WaterSMART

Water and Energy Efficiency Grants for FY 2020

Funding Opportunity Announcement No. BOR-DO-20-F001

Funding Group II

KIRBY DITCH LOWER REACH PIPING PROJECT

KIRBY DITCH IRRIGATION DISTRICT

P.O. Box 1065

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October 3, 2019

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Technical Proposal and Evaluation Criteria

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: Application due date is October 3, 2019.

Applicant: Kirby Ditch Irrigation District. Thermopolis, Hot Springs County, Wyoming

Project Title: Kirby Ditch Lower Reach Piping Project

Project Summary:

Kirby Ditch Irrigation District (KDID) proposes converting 2.56 miles of open canal on the lower reach of the Kirby Ditch to a PVC buried pipeline. The project will accomplish the FOA goals by eliminating water losses due to seepage, evaporation, and ditch failure. Specific project activities would consist of installing 36", 30' and 24" PVC pipe, installing new turnouts at existing locations, and installing appurtenances (air vents, drains, etc.) as needed. It is anticipated that the proposed pipeline alignment would follow the existing ditch and allow flows of 20 cfs. Turnouts will be designed so that water can be delivered to an existing ditch or irrigators can connect directly to the pipeline. Maintenance through the lower section has historically be high due to a slide section of the ditch that skirts a steep hillside for approximately one-half mile. Steep, erosive slopes frequently slough into the ditch, reducing capacity and obstructing flows, which result in increased breach potential. Further complicating issues, limited access along this reach hinders monitoring and maintenance activities, as shown in Figure 1.

This project is 67% funded by Wyoming Water Development Commission, and WaterSMART grant funds will be used to augment and provide the balance of funding necessary to allow completion of this project.

Approximate Timeline: 3 years

Completion Date: December 31, 2022

Federal Facility: The project is not located on a Federal facility.

Figure 1: Lower Reach Slide Area

Background Data

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 a hydropower component, 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 Kirby Ditch Irrigation District

The Kirby Ditch is owned and operated by the Kirby Ditch Irrigation District (KDID). Water is diverted from the Big Horn River approximately one mile north of Thermopolis, Wyoming. The ditch is approximately ten (10) miles long and parallels the Big Horn River on the east side. The ditch lies within the boundaries of the KDID which was formed by the previous owner, the Kirby Ditch Company, to facilitate rehabilitation projects funded by the Wyoming Water Development Commission (WWDC). The total area within the KDID boundary is approximately 5,100 acres, of which, approximately 3,200 acres have been irrigated historically.

The ditch was originally built in 1904. Diversions from the Big Horn River are facilitated by the existence of a rock/cobble check dam on the river and a conventional concrete headgate structure incorporating two, four-foot screw-type slide gates. The ditch is predominately an unlined earthen ditch; however, approximately 900 feet of the ditch has been lined in areas reportedly experiencing significant seepage and potentially threatening the integrity of the system. Critical structural components of the system were recently rehabilitated or replaced. The Kirby Creek siphon was replaced with funding provided by the WWDC. In addition, a portion of the ditch has been placed in a buried pipe where the ditch is confined to a narrow reach of land between the river, a large bluff and the county road. At this location, irrigation diversions are conveyed beneath the road for approximately 900 feet in a six-foot diameter pipeline.

Water Rights and Irrigation Diversions

Water rights associated with the KDID are tabulated in Table 1. The ditch has adjudicated direct flow right of approximately 43 cfs with priorities as old as 1892 and as recent as 1972. Supplemental water rights conveyed in the ditch provide an additional 1.14 cfs with a priority date of 1952. Unadjudicated water rights conveyed within the Kirby Ditch total 0.76 cfs with priority dates ranging from 1987 to 1993. Consequently, the single appropriation associated with these water rights is approximately 45 cfs. For those water rights that are

Table 1 Kirby Ditch Water Rights.

Priority Date	Permit Number	Permit Use	Acres	Flow (cfs)	Cumulative Flow (cfs)
Adjudicated Direct Flow					
3/31/1892	255	Irr.	209	2.99	2.99
9/08/1894	84E	Irr.	374.5	5.35	8.34
10/01/1896	1322	Irr.	171.6	2.45	10.79
4/19/1904	6200	Irr.	1711.5	24.45	35.24
7/19/1904	1241E	Irr.	146	2.08	37.32
9/30/1909	2127E	Irr.	6	0.09	37.41
1/24/1910	2198E	Irr.	15.2	0.22	37.63
7/21/1913	2833E	Irr.	198	2.83	40.46
7/7/1949	5479E	Irr.	100	1.42	41.88
2/9/1950	20349	Irr.	70	1.0	42.88
12/11/1972	6448E	Irr.	21	0.3	43.18
4/29/83	6729E	Irr.	14.4	0.21	43.39
Supplemental Supply					
4/18/1952	5618E	Irr.	80	1.14	1.14
Unadjudicated Direct Flow					
10/19/1987	6868E	Irr.	3.1	0.04	0.04
6/2/1988	6892E	Irr.	2.3	0.03	0.07
5/3/1989	7006E	Irr.	27.7	0.4	0.47
4/13/1992	7031E	Irr.	6.0	0.09	0.56
1/19/1993	7074E	Irr.	4.2	0.06	0.62
9/17/1993	7126E	Irr.	9.7	0.14	0.76

authorized a second appropriation during periods of surplus or excess flows, the water diverted into the ditch facilities becomes slightly less than 87 cfs. Diversions into the ditch under "free river status" are limited to the safe carrying capacity of the ditch as long as all the water being diverted is being put to beneficial use and no injury is occurring with respect to return flows after the water has been applied to beneficial use. During periods of limited water supplies, the KDID supplements it existing water supply with purchases of water stored in Boysen Reservoir from the Bureau of Reclamation.

The irrigation season for the water users of the Kirby Ditch begins in late April and ends in late September. As indicted in Figure 5, recent diversion records indicate an average annual

diversion from the headgate of 17,680 acre-feet (1973 through 2009). In 2009, a total of 20,539 acre-feet were diverted from the river. Given 3,196 acres of assessed lands, the average diversion at the headgate corresponds to 5.53 acre-feet per acre.

