

# **WaterSMART Grant Application**

Installation of Conservation Pipelines – Blocks 40, 41, 42, 43, 44, 45, 46, and 49

July 22, 2022

## **East Columbia Basin Irrigation District**

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## **Executive Summary**

July 22, 2022

The East Columbia Basin Irrigation District (District), headquartered in Othello, Washington, which is in Adams County. We are a category A Applicant that propose to replace approximately 23,483 feet of open canals with pipelines. By doing so, the District will conserve approximately 290 acre-feet of which will be available for other projects each and every year. In addition, since water serving the Columbia Basin Project is pumped from Grand Coulee Dam, the Bonneville Power Administration (BPA) has calculated that an energy savings of approximately 512 kilowatt-hours (kWh) per acre-foot will be saved, resulting in an annual energy savings of approximately 737,338 kWh's. Any water that is not diverted from the Columbia River as a result of this conservation will be left in the river to assist the endangered salmon. The District operates and maintains a portion of the Columbia Basin Project, under contract with the Bureau of Reclamation. The District's main canal is 89 miles long in addition to several thousand miles of laterals, wasteways, and drains. Its service area includes most of Adams County and a portion of Grant County. The project will take place between October 2023 and March 2024.

## **Background Data**

The East Columbia Basin Irrigation District is one of three (3) Irrigation Districts that operate the U.S. Bureau of Reclamation's Columbia Basin Project (CBP) in the state of Washington. Water is pumped from Lake Roosevelt behind Grand Coulee Dam into Banks Lake Reservoir where it is diverted through 300 miles of main canals and about 6,000 miles of laterals, drains, and wasteways. Water is primarily used for irrigation, but in limited circumstances is used for municipal and industrial purposes. Benefits from the Columbia Basin Project include recreation, created habitat, flood control, and power generation. The District serves approximately 171,000 acres primarily for irrigation and has about 2,700 customers. Major crops include alfalfa, wheat, corn, potatoes, and beans. The average annual diversion from the Columbia River to serve the entire CBP is 2.85 million acre-feet, of which the East District uses approximately 949,000 acre-feet. We operate 87 miles of the main canal (the East Low Canal), 30 miles of which is concrete lined and the rest is unlined, compacted earth. We operate approximately 530 miles of laterals and sublaterals, of which 25 miles are concrete lined, 38 miles are membrane lined and 80 miles are piped. We operate 62 pumping plants ranging in size from 10 Horsepower to 2,600 Horsepower.

The District began a formal water conservation program in 1986, utilizing the State of Washington's Referendum 38 water supply program which provided both grants and loans. The District began participating in Reclamation's Water Conservation Field Services Program (WCFSP) shortly after the program became available in 1996. These funds helped to update the District's Water Conservation Plan in 2007. The District has completed hundreds of water

conservation projects since the inception of WCFSP. These projects included shotcrete lining, piping, geomembrane lining, automated gates for upstream level control, and polyurea crack sealing.

## **Project Location**

Please see Appendix A for a general location map. The District plans to replace open laterals with pipelines in Grant and Adams County, WA.

## **Technical Project Description**

If selected to receive a WaterSMART grant, the District plans to replace approximately 23,483 linear feet of earth lined, open ditch with PVC pipelines ranging in size from 12" diameter to 30" diameter and carrying flows from 2 cubic feet per second (cfs) to 11 cfs. This proposal anticipates the need for approximately 24,640 lineal feet of pipe to replace the earthen laterals. Consequently, the District estimates a savings of approximately 290 acre-feet will be realized due to the elimination of seepage and evapotranspiration each and every year. Additional benefits achieved by piping open laterals include lower maintenance costs, decreased conveyance times, less sediment removal, less terrestrial and aquatic weed control, and many times, enabling on-farm irrigation improvements such as center pivots to be installed. Such on-farm improvements have been proven to greatly reduce the consumptive needs of agricultural croplands. These projects also address some of the District's aging infrastructure issues by replacing older open channel conveyance facilities with new efficient pipelines.

Since our canals and laterals are being used to deliver water from March 31<sup>st</sup> to October 25<sup>th</sup>, our construction season is fairly short. The District is comprised of two (2) watermaster sections, each with approximately 20 maintenance personnel. Each section is equipped with a digging excavator, long boom excavator, backhoe, Grade-all, dozers, several dump trucks, loaders, trench compactors, etc. Each watermaster section has historically been tasked with installing upwards of 15,000 linear feet of pipe in a construction season. For the two-year schedule proposed for the projects, District crews will install the entire 24,640 feet of pipe during the next construction season.

## Technical Proposal: Evaluation Criteria

### E.1.

The following evaluation criteria prioritize projects that are intended to meet the objectives stated in Section 9504(a) of the Secure Water Act (P.L. 111-11) and that align with priorities of the Biden administration, including E.O. 14008: “Tackling the Climate Crisis at Home and Abroad” and E.O. 13985: “Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.” Applications should thoroughly address each criterion and any sub- criterion in the order presented below. It is suggested that applicants copy and paste the below criteria and subcriteria into their applications to ensure that all necessary information is adequately addressed.

**Applications will be evaluated against the evaluation criteria listed below.** If the work described in your application is a phase of a larger project, only discuss the benefits that will result directly from the work discussed in the technical project description and that is reflected in the budget, not the larger project.

*The evaluation criteria portion should be addressed in the technical proposal section of the application.*

| <b>Evaluation Criteria: Scoring Summary</b>      | <b>Points:</b> |
|--|----------------|
| A. Quantifiable Water Savings                    | 28             |
| B. Renewable Energy                              | 20             |
| C. Sustainability Benefits                       | 20             |
| D. Complementing On-Farm Irrigation Improvements | 10             |
| E. Planning and Implementation                   | 8              |
| F. Collaboration                                 | 6              |
| G: Additional Non-Federal Funding                | 4              |
| H: Nexus to Reclamation                          | 4              |
| <b>Total</b>                                     | <b>100</b>     |

*Note: Since the NOFO is open to a variety of project types, Evaluation Criteria A-D may not apply to every project. For example, a water savings project (Criterion A) may not include implementation of a renewable energy component (Criterion B). Please provide as much detail and support as you can for those criteria in A-D that are applicable to your project. All applicants should respond to Evaluation Criteria E-H.*

#### **E.1.1. Evaluation Criterion A—Quantifiable Water Savings (28 points)**

*Up to 28 points may be awarded for this criterion. This criterion prioritizes projects that*

*will conserve water and improve water use efficiency, supporting the goals of E.O. 14008. Points will be allocated based on the quantifiable water savings expected as a result of the project. Points will be allocated to give greater consideration to projects that are expected to result in more significant water savings.*

**All applicants should be sure to:**

- 1) Describe the amount of estimated water savings.** For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre-feet per year) as a direct result of this project.

290 AF/YR

*Please include a specific quantifiable water savings estimate; do not include a range of potential water savings.*

- 2) Describe current losses:** Please explain where the water that will be conserved is currently going and how it is being used. Consider the following:

- a. Explain where current losses are going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground)?

