand. All water will be filtered and metered. The landowners will work with NRCS to develop their systems to make the most efficient use of their water.

PROJECT BUDGET

The non-federal share of the project costs will be from the District's annual budget. The funds will be available January 1, 2019.

Budget Table 1 - Summary of Non-Federal & Federal Funding Sources

FUNDING SOURCE	FUNDING AMOUNT
Non-Federal Entities:	
West Extension Irrigation District	
WEID In - Kind	46,755
Budget, Line Item	42,842
Non-Federal Subtotal	89,597
Reclamation Funding	75,000
TOTAL PROJECT FUNDING	164,597

Budget Table 2.. Funding Breakdown

Description	Percentage	Total
District Funds		
Budgeted funds	26.0%	$ 42,842
In-kind	28.4%	$ 46,755
Reclamation Funds	45.6%	$ 75,000
TOTAL PROJECT	100%	$164,597

DETAILED PROJECT BUDGET – SUB-LATERAL 12 BOARDMAN

Budget Item Description	Quantity	Price/Unit	Cost
Salary/Wages			
Manager	80 hrs	$34.27/hr	$ 2,742
Op Mgr/Supervisor	160 hrs	$21.50/hr	$ 3,440
District Skilled Crew	640 hrs	$19.20/hr	$ 12,288
Temp Labor	160 hrs	$17.00/hr	$ 2,720
Sub-total Labor			$ 21,190
Fringe - Mgr		48.46%	$ 1,329
Fringe - Supervisor		50.08%	$ 1,723
Fringe – District Crew		52.95%	$ 6,506
Fringe - Labor		17.41%	$ 474
Sub-total Fringe			$ 10,032
Mileage-Travel	0.00		0.00
Equipment			
Trackhoe/Loader	160 hrs	$22.55	$ 3,608
Backhoe/Loader	160 hrs	$22.23	$ 3,557
Dump Truck	200 hrs	$34.48	$ 6,896
1 ton 4X4 pickup	32 hrs	$21.39	$ 684
¾ ton 4X4 flatbed	16 hrs	$22.74	$ 364
½ ton 2X4 pickup	20 hrs	$21.20	$ 424
Sub-total equipment			$ 15,533
Supplies/Materials			
10-inch PVC, PIP	980 feet	9.65	$ 9,457
6-inch PVC, IPS	3400 feet	2.80	$ 9,520
Flow control valve (3)	Lot	5375	$ 5,375
Elbows, tees, reducers	Lot	2500	$ 2,500
Misc fittings, parts	Lot	3200	$ 3,200
Flush. Air relief valves	7 each	120	$ 840
Service valves	10 each	300	$ 3,000
Main system meter	1 each	1750	$ 1,750
40 HP Pump w/VFD	1 each	18000	$ 18,000
Pump manifold, fittings	Lot	12000.	$ 12,000
Building for pump		6500	$ 6,500
Concrete & Headgate	Canal work		$ 1,800
Gravel & Fill			$ 8,000

Weed screen & Filter			$ 6,000
Sub-total materials			$ 87,942
Contractors			
Contractor Road Xings	2 HDPE	5200	$ 10,400
Contractor – prep work			$ 5,500
Engineering	50 hrs	180.00	$ 9,000
Surveying			$ 5,000
Environmental, permitting			$ 0
Sub-Total Contractors			$ 29,900
TOTAL DIRECT & PROJECT COSTS			164,597

BUDGET NARRATIVE:

Salaries and Wages – The labor rates in the budget proposal are the actual labor rates of the identified personnel for 2019.

Bev Bridgewater, District Manager – Annual salary $71,285. Rate of $34.27 per hour. 80 hours for planning, managing, working with engineer and surveyors and general oversight of project.

Ben de los Santos, Field Supervisor - Rate of $21.50 per hour. 160 hours for planning, ordering & receiving materials, installing, and supervising all phases of project.

Crew – 3 men average hourly rate of $19.20 per hour. Will construct project. Site prep & clean-up, 2 men, 1 week; Installation, 3 men, 4 weeks . Building pump manifold, Installing pump. 2 men 2 weeks. Total of 640 hours.

Labor: Rate - $17.00 per hour. Will assist with pipe & pump building/installation. 160 hours.

