WaterSMART Grant

Water & Energy Efficiency Grant for Fiscal Year 2020

Funding Opportunity Announcement No. BOR-DO-21-F001

September 2020

Cottonwood Irrigation District Lateral L-6 and L-7 Replacement Project

Smoot, Wyoming

Applicant

Cottonwood Irrigation District

76219 Highway 89

Smoot, Wyoming 83126

TEL 307-884-8655

Project Manager

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SUNRISE ENGINEERING

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Executive Summary

The executive summary should include:

- *The date, applicant name, city, county, and state*
- *A one paragraph project summary that specifies the work proposed, including how funds will be used to accomplish specific project activities and briefly identifies how the proposed project contributes to accomplishing the goals of this FOA.*
- *State the length of time and estimated completion date for the proposed project*
- *Whether or not the proposed project is located on a Federal facility*

Date:	September 10, 2010
Applicant:	Cottonwood Irrigation District 76219 Highway 89. Smoot, Lincoln County, Wyoming 83126
Contact:	Jason Linford, PE Sunrise Engineering, Inc PO Box 609. Afton, Wyoming 83110 jlinford@sunrise-eng.com 307.885.8500

Project Summary

The water users of the Cottonwood Irrigation District currently experience significant water losses due to extensive seepage on the Laterals L-6 and L-7. These 36-inch and 18-inch welded steel pipelines are located at the head of a branching distribution system serving 5,185 acres under 336 separate accounts. The pipe was installed in the early 1970's and in recent years has experienced unplanned and planed repair and replacement projects.

For this project, 5,900 feet of 36-inch and 300 feet of 18-inch pipe is proposed to be replaced along with three orifice metering stations located on the pipe. This work will do the following:

- Improve sustainability of rural communities through water conservation
- Reduce operation and maintenance costs
- Improve water measurement and monitoring ability

Approximate Project Length:	12 months
Completion Date:	June 2022
Federal Facility:	This is not a Federal facility.

Background Data

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As applicable, describe the source of water supply, the water rights involved, current water uses (e.g., agricultural, municipal, domestic, or industrial), the number of water users served, and the current and projected water demand. Also, identify potential shortfalls in water supply. If water is primarily used for irrigation, describe major crops and total acres served.

In addition, describe the applicant's water delivery system as appropriate. For agricultural systems, please include the miles of canals, miles of laterals, and existing irrigation improvements (e.g., type, miles, and acres). For municipal systems, please include the number of connections and/or number of water users served and any other relevant information describing the system.

If the application includes hydropower or energy efficiency elements, describe existing energy sources and current energy uses.

Identify any past working relationships with Reclamation. This should include the date(s), description of prior relationships with Reclamation, and a description of the project(s).

The Cottonwood Irrigation District owns and operates the intake and pipeline that obtains water from the Cottonwood Creek Drainage. The system serves 5,185 adjudicated acres and has water rights for 61.62 CFS from the Cottonwood Creek.

Irrigators in the Cottonwood Irrigation District utilize sprinkler irrigation. Sprinkler irrigation mainly consists of hand lines, wheel lines and some center pivots. Crops grown are primarily alfalfa, barley, and pasture grass.

The District's water rights are associated with the original ditches that were replaced by pipelines in the early 1970s under a Soil Conservation Service led project. The following ditches or enlargements of the ditches were transferred to the pipeline:

Table 1: Cottonwood Irrigation District Water Right Information

Water Rights Associated with the Original Ditches	
Ditch Name	***Flow CFS**
American Ditch	1.41
Bruce Ditch	1.13
Cottonwood South Ditch	21.1
Creger Ditch	14.39
Jensen Ditch	0.37
Schwab Ditch	3.98
Smoot Ditch	0.53
Upper North Canal	7.54
West Fork Creggar Ditch	3.97
Wilber Ditch	7.2
Total CFS	**61.62**
* Flows include enlargements	

Project Location

Provide detailed information on the proposed project location or project area including a map showing the specific geographic location. For example, {project name} is located in {state and county} approximately {distance} miles {direction, e.g. northeast} of {nearest town}. The project latitude is {##°##'N} and longitude is {###°##'W}.

The Cottonwood Irrigation District Lateral L-6 and L-7 Replacement Project is in Lincoln County, Wyoming in the vicinity of the unincorporated community of Smoot, Wyoming. The upper end of the proposed project is located latitude is 42°36'42.67" N and longitude is 110°53'42.97" W. Figure 1 illustrates the location of the District in relation to its surroundings.

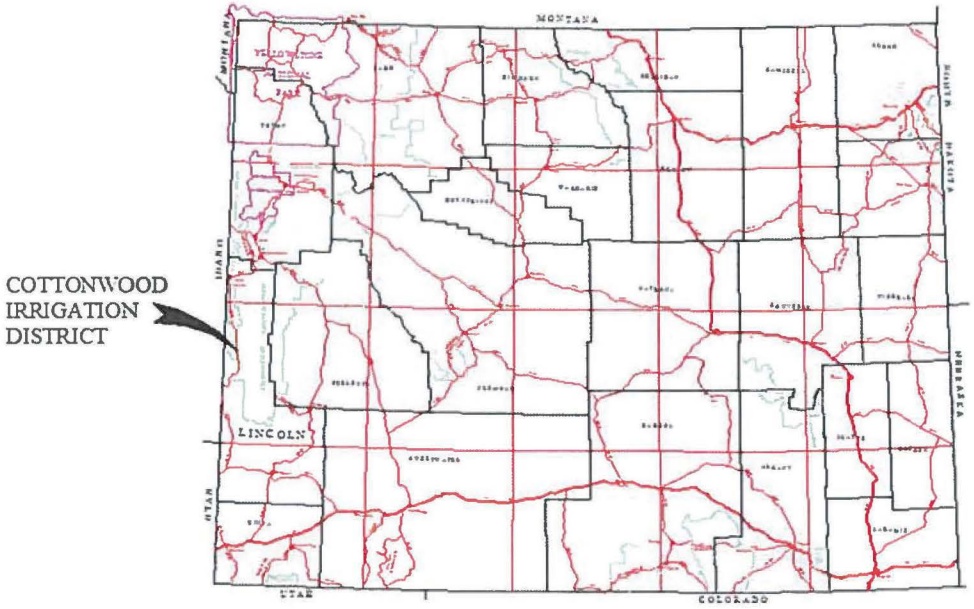


Figure 1 – District Location

Technical Project Description

The technical project description should describe the work in detail, including specific activities that will be accomplished. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal.

Cottonwood Irrigation District currently owns and operates 174,200 feet of pipeline. Pipe sizes range from 42-inch down to 4-inch. Pipe materials include concrete, welded steel, asbestos cement and more recently PVC. The District has experienced significant increased maintenance associated with corrosion and internal erosion on its welded steel pipes. The largest steel pipes at the head of the system have caused the most difficulty. The purpose of this project is to improve the most problematic section of the welded steel pipe to reduce seepage and un planned maintenance.

The Wyoming Water Development Commission (WWDC) has stated their support for this project by approving 67% funding, which was recently approved through the Wyoming State Legislature. A Level II engineering study was completed in 2017 using WWDC funding. The study identified several needs including the improvements proposed at this time. This proposal has been prioritized over other projects in the original study as unexpected leak repairs have revealed the critical condition of this segment.

The District has undertaken in recent years to replace one 400 foot section immediately downstream of this project and one 300 foot section about mid project using maintenance and WWDC funds. Coupons cut from the invert of the pipe indicate severe internal pitting across the bottom for a width of 8 inches and full penetration holes 3mm to 15mm about every 4 inches along the invert. The exterior of the pipe is in good condition with no visible corrosion originating on the exterior. Figure 2 is a photo of one of the coupons.

Figure 2 Invert of Replaced Pipe

The project will replace the main 36-inch pipeline as well as to short segments of branching 18-inch pipe. Each of the three pipe segments contains old orifice flow meters that are difficult to access and read. It is proposed these orifice flow meters be updated when replace to make reading easier and to encourage their monitoring and use.

With funding secured from both the WaterSMART Grant and the WWDC, a full engineering design of the proposed pipeline and metering stations will be completed by a professional engineering firm to ensure proper design and safety considerations. The design will be in accordance with industry design standards.