Presently, approximately 53 users utilize the ditch diversions to irrigate pasture, alfalfa hay, grass hay, small grains, and corn. Subdivision of land has resulted in an increased amount of water being applied to lawns and gardens. Irrigation methods are dominated by conventional flood irrigation practices and some gated pipe. In recent years, the KID has seen an increase in the number of sprinklers being installed, including sprinklers applying water to lands upslope of the ditch via pumps.

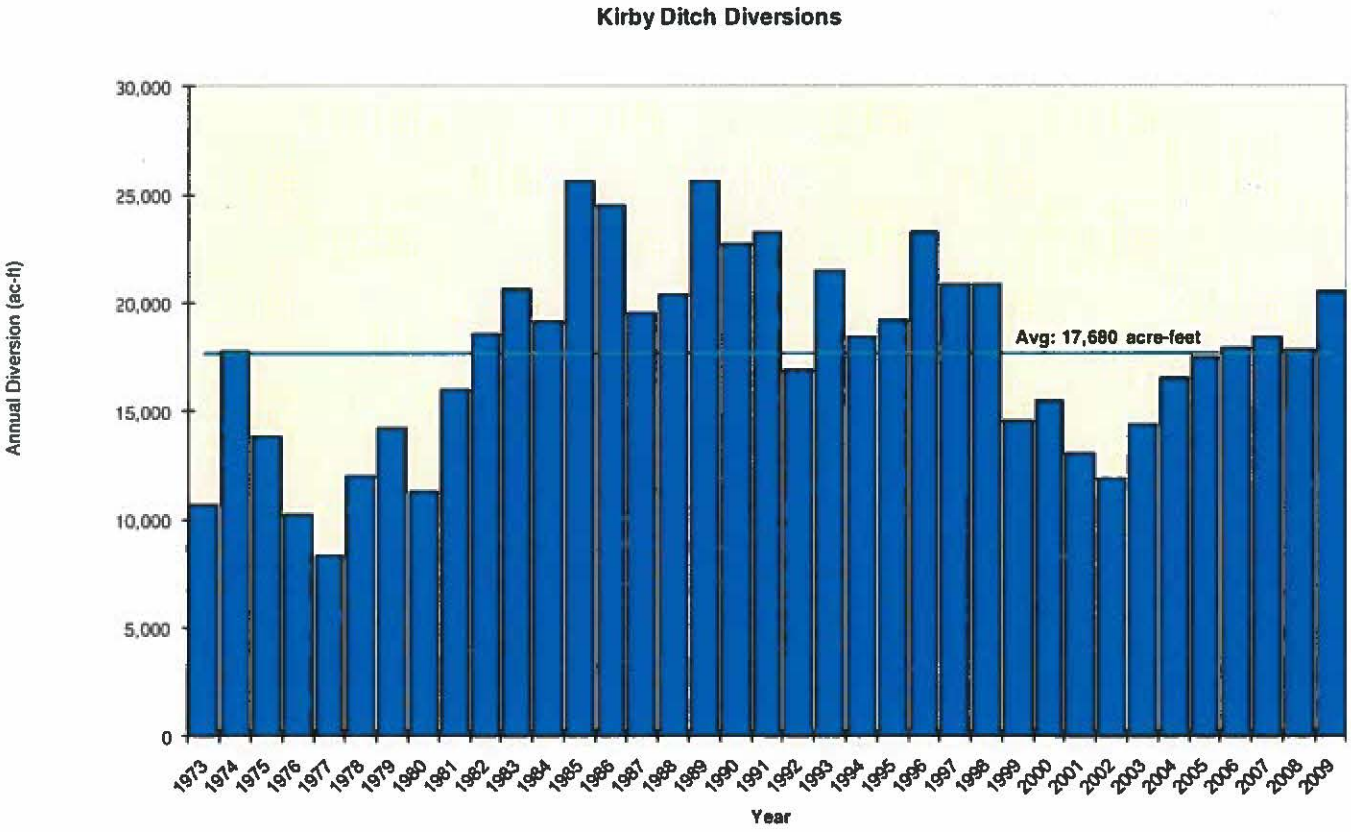

Figure 2: Historic Diversions for Kirby Ditch

Operating Budget and Annual Assessment

The assessment for the KDID varies depending upon maintenance requirements. Total assessments have ranged from a low of $6.50 (2006) to a high of $11.50 (including $1.50 loan repayment). Current assessment is reported to be $8.00 per acre with a $75 first acre assessment.

Issues Facing the Kirby Ditch Irrigation District

The primary issues facing the Kirby Irrigation District arise from increased diligence by the State Engineer's Office in monitoring the irrigation diversions from the river. As discussed above, the KDID has water rights of approximately 45 cfs which can be diverted if it is physically available in priority and the river is not in regulation, meaning senior water users have not put a call on the river. As mentioned previously, during the spring runoff period when water is available, the KDID can divert up to twice their water right. Once waters stored in Boysen Reservoir are released, the KDID must either reduce their diversions to their allocation (~43 cfs) in accordance with their priority or purchase water stored in Boysen Reservoir. Due to limitations in the existing delivery facilities (crossing encroachments, inefficient turnouts, moss accumulation, seepage, etc.) to convey the irrigation diversions, the KDID has historically relied on the diverting water in excess of their water right, to serve as 'carriage' water to 'push' flows down the ditch to lower end users. Reduction in diversions will impose physical restraints on the KDID making deliveries more difficult.

Considering this information, the following issues have been identified which the KDID must face and address in the near future:

- Strict adherence to flow diversions by the State Engineer's Office coupled with limited available flow during drought conditions will make deliveries of waters to tail-end users increasingly problematic.
- Seepage losses from the system may be significant. Estimated seepage on the order of 20 to 25 percent could result in seasonal losses approaching 3,500 acre-feet.

Project Location

Provide detailed information on the proposed project location or project area including a map showing the specific geographic location.

Kirby Ditch Lower Reach Piping Project is in Hot Springs County, Wyoming approximately 10 miles northeast of Thermopolis. The project start point latitude is {43°46'6.42"N} and longitude is {108°8'19.942"W}.