In open laterals, the current transport system, water seeps into the ground. Seeping water typically flows into shallow groundwater systems, some of which terminate in the Potholes Reservoir or the Potholes East Canal. The South Columbia Basin Irrigation District relies on these facilities for a portion of its water supply. Water conservation projects in the East District that eliminate seepage may result in a reduction the South District's supply. East District will be conserving 290 acre-feet per year by piping proposed laterals.

- b. If known, please explain how current losses are being used. For example, are current losses returning to the system for use by others? Are current losses entering an impaired groundwater table becoming unsuitable for future use?

The South District relies on the returned seepage so the East District can account for saving a portion of total conservation dependent on the system the groundwater seepage would have fed, 17.1% of the conserved water for seepage terminating in the Potholes Reservoir and 32% of the conserved water for seepage terminating in the Potholes East Canal..

- c. Are there any known benefits associated with where the current losses are going? For example, is seepage water providing additional habitat for fish or animal species?

For laterals with groundwater systems that seepage water flows directly to the Columbia River and does not enter the Potholes Reservoir or the Potholes East Canal the East District can realize the full conservation as savings.

**3) Describe the support/documentation of estimated water savings:**

Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations. Note: projects that do not provide sufficient supporting detail/calculations may not receive credit under this section. Please be sure to consider the questions associated with your project type (listed below) when determining the estimated water savings, along with the necessary support needed for a full review of your proposal.

*In addition, please note that the use of visual observations alone to calculate water savings, without additional documentation/data, are **not** sufficient to receive credit under this section. Further, the water savings must be the result of reducing or eliminating a current, ongoing loss, not the result of an expected future loss.*

Water savings were estimated using previous methodologies established by the East Columbia Basin Irrigation District Coordinated Water Conservation Plan (attached). The following Formula was used for determining the annual seepage loss:

$$\text{Seepage Loss (acre-ft/yr)} = \text{Seepage Rate (ft/day)} \times \text{Wetted Perimeter (ft)} \times \text{Length (ft)} \times 195 \text{ (days)/43,560 (ft}^3\text{/ac-ft)}$$

The seepage rate depends on the underlying geology. Average seepage rates for different geologic units were determined. Those rates were accepted by the Washington State Department of Ecology and Bureau of Reclamation for use in estimating water conserved in conservation projects. The Table presents those seepage rates by geologic unit.

| Geology                                      | Seepage Rate (ft/day) |       |       |
|--|-----------------------|-------|-------|
|  | Unlined               | Lined | Piped |
| Outburst flood deposits, gravel (Qfg)        | 2.0                   | 0.2   | 0     |
| Outburst flood deposits, sand and silt (Qfs) | 1.2                   | 0.2   | 0     |
| Continental sedimentary rocks (PLMc)         | 0.73                  | 0.2   | 0     |
| Wanapum basalt (Mv)                          | 0.99                  | 0.2   | 0     |
| Loess (Ql)                                   | 2.24                  | 0.2   | 0     |
| Alluvium (Qa)                                | 1.7                   | 0.2   | 0     |
| Dune sand, stabilized dunes (Qds)            | 2.24                  | 0.2   | 0     |

See Appendix B

**4) Please address the following questions according to the type of infrastructure improvement you are proposing for funding.** See Appendix A: *Benefit Quantification and Performance Measure Guidance* for additional guidance on quantifying water savings.

(1) **Canal Lining/Piping:** Canal lining/piping projects can provide water savings when irrigation delivery systems experience significant losses due to canal seepage. Applicants proposing lining/piping projects should address:

- a. How has the estimated average annual water savings that will result from the project been determined? Please provide all relevant calculations, assumptions, and supporting data.
- b. How have average annual canal seepage losses been determined? Have ponding and/or inflow/outflow tests been conducted to determine seepage rates under varying conditions? If so, please provide detailed descriptions of testing methods and all results. If not, please provide an explanation of the method(s) used to calculate seepage losses. All estimates should be supported with multiple sets of data/measurements from representative sections of canals.

Often, the measurement devices used to record diversions into and out of the lateral are not sensitive enough to reflect the changes in flows resulting from the reduction in seepage when a lateral is piped. In these cases, we conduct ponding tests on a representative sample of the laterals before the piping project is started. The District has frequently used ponding tests as a check against the approved methodology developed in the Phase I and Phase II Seepage Analyses. Some of the laterals to be piped may have measurement devices sensitive enough to reflect the reduction in seepage achieved by the project. In those cases, a water balance calculation will be used to account for the diversions into and out of the lateral stretch. Diversion records are kept for every lateral for each day of the irrigation season. Pre- and post-project diversion records can be compared to determine the savings achieved by the project.

- c. What are the expected post-project seepage/leakage losses and how were these estimates determined (e.g., can data specific to the type of material being used in the project be provided)?

Installation of pipe to replace existing open channel flow results in no measurable losses due to seepage. The seepage losses due to ditch loss are expected to be removed with the piping project. Previous projects that involved open canals being replaced with pipe have proven that the piped canals have no losses due to seepage and evapotranspiration.



- d. What are the anticipated annual transit loss reductions in terms of acre-feet per mile for the overall project and for each section of canal included in the project?

Annual transit loss reductions have been calculated for each section of canal piped and are shown in Appendix B. The average rate of transit loss for the proposed projects is 5,580 acre-feet per mile per year.

- e. How will actual canal loss seepage reductions be verified?

Where ponding tests are to be conducted, the District creates an earthen dam at each end of the section being tested and fills the canal section to its normal operating level. Staff gauges are installed at appropriate points to measure water level. Measurements are recorded every few hours until the canal is dry. The resulting data is used to calculate the seepage rate.

- f. Include a detailed description of the materials being used. The materials used in piping laterals is PVC, HDPE, or FRP pipe and other materials incorporated into the work (such as concrete, pipe fittings, etc.).

(2) **Municipal Metering:** Municipal metering projects can provide water savings when individual user meters are installed where none exist to allow for unit or tiered pricing and when existing individual user meters are replaced with advanced metering infrastructure (AMI) meters. To receive credit for water savings for a municipal metering project, an applicant must provide a detailed description of the method used to estimate savings, including references to documented savings from similar previously implemented projects. Applicants proposing municipal metering projects should address the following.

- a. How has the estimated average annual water savings that will result from the project been determined? Please provide all relevant calculations, assumptions, and supporting data.
- b. How have current system losses and/or the potential for reductions in water use by individual users been determined?
- c. For installing end-user water service meters, e.g., for a residential or commercial building unit., refer to studies in the region or in the applicant's service area that are relevant to water use patterns and the potential for reducing such use. In the absence of such studies, please explain in detail how expected water use reductions have been estimated and the basis for the estimations.
- d. What types (manufacturer and model) of devices will be installed and what quantity of each?
- e. How will actual water savings be verified upon completion of the

project?

(3) **Irrigation Flow Measurement:** Irrigation flow measurement improvements can provide water savings when improved measurement accuracy results in reduced spills and over-deliveries to irrigators. Applicants proposing municipal metering projects should address:

- a. How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.
- b. Have current operational losses been determined? If water savings are based on a reduction of spills, please provide support for the amount of water currently being lost to spills.
- c. Are flows currently measured at proposed sites and if so, what is the accuracy of existing devices? How has the existing measurement accuracy been established?
- d. proposed flow measurement devices, including accuracy and the basis for the accuracy.
- e. Will annual farm delivery volumes be reduced by more efficient and timely deliveries? If so, how has this reduction been estimated?