Evaluation Criteria

Evaluation Criterion A—Quantifiable Water Savings

Up to 30 points may be awarded for this criterion. This criterion prioritizes projects that will conserve water and improve water use efficiency by modernizing existing infrastructure. 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 address the following:

***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.*

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

Water loss from the pipe is currently lost to deep percolation in the rocky allvium deposits that underly the soil in the project area. It is estimated a 6mm orifice with an internal pressure of 50 psi and an exterior pressure of 49 psi could pass up to 1.1gpm. At this flow rate, with an estimated one hole per foot, water losses for the project area are estimated as follows:

5,900 ft x 1 hole/ft x 1.1gpm/hole = 6,490gpm

6,490gpm = 14.4 cfs

14.4 cfs over a 120 day season = 3,427 ac-ft per season

The use of PVC pipe with gasketed fittings will result in an almost complete elimination of water loss from the pipe. Irrigation risers and fittings will introduce some losses. Recent replacement projects within the District have specified the allowable leakage after construction as follows:

$$L = 10xSD(P^{0.5})/133,200$$

where:
L = Leakage rate (gal/hour)
S = Length of tested pipe (feet)
D = Nominal diameter of pipe (inches)
P = Average test pressure (psi)

Under this formula the allow able leakage post construction will be as follows:

$$L = 10 \times 5,900 \times 36D(100^{0.5})/133,200 = 159gph$$

159gph = 0.35cfs

0.35 cfs over a 120 day season = 83 ac-ft per season

The net water savings is estimated at (3,247 – 83) 3,164 acre feet.

Describe current losses: *Please explain where the water that will be conserved is currently going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground)?*

Water losses from the bottom of the pipe are typically lost to deep percolation in the rocky alluvium underlying most of the District. It some areas the leaks do surface if the topsoil is deep and enough leaks occur in close proximity. Generally speaking no surfacing leaks flow a appreciable distance before sinking back into the ground.

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.

Please address the following questions according to the type of infrastructure improvement you are proposing for funding.

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 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.*

    Not applicable as there are no canal improvements proposed.

    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.*

    Not applicable as there are no canal improvements proposed.

    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)?*

    Not applicable as there are no canal improvements proposed.

    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?*

Not applicable as there are no canal improvements proposed.

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

Not applicable as there are no canal improvements proposed.

f. *Include a detailed description of the materials being used.*

The project will utilize PVC piping.

Evaluation Criterion B—Water Supply Reliability

Up to 18 points may be awarded under this criterion. This criterion prioritizes projects that address water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflicts in the region.

Please address how the project will increase water supply reliability. Proposals that will address more significant water supply shortfalls benefitting multiple sectors and multiple water users, will be prioritized. General water supply reliability benefits (e.g., proposals that will increase resiliency to drought) will also be considered. Please provide sufficient explanation of the project benefits and their significance. These benefits may include, but are not limited to, the following:

- *Will the project address a specific water reliability concern? Please address:*
    - *Explain and provide detail of the specific issue(s) in the area that is impacting water reliability, such as shortages due to drought, increased demand, or reduced deliveries. Will the project directly address a heightened competition for finite water supplies and over-allocation (e.g. population growth)?*

      In years that experience drought, the Blacks Fork River may not have much spring runoff through the Bridger Valley. The water rights for the Wall Reservoir and Wall Canal are relatively junior on the Blacks Fork River, which means that there are years with no direct flow availability from the river during the irrigation season. Even in moderate runoff years, direct flow rights may be regulated early in the irrigation season. During these years, reliance on stored water is critical to the success of any crops. Water stored in the Wall Reservoir can be delivered and used when needed at the field. The proposed water savings will keep more volume of water in the reservoir ready to be used throughout the irrigation season, resulting in increased crop production.

    - *Describe how the project will address the water reliability concern? In your response, please address where the conserved water 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 from transfer, left in the river system, or used to meet another intended use.*

      Not applicable as there are no canal improvements proposed.

    - *Provide a description of the mechanism that will be used, if necessary, to put the conserved water to the intended use.*

      The conserved water will enter downstream pipe and sprinkler irrigation systems.

- *Indicate the quantity of conserved water that will be used for the intended purpose.*

  All conserved water will remain in the system. The District currently experiences shortages and goes on turns sometime in July or August. The conserved water will delay turns providing growers with important late season water. It is expected that all 14 cfs of conserved water will be put to beneficial use in the sprinkler irrigation systems.

Will the project make water available to achieve multiple benefits or to benefit multiple users?

- *Will the project benefit multiple sectors and/or users (e.g. agriculture, municipal and industrial, environmental, recreation, or others)?*

The primary beneficiary of the water savings will be to the agricultural sector. Because Cottonwood Creek is fully appropriated in some seasons very limited water passes the diversion structure. Because of this project in certain seasons the conserved water will remain in Cottonwood Creek for recreation and to maintain the fishery.

- *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.*

  Common threatened or endangered species with a potential to be in the area are Ute ladies'-tresses (threatened) and the Yellow-billed cuckoo (candidate). The proposed project would benefit any of these species if present by extending the seasons when water passes the diversion structure.

  This project will enable reduced diversions from the Cottonwood Creek, leaving more water for any downstream uses. This could provide positive impacts downstream.

  This project will not have adverse impacts to any listed species.

- *Will the project benefit a larger initiative to address water reliability?*

  The project will delay turns when irrigators must limit their use. These turns often occur during the heat of the summer when irrigation would be most beneficial.

  The project will also eliminate the unplanned maintenance that has interrupted irrigation in recent years as large leaks surface or the pipe ruptures.

- *Will the project benefit Indian tribes?*

  This project will not benefit an Indian tribe.

- *Will the project benefit rural or economically disadvantaged communities?*

  This project will support rural communities. The majority of the Cottonwood uses users live in or near Smoot, Wyoming. Most of the irrigators affected by this project live in rural areas outside of the any incorporated municipal limits.

- *Describe how the project will help achieve these multiple benefits? In your response, please address where the conserved water 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 from transfer, left in the river system, or used to meet another intended use.

As described under the similar question above, the conserved water will be used by District users with the primary benefit occurring during the summer months. In addition to irrigators, residential lots rely on this water for lawns and stock water. When not required by the users the conserved water will remain in Cottonwood Creek extending the periods and volume of flow in the stream channel.

- *Does the project promote and encourage collaboration among parties in a way that helps increase the reliability of the water supply?*
    - *Is there widespread support for the project?*

      Yes, the irrigators that utilize the Cottonwood irrigation system are in favor of the project as they believe the improvements are critical to their continued success. The District members have in recent years voted in assessment increases to address the increasing maintenance needs.

    - *What is the significance of the collaboration/support?*

      Several meetings have been held with the District members to discuss the system condition, need for projects, and how to make projects financially feasible. The Cottonwood Irrigation District Board sees this as a large benefit.

    - *Is the possibility of future water conservation improvements by other water users enhanced by completion of this project?*

      Yes, the proposed improvements are considered the second phase of improvements to address water losses. Improvements will be installed in phases due to funding constraints. Because all downstream pipelines rely on this project for water supply, this project was prioritized over several other projects once the condition of the pipe was realized. In future years other downstream projects will continue to be completed.

    - *Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?*

      The irrigators and District maintain a good working relationship and all understand the condition of the pipe and the risk of future outages. The District works with irrigators to educate them on their on-farm water use and irrigation by-laws that must be followed with respect to the number of sprinklers, size of orifices, and leak repairs. As older and larger farms are divided and sold to new persons, questions do arise and the education process must begin anew.

    - *Describe the roles of any partners in the process. Please attach any relevant supporting documents.*

        - Cottonwood Irrigation District
            - Owner and project stake holder
        - Sunrise Engineering Inc.
            - Providing engineering design and professional support for owner

- Wyoming Water Development Commission
  - Funding: grant and loan
- Reclamation
  - Funding: grant

- *Will the project address water supply reliability in other ways not described above?*

  All water supply reliability issues are discussed above.