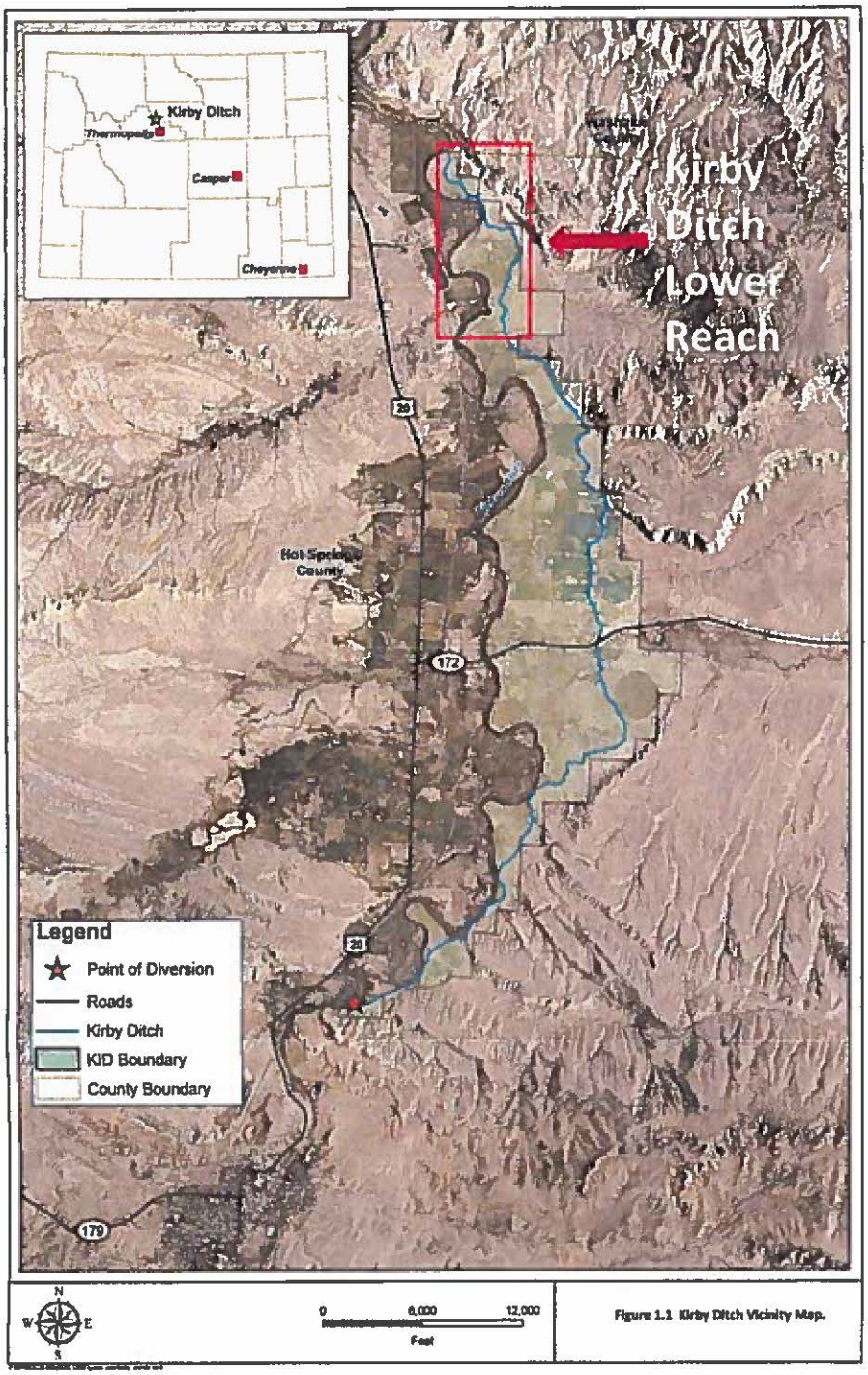

Figure 3: Overview of Kirby Ditch Irrigation District

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. Please note, if the work for which you are requesting funding is a phase of a larger project, please only describe the work that is reflected in the budget and exclude description of other activities or components of the overall project.

The proposed project involves replacing the lower section Kirby Ditch, which is open ditch with a PVC pipeline. The pipeline will deliver water to 6 landowners and 704.36 acres, allowing for 20 cfs to be delivered via the pipeline. Approximately 2.56 miles of open ditch will be converted. All materials will be from credible manufacturers and installed according to Natural Resources Conservation Service (NRCS) standards and specifications.

The preliminary design indicates 1559 feet of 36-inch PVC pipe, 6070 feet of 30 inch PVC, and 4341 feet of 24 inch PVC will be needed to accommodate the water capacity required. The pipe will be buried 30 inches deep and installed on the grade specified by the final design when completed. The pipe will be bedded according to NRCS specifications. The pipeline will be designed not to exceed the industry accepted standard water velocity of 5 feet per second. Air-vac valves, drains, fittings and all other appurtenances will be installed at predetermined locations to ensure proper operation of the pipeline.

The complete design of the project will be completed by a professional engineering firm (preliminary was completed by Sage Civil Engineering.) All design drawings will be stamped by a professional engineer and will be available to Bureau of Reclamation for review if requested.

The project has been submitted for a Level III Study with the Wyoming Water Development Commission, which covers 67% of the project cost.