The Columbia Basin Project was designed as a gravity irrigation project and most farmers used rill irrigation. Conversion of open laterals to pipelines often makes the installation of center pivot irrigation systems more cost effective for farmers. When farmers convert from rill irrigation to center pivot sprinkler irrigation it results in significant water savings. Some landowners have had to put up two pivots on each side of the lateral instead of one if the lateral had been piped. In the future when their pivots need to be replaced, if the lateral is piped, they can replace them with one center pivot.

- f. How will actual water savings be verified upon completion of the project?

Diversion records for the water season prior to installing pipelines will be used for a balance calculation. If there is a question due to length of ditch being piped in comparison to accurate balance calculation, ponding tests will be conducted. The District has frequently used ponding tests as a check to verify seepage losses.

#### **E.1.2. Evaluation Criterion B—Renewable Energy (20 points)**

*Up to 20 points may be awarded based on the extent to which the project increases the use of renewable energy or otherwise results in increased energy efficiency and reduced greenhouse gas emissions.*

For projects that include constructing or installing renewable energy components, please respond to Subcriterion No. B.1: *Implementing Renewable Energy Projects Related to*

*Water Management and Delivery.* If the project does not implement a renewable energy project but will increase energy efficiency, please respond to Subcriterion No. B.2. *Increasing Energy Efficiency in Water Management.* If the project has separate components that will result in both implementing a renewable energy project and increasing energy efficiency, an applicant may respond to both.

*Note: an applicant may receive points under both Subcriteria No. B.1 and B.2 if the project consists of an energy efficiency component separate from the renewable energy component of the project. However, an applicant may receive no more than 20 points total under both Subcriteria No. B.1 and B.2.*

**E.1.2.1. Subcriterion No. B.1: Implementing Renewable Energy Projects Related to Water Management and Delivery**

*Up to 20 points may be awarded for projects that include constructing or installing renewable energy components (e.g., hydroelectric units, solar-electric facilities, wind energy systems, or facilities that otherwise enable the use of renewable energy). Projects such as small-scale solar resulting in minimal energy savings or production will be considered under Subcriterion No. B.2.*

**Describe the amount of energy capacity.** For projects that implement renewable energy systems, state the estimated amount of capacity (in kilowatts) of the system. Please provide sufficient detail supporting the stated estimate, including all calculations in support of the estimate.

**Describe the amount of energy generated.** For projects that implement renewable energy systems, state the estimated amount of energy that the system will generate (in kilowatt hours per year). Please provide sufficient detail supporting the stated estimate, including all calculations in support of the estimate. Please explain how the power generated as a result of this project will be used, including any existing or planned agreements and infrastructure.

**Describe the status of a mothballed hydropower plant.** For projects that are bringing mothballed hydropower capacity back online, please describe the following:

- Clearly describe the work that will be accomplished through the WaterSMART Grant. Note: normal OM&R activities are not eligible for funding. The work being proposed must be an investment.
- Provide information about the capacity (in kilowatts) of the existing hydro system and the expected capacity once it is brought back on-line.
- Provide information about the duration that the hydro system has been offline and the reasons why it has been mothballed. Please include any regulatory reporting or filings (e.g., FERC filings) or other documentation regarding the system.

**Describe any other benefits of the renewable energy project.** Please describe and

provide sufficient detail on any additional benefits expected to result from the renewable energy project, including:

- How the system will combat/offset the impacts of climate change, including an expected reduction in greenhouse gas emissions.

As a direct result to this project the East Columbia Basin Irrigation District will substantially lower its Carbon footprint. This project will lower the miles driven by personnel and reduce the fires needed to clean the laterals prior to the start of the irrigating season.

- Expected environmental benefits of the renewable energy system

Piping of open laterals eliminates the cyclical maintenance in regards to vegetation. Vegetation grows along ditch banks absorbing water as it flows and slowing flow through the ditch. Vegetation must be controlled by mechanical or chemical means. By replacing earth-lined ditches with pipelines, aquatic vegetation is essentially eliminated along piped sections of laterals. Piped laterals require less maintenance in general, particularly with respect to sediment removal and weed control. Management of terrestrial vegetation is less labor intensive and less costly than current open lateral maintenance.

- Any expected reduction in the use of energy currently supplied through a Reclamation project.

Moving these farmers to surface water from the Columbia Basin Project would significantly reduce pumping costs and result in reduced electric use.

- Anticipated benefits to other sectors/entities.

It is anticipated that all of the water conserved under this proposal would be made available to serve commercial agriculture needs in the Odessa subarea through contracts between individual landowners and the East District. The District has the authority to write these contracts through a master water service contract with the Bureau of Reclamation. This contractual relationship imposes Reclamation water law with respect to the way the water is used.

The projects proposed for construction represent a Public/Private partnership between the Bureau of Reclamation and the District to modernize U.S. Infrastructure. Further, infrastructure construction proposed in this application would be property of the United States of America. The District is funded through landowner assessments, private funds, and the WaterSMART Grants are public funds. Construction of pipelines to replace open laterals that were built in the 1950's is modernizing existing U.S infrastructure while conserving water.

- Expected water needs, if any, of the system.

**AND/OR**

***E.1.2.2. Subcriterion No. B.2: Increasing Energy Efficiency in Water Management***

*Up to 10 points may be awarded for projects that address energy demands and reduce greenhouse gas emissions by retrofitting equipment to increase energy efficiency and/or through water conservation improvements that result in reduced pumping or diversions.*

**Describe any energy efficiencies that are expected to result from implementation of the water conservation or water efficiency project (e.g., reduced pumping).**

- If quantifiable energy savings is expected to result from the project, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimated amount in kilowatt hours per year.

The Bonneville Power Administration (BPA) has calculated that an energy savings of approximately 512 kilowatt-hours (kWh) per acre-foot will be saved, resulting in an annual energy savings of approximately 737,338 kWh's (af/yr x 512 kwh) + Relift Savings = Total Savings kwh

- How will the energy efficiency improvement combat/offset the impacts of climate change, including an expected reduction in greenhouse gas emissions.

As a direct result to this project the East Columbia Basin Irrigation District will substantially lower its Carbon footprint. This project will lower the miles driven by personnel and reduce the fires needed to clean the laterals prior to the start of the irrigating season. Piping these laterals not only conserves water, but it also reduces the amount of maintenance that is required for an open lateral. When we pipe a lateral that goes to just one landowner or is along a county road, we can often get rid of the operation and maintenance for the road which cuts down on the amount of roads that require repairs and new gravel. The landowner can then farm over it which keeps the District from having to mow or spray the weeds that would exist otherwise.

- If the project will result in reduced pumping, please describe the current pumping requirements and the types of pumps (e.g., size) currently being used. How would the proposed project impact the current pumping requirements and energy usage?