Evaluation Criterion C—Implementing Hydropower

*Up to **18 points** may be awarded for this criterion. This criterion prioritizes projects that will install new hydropower capacity in order to utilize our natural resources to ensure energy is available to meet our security and economic needs.*

If the proposed project includes construction or installation of a hydropower system, please address the following:

During the 2017 Level II study funded by the State of Wyoming several hydro power sites were investigated. One of the sites was directly connected to the proposed project while to additional sites were downstream and relied on the proposed project for water supply. Generators ranged in size from 220kW to 520kW. The study identified an avoided cost rate of six cents per kWh as the minimum necessary for feasibility at the best site. Given the current avoided cost of power in the area of three and a half cents a hydro project is not viable at this time.

Evaluation Criterion D—Complementing On-Farm Irrigation Improvements

*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 the Environmental Quality Incentives Program (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 this FOA. This criterion is intended to focus on how the WaterSMART Grant project will complement ongoing or future on-farm improvements. 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.*

      All farms utilize sprinkler irrigation. In recent years the District has helped with the purchase of flow control nozzles and has purchased a portable flow meter to monitor the on-farm deliveries. Irrigators maintain their gaskets and valve openers to prevent unnecessary water loss.

      Lines are typically moved twice per day by irrigators to avoid deep percolation losses.

    - *Have the farmers requested technical or financial assistance from NRCS for the on-farm efficiency projects, or do they plan to in the future?*

      There is one farm working with NRCS for an on farm efficiency project.

    - *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.*

      N/A

    - *Applicants should provide letters of intent from farmers/ ranchers in the affected project areas.*

      N/A

- *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, installation of a pressurized pipe through WaterSMART can help support efficient on-farm irrigation practices, such as drip-irrigation.*

      By increasing water availability and reliability in the delivery pipeline, the on-farm sprinkler use will be extended. This increases the benefit to irrigators who have previously installed on-farm improvements.

    - *Will the proposed WaterSMART project complement the on-farm project by maximizing efficiency in the area? If so, how?*

      Reduction in water losses in the delivery pipeline will result in more dependable water availability, which in turn helps the efficiency of existing pivot systems. Better water reliability will also increase crop production, which in turn could help fund on-farm improvements such as additional center pivot systems.

- *Describe the on-farm water conservation or water use efficiency benefits that would result from the on-farm component of this project.*

    - *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.*

      N/A

Evaluation Criterion E—Department of the Interior Priorities

*Up to **10 points** may be awarded based on the extent that the proposal demonstrates that the project supports the Department priorities. Please address those priorities that are applicable to your project. It is not necessary to address priorities that are not applicable to your project. A project will not necessarily receive more points simply because multiple priorities are addressed. 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.*

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

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

       N/A

    b. *Examine land use planning processes and land use designations that govern public use and access;*

       N/A

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

       N/A

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

       N/A

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

       The proposed project will allow more water to remain within the Cottonwood Creek channel downstream of the diversion structure. As future demands for instream flow or recreational water arise, the impact to the District will be reduced by this project having conserved that water that they do receive to the fullest extent possible.

    f. *Identify and implement initiatives to expand access to Department lands for hunting and fishing;*

       N/A

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

N/A

2. *Utilizing our natural resources*

a. *Ensure American Energy is available to meet our security and economic needs;*

This pipeline can produce a worthwhile quantity of hydropower. At such time as electricity prices can justify construction of a powerhouse this project will directly benefit the construction and serve to supply the powerhouse.

b. *Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications;*

N/A

c. *Refocus timber programs to embrace the entire 'healthy forests' lifecycle;*

N/A

d. *Manage competition for grazing resources.*

N/A

3. *Restoring trust with local communities*

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

This project will prolong water availability and improve the stability of water supplies available for use by indirect recreational users.

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

N/A

4. *Striking a regulatory balance*

a. *Reduce the administrative and regulatory burden imposed on U.S. industry and the public;*

N/A

b. *Ensure that Endangered Species Act decisions are based on strong science and thorough analysis.*

N/A

5. *Modernizing our infrastructure*

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

      This project will help modernize the pipeline infrastructure and reduce wasted resources and by bringing the facility up to modern standards.

   b. *Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs;*

      The Cottonwood Irrigation District serves the irrigation needs for rural areas near Smoot, Wyoming. The District covers 6,020 acres (5,185 irrigated) and is the only source of irrigation water for the entire area. Irrigation districts such a Cottonwood are vital entities for these rural areas. The Cottonwood District that will be helped by this project serves 336 separate water accounts from quarter quarters to residential lots.

      Funds from this WaterSMART grant will help overcome the biggest hurdle to this improvement: adequate funding. Funding programs such as these enable irrigators to make critical infrastructure improvements that would otherwise be unaffordable. Specifically, these funds will help improve efficiency and reliability of the system which in turn improves crop production. Increased crop production fulfils the need for feed for the irrigators, many of whom are also cattle ranchers or dairy farmers. A more productive system makes the cattle ranching businesses of the irrigators more profitable.

   c. *Prioritize Department infrastructure needs to highlight:*

      1. *Construction of infrastructure;*

         N/A

      2. *Cyclical maintenance;*

         N/A

      3. *Deferred maintenance.*

         N/A

Evaluation Criterion F—Implementation and Results

*Up to **6 points** may be awarded for these subcriteria.*

Subcriterion F.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?** Please self-certify, or provide copies of these plans where appropriate to verify that such a plan is in place.*

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.*

   Studies completed for the Wyoming Water Development Commission include:

   Cottonwood Lake Enlargement Project Level II Study, Sunrise Engineering, Inc., 2009
   Cottonwood Lake Enlargement Project Level II, Phase II Study, Sunrise Engineering, Inc., 2013
   Cottonwood Irrigation District Master Plan, Sunrise Engineering, Inc., 2017

   Each of these studies is available at the Wyoming Water Development Commission website (wwdc.state.wy.us).

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).*

   The Cottonwood Irrigation District initially began a search for late season water with the above listed studies of the enlargement of Cottonwood Lake. These studies were a direct approach at storing water to meet late season demands. The enlargement of the lake would yield about 360 acre feet. After the USFS confirmed the annual user fee would be over $13,000 the District wisely dropped the enlargement of Cottonwood Lake. Looking inward, the District implemented and enforced water on-farm conservation measures. In addition, in intervening years the District learned more about the scope of its transmission and distribution system. The 2017 Master Plan confirmed system leaks were significant and even surpassed by several magnitudes the storage they were trying to achieve with the lake enlargement. The Master Plan recommended several projects one of which is the subject of this application.

Subcriterion F.2— Performance Measures

Points may be awarded based on the description and development of performance measures to quantify actual project benefits upon completion of the project.

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g., water saved or better managed, energy generated or saved).

The completed line will be pressure tested and leakage of the line will be measured to insure it falls below as specified maximum.

Note: All Water and Energy Efficiency Grant applicants are required to propose a "performance measure" (a method of quantifying the actual benefits of their project once it is completed). A provision will be included in all assistance agreements with Water and Energy Efficiency Grant recipients describing the performance measure, and requiring the recipient to quantify the actual project benefits in their final report to Reclamation upon completion of the project. If information regarding project benefits is not available immediately upon completion of the project, the financial assistance agreement may be modified to remain open until such information is available and until a Final Report is submitted. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of Water and Energy Efficiency Grants.

Subcriterion F.3— 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.

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 of 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.

The proposed schedule for the project is as follows:

Funding application to Wyoming Water Development Commission:	09/2019
Approval of WWDC Funding by Wyoming Legislature	03/2020
Commence survey, environmental, engineering design	05/2021
Design review and approval by funding agencies	06/2021
Bidding for construction work	07/2021
Commence construction	09/2021
Complete construction	04/2022

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

The following permitting activities will be completed during the project:

Endangered Species Act review: consult with US Fish & Wildlife Service
Wyoming Department of Environmental Quality: stormwater permit
Lincoln County: County Road Rights of Way License

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

Site investigations and soils investigations, and so forth were completed as part of the previous Master Plan.

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

N/A

Describe how the environmental compliance estimate was developed. Has the compliance cost been discussed with the local Reclamation office?