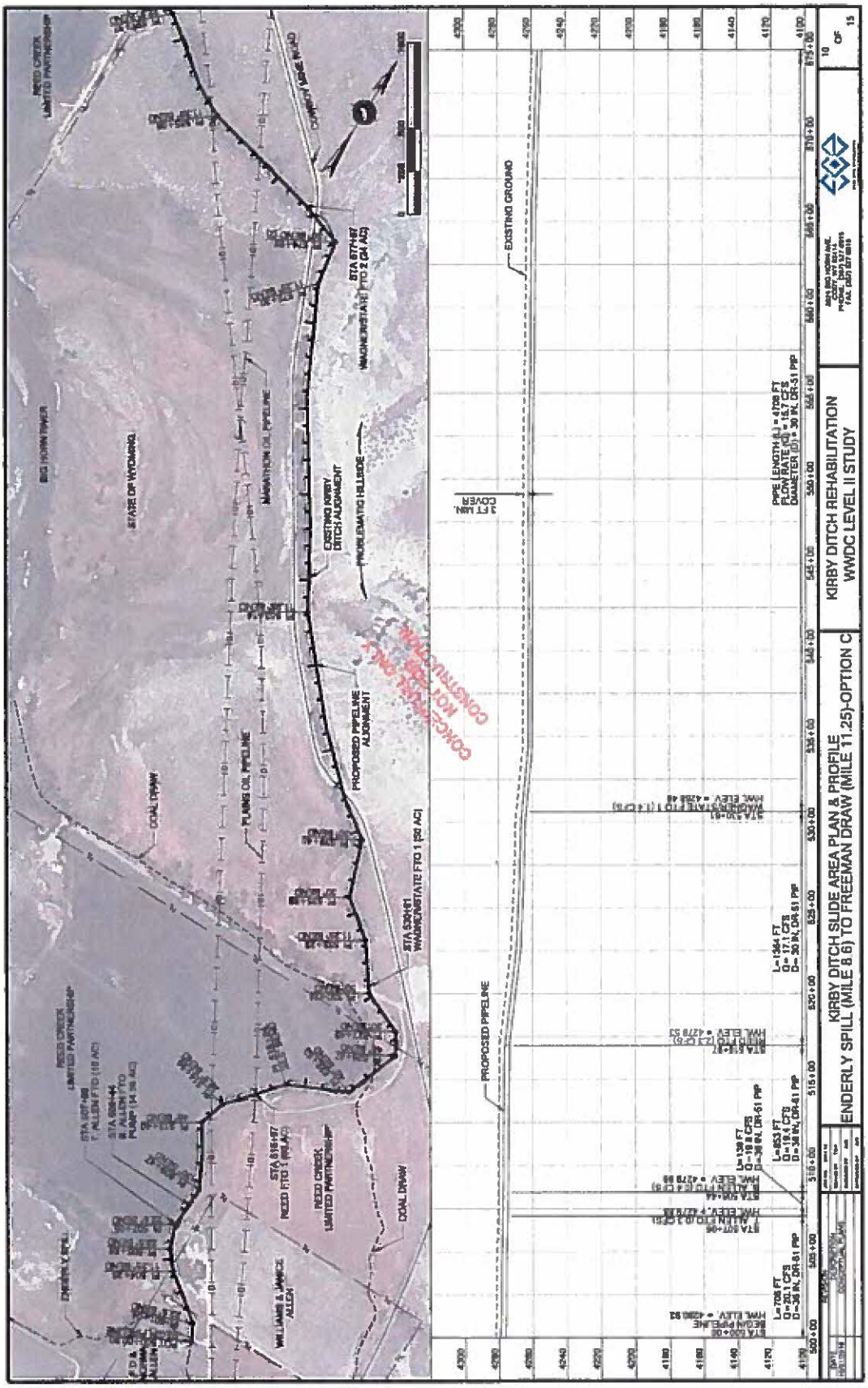

Figure 4: Preliminary Design Page 1

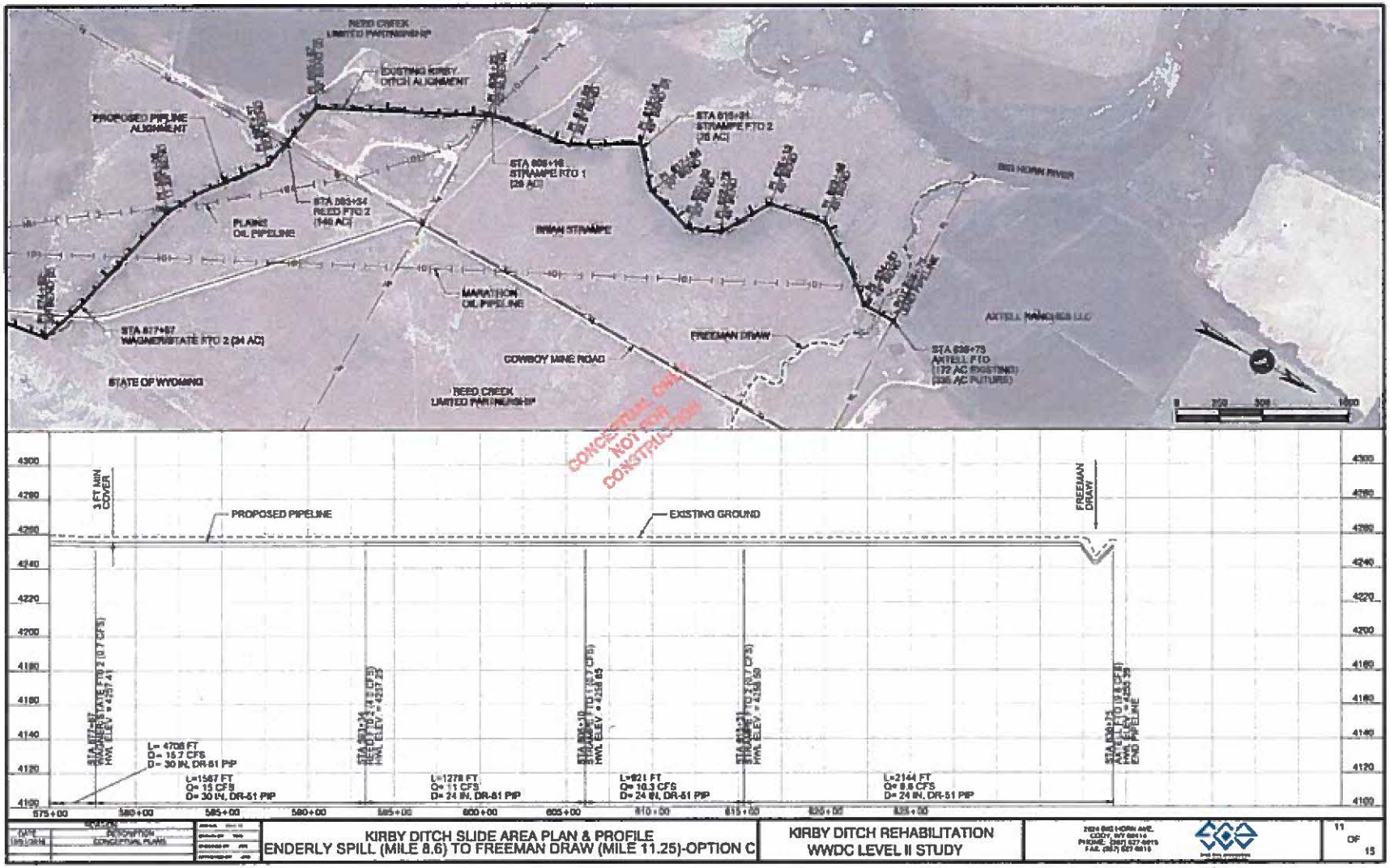

Figure 5: Preliminary Design Page 2

13,537 total ft

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.