Fringe Benefits: The District has paid leave, health insurance, PERS, and the standard state and federal payroll tax benefits. The actual calculated rate is used in the budget.

Equipment: All equipment & vehicles are owned by the District. We used the Army Corps Region 8 Ownership and Operating Costs manual for calculating costs for this project.

Materials and Supplies: All materials are for construction. We have current bids for most supplies. They will be billed at cost.

Travel – No travel will be billed for this job.

Sub-Contractors: The district will use its engineering firm – J-U-B Engineers in Kennewick, WA. They have been selected in a competitive bid basis to represent the District. Preliminary work on the project is complete. We estimate 50 hours for final drawings and review at $180/hour.

A surveyor will be hired to locate the actual right-of-way relative to the private land and to file the document with the county. We will not get a bid until the work is settled, but previous experience shows $5,000 for this work.

A contractor will be used to supply and install the HDPE pipe for two road crossings. A contractor will be used for preliminary prep work to remove concrete canal & material.

Environmental & Regulatory Compliance Costs: Work will be completed prior to this project.

Indirect Costs: No indirect costs have been included.

Other Costs: None.

Contingency Costs: The District budget will cover any contingencies.

ENVIRONMENTAL AND CULTURAL RESOURCE COMPLIANCE

The District has consulted on two adjacent projects (2015 and 2016). In 2018, work was started to prepare a Boardman Area cultural resource inventory which we plan to present to Reclamation in the fall of 2018 and consult for the entire area. This will cover all the Boardman sub-laterals.

Enviro 1: Will the project impact the surrounding environment? There will be some equipment noise and work along rural road. Crew will follow safety procedures, working during day hours.

Enviro 2: 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? There are none, based on two previous cultural resource documents we have prepared for adjacent areas.

Enviro 3: Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "waters of the United States?" No.

Enviro 4: When was the water delivery system constructed? 1916

Enviro 5: Will the project result in any modifications of or effects to, individual features of an irrigation system? If so, state when these features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.
Yes. The project will remove the existing concrete-lined sub-laterals. Headgates 12 will be modified and screening added. Headgate 13 will be closed off for safety and the sub-lateral abandoned. Original construction was 1916. There have been repairs to the original construction over the years, but no extensive modifications.

Enviro 6: Are any buildings, structures or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? Yes**.**

Enviro 7: Are there any known archeological sites in the proposed project area? No.

Enviro 8: Will the project have a disproportionately high and adverse effect on low income or minority populations? No.

Enviro 9: Will the project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands? No.

Enviro 10: Will the project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area? No.

PERMITS: No permits are needed for this work.

READY TO PROCEED: The District is registered with SAM; it has the available funds, equipment & manpower: enviro consultation will be complete. It will be ready to proceed when the contract is signed.

RESOLUTION
BOARD OF DIRECTORS

WEST EXTENSION IRRIGATION DISTRICT
RESOLUTION NO. 18-007
WATERSMART: SMALE SCALE WATER EFFICIENCY
FUNDING OPPORTUNITY NO. BOR-DO-18-F009

LATERAL 11 MILLER ROAD PIPING PROJECT

WHEREAS, the Board of Directors (BOD) of the West Extension Irrigation District (WEID) has an approved Water Management and Conservation Plan (WCMP), and

WHEREAS, the Board of Directors (BOD) wants to implement the WCMP and make improvements to its Boardman delivery system, and

WHEREAS, the BOD has decided that it is in the best interest of the WEID, now

THEREFORE BE IT RESOLVED that the BOD of the WEID authorizes an application to the Bureau of Reclamation WaterSMART program for the amount up to $75,000 for piping open laterals and water measurement. The application will be prepared by the WEID Manager with assistance from J-U-B Engineers and the Manager is authorized to sign the application on behalf of the WEID. The Board commits the match of $75,000 in funding and in-kind specified in the funding plan. The WEID will work with Reclamation to meet established deadlines for entering into a cooperative agreement and authorizes its Manager to sign such agreements on behalf of the WEID.

ADOPTED BY THE BOARD OF DIRECTORS OF THE WEST EXTENSION IRRGATION DISTRICT THIS 21st DAY OF JUNE, 2018.

Dalarie Philippi, Chairman

Vern Frederickson, Vice Chairman

Robert Mueller, Director

Warren Kemper, Director

Abe McNamee, Director