Evaluation Criterion G— Nexus to Reclamation Project Activities

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

- *Is the proposed project connected to Reclamation project activities? If so, how? Please consider the following:*
    - *Does the applicant receive Reclamation project water?*

      No
    - *Is the project on Reclamation project lands or involving Reclamation facilities?*

      No.
    - *Is the project in the same basin as a Reclamation project or activity?*

      Yes, the proposed project lies within the Snake River drainage upstream of the Palisades Dam and other Minidoka Project installations.
    - *Will the proposed work contribute water to a basin where a Reclamation project is located?*

      Yes. As mentioned above.
- *Will the project benefit any tribe(s)?*

  The project will not benefit an Indian tribe.

Evaluation Criterion H— Additional Non-Federal Funding

*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:*

$$\frac{\textbf{Non - Federal Funding}}{\textbf{Total Project Cost}} = \frac{\$600,000}{\$900,000} = 66.7\%$$

Project Budget

The project budget includes:

1. *Funding plan and letters of commitment*
2. *Budget proposal*
3. *Budget narrative*

Funding Plan and Letters of Commitment

Describe how the non-Federal share of project costs will be obtained. Reclamation will use this information in making a determination of financial capability.

Project funding provided by a source other than the applicant shall be supported with letters of commitment from these additional sources. Letters of commitment shall identify the following elements:

- *The amount of funding commitment*
- *The date the funds will be available to the applicant*
- *Any time constraints on the availability of funds*
- *Any other contingencies associated with the funding commitment*

Commitment letters from third party funding sources should be submitted with your application. If commitment letters are not available at the time of the application submission, please provide a timeline for submission of all commitment letters. Cost-share funding from sources outside the applicant's organization (e.g., loans or State grants), should be secured and available to the applicant prior to award.

Reclamation will not make funds available for an award under this FOA until the recipient has secured non-Federal cost-share. Reclamation will execute a financial assistance agreement once non-Federal funding has been secured or Reclamation determines that there is sufficient evidence and likelihood that non-Federal funds will be available to the applicant subsequent to executing the agreement.

The funding plan for the project is as follows and will be split as follows:

- 66.7% Wyoming Water Development Commission Grant: $1,029,629
  - WWDC funding has been approved in March of 2020.
- 13.7% Wyoming Water Development Commission Loan: $206,741
- 19.5% Reclamation Water SMART Grant: $300,000
- For information, the following funding has been previously awarded to the Cottonwood Irrigation District for other related work on pipeline replacement:
  - Wyoming Water Development Commission Grant: $558,780
  - Wyoming Water Development Commission Loan: $275,220

In addition, please identify whether the budget proposal includes any project costs that have been or may be incurred prior to award.

N/A

Budget Proposal

Table 2: Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	$ 300,000
Costs to be paid by the applicant	$ 206,741
Value of third party contributions	$ 1,029,629
TOTAL PROJECT COST	$ 1,536,370

The budget proposal should include detailed information on the categories listed below and must clearly identify all items of costs, including those that will be contributed as non-Federal cost share by the applicant, third-party in-kind contributions, and those that will be covered using the funding requested by Reclamation, and any requested pre-award costs. Unit costs must be provided for all budget items including the cost of services or other work to be provided by consultants and contractors.

It is strongly advised that applicants use the budget proposal format shown below on Table 2 or a similar format that provides this information. If selected for award, successful applicants must submit detailed supporting documentation for all budgeted costs.

Note: The costs of preparing bids, proposals, or applications on potential Federal and non-Federal awards or projects, including the development of data necessary to support the non-Federal entity's application are not eligible project costs and should not be included in the budget proposal (2 CFR §200.460).

Table 3: Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	$/Unit	Quantity		
Salaries and Wages				
Included within Contractual	N/A	N/A	N/A	$ 0
Fringe Benefits				
Not Applicable for Current Budget	N/A	N/A	N/A	$ 0
Travel				
Not Applicable for Current Budget	N/A	N/A	N/A	$ 0
Equipment				
Included within Contractual	N/A	N/A	N/A	$ 0
Supplies and Materials				
Included within Contractual	N/A	N/A	N/A	$ 0
Contractual/Construction				
Engineering Professional Services	Refer to Appendix C			$ 96,800
Construction	Refer to Appendix C			$ 1,360,000
Environmental	Refer to Appendix C			$ 21,600
Legal Professional Services	$ 2,400	1	Lump Sum	$ 2,400
Permitting	Refer to Appendix C			$ 10,800
Other				
Inflation (one year)	$44,370	1	Lump Sum	$ 44,770
TOTAL DIRECT COSTS				**$1,536,370**
Indirect Costs				
Not Applicable for Current Budget	N/A	N/A	N/A	$ 0
TOTAL ESTIMATED PROJECT COSTS				**$ 1,536,370**

Budget Narrative

Submission of a budget narrative is mandatory. An award will not be made to any applicant who fails to fully disclose this information. The budget narrative provides a discussion of, or explanation for, items included in the budget proposal. The types of information to describe in the narrative include, but are not limited to, those listed in the following subsections. Costs, including the valuation of in-kind contributions and donations, must comply with the applicable cost principles contained in 2 CFR Part §200, available at the Electronic Code of Federal Regulations (www.ecfr.gov).

Salaries and Wages

Indicate the program manager and other key personnel by name and title. The Project Manager must be an employee or board member of the applicant. Other personnel should be indicated by title alone. For all positions, indicate salaries and wages, estimated hours or percent of time, and rate of compensation. The labor rates must identify the direct labor rate separate from the fringe rate or fringe cost for each

category. All labor estimates must be allocated to specific tasks as outlined in the applicant's technical project description. Labor rates and proposed hours shall be displayed for each task. The budget proposal and narrative should include estimated hours for compliance with reporting requirements, including final project and evaluation. Please see Section F.3 Program Performance Reports for information on types and frequency of reports required.

Generally, salaries of administrative and/or clerical personnel will be included as a portion of the stated indirect costs. If these salaries can be adequately documented as direct costs, they should be included in this section; however, a justification should be included in the budget narrative.

The District maintains no full time salaried employees. The water master position is seasonal with wages paid but no fringe benefits.

Salaries and Wages for project consultants are included in Contractual Costs. With the Contractual Costs, the budgeted amounts have been broken down to Salaries and Wages (Fee Schedule) where applicable. These cost break downs are included in Appendix C.

Fringe Benefits

Identify the rates/amounts, what costs are included in this category, and the basis of the rate computations. Federally approved rate agreements are acceptable for compliance with this item.

Fringe Benefits are not included in this budget. All compensation for employees with the engineering firm are expressed in the Fee Schedule attached in Appendix C. All other compensation for employees outside of the engineering firm are included in their Contractual Costs.

Travel

Identify the purpose of each anticipated trip, destination, number of persons traveling, length of stay, and all travel costs including airfare (basis for rate used), per diem, lodging, and miscellaneous travel expenses. For local travel, include mileage and rate of compensation.

Travel Costs included in the budgets in Appendix C are associated with travel to and from the site during design and construction. The construction observer and project personnel will reside within 10 miles of the project. It is anticipated they will accumulate 6,400 miles during the course of the project at $0.59 per mile.

During design and permitting the surveyor will travel as a single person with one overnight stay. Environmental and cultural consultants will travel to the site from their homes located between 60 and 200 miles away for a site visits or meetings. It is anticipated they will accumulate 1,800 miles during the course of the project at $0.59 per mile.

Equipment

If equipment will be purchased, itemize all equipment valued at or greater than $5,000. For each item, identify why it is needed for the completion of the Project and how the equipment was priced. Note: if the value is less than $5,000, the item should be included under materials and supplies.

If equipment is being rented, specify the number of hours and the hourly rate. Local rental rates are only accepted for equipment actually being rented or leased. If the applicant intends to use their own

equipment for the purposes of the project, the proposed usage rates should fall within the equipment usage rates outlined by the United States Army Corps of Engineers (USACE) within their Construction Equipment Ownership and Operating Expense Schedule (EP 1110-1-8)

Equipment Costs are included in Contractual Costs. Documentation of all equipment costs on the fee schedule incurred during the project will be properly documented and shown on invoices. No new equipment purchases are anticipated for this project.

Materials and Supplies

Itemize supplies by major category, unit price, quantity, and purpose, such as whether the items are needed for office use, research, or construction. Identify how these costs were estimated (i.e., quotes, past experience, engineering estimates, or other methodology). Note: If the materials/supplies will be furnished and installed under a contract, the equipment should be identified as a contractual cost in the budget proposal

Materials and Supplies are included in Contractual Costs. Survey supplies, office supplies, binding, publishing, mailing and other materials are incidental to the tasks and will not be billed separately. No additional material needs are anticipated for this project.