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.

Results of the seepage study completed by Anderson Engineering in 2008 concluded that that the lower reach of the Kirby Ditch had a seepage loss of 5.7%. Considering Kirby Ditch has a yearly usage if 17,681 acre feet, that equates to 1008 acre feet lost per year to seepage. Ditch seepage losses were calculated using a water budget approach. This approach relied on measuring the ditch discharge upstream and downstream of the reach.

Current Water Losses

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)?

The 1008 acres feet of water lost to seepage is now lost into the ground and to evaporation. Post-project the water will remain in the Big Horn River by diverting less water into the canal or be returned to the Big Horn River at a spillway along the canal when carrier water is no longer needed to get required cfs to the end of the lower reach.

Support/Documentation of Water Savings

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.

Table 2 Summary of Kirby Ditch Seepage Investigation.

Reach	Description	Reach Loss / (Gain)			
		2007 (late season)		2008 (mid season)	
		(cfs)	(%)	(cfs)	(%)
1	SEO Gage to Pipe Inlet	(1.55)	---	(.7)	---
2	Pipe inlet to beginning of Liner 2	0.5	1.0%	(2.5)	---
3	Beginning of Liner 2 to end of Liner 3	1.2	2.5%	2	3.2%
4	End of Concrete Liner 3 to Farm	5.9	12.5%	5.9	11.6%
5	Farm to Farm	1.8	4.4%	0.2	0.7%
6	Farm to Kirby Creek Siphon Outlet	1.0	2.6%	0.7	2.2%
7	Siphon Outlet to Skelton Road	1.1	4.0%	1.7	5.6%
8	Skelton Road to Tailend Wasteway	(1.6)	---	1.5	5.7%

Project Types

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.

The water savings will be equal to the amount of water that is currently lost through seepage and evaporation. As previously described, the annual water savings is 1,008 acre-feet.

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.

Anderson Engineering conducted a seepage study on 8 reaches of Kirby Ditch in late-season 2007 and mid-season 2008. Results of the seepage study shed light on potential location and magnitude of those losses. Ditch seepage losses within each reach were estimated using a water budget approach. The approach relies on measuring the ditch discharge upstream and

downstream of the reach suspected of losing water to seepage. The purpose of the seepage study was to identify and evaluate areas of significant water loss. Ditch representatives indicated they suspected several specific reaches lose water due to seepage. This task of the project consisted of development of a water budget to evaluate the location and magnitude of those losses. Results of the seepage study shed light on potential improvement measures (i.e., lining or pipeline projects) as well as becoming a component of subsequent operational efficiency analyses.

The Kirby Ditch was segmented into specific reaches based upon various seepage indicators. Seepage indicators used to determine the reaches included:

- Input from ditch representatives;
- The presence of phreatic vegetation and wetlands along the ditches;
- Changes in the health and vigor of existing vegetation along the ditches;
- Presence of fractured and jointed bedrock in ditch beds and banks; and
- Review of color infrared aerial photographs (2003).

Other factors which entered into the process included the quantity and type of farm turnouts (FTO's), and gaging locations which facilitate accuracy and repeatability. Given this information, eight seepage reaches were initially selected for investigation (Figure 6).

Figure 6: Seepage Study Reaches

It must be recognized that all ditches lose water to seepage to a certain degree. The purpose of the seepage investigation was to identify locations where seepage appears to be significant and where tangible benefits could be gained if seepage losses were mitigated.

Ditch seepage losses (and gains) within each reach were estimated using a water budget approach. This approach relies on measuring the ditch discharge upstream and down-stream of the reach suspected of losing water to seepage. A sketch of the water budget

approach concept is presented in Figure 7.

Reach inflow components include ditch inflow at the upstream end of a reach, surface runoff, and precipitation. Reach outflow components include ditch outflow at the downstream end of

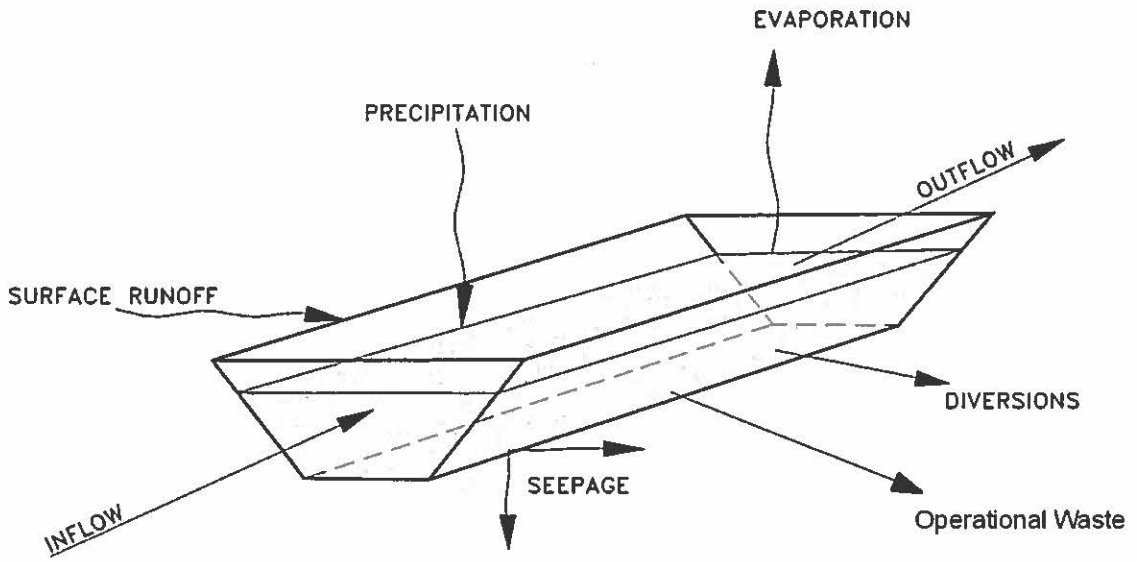

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Figure 7:Water Budget Approach Concept

reach, diversions at farm turnouts, operational waste, evaporation, and seepage. Each of the components of the water budget was estimated as follows:

- Reach Inflow/Outflow: Reach inflow and outflow can be directly measured using standard stream gaging methods described by the United States Geological Survey (Buchanon, T.J., and W.P. Somers, 1969).