Water delivered to the East District is withdrawn/pumped from the Columbia River at Lake Roosevelt. In the area known as the Odessa subarea, farmers currently use private wells to irrigate their land. They must pump from thousands of feet below ground to run their irrigation sprinkler systems. The aquifer is declining rapidly and much of the land currently irrigated by these wells is becoming infeasible to irrigate. The loss of this farmland would be a huge economic impact to the immediate area as well as the state of Washington. Moving these farmers to surface water from the Columbia Basin Project would significantly reduce pumping costs and result in reduced electric use. More importantly, they would obtain a long-term, reliable water supply.

- Please indicate whether your energy savings estimate originates from the point of diversion, or whether the estimate

is based upon an alternate site of origin.

- Does the calculation include any energy required to treat the water, if applicable?
- Will the project result in reduced vehicle miles driven, in turn reducing greenhouse gas emissions? Please provide supporting details and calculations.
- Describe any renewable energy components that will result in minimal energy savings/production (e.g., installing small-scale solar as part of a SCADA system).

### **E.1.3. Evaluation Criterion C—Sustainability Benefits (20 points)**

*Up to 20 points may be awarded under this criterion. This criterion prioritizes projects that address a specific water and/or energy sustainability concern(s), including enhancing drought resilience, addressing the current and future impacts of climate change, and resolving water related conflicts in the region. In addition, this criterion is focused on the benefits associated with the project, including benefits to tribes, ecosystem benefits, and other benefits to water and/or energy supply sustainability.*

**Enhancing drought resiliency.** In addition to the separate WaterSMART Environmental Water Resources Projects NOFO, this NOFO places a priority on projects that enhance drought resiliency, through this section and other sections above, consistent with the SECURE Water Act. Please provide information regarding how the project will enhance drought resilience by benefitting the water supply and ecosystem, including the following:

- Does the project seek to improve ecological resiliency to climate change?

In the Odessa subarea, farmers currently use private wells to irrigate their land. They must pump from thousands of feet below ground to run their irrigation sprinkler systems. The aquifer is declining rapidly and much of the land currently irrigated by these wells is becoming infeasible to irrigate. The loss of this farmland would be a huge economic impact to the immediate area as well as the state of Washington. Moving these farmers to surface water from the Columbia Basin Project would significantly reduce pumping costs and result in reduced electric use.

- Will water remain in the system for longer periods of time? If so, provide details on current/future durations and any expected resulting benefits (e.g., maintaining water temperatures or water levels).
- Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)? Please describe the relationship of the species to the

water supply, and whether the species is adversely affected by a Reclamation project or is subject to a recovery plan or conservation plan under the Endangered Species Act (ESA).

Chinook salmon are listed as endangered species in the Columbia River. Chum and steelhead are threatened. The three federal agencies that control Columbia River operations are required to abide by the Federal Columbia River Power System Biological Opinion (the BiOp). The BiOp sets standards and guidelines for operation of the River system, including withdrawals for irrigation of Federal irrigation projects. These standards and guidelines are intended to protect the 13 species of salmon and steelhead that are listed for protection under the Endangered Species Act. The enhancement of instream flows in the mainstem of the river is a critical component of the BiOp. Water conservation within the East District directly enhances instream flows in the Columbia River.

- Please describe any other ecosystem benefits as a direct result of the project.

The East Low Canal (ELC) will substantially contribute to less operational requirements which lowers the miles driven by personnel reducing the wear and tear on vehicles leading to less fuel consumption and increasing our employee safety.

- Will the project directly result in more efficient management of the water supply? For example, will the project provide greater flexibility to water managers, resulting in a more efficient use of water supplies?

Projects that are intended to improve streamflows or aquatic habit, and that are requesting \$500,000 or more in Federal funding, must include information about plans to monitor the benefits of the project. Please describe the plan to monitor improved streamflows or aquatic habit benefits over a five-year period once the project has been completed. Provide detail on the steps to be taken to carry out the plan.

**Addressing a specific water and/or energy sustainability concern(s).** Will the project address a specific sustainability concern? Please address the following:

- Explain and provide detail of the specific issue(s) in the area that is impacting water sustainability, such as shortages due to drought and/or climate change, increased demand, or reduced deliveries.

The Odessa subarea special study is a collaborative effort, primarily led by the Bureau of Reclamation and Washington State Department of Ecology. In April 2005, a Memorandum of Understanding (MOU) between the East District, Ecology, and Reclamation established goals on how to handle conserved water within the District. It was determined that the conserved water would be available as a replacement water supply for groundwater deliveries in the Odessa Subarea, municipal and industrial water supply, and environmental uses. Ecology funded the preparation of the Plan through the Columbia River Water Management Program.

Furthermore, in July 2006, the Washington State Legislature passed the Revised Code of Washington (RCW), Title 90, Chapter 90 (90.90) which declared that a Columbia River basin water supply development program was needed and directed the Department of Ecology to

aggressively pursue the development of water supplies to benefit both instream and out-of-stream uses.

A Record of Decision was issued in 2013 by the Pacific Northwest Regional Director of the Bureau of Reclamation regarding the Odessa Subarea Special Study. That decision was to move forward with development of a replacement water supply for those farms on wells in the Odessa subarea. Work has been done and will continue to be done to increase the capacity in the East Low Canal so that the District can deliver surface water to replace groundwater in the Odessa Subarea. The District has completed the EL47.5 pumping plant, and is delivering to 8521 acres of new surface watered lands, with the ability to deliver to 10,500 acres.

- Explain and provide detail of the specific issue(s) in the area that is impacting energy sustainability, such as reliance on fossil fuels, pollution, or interruptions in service.
- Please describe how the project will directly address the concern(s) stated above. For example, if experiencing shortages due to drought or climate change, how will the project directly address and confront the shortages?

The projects proposed for construction represent a Public/Private partnership between the Bureau of Reclamation and the District to modernize U.S. Infrastructure. Further, infrastructure construction proposed in this application would be property of the United States of America. The District is funded through landowner assessments, private funds, and the WaterSMART Grants are public funds. Construction of pipelines to replace open laterals that were built in the 1950's is modernizing existing U.S infrastructure while conserving water.

- Please address where any conserved water as a result of the project will go and how it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.

It is anticipated that all of the water conserved under this proposal would be made available to serve commercial agriculture needs in the Odessa subarea through contracts between individual landowners and the East District. The District has the authority to write these contracts through a master water service contract with the Bureau of Reclamation. This contractual relationship imposes Reclamation water law with respect to the way the water is used.

- Provide a description of the mechanism that will be used, if necessary, to put the conserved water to the intended use.
- Indicate the quantity of conserved water that will be used for the intended purpose(s).

**Other project benefits.** Please provide a detailed explanation of the project benefits and their



significance. These benefits may include, but are not limited to, the following:

(1) **Combating the Climate Crisis:** E.O. 14008: “Tackling the Climate Crisis at Home and Abroad”, focuses on increasing resilience to climate change and supporting climate- resilient development. For additional information on the impacts of climate change throughout the western United States, see: <https://www.usbr.gov/climate/secure/docs/2021secure/2021SECUREReport.pdf>. Please describe how the project will address climate change, including:

- Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.
- Does this proposed project strengthen water supply sustainability to increase resilience to climate change?
- Will the proposed project establish and utilize a renewable energy source?
- Will the project result in lower greenhouse gas emissions?