Contractual

Identify all work that will be accomplished by consultants or contractors, including a breakdown of all tasks to be completed, and a detailed budget estimate of time, rates, supplies, and materials that will be required for each task. For each proposed contract, identify the procurement method that will be used to select the consultant or contractor and the basis for selection. Please note that all procurements with an anticipated aggregate value that exceeds the Micro—purchase threshold (currently $10,000) must use a competitive procurement method. Only contracts for architectural/engineering services can be awarded using a qualifications-based procurement method. If a qualifications-based procurement method is used, profit must be negotiated as a separate element of the contract price.

Funding for the project will be used to pay for contractors, construction material, engineering consultants, environmental consultants, and attorney consultation. This includes construction, engineering, environmental, and legal services. A breakdown of probable costs for these services can be viewed in Appendix C.

The probable costs found in Appendix C were prepared by a professional engineering firm. Costs for construction were taken from recent bid documents from similar type of work and projects. This information is available for review upon request.

Third-Party In-Kind Contributions

N/A

Environmental and Regulatory Compliance Costs

The amount of the line item should be based on the actual expected environmental compliance costs for the project, including Reclamation's cost to review environmental compliance documentation. How environmental compliance activities will be performed (e.g., by Reclamation, the applicant, or a consultant) and how the environmental compliance funds will be spent, will be determined pursuant to subsequent agreement between Reclamation and the applicant. The amount of funding required for Reclamation to conduct any environmental compliance activities, including Reclamation's cost to review

environmental compliance documentation, will be withheld from the Federal award amount and placed in an environmental compliance account to cover such costs. If any portion of the funds budgeted for environmental compliance is not required for compliance activities, such funds may be reallocated to the project, if appropriate.

Costs associated with environmental and regulatory compliance must be included in the budget. Compliance costs include costs associated with any required documentation of environmental compliance, analyses, permits, or approvals. Applicable Federal environmental laws could include National Environmental Policy Act (NEPA), Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Clean Water Act (CWA), and other regulations depending on the project. Such costs may include, but are not limited to:

- *The cost incurred by Reclamation to determine the level of environmental compliance required for the project*
- *The cost incurred by Reclamation, the recipient, or a consultant to prepare any necessary environmental compliance documents or reports*
- *The cost incurred by Reclamation to review any environmental compliance documents prepared by a consultant*
- *The cost incurred by the recipient in acquiring any required approvals or permits, or in implementing any required mitigation measures*

A budget of $34,000 is planned to complete the environmental requirements of this project. It is anticipated that a team of consultants will be used to prepare the environmental documents to a level acceptable by the National Environmental Policy Act (NEPA) requirements.

Other Expenses

Any other expenses not included in the above categories shall be listed in this category, along with a description of the item and why it is necessary. No profit or fee will be allowed.

There are no other expenses that have not been accounted for in the previous sections and previous budgets.

Indirect Costs

If the applicant has never received a Federal negotiated indirect cost rate, the budget may include a de minimis rate of up to 10 percent of modified total direct costs. For further information on modified total direct costs, refer to 2 CFR §200.68 available at www.ecfr.gov.

If the applicant does not have a federally approved indirect cost rate agreement and is proposing a rate greater than the de minimis 10 percent rate, include the computational basis for the indirect expense pool and corresponding allocation base for each rate. Information on "Preparing and Submitting Indirect Cost Proposals" is available from Interior, the National Business Center, and Indirect Cost Services, at www.doi.gov/ibc/services/finance/indirect-cost-services. If selected, the applicant will be required to obtain a negotiated Federal indirect cost rate agreement.

There are no Indirect Costs associated with this proposed project.

Required Permits or Approvals

Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals. Note that improvements to Federal facilities that are implemented through any project awarded funding through this FOA must comply with additional requirements. The Federal government will continue to hold title to the Federal facility and any improvement that is integral to the existing operations of that facility. Please see P.L. 111-11, Section 9504(a)(3)(B). Reclamation may also require additional reviews and approvals prior to award to ensure that any necessary easements, land use authorizations, or special permits can be approved consistent with the requirements of 43 CFR Section 429, and that the development will not impact or impair project operations or efficiency.

As described previously, the following permitting activities will be completed during the project:

Endangered Species Act review: consult with US Fish & Wildlife Service
Wyoming State Historical Preservation Office: cultural review (survey completed)
Wyoming Department of Environmental Quality: stormwater permit
Lincoln County: Permit for work in roadway right-of-way.

Letters of Project Support

Please include letters from interested stakeholders supporting the proposed project. To ensure your proposal is accurately reviewed, please attach all letters of support/ partnership letters as an appendix. (Note: this will not count against the application page limit.) Letters of support received after the application deadline for this FOA will not be considered in the evaluation of the proposed project.

The membership of the District has voted a rate increase to pay for pipeline replacement.

Official Resolution

Include an official resolution adopted by the applicant's board of directors or governing body, or, for State government entities, an official authorized to commit the applicant to the financial and legal obligations associated with receipt of a financial assistance award under this FOA, verifying:

- *The identity of the official with legal authority to enter into an agreement*
- *The board of directors, governing body, or appropriate official who has reviewed and supports the application submitted*
- *The capability of the applicant to provide the amount of funding and/or in-kind contributions specified in the funding plan*
- *That the applicant will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement*

An official resolution meeting the requirements set forth above is mandatory. If the applicant is unable to submit the official resolution by the application deadline because of the timing of board meetings or other justifiable reasons, the official resolution may be submitted up to 30 days after the application deadline.

An official resolution meeting the criteria set forth above is attached in Appendix E.

Unique Entity Identifier and System for Award Management

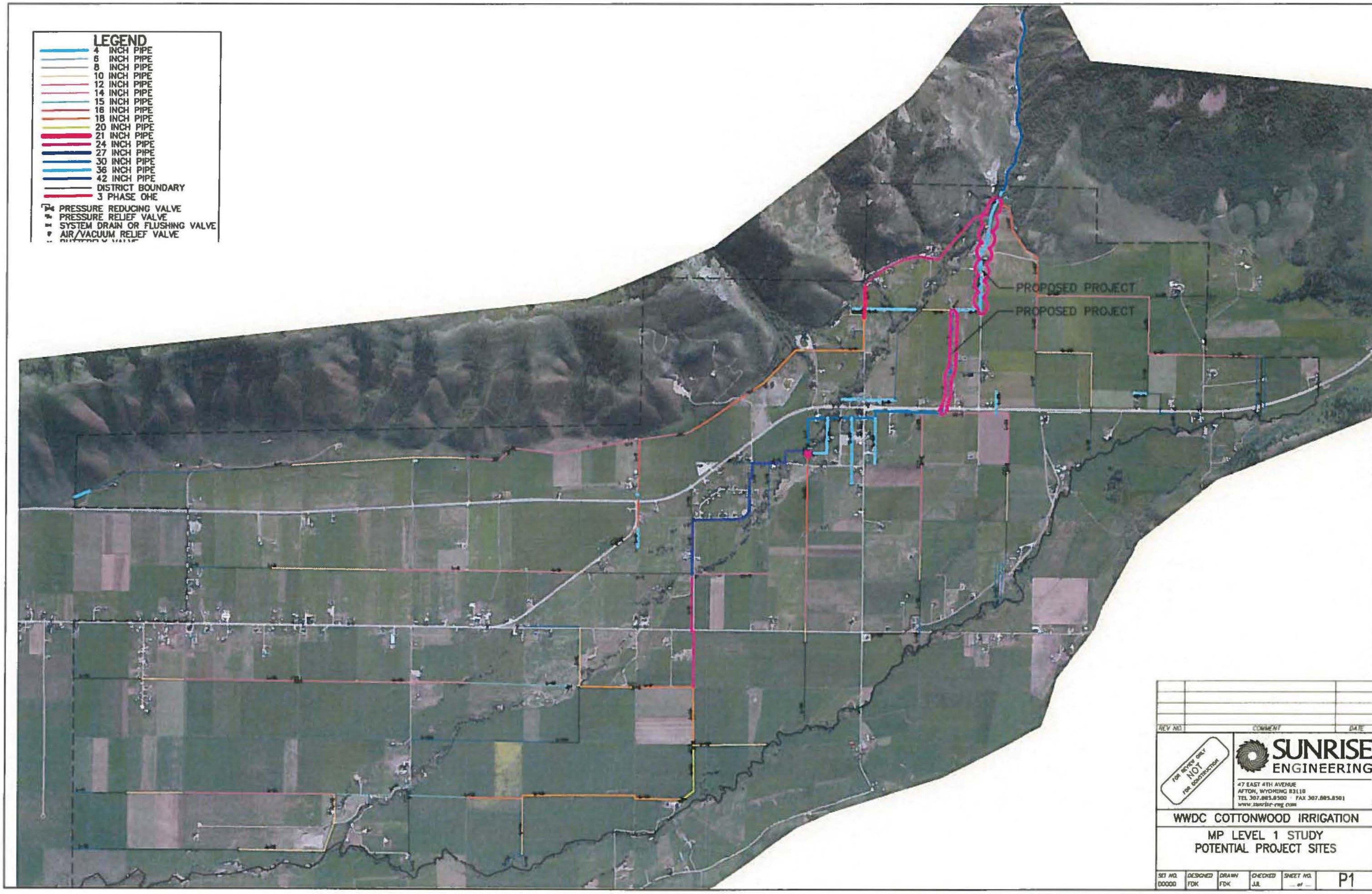
All applicants (unless the applicant has an exception approved by Reclamation under 2 CFR §25.110[d]) are required to:

i. *Be registered in the System for Award Management (SAM) before submitting its application;*
ii. *Provide a valid unique entity identifier in its application; and*
iii. *Continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency.*

The Cottonwood Irrigation District is currently registered with SAM, under DUNS number 099319196.

Appendix A

System Map


LEGEND
4 INCH PIPE
6 INCH PIPE
8 INCH PIPE
10 INCH PIPE
12 INCH PIPE
14 INCH PIPE
15 INCH PIPE
16 INCH PIPE
18 INCH PIPE
20 INCH PIPE
21 INCH PIPE
24 INCH PIPE
27 INCH PIPE
30 INCH PIPE
36 INCH PIPE
42 INCH PIPE
DISTRICT BOUNDARY
3 PHASE OHE
PRESSURE REDUCING VALVE
PRESSURE RELIEF VALVE
SYSTEM DRAIN OR FLUSHING VALVE
AIR/VACUUM RELIEF VALVE
PROPOSED PROJECT
PROPOSED PROJECT
REV NO.
COMMENT
DATE
FOR REVIEW ONLY NOT FOR CONSTRUCTION
SUNRISE ENGINEERING
47 EAST 4TH AVENUE
AFTON, WYOMING 83110
TEL 307.885.8500 · FAX 307.885.8501
www.sunrise-eng.com
WWDC COTTONWOOD IRRIGATION
MP LEVEL 1 STUDY
POTENTIAL PROJECT SITES
SET NO. D0000
DESIGNED FDK
DRAWN FDK
CHECKED JJL
SHEET NO. __ of __
P1

Appendix B

Previous Studies

COTTONWOOD IRRIGATION DISTRICT MASTER PLAN

WYOMING WATER DEVELOPMENT COMMISSION

AUGUST 2017

47 E. 4th Ave., PO Box 609, Afton, WY 83110 - 307.885.8500 - *sunrise-eng.com*

SUNRISE ENGINEERING

COTTONWOOD LAKE LEVEL II, PHASE II 2010

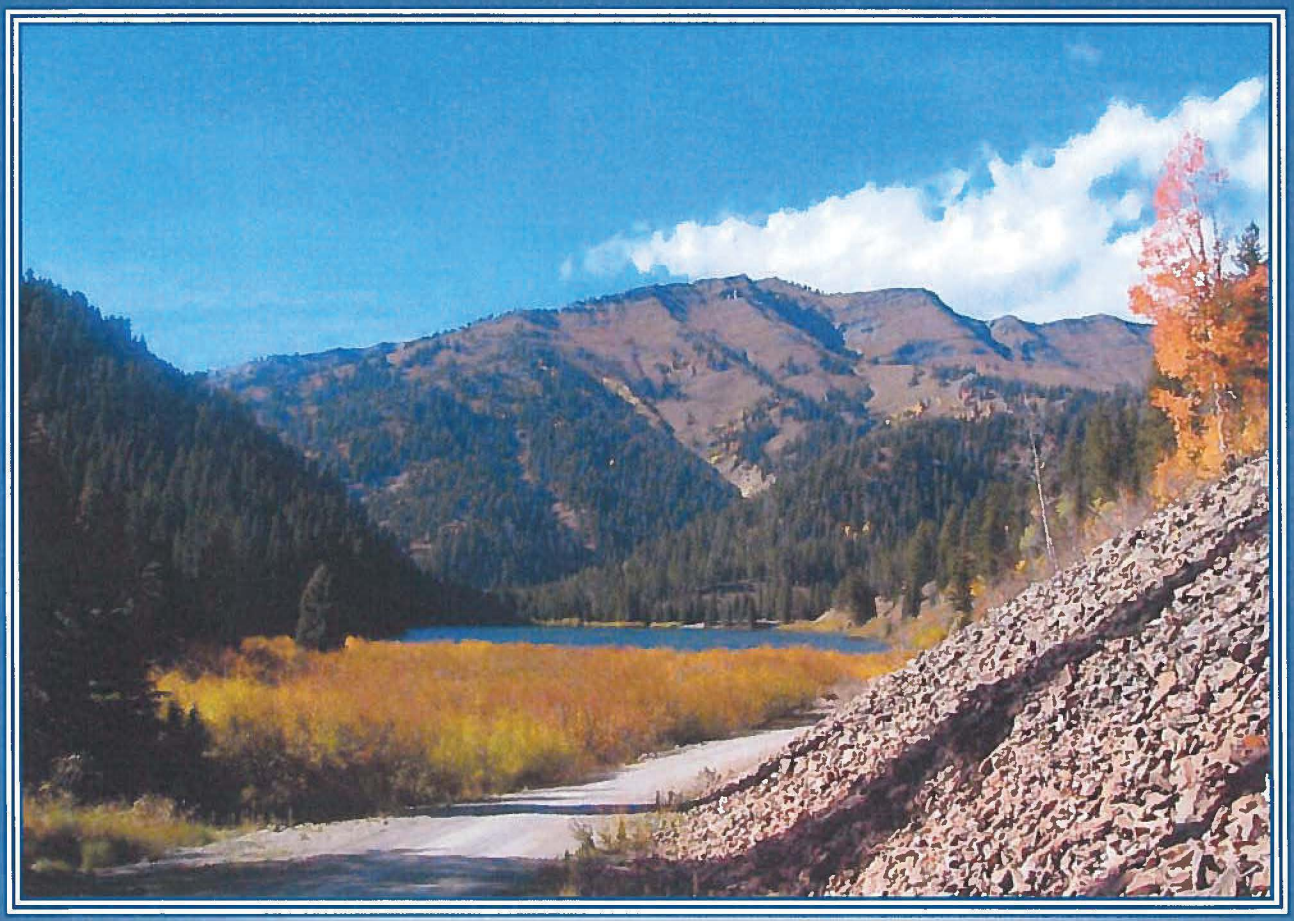
COTTONWOOD IRRIGATION DISTRICT
WYOMING WATER DEVELOPMENT COMMISSION

September 13, 2013

P.O. Box 609
47 E 4th Avenue
Afton, Wyoming 83110
307-885-8500
www.sunrise-eng.com

SUNRISE ENGINEERING

Cottonwood Lake Enlargement Project



2009 Level II Study

Prepared For:
Wyoming Water Development Commission

Prepared By:
Sunrise Engineering, Inc.
PO Box 609
Afton, WY 83110
307.885.8500

Appendix C

Cost Estimates

Cottonwood Irrigation District Master Plan Level I Study

Irrigation System Rehabilitation

Engineer's Opinion of Probable Construction Costs

SUNRISE ENGINEERING

Owner/Operator	**Cottonwood Irrigation District**
Site Name	***Replace Portions of L-6 and L-27 near the mouth of the canyon.***
Type Of Project	Pipeline Replacement
Notes/Description	**Originally Project 10 in Level II Study - Modified based on bids and pipe conditions discovered in 2019**

Description: This cost estimate is to replace portions of the two main steel laterals that branch at the mouth of the canyon. The condition of these pipes is poor and a priority over other projects. Under this cost estimate, the replacement of Lateral L-6 is extended down to L-7 while L-27 is reduced to the distance from Cottonwood road to the first valve.