- Precipitation: All seepage investigation field work took place during dry periods; there was no precipitation to measure.

- Surface Runoff: Return flows from upslope irrigation or surface inflows are noted. Although they are more difficult and often impossible to measure directly, observation of their locations allowed subjective corrections to the water budget equation. Where quantification of irrigation returns was possible, they were measured. No surface runoff was noted during the field investigation.

- Diversions: Each farm turnout within a reach was observed to determine whether it was open or closed. At those which were open, the amount diverted was estimated in a similar manner to reach inflow/outflow measurement. Farm ditch cross sectional area and velocity were measured, and the diversion calculated. At those farm turnouts utilizing pumps, pump data were observed or obtained from ditch representatives and diversion amounts tabulated. A limited number of pump turnouts were in operation during the study.

- Operational Waste: Amounts spilled at wasteways were estimated based upon the depth of water flowing over the check boards and the width of the structure. Standard weir equations were utilized.

- Evaporation: Based upon pan evaporation data collected at Boysen Dam (the nearest site for which data are available) and the average water surface area within the ditch, evaporation was estimated to be approximately 40 acre-feet per year (April through October or 214 days). This value translates to approximately 0.18 acre feet per day or less than 0.1 cfs. Consequently, evaporative losses were deemed insignificant.

Seepage losses are the only component of the water budget which cannot be measured or estimated directly. The loss was estimated for each reach as the difference between all inflows and outflows.

To reduce the likelihood of an erroneous measurement or inaccuracies in the data obtained during this task, several steps were taken and are summarized below:

- Discharge measurements were made at each seepage site by first gaging the upstream limit of the reach followed by gaging at the downstream limit. This convention was employed in an effort to measure the same "bucket of water" as it passes each location. Consequently, potential errors related to changes in diversions and turnouts are reduced.
- Each measurement was repeated to increase reliability of the data.
- All cross sections were gaged by wading the ditch.
- Each reach was walked prior to gaging to observe the presence of ditch inflow (surface runoff, springs, etc.) and/or outflow (turnouts, wasteways, etc.).

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)?

Seepage loss will be eliminated. The ditch will be replaced with PVC pipe.

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?

There will be 2.56 miles of ditch replaced with PVC pipe. The total conservation amount is estimated to be 1,008 acre-feet per year, so there will be 393.75 acre-feet per mile each year.

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

Flow calculations will be taken at the inlet and outlet of the pipeline.

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

Preliminary design indicates that the ditch will be replaces with PVC pipe. The preliminary pipe size initiates at 36 inch, reduces to 30 inch and finishes with 24 inch PVC. An inlet screening

structure and outlet structure will be incorporated into the system, along with air-vac valves and other appurtenances as needed.

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:

1. Will the project address a specific water reliability concern? Please address the following: o 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)? o 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 for transfer, left in the river system, or used to meet another intended use. o Provide a description of the mechanism that will be used, if necessary, to put the conserved water to the intended use. o Indicate the quantity of conserved water that will be used for the intended purpose.

Water reliability at the lower reach of Kirby Ditch has been an on-going problem for lower reach water users. Without adequate "carrier" water in the ditch, these irrigators rarely are delivered the quantity of water they require. Conversion to a pipe system will reduce losses along the 2.56 miles so that every user can get the quantity. Not only will the seepage losses be eliminated, but less water can be diverted because the carrier water will no longer be needed to get water to the far end of the ditch. Less water waste is especially important during periods of limited water supplies, when the KDID supplements it existing water supply with purchases of water stored in Boysen Reservoir from the Bureau of Reclamation. Less water diverted means less expense for the KDID.

2. Will the project make water available to achieve multiple benefits or to benefit multiple water users? Consider the following: o Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)? ♣ 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. ♣ Will the project benefit a larger initiative to address water reliability? o Will the project benefit Indian tribes? o Will the project benefit rural or economically disadvantaged communities?

This project will benefit mainly agriculture users but may also benefit recreation users of the Big Horn River by having less water diverted for irrigation. The project should have no effect on any endangered or federally threatened species. Consultation with Wyoming Game & Fish will be conducted to allow for comment and recommendations to reduce wildlife impacts. There is no impact to Indian tribes in the area, nor disadvantaged communities.

3. Does the project promote and encourage collaboration among parties in a way that helps increase the reliability of the water supply? o Is there widespread support for the project? o What is the significance of the collaboration/support? o Is the possibility of future water conservation improvements by other water users enhanced by completion of this project? o Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin? o Describe the roles of any partners in the process. Please attach any relevant supporting documents.

The Kirby Ditch Irrigation District members are in full support of this proposal. There has been discussion at the past 2 annual meetings concerning ways we can improve the delivery of water to the lower reach of Kirby Ditch. Following the study by Sage Engineering, the members of the KDID chose to pursue the proposal of the Lower Reach Pipeline. The impacted users have already spoken to the local NRCS staff about the possibility of on-farm improvements related or tying into the proposed pipeline. Such improvements that will continue to improve irrigation efficiency through the NRCS Environmental Quality Incentives Program (EQIP) will further the water savings initiated through this proposal.

4. Will the project address water supply reliability in other ways not described above?

Not Applicable

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: Describe the amount of energy capacity. For projects that implement hydropower 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 hydropower 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. Describe any other benefits of the hydropower project. Please describe and provide sufficient detail on any additional benefits expected to result from the hydropower project, including: • Any expected reduction in the use of energy currently supplied through a Reclamation project. • Anticipated benefits to other sectors/entities. • Expected water needs, if any, of the system.

Not Applicable

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 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. o Provide a detailed description of the on-farm efficiency improvements. 38 Section E: Application Review Information o Have the farmers requested technical or financial assistance from NRCS for the on-farm efficiency projects, or do they plan to in the future? o 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. o 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. o 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. OR o 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. o 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. Note: On-farm water conservation improvements that complement the water delivery improvement projects selected through this FOA may be considered for NRCS funding and technical assistance to the extent that such assistance is available.