(2) **Disadvantaged or Underserved Communities:** E.O. 14008 and E.O. 13985 support environmental and economic justice by investing in underserved and disadvantaged communities and addressing the climate-related impacts to these communities, including impacts to public health, safety, and economic opportunities. Please describe how the project supports these Executive Orders, including:

- a. Does the proposed project directly serve and/or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to: public health and safety through water quality improvements, new water supplies, new renewable energy sources, or economic growth opportunities.
- b. If the proposed project is providing benefits to a disadvantaged community, provide sufficient information to demonstrate that the community meets the disadvantaged community definition in Section 1015 of the Cooperative Watershed Act, which is defined as a community with an annual median household income that is less than 100 percent of the statewide annual median household income for the State, or the applicable state criteria for determining disadvantaged status.
- c. If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the

underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a

full opportunity to participate in aspects of economic, social, and civic life.

(3) **Tribal Benefits:** The Department of the Interior is committed to strengthening tribal sovereignty and the fulfillment of Federal Tribal trust responsibilities. The President’s memorandum “Tribal Consultation and Strengthening Nation-to-Nation Relationships” asserts the importance of honoring the Federal government’s commitments to Tribal Nations. Please address the following, if applicable:

- a. Does the proposed project directly serve and/or benefit a Tribe? Will the project increase water supply sustainability for an Indian Tribe? Will the project provide renewable energy for an Indian Tribe?
- b. Does the proposed project directly support tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety through water quality improvements, new water supplies, or economic growth opportunities?

(4) **Other Benefits:** Will the project address water and/or energy sustainability in other ways not described above? For example:

- a. Will the project assist States and water users in complying with interstate compacts?
- b. Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?

The water conserved under this proposal would be made available to serve commercial agriculture needs in the Odessa subarea through contracts between individual landowners and the East District. The District has the authority to write these contracts through a master water service contract with the Bureau of Reclamation. This contractual relationship imposes Reclamation water law with respect to the way the water is used.

- c. Will the project benefit a larger initiative to address sustainability?
- d. Will the project help to prevent a water-related crisis or conflict?  
Is there frequently tension or litigation over water in the basin?

#### **E.1.4. Evaluation Criterion D—Complementing On-Farm Irrigation Improvements (10 points)**

*Up to 10 points may be awarded for projects that describe in detail how they will complement on-farm irrigation improvements eligible for NRCS financial or technical assistance.*

Note: Scoring under this criterion is based on an overall assessment of the extent to which the WaterSMART Grant project will complement ongoing or future on-farm improvements.

Applicants should describe any proposal made to NRCS, or any plans to seek assistance from NRCS in the future, and how an NRCS-assisted activity would complement the WaterSMART Grant project. Financial assistance through EQIP is the most commonly used program by which NRCS helps producers implement improvements to irrigation systems, but NRCS does have additional technical or financial assistance programs that may be available. Applicants may receive maximum points under this criterion by providing the information described in the bullet points below. **Applicants are *not* required to have assurances of NRCS assistance by the application deadline to be awarded the maximum number of points under this sub- criterion.** Reclamation may contact applicants during the review process to gather additional information about pending applications for NRCS assistance if necessary.

**Please note: On-farm improvements themselves are *not* eligible activities for funding under -NRCS will have a separate application process for the on-farm components of selected projects that may be undertaken in the future, separate of the WaterSMART Grant project.**

If the proposed project will complement an on-farm improvement eligible for NRCS assistance, please address the following:

- Describe any planned or ongoing projects by farmers/ranchers that receive water from the applicant to improve on-farm efficiencies.
  - Provide a detailed description of the on-farm efficiency improvements.

Piping these laterals not only conserves water, but it also reduces the amount of maintenance that is required for an open lateral. When we pipe a lateral that goes to just one landowner or is along a county road, we can often get rid of the operation and maintenance road which cuts down on the amount of roads that need repairs and new gravel. The landowner can then farm over it which keeps the District from having to mow or spray the weeds that would exist otherwise.

The Columbia Basin Project was designed as a gravity irrigation project and most farmers used rill irrigation. Conversion of open laterals to pipelines often makes the installation of center pivot irrigation systems more cost effective for farmers. When farmers convert from rill irrigation to center pivot sprinkler irrigation it results in significant water savings. Some landowners have had to put up two pivots on each side of the lateral instead of one if the lateral had been piped. In the future when their pivots need to be replaced, if the lateral is piped, they can replace them with one center pivot.

- Have the farmers requested technical or financial assistance from NRCS for the on- farm efficiency projects, or do they plan to in the future?
- If available, provide documentation that the on-farm projects are eligible for NRCS assistance, that such assistance has or will be requested, and the number or percentage of farms that plan to

participate in available NRCS programs.

- Applicants should provide letters of intent from farmers/ranchers in the affected project areas.
- Describe how the proposed WaterSMART project would complement any ongoing or planned on-farm improvement.
  - Will the proposed WaterSMART project directly facilitate the on-farm improvement? If so, how? For example, installing a pressurized pipe through WaterSMART can help support efficient on-farm irrigation practices, such as drip-irrigation.

OR

- Will the proposed WaterSMART project complement the on-farm project by maximizing efficiency in the area? If so, how?
- Describe the on-farm water conservation or water use efficiency benefits that are expected to result from any on-farm work.
  - Estimate the potential on-farm water savings that could result in acre-feet per year. Include support or backup documentation for any calculations or assumptions.
- Please provide a map of your water service area boundaries. If your project is selected for funding under this NOFO, this information will help NRCS identify the irrigated lands that may be approved for NRCS funding and technical assistance to complement funded WaterSMART projects.

*Note: On-farm water conservation improvements that complement the water delivery improvement projects selected through this NOFO may be considered for NRCS funding and technical assistance to the extent that such assistance is available. For more information, including application deadlines and a description of available funding, please contact your local NRCS office. See the NRCS website for office contact information, [www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/states/](http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/states/).*

#### **E.1.5. Evaluation Criterion E—Planning and Implementation (8 points)**

*Up to 8 points may be awarded for these subcriteria.*

##### **E.1.5.1. Subcriterion E.1— Project Planning**

*Points may be awarded for proposals with planning efforts that provide support for the proposed project.*

**Does the applicant have a Water Conservation Plan and/or System Optimization Review (SOR) in place? Does the project address an adaptation strategy identified in a completed WaterSMART Basin Study?** Please self-certify or provide copies of these plans where appropriate to verify that such a plan is in place. Including a specific excerpt or a link to the planning document may also

be considered where appropriate.

Provide the following information regarding project planning:

- (1) Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, SOR, Drought Contingency Plan or other planning efforts done to determine the priority of this project in relation to other potential projects.
- (2) Describe how the project conforms to and meets the goals of any applicable planning efforts and identify any aspect of the project that implements a feature of an existing water plan(s).
- (3) If applicable, provide a detailed description of how a project is addressing an adaptation strategy specifically identified in a completed WaterSMART Basin Study or Water Management Options Pilot (e.g., a strategy to mitigate the impacts of water shortages resulting from climate change, drought, increased demands, or other causes)

The East District has a “Comprehensive Water Conservation Plan” which was developed in May, 2007 and is an update of one completed in 1995. Please see Appendix E for a photocopy of its cover.