PRE CONSTRUCTION COSTS

Preparation of Final Designs and Specifications	$96,800.00	
Permitting and Mitigation @ 1% of Project Cost	$10,800.00	
Title of Opinion @ 0.22% of Project Cost	$2,400.00	
Acquisition of Access and Rights of Way Confirmation	$21,600.00	
Pre Construction Costs (Subtotal #1)		**$131,600**

COST OF PROJECT COMPONENTS

Item #	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization	1.0	LS	$19,000.00	$19,000
2	18" SDR 32.5 (125 psi) P.I.P. (L-27)	300	L.F.	$35.00	$10,500
3	36" Class 150 PVC (L-6 and L-7)	5,900	L.F.	$150.00	$885,000
4	Irrigation Riser Tee	82	Each	$470.00	$38,540
5	Import Pipe Bedding	1,440	Cu. Yd.	$18.00	$25,920
6	Final Grading and Reseeding	2.8	Acres	$900.00	$2,562
7	Large Air Relief Valve	4	Each	$2,800.00	$11,200
8	6" to 10" Butterfly Valve	3	Each	$1,400.00	$4,200
9	12" to 16" Butterfly Valve	1	Each	$2,500.00	$2,500
10	18" to 21" Butterfly Valve	1	Each	$2,700.00	$2,700
11	30" to 36" Butterfly Valve	1	Each	$7,500.00	$7,500
12	Drain valve assembly	1	Each	$5,000.00	$5,000
13	Remove Spoils From Site	1,440	Cu. Yd.	$11.70	$16,848
14	Road Crossing Pipe Removal and Reinsertion	1	Each	$15,000.00	$15,000
15	Road Crossing Restoration	2	Each	$4,450.00	$8,900
16	Orifice Meter Station Rebuild	3	Each	$3,666.66	$11,000
17	Large PRV Station Rebuild	-	Each	$75,000.00	$0
18	Blowoff Valve Rebuild	-	Each	$8,000.00	$0
19	Fence Repair	500	L.F.	$18.00	$9,000
				Construction Total	**$1,075,370**

INCIDENTAL PROJECT COMPONENT COSTS

Total Component Cost (Subtotal #2)	**$1,075,370**
Construction Engineering Cost (Subtotal #2 x 10%)	$107,537
Components and Engineering Costs(Subtotal #3)	**$1,182,907**
Contingency (Subtotal #3 x 15%)	$177,436
Construction Cost Total (Subtotal #4)	**$1,360,000**
Total Project Cost (Subtotal #1 + Subtotal #2)	**$1,492,000**
Inflation @ 3% for one year	$44,770
Total Cost with Inflation	$1,536,370
WWDC Grant	$1,029,367.90
BOR Water Smart	$300,000.00
Other Funding	$207,002.10

Manhour Estimate
Client: Cottonwood Irrigation District
Project Name: Laterals L-6 and L-7 Replacement
Phase: DESIGN

SUNRISE ENGINEERING

No.	Work Task Description	Principal Engineer	Engineer IV	Engineer III	Engineer Tech IV	CADD Tech IV	RLS Surveyor	Admin. Ass't.	Misc. Costs	Estim. Mileage	Sub-total (hours)	Sub-total ($)
1	Survey, Data Collection & Evaluation	2	16		32		24	2	$2,000	1120	76	$13,087
2	Prepare Drawing Format		4			8					12	$1,364
3	Prepare Title Sheet and Design Criteria Sheet	2	8			8					18	$2,294
4	Gather and Import Utility Drawings		4		8	16					28	$3,108
5	Prepare Plan View Drawings with Contours	8	40		16	80		4			148	$17,208
6	Design Profile Drawings	8	30		24	120		2			184	$20,514
7	Prepare Detail Sheets	4	32		40	60		2			138	$16,144
8	Prepare Preliminary Quantity Take-off & Cost Estimate	4	8		8						20	$2,820
9	Write Specifications and Prepare Bidding Documents	4	24		16			24			68	$7,588
10	Submittals to Funding Agencies	4	8					8			20	$2,356
11	Meetings & Project Management	24	32					8		1680	64	$10,327
											0	$0
											0	$0
											0	$0
											0	$0
											0	$0
											0	$0
											0	$0
	Sub-Total Hours/Miles/Days	60	206	0	144	292	24	50	$2,000	2800	510	$96,810
	Billing Rate	$175.00	$145.00	$128.00	$120.00	$98.00	$158.00	$62.00	$0	$0.59		
	Total Dollars	$10,500	$29,870	$0	$17,280	$28,616	$3,792	$3,100	$2,000	$1,652	**SUBTOTAL**	**$96,810**
											GRAND TOTAL	**$96,810**

Misc. Costs: soils lab testing

Manhour Estimate
Client: Cottonwood Irrigation District
Project Name: Laterals L-6 and L-7 Replacement
Phase: BIDDING & CONSTRUCTION

No.	Work Task Description	Principal Engineer	Engineer IV	Engineer III	Construction Observer III	CADD Tech III	RLS Surveyor	Admin. Ass't.	Misc. Costs	Estim. Mileage	Sub-total (hours)	Sub-total ($)
1	Bidding Administration	16	24					16		100	56	$7,331
2	Surveying		16		8		24			700	48	$7,285
3	Engineering Supervision	16	80							800	96	$14,872
4	Change Orders & Pay Requests Processing	4	40					8			52	$6,996
5	Field Representative (Construction Observers)		20		516			22		2800	558	$54,936
6	Board & Staff meetings (travel in Eng. Supervision visits)	8	16								24	$3,720
7	As-Built Drawings		16			32		8			56	$5,952
8	Project Close-out documents	4	32					16	$100		52	$6,432
											0	$0
											0	$0
											0	$0
											0	$0
											0	$0
											0	$0
											0	$0
											0	$0
	Sub-Total Hours/Miles/Days	48	244	0	524	32	24	70	$100	4400	650	$107,524
	Billing Rate	$175.00	$145.00	$128.00	$95.00	$98.00	$158.00	$62.00	$0	$0.59		
	Total Dollars	$8,400	$35,380	$0	$49,780	$3,136	$3,792	$4,340	$100	$2,596	SUBTOTAL	$107,524

GRAND TOTAL **$107,524**

Manhour Estimate
Client: Cottonwood Irrigation District
Project Name: Laterals L-6 and L-7 Replacement
Phase: PERMITTING, MITIGATION, ACCESS AND RIGHTS OF WAY CONFIRMATION

SUNRISE ENGINEERING

No.	Work Task Description	Principal Engineer	Engineer IV	Engineer III	Engineer Tech IV	CADD Tech IV	RLS Surveyor	Admin. Ass't.	Misc. Costs	Estim. Mileage	Sub-total (hours)	Sub-total ($)
1	**Cultural Resources**										0	$0
2	Field Work/Site Investigation		16						$3,000	560	16	$5,650
3	File Search/Update								$1,500		0	$1,500
4	Report & Deliverables	4	10			10		2	$1,000		26	$4,254
5											0	$0
6	**ESA**										0	$0
7	Field Work/Site Investigation		16						$2,500	560	16	$5,150
8	File Search/Update								$1,500		0	$1,500
9	Report & Deliverables	4	20			10		4	$1,000		38	$5,828
10											0	$0
11	Approvals/Coordination	8	40			8		8			64	$8,480
12												
13	Lincoln County Rights of Way	2	10			6					18	$2,388
											0	$0
											0	$0
											0	$0
											0	$0
											0	$0
											0	$0
	Sub-Total Hours/Miles/Days	18	112	0	0	34	0	14	$10,500	1120	48	$34,751
	Billing Rate	$175.00	$145.00	$128.00	$120.00	$98.00	$158.00	$62.00	$0	$0.59		
	Total Dollars	$3,150	$16,240	$0	$0	$3,332	$0	$868	$10,500	$661	**SUBTOTAL**	**$34,751**
											GRAND TOTAL	**$34,751**