The local NRCS office representative was a guest at the annual meeting of KDID. She spoke to the members about available programs and the options available to landowners. Many irrigators on the lower end still use dirt ditch flood irrigation and have shown interest in increasing their on-farm irrigation efficiency by converting to gated pipe and pivot irrigation methods. Several farmers are also interested in upgrading their current system when increased water availability allows with this proposed project. The farmers will apply for funding after this Kirby Ditch lower reach has been converted to pipe, allowing them to have increased pressure at their diversion point.

If all farmers on the Kirby Ditch lower reach converted to gated pipe or pivot irrigation, water savings could increase another 20+ percent. This has the potential to increase water savings from 1008 acre feet to 1209 acre-feet per year.

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; b. Examine land use planning processes and land use designations that govern public use and access; c. Revise and streamline the environmental and regulatory review process while maintaining environmental standards; d. Review Department water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity; e. Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands; f. Identify and implement initiatives to expand access to Department lands for hunting and fishing; g. Shift the balance towards providing greater public access to public lands over restrictions to access.

This project was founded on science. Science was used in 2 Level II WWDC studies to pinpoint where in the system we get the most bang for the buck. These 2 studies measured seepage along canal reaches and brought forward alternatives for water savings. Improving the infrastructure of this system helps to keep agriculture land in agriculture, producing crops and forage to feed the people of this country. Improving distribution systems to water users resolves the conflicts that come with water by making sure each irrigator gets the water they need.

2. Utilizing our natural resources a. Ensure American Energy is available to meet our security and economic needs; b. Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications; c. Refocus timber programs to embrace the entire 'healthy forests' lifecycle; d. Manage competition for grazing resources.

Not Applicable

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

Farmers need trust in their delivery system and need to be able to count on the system being reliable. In agriculture, there is a constant fear that the cost of inputs such as seed, livestock, or equipment will be lost if there isn't that reliability in agriculture's most precious resource....water. This project will have a huge positive effect on the confidence of the lower reach water users when they know the system is reliable to get them the water they need. The 2 WWDC studies have brought all of the water users of the entire length of the Kirby Ditch together to better understand the issues facing all users and come up with solutions to better the efficiency and reliability of the ditch as a whole, working toward a common goal.

4. Striking a regulatory balance a. Reduce the administrative and regulatory burden imposed on U.S. industry and the public; b. Ensure that Endangered Species Act decisions are based on strong science and thorough analysis.

Not Applicable

5. Modernizing our infrastructure a. Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure; b. Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs; c. Prioritize Department infrastructure needs to highlight: 1. Construction of infrastructure; 2. Cyclical maintenance; 3. Deferred maintenance.

This project develops a partnership between the KDID, Wyoming, and Bureau of Reclamation. This partnership will allow the KDID to modernize their system, increase water availability, reduce water conflict, reduce maintenance costs, and facilitate on-farm irrigation improvements.

Evaluation Criterion F—Implementation and Results

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. (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 KDID has partnered with Wyoming Water Development Commission to complete a Level I and two Level II studies, each focusing on different ways to improve water delivery and efficiency of the Kirby Ditch. The first Level II study, in 2009, focused on the canal as whole, specifically operation and irrigation efficiency analysis, automation of existing facilities, water storage evaluation, and rehabilitation plan. The second study, in 2018, focused on the lower reach water delivery issues. This proposal draws from both studies, taking into account the seepage losses encountered in the first study and finding solutions to stopping that seepage as well as mitigating the slide area, as found in the 2nd study.

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). All Water and Energy Efficiency Grants applicants are required to propose a "performance measure" (a method of quantifying the actual benefits of their project once it is completed)*

The methods used to quantify seepage and evaporation losses in the 2008 Level II study can be recreated to quantify those losses post-project. Comparing losses pre and post-project can give an accurate picture of water savings in the lower reach of the canal. The process will be simplified with the implementation of the pipeline, simply taking measurements at the beginning and the end.

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. • Describe any permits that will be required, along with the process for obtaining such permits. • 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. • Describe how the environmental compliance estimate was developed. Has the compliance cost been discussed with the local Reclamation office?*

This project has enough of the groundwork done that it can progress quickly. Sage Engineering has the preliminary design completed and would just need to follow up to make minor changes.

March 2020 – Engineering: Survey additional locations as needed.

Environmental and Cultural Resource compliance initiated

Acquisition of Rights of Way

May 2020 – Final design completed. Bid packets sent. Prebid tour.

October 2020 – Initiate construction

March 2021 – Possible construction completion

October 2021 – Extended timeline to complete construction because of frozen ground etc.

Evaluation Criterion G— Nexus to Reclamation Project Activities *(4 Points) 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: o Does the applicant receive Reclamation project water? o Is the project on Reclamation project lands or involving Reclamation facilities? o Is the project in the same basin as a Reclamation project or activity? o Will the proposed work contribute water to a basin where a Reclamation project is located? • Will the project benefit any tribe(s)? E.1.8.*

The Kirby Ditch's diversion is on the Big Horn River, which initiates out of water stored in Boysen Reservoir, a Bureau of Reclamation facility. In periods of limited water supply, the KDID supplements their water supply with purchase of water stored in Boysen Reservoir.

Evaluation Criterion H— 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.

$1,498,294 WWDC funding = 67%

$2,236260 Total Project Estimate

An application for funding has been made to the WWDC. On 9/30 the Vice President of the KDID spoke with Chase Tavelli, the KDID WWDC Project Manager. The application has been reviewed by the WWDC staff and they have recommended approval. The KDID will receive preliminary approval at WWDC November 2019 meeting. We will be approved by the select

Project Budget

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.

Please identify the sources of the non-Federal cost-share contribution for the project, including:

- *Any monetary contributions by the applicant towards the cost-share requirement and source of funds (e.g., reserve account, tax revenue, and/or assessments).*
- *Any costs that will be contributed by the applicant.*
- *Any third-party in-kind costs (i.e., goods and services provided by a third party).*
- *Any cash requested or received from other non-Federal entities.*
- *Any pending funding requests (i.e., grants or loans) that have not yet been approved and explain how the project will be affected if such funding is denied.*

The KDID has applied to WWDC for 67% of the total project cost, totaling $1,498,294. In conversation with Chase Tavelli, WWDC project manager, the KDID Level III application has been submitted, reviewed by WWDC staff and recommended for approval. It will receive preliminary approval at the WWDC November meeting. It will be approved by the Select Water Commission in January and then will receive final approval and signature by the Wyoming State Governor in February 2020. The funds will be available to the KDID following final approval. The agreement with WWDC will be for 3 years. According to Mr. Tavelli, the WWDC believes the KDID project is a good project and they want it to proceed. WWDC will be happy to provide a commitment letter after the Select Water Approval in January 2020.