This project meets the goals of the Comprehensive Water Conservation Plan as well as the “Columbia Basin Project, Coordinated Water Conservation Plan” (Appendix F) developed for the three (3) CBP Irrigation Districts and the Washington State Department of Ecology.

Preliminary design work has been completed by District staff in support of the proposed projects.

The installation of conservation pipelines is a key priority identified in the District’s Water Conservation Plan.

*For more information on Basin Studies, including a list of completed basin studies and reports, please visit: [www.usbr.gov/WaterSMART/bsp](http://www.usbr.gov/WaterSMART/bsp).*

***E.1.5.2. Subcriterion E.2— Readiness to Proceed***

*Points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement. Please note, if your project is selected, responses provided in this section will be used to develop the scope of work that will be included in the financial assistance agreement.*

Applications that include a detailed project implementation 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.

- Identify and provide a summary description of the major tasks

necessary to complete the project. Note: please do not repeat the more detailed technical project description provided in Section D.2.2.2. *Application Content.* This section should focus on a summary of the major tasks to be accomplished as part of the project.

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

The District will be required to obtain approval from the State Historic Preservation Office in order to complete the proposed projects. In the most recent projects where this was required, the District coordinated with the Bureau of Reclamation to contract the work to a consultant, who prepared a report describing their findings and submitted it to the State Historic Preservation Office for review and approval. The District intends to use this same process to obtain approval for the proposed projects.

- Identify and describe any engineering or design work performed specifically in support of the proposed project.
- Describe any new policies or administrative actions required to implement the project.

An official resolution in support of the proposed projects will be signed by the Board of Directors at their August 3, 2022 board meeting (Appendix H).

The East Columbia Basin Irrigation District is registered with the System for Award Management (SAM) with the DUNS number of 07-096-5710.

- Please also include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Milestones may include, but are not limited to, the following: complete environmental and cultural compliance; mobilization; begin construction/installation; construction/installation (50% complete); and construction/installation (100% complete). Was the expected timeline for environmental and cultural compliance discussed with the local Reclamation Regional or Area Office?

#### **E.1.6. Evaluation Criterion F—Collaboration (6 points)**

Up to **6 points** may be awarded for projects that promote and encourage collaboration among parties in a way that helps increase the sustainability of the water supply.

- Please describe how the project promotes and encourages collaboration. Consider the following:
- Is there widespread support for the project? Please provide specific details regarding any support and/or partners involved in the project. What is the extent of their involvement in the process?

There is widespread support for the project which includes the signatories on the 2004 MOU and coordinated water conservation plan. Signatories include the three Columbia Basin Irrigation Districts, the Washington State Department of Ecology, and the

Washington State Department of Fish and Wildlife. The project encourages collaboration between the three Columbia Basin Project Irrigation Districts, the Washington State Department of Ecology, the Department of Fish and Wildlife, and the Bureau of Reclamation to address and achieve regional water conservation goals. The Coordinated Water Conservation Plan was developed to address action items in the 2004 MOU between the districts, Ecology, Fish and Wildlife, and the Bureau of Reclamation. The 2004 MOU describes the ways in which all parties will work collaboratively and in good faith to secure economic and environmental benefits through improved water management to avoid future conflict. Frequent litigation has occurred such as involving the Federal Columbia River Power System Biological Opinion which includes Bureau of Reclamation facilities. Water conservation will help address Biological Opinion action items listed in the BiOp, such as to provide adequate flows for Endangered Species Act salmon and steelhead.

- Will this project increase the possibility/likelihood of future water conservation improvements by other water users?

Successful implementation will make future water conservation improvements by other water users enhanced by demonstrating the ability to successfully implement components of the Coordinated Water Conservation Plan. The parties agreed to use their best efforts in working collaboratively and in good faith to secure economic and environmental benefits.

- Please attach any relevant supporting documents (e.g., letters of support or memorandum of understanding).

**E.1.1. Evaluation Criterion G— Additional Non-Federal Funding (4 points)**

*Up to 4 points may be awarded to proposals that provide non-Federal funding in excess of 50 percent of the project costs. State the percentage of non-Federal funding provided using the following calculation:*

Non-Federal Funding Total Project Cost \_\_\_\_\_

$$\frac{\text{Non – Federal Funding}}{\text{Total Project Cost}} = \text{Total Non – Federal Funding}$$

$$\frac{\$805,777.59}{\$1,305,777.59} = .617 \times 100 = 61.7\%$$

**E.1.2. Evaluation Criterion H— Nexus to Reclamation (4 Points)**

*Up to 4 points may be awarded if the proposed project is connected to a Reclamation project or Reclamation activity. No points will be awarded for proposals without connection to a Reclamation project or Reclamation activity.*

Describe the nexus between the proposed project and a Reclamation project or Reclamation activity. Please consider:

Does the applicant have a water service, repayment, or

operations and maintenance (O&M) contract with Reclamation?

- If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?
- Will the proposed work benefit a Reclamation project area or activity?

The Columbia Basin Project was constructed by the Bureau of Reclamation beginning in the 1930s with the Grand Coulee Dam. The Bureau of Reclamation holds title to all water conveyance facilities within the East District, including the facilities to be built under this proposal. The District operates and maintains the Columbia Basin Project under contract with the Bureau of Reclamation. Conserved water will be available as a replacement water supply for groundwater deliveries in the Odessa Subarea, environmental uses, and municipal and industrial water supply. The project will help meet the goals of the Coordinated Water Conservation Plan which was jointly prepared by the, East Columbia Basin Irrigation District, Quincy-Columbia Basin Irrigation District, South Columbia Basin Irrigation District, and the Washington Department of Ecology. The project will also help meet the goals of the 2004 Memorandum of Understanding concerning the State of Washington's Columbia River Initiative entered into by the three districts, Bureau of Reclamation, the Washington Department of Ecology, and the Washington Department of Fish and Wildlife. The 2004 MOU between the three irrigation Districts, Ecology, Fish and Wildlife, Reclamation along with an agreement in principal with the Confederated Tribes of the Colville Reservation, 6 under the Columbia River Initiative, served as the basis for creating the Columbia River Water Management Program.

- Is the applicant a Tribe?.



## Project Budget

### Funding Plan and Letters of Commitment

To fund these projects, the District plans on obtaining 38% of the total cost from Reclamation through the WaterSMART program. The District is prepared to contribute in-kind labor and equipment costs as well as the remainder of the funding needed for the project. District funds come from assessments collected annually from our landowners as well as revenue from electricity generated by District-owned hydroelectric generation facilities.

| <b>Funding Sources</b>        | <b>Funding Amount</b>      |
|-------------------------------|----------------------------|
| Non - Federal Entities        |                            |
| 1. ECBID                      | \$<br>805,777.59           |
|                               |                            |
| Requested Reclamation Funding | \$<br>500,000.00           |
|                               |                            |
| <b>Total Project Funding:</b> | <b>\$<br/>1,305,777.59</b> |

No project costs have been incurred. Design costs are anticipated to occur in March of 2023.