Misc. Costs: subconsultants

SUNRISE ENGINEERING

FEE SCHEDULE

EXHIBIT A

Work Code	Work Classification	Hourly Rate	Work Code	Work Classification	Hourly Rate
101	Engineer Intern (E.I.T.) I	$ 114	451	Training Specialist I	$ 77
102	Engineer Intern (E.I.T.) II	115	452	Training Specialist II	91
103	Engineer III	140	455	Training Supervisor	110
104	Engineer IV	160	456	Training Manager	123
105	Engineer V	172	460	Training Director	154
110	Principal Engineer	185	500	Funding Specialist	115
121	Electrical Eng. Int. (E.I.T.) I	99	510	Plan Reviewer	107
122	Electrical Eng. Int. (E.I.T.) II	109	511	Building Inspector I	59
123	Electrical Engineer III	134	512	Building Inspector II	82
124	Electrical Engineer IV	155	513	Building Inspector III	102
125	Electrical Engineer V	170	525	Building Official	118
126	Principal Electrical Engineer	185	604	GIS Tech IV	95
301	Engineering Tech I	75	611	GIS Analyst	110
302	Engineering Tech II	79	51	Administrative I	55
303	Engineering Tech III	95	52	Administrative II	65
304	Engineering Tech IV	125	53	Administrative III	75
311	Electrical Tech I	81	721	Water Rights Specialist I	91
312	Electrical Tech II	89	722	Water Rights Specialist II	102
313	Electrical Tech III	102	723	Water Rights Specialist III	116
314	Electrical Tech IV	112	711	Project Manager I	105
315	Electrical Tech V	125	712	Project Manager II	125
351	Construction Observer I	75	930	Survey CAD Tech	100
352	Construction Observer II	85	935	One Man Survey Crew	140
353	Construction Observer III	98	940	Survey Manager	150
354	Construction Observer IV	112	945	Registered Surveyor	158
401	CAD Drafter I	72	950	Principal Surveyor	175
402	CAD Drafter II	80			
403	CAD Drafter III	98			
404	CAD Drafter IV	105			

REIMBURSABLE EXPENSE SCHEDULE

Expense	Rate	Mark-Up
Mileage	$0.575 per mile	N/A
Per Diem Meals	$40 per day	N/A
Snowmobile/ATV & Trailer	$250 per day	N/A
Troxler Nuclear Density Gauge	$40 per day	N/A
High Density Scanner	$150 per hour	N/A
Material Testing Lab Work	Actual Cost	N/A
Outside Consultants, Aerial Photography, etc.	Actual Cost	N/A
Lodging	Actual Cost	N/A
Other Expenses incurred	Actual Cost	N/A

Fee schedule is fixed for the term of the contract. Afton WWDC 121.1

Appendix D

Letters of Support

Representative **Evan J. Simpson**
Wyoming House of Representatives **House District 21**
P.O. Box 678 | Afton, WY 83110

home (307) 885-5588
email Evan.Simpson@wyoleg.gov

September 10, 2020

U.S. Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Ned Weakland
P.O. Box 25007, MS 84-27815
Denver, CO 80225

RE: Water Efficiency Grant Application – Cottonwood Irrigation District

Dear Selection Committee:

I am writing to express support for the Cottonwood Irrigation District and its efforts to reduce water loss and preserve its ability to deliver water to their District members. This District's irrigation system is critical to the resident's livelihoods and is relied on by several hundred water users for irrigation and livestock watering. The Irrigation District is desiring to upgrade their old leaking pipes to new pipes.

This grant will help the District better manage its water consumption and help preserve water for other downstream irrigation and recreational users.

Thank you for your consideration.

Sincerely,

Evan J Simpson

Evan J. Simpson, Representative
Wyoming House District 21

September 9, 2020

Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Ned Weakland
P.O. Box 25007, MS 84-27815
Denver, CO 80225

RE: Water Efficiency Grant Application – Cottonwood Irrigation District

Dear Selection Committee:

I am writing to express support for the Cottonwood Irrigation District and its efforts to reduce water loss and preserve its ability to deliver water to the District members. This District and it's pressurized irrigation system is relied on by over 330 separate water accounts for irrigation and stock water. This grant will help the District reduce water loss and preserve system reliability in a reach of the system that is relied on by all users.

Thank you for your consideration.

Sincerely,

Jerry Harmon, Lincoln County Commissioner

September 9, 2020

Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Ned Weakland
P.O. Box 25007, MS 84-27815
Denver, CO 80225

RE: Water Efficiency Grant Application – Cottonwood Irrigation District

Dear Selection Committee:

I am writing to express support for the Cottonwood Irrigation District and its efforts to reduce water loss and preserve its ability to deliver water to the District members. This District and it's pressurized irrigation system is critical to my ability to raise crops and sustain my farm. The L-6 and L-7 lateral project is relied on by myself and almost all other users. As a District, we have voted for increased assessments to help accomplish this project. A Water Smart Grant will help keep our assessments at a tolerable level.

Thank you for your consideration.

Sincerely,

District Member

September 9, 2020

Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Ned Weakland
P.O. Box 25007, MS 84-27815
Denver, CO 80225

RE: Water Efficiency Grant Application – Cottonwood Irrigation District

Dear Selection Committee:

I am writing to express support for the Cottonwood Irrigation District and its efforts to reduce water loss and preserve its ability to deliver water to the District members. This District and it's pressurized irrigation system is critical to my ability to raise crops and sustain my farm. The L-6 and L-7 lateral project is relied on by myself and almost all other users. As a District, we have voted for increased assessments to help accomplish this project. A Water Smart Grant will help keep our assessments at a tolerable level.

Thank you for your consideration.

Sincerely,

Johnson Willow Creek Ranch

District Member

September 9, 2020

Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Ned Weakland
P.O. Box 25007, MS 84-27815
Denver, CO 80225

RE: Water Efficiency Grant Application – Cottonwood Irrigation District

Dear Selection Committee:

I am writing to express support for the Cottonwood Irrigation District and its efforts to reduce water loss and preserve its ability to deliver water to the District members. This District and it's pressurized irrigation system is critical to my ability to raise crops and sustain my farm. The L-6 and L-7 lateral project is relied on by myself and almost all other users. As a District, we have voted for increased assessments to help accomplish this project. A Water Smart Grant will help keep our assessments at a tolerable level.

Thank you for your consideration.

Sincerely,

John Hunsaker BOARD Member!

District Member

B

Appendix E

Resolution

OFFICIAL RESOLUTION

OF THE

Cottonwood Irrigation District

Resolution No. 2019 -1

The President of the District is Kelly Johnson, and he will be the legal authority on the project.

AUTHORIZING THE PRESIDENT OF THE COTTONWOOD IRRIGATION DISTRICT TO APPLY FOR A CONTRIBUTION GRANT FROM THE U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION, FOR THE RENOVATIONS NECESSARY TO REDUCE LEAKAGE FROM THE L-6 AND L-7 PIPELINES AND TO INSTALL FLOW MEASUREMENT DEVICES AT THE L-1, L-6, AND L-27 BIFURCATIONS.

WHEREAS, The Cottonwood Irrigation District, (the "District") of Lincoln County, Wyoming deems it necessary to apply to the Department of the Interior, Bureau of Reclamation, for funding through a cost-sharing grant, that shall not exceed $300,000 (Water SMART Grant), and $1,536,370 (Total Project,) for design & construction enhancements of the L-7 and L-7 pipelines for the purpose of seepage reduction and flow measurement upgrades. The District has reviewed and supports the application submitted.

WHEREAS, The District intentions are to provide the remaining funding through Wyoming Water Development Commission as specified in the funding plan.

NOW THEREFORE BE IT RESOLVED, the District will authorize application to the Bureau of Reclamation for the grant and will work with Reclamation to meet environmental compliance and established deadlines for the entering into a grant or cooperative agreement.

Date: 8-14-20

Kelly A Johnson

Kelly Johnson, President

ATTEST:

Heidi Summers