The KDID is requesting a match to the non-federal funds in the amount of $737,965. If funding is denied, this project will be put on hold until matching funds can be procured.

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

- *The project expenditure and amount.*
- *The date of cost incurrence.*
- *How the expenditure benefits the project.*

There are no known project costs that will be incurred prior to award.

Budget Proposal

The total project cost (Total Project Cost), is the sum of all allowable items of costs, including all required cost sharing and voluntary committed cost sharing, including third-party contributions, that are necessary to complete the project.

Table 1.—Total Project Cost Table SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	$ 737,965.00
Costs to be paid by the applicant	$
Value of third party contributions	$ 1,498,294.00
TOTAL PROJECT COST	**$ 2,236,260.00**

The budget proposal should include detailed information on the categories listed below and must clearly identify all items of cost, including those that will be contributed as non-Federal cost share by the applicant (required and voluntary), third-party in-kind contributions, and those that will be covered using the funding requested from 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.

The following budget/cost estimate was developed for the KDID by Sage Civil Engineering after their preliminary design was completed. It has been updated to recently to reflect current pricing and an inflation rate of 0.03%. Budget is shown in Figure 8.

2020 Inflation Rate: 0.03

ENDERLY SPILL (MILE 8.6) TO FREEMAN DRAW (MILE 11.25) - OPTION C - 2019 COST ESTIMATE						
					Preparation of Final Designs and Specifications	$161,560.00
					Permitting and Mitigation	$14,510.00
					Legal Fees (Title Opinion Only)	$1,060.00
					Acquisition of Access and Rights of Way	$1,060.00
MATERIALS						
Item	Unit	Estimated Quantity	Estimated Unit Price	Estimated Total Price		
PIPE						
DR-51 PIP-36 inch	LF	1697	$72.00	$122,184.00		
DR-51 PIP-30 inch	LF	7637	$50.00	$381,850.00		
DR-51 PIP-24 inch	LF	4341	$30.00	$130,230.00		
BEDDING						
36 inch	LF	1697	$16.00	$27,152.00		
30 inch	LF	7637	$13.00	$99,281.00		
24 inch	LF	4341	$12.00	$52,092.00		
FITTINGS						
36 in Fittings						
36 in PIP DR51 - 11.25° Bend	EA	1	$8,990.00	$8,990.00		
36 in PIP DR51 - 22.5° Bend	EA	4	$8,990.00	$35,960.00		
36 in PIP DR51 - 30° Bend	EA	1	$9,463.00	$9,463.00		
36 in PIP DR51 - 45° Bend	EA	1	$9,463.00	$9,463.00		
36 in x 30 in PIP DR51 Reducer	EA	1	$6,118.00	$6,118.00		
30 in Fittings						
30 in PIP DR51 - 11.25° Bend	EA	5	$7,492.00	$37,460.00		
30 in PIP DR51 - 22.5° Bend	EA	3	$7,492.00	$22,476.00		
30 in PIP DR51 - 30° Bend	EA	8	$7,886.00	$63,088.00		
30 in PIP DR51 - 45° Bend	EA	2	$7,886.00	$15,772.00		
30 in x 24 in PIP DR51 Reducer	EA	1	$4,121.00	$4,121.00		
24 in Fittings						
24 in PIP DR51 - 22.5° Bend	EA	2	$1,929.00	$3,858.00		
24 in PIP DR51 - 30° Bend	EA	4	$1,588.00	$6,352.00		
24 in PIP DR51 - 45° Bend	EA	6	$1,588.00	$9,528.00		
STRUCTURES & SYSTEM APPURTENANCES						
Structural Concrete	CY	38	$160.00	$6,080.00		
Coanda Wedge Wire Screen	LF	10	$1,274.00	$12,740.00		
C10 Canal Gate - 36 in	EA	1	$4,162.00	$4,162.00		
24 in x 18 in PIP DR51 Reducer	EA	2	$2,835.00	$5,670.00		
18 in Gate Valve	EA	1	$20,158.00	$20,158.00		
Metered FTO Assembly	EA	9	$12,795.00	$115,155.00		
Air/Vac Cleanout Assembly	EA	11	$1,061.00	$11,671.00		
Drain Assembly	EA	1	$1,122.00	$1,122.00		
					Materials Total	$1,222,196.00
INSTALLATION						
Structural Concrete Placement	CY	38	$1,221.00	$46,398.00		
Metered FTO Assembly	EA	9	$2,198.00	$19,782.00		
Air/Vac Cleanout Assembly	EA	11	$1,159.00	$12,749.00		
Drain Assembly	EA	1	$1,159.00	$1,159.00		
Trench Excavation/Backfill 12-36 in	LF	13675	$13.00	$177,775.00		
Mobilization	LS	1	$146,873.00	$146,873.00		
					Installation Total	$404,736.00
					Construction Cost Subtotal (CCS)	$1,626,932.00
					Engineering Costs (10% of CCS)	$162,694.00
					Subtotal #3	$1,789,626.00
					Contingency (15%)	$268,444.00
					Construction Cost Total	$2,058,070.00
					Project Cost Total	$2,236,260.00

Figure 8: KDID Lower Reach Budget

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.

Salaries and Wages

Indicate the Project 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.

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.

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.

Dee Hillberry, KDID Vice President, will act as Project Manager. No KDID board members will earn a salary, wages, fringe benefits, or reimbursements from funding obtained to implement this project.

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.

No equipment will be purchased or leased. The chosen contractor will provide all equipment needed to complete 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, engineering estimates, or other methodology). Note: If the materials/supplies will be furnished and installed under a contract, the equipment should be included in the construction contract cost estimate.

All cost estimated were compiled by Sage Civil Engineers using current prices.

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.

The KDID will hire a contractor and engineering firm to complete all the tasks on the proposed budget. The chosen engineering firm will complete the initial items, including Preparation of Final Designs and Specifications, Permitting and Mitigation, Legal fees