# Budget Proposal

| Budget Item Description   | \$/Unit | Quantity | Recipient & Non-federal Funding | Reclamation Funding | Total Cost  |
|---------------------------|---------|----------|---------------------------------|---------------------|-------------|
| <b>Salaries and Wages</b> |         |          |                                 |                     |             |
| <b>Engineers</b>          |         |          |                                 |                     |             |
| District Engineer         | \$53.78 | 60       | \$3,226.80                      | \$0.00              | \$3,226.80  |
| Staff Engineer            | \$35.56 | 160      | \$5,689.60                      | \$0.00              | \$5,689.60  |
| Staff Engineer            | \$34.99 | 100      | \$3,499.00                      | \$0.00              | \$3,499.00  |
| <b>Supervisors</b>        |         |          |                                 |                     |             |
| Watermaster               | \$38.78 | 90       | \$3,490.20                      | \$0.00              | \$3,490.20  |
| Assistant Watermaster     | \$32.64 | 90       | \$2,937.60                      | \$0.00              | \$2,937.60  |
| <b>Laborers</b>           |         |          |                                 |                     |             |
| Laborer 1                 | \$26.51 | 1054     | \$27,941.54                     | \$0.00              | \$27,941.54 |
| Laborer 2                 | \$26.83 | 1054     | \$28,278.82                     | \$0.00              | \$28,278.82 |
| Laborer 3                 | \$26.25 | 1055     | \$27,693.75                     | \$0.00              | \$27,693.75 |
| Laborer 4                 | \$26.51 | 1055     | \$27,968.05                     | \$0.00              | \$27,968.05 |
| Laborer 5                 | \$26.51 | 1055     | \$27,968.05                     | \$0.00              | \$27,968.05 |
| Laborer 6                 | \$28.03 | 1055     | \$29,571.65                     | \$0.00              | \$29,571.65 |
| Laborer 7                 | \$25.53 | 1055     | \$26,934.15                     | \$0.00              | \$26,934.15 |
| Laborer 8                 | \$26.51 | 1055     | \$27,968.05                     | \$0.00              | \$27,968.05 |
| <b>Fringe Benefits</b>    |         |          |                                 |                     |             |
| <b>Engineers</b>          |         |          |                                 |                     |             |
| District Engineer         | \$17.06 | 60       | \$1,023.60                      | \$0.00              | \$1,023.60  |
| Staff Engineer            | \$17.56 | 160      | \$2,809.60                      | \$0.00              | \$2,809.60  |
| Staff Engineer            | \$11.16 | 100      | \$1,116.00                      | \$0.00              | \$1,116.00  |
| <b>Supervisors</b>        |         |          |                                 |                     |             |
| Watermaster               | \$12.23 | 90       | \$1,100.70                      | \$0.00              | \$1,100.70  |
| Assistant Watermaster     | \$13.93 | 90       | \$1,253.70                      | \$0.00              | \$1,253.70  |
| <b>Laborers</b>           |         |          |                                 |                     |             |
| Laborer 1                 | \$10.00 | 1054     | \$10,540.00                     | \$0.00              | \$10,540.00 |
| Laborer 2                 | \$11.97 | 1054     | \$12,616.38                     | \$0.00              | \$12,616.38 |
| Laborer 3                 | \$12.24 | 1055     | \$12,913.20                     | \$0.00              | \$12,913.20 |
| Laborer 4                 | \$12.28 | 1055     | \$12,955.40                     | \$0.00              | \$12,955.40 |
| Laborer 5                 | \$9.73  | 1055     | \$10,265.15                     | \$0.00              | \$10,265.15 |
| Laborer 6                 | \$10.18 | 1055     | \$10,739.90                     | \$0.00              | \$10,739.90 |
| Laborer 7                 | \$9.82  | 1055     | \$10,360.10                     | \$0.00              | \$10,360.10 |
| Laborer 8                 | \$9.73  | 1055     | \$10,265.15                     | \$0.00              | \$10,265.15 |

|  |             |       |                     |                     |                       |
|--|-------------|-------|---------------------|---------------------|-----------------------|
| <b>Equipment</b>                               |             |       |                     |                     |                       |
| Excavator (60% of Total Equipment Hours)       | \$75.00     | 1433  | \$107,475.00        | \$0.00              | \$107,475.00          |
| Dozer (6% of Total Equipment Hours)            | \$45.00     | 143   | \$6,435.00          | \$0.00              | \$6,435.00            |
| Gradall (9% of Total Equipment Hours)          | \$60.00     | 215   | \$12,900.00         | \$0.00              | \$12,900.00           |
| Loader (9% of Total Equipment Hours)           | \$80.00     | 215   | \$17,200.00         | \$0.00              | \$17,200.00           |
| Grader (16% of Total Equipment Hours)          | \$95.00     | 382   | \$36,290.00         | \$0.00              | \$36,290.00           |
| Pickup Truck Mileage                           | \$0.55      | 7,320 | \$4,026.00          | \$0.00              | \$4,026.00            |
| Dump Truck Mileage                             | \$1.00      | 2,464 | \$2,464.00          | \$0.00              | \$2,464.00            |
| (See Attached Breakdown)                       |             |       |                     |                     |                       |
| <b>Supplies/Materials</b>                      |             |       |                     |                     |                       |
| Pipe (12" diameter)                            | \$7.67      | 4140  | \$11,749.36         | \$20,005.67         | \$31,755.03           |
| Pipe (15" diameter)                            | \$11.91     | 4340  | \$18,602.44         | \$33,071.02         | \$51,673.46           |
| Pipe (18" diameter)                            | \$18.01     | 2100  | \$13,618.34         | \$24,210.38         | \$37,828.72           |
| Pipe (21" diameter)                            | \$23.93     | 3680  | \$31,701.82         | \$56,358.79         | \$88,060.60           |
| Pipe (24" diameter)                            | \$30.86     | 3980  | \$44,211.16         | \$78,597.62         | \$122,808.77          |
| Pipe (27" diameter)                            | \$42.17     | 5240  | \$81,763.14         | \$139,218.31        | \$220,981.45          |
| Pipe (30" diameter)                            | \$57.79     | 1160  | \$24,545.67         | \$42,490.29         | \$67,035.96           |
| Fittings/Concrete/Etc.                         | \$9,756.00  | 14    | \$50,536.08         | \$86,047.92         | \$136,584.00          |
| (See Attached Breakdown)                       |             |       |                     |                     |                       |
| <b>Environmental and Regulatory Compliance</b> |             |       |                     |                     |                       |
| Coordination with SHPO/USBR                    | \$20,000.00 | 1     | 0                   | \$20,000.00         | \$20,000.00           |
| <b>Reporting</b>                               |             |       |                     |                     |                       |
| Submitting Progress and Final Reports          | \$70.84     | 16    | \$1,133.44          |                     | \$1,133.44            |
|  |             |       |                     |                     |                       |
| <b>Total Project Costs</b>                     |             |       | <b>\$805,777.59</b> | <b>\$500,000.00</b> | <b>\$1,305,777.58</b> |

## Budget Narrative:

Salaries and wages are based on rates as of July 2022. Benefit rates are actual rates for 2022. Benefit rates include District contributions to: FICA, Medicare, employee health insurance, retirement, and industrial insurance premiums through the State of Washington.

Labor and equipment rates for construction are based on average prices for similar work done in the 2022-2023 construction seasons. The labor and equipment rates shown on the budget breakdown vary based on the size of pipe being installed. Equipment rates are based on the District's actual costs to operate and maintain District equipment. District equipment rates are shown in Appendix K.

Pipe prices are based on 2019 District pipe bids with a 10% increase.

Other materials incorporated into the work (such as concrete, pipe fittings, etc.) are tracked during construction. The lump sum prices shown on the budget breakdown are based on work done in the 2019-2020 construction seasons. Each reach of canal to be piped is anticipated to have a separate group of fittings and other materials.

The price shown on the budget for environmental and regulatory compliance is based on a contract with a consultant for the same type of work in 2019.

Reporting costs are based on the District Engineer's combined wage and benefit rate and the number of hours anticipated to prepare the required semi-annual and final reports to Reclamation.

The District does not have an approved indirect costs rate agreement. The District does not intend to recover indirect costs under a WaterSMART grant agreement, and no indirect costs have been included in the proposed budget.

The proposed project budget and construction budget are shown in Appendix J.

## **Environmental and Cultural Resources Compliance**

The installation of conservation pipelines requires disturbing the existing open canal prism. The canal prism was previously constructed as part of the original system and has typically been cleaned occasionally by excavators or similar equipment. No impacts to air or water quality are anticipated. The work will be done when water is out of the canals and no discharge of storm water from the project site will occur.

The pygmy rabbit, Columbia Basin DPS has been reported to live within the area. However, the District is not aware of any pygmy rabbits living near the proposed project sites. No effect is anticipated by construction of the proposed projects.

There are no wetlands within the proposed project sites.

The water delivery system was constructed primarily in the 1950s.

The project will eliminate existing open canals and some structures associated with those canals will be eliminated or modified. These are typically concrete structures such as drops, checks and turnouts. Most of these structures have not been modified since original construction with the exception of replacing gates.

The District's main canals, the East Low Canal and the Potholes East Canal, are eligible for listing on the National Register of Historic Places. The proposed projects do not include any modifications to the East Low Canal or Potholes East Canal.

There are no known archaeological sites within the project areas.

No adverse impact to low income or minority populations is anticipated.

No impacts to tribal lands are anticipated. There are no sacred Indian sites in the project area.

The projects will have no impact on the introduction, spread, or existence of noxious weeds or invasive species. District crews control weeds on an ongoing basis.

## **Required Permits or Approvals**

The District will be required to obtain approval from the State Historic Preservation Office in order to complete the proposed projects. In the most recent projects where this was required, the District coordinated with the Bureau of Reclamation to contract the work to a consultant, who prepared a report describing their findings and submitted it to the State Historic Preservation Office for review and approval. The District intends to use this same process to obtain approval for the proposed projects.

## **Letters of Support**

None.

## **Official Resolutions**

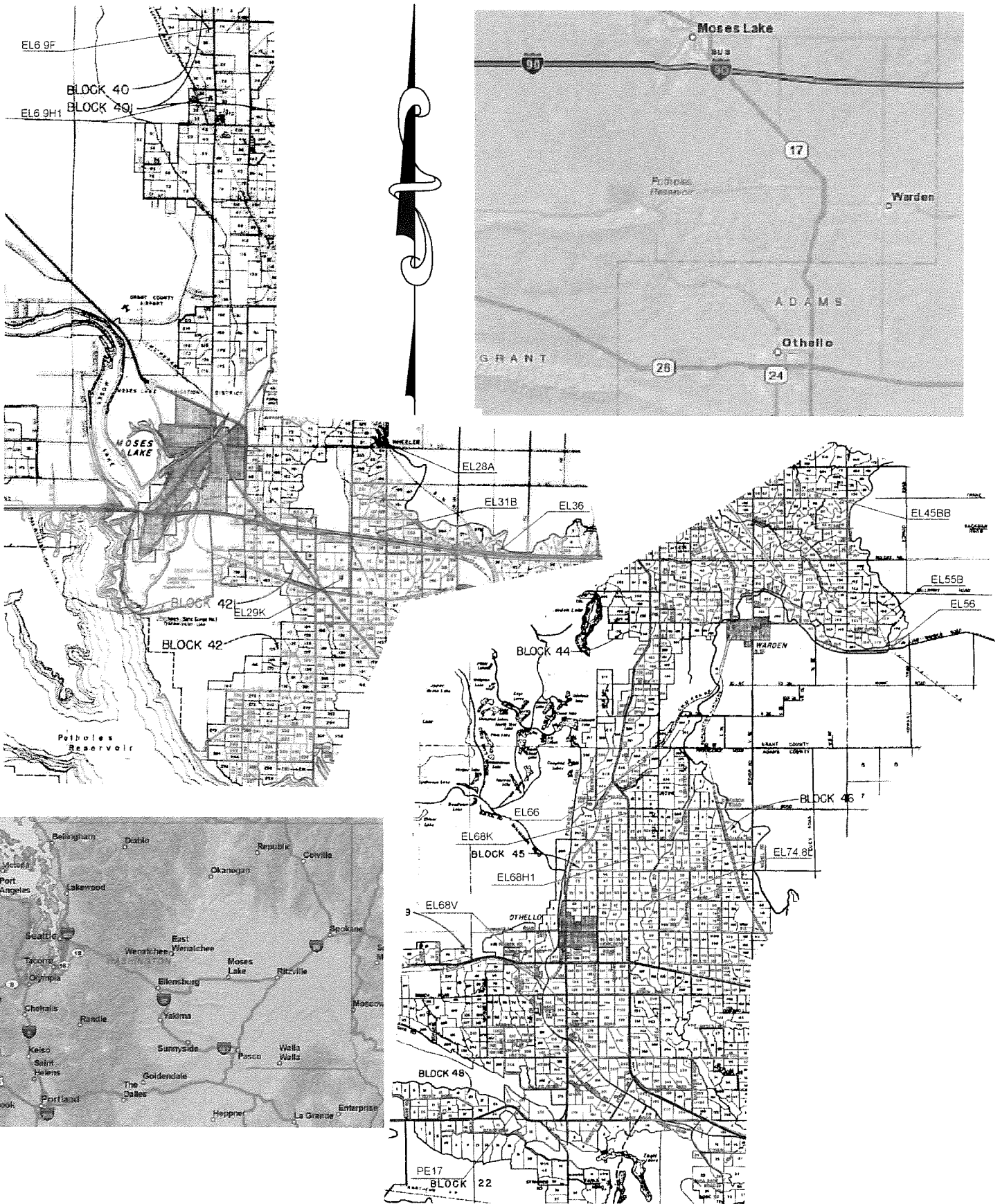
An official resolution in support of the proposed projects will be signed by the Board of Directors at their August 3, 2022 board meeting (Appendix H).

## **Unique Entity Identifier and System for Award Management**

The East Columbia Basin Irrigation District is registered with the System for Award Management (SAM) with the DUNS number of 07-096-5710.

**Appendix A**  
**Location Map**

# APPENDIX A 2022 WATERSMART GRANT APPLICATION LOCATION MAP



INSTALLATION OF CONSERVATION PIPELINES – Blocks 40, 41, 42, 43, 44, 45, 46 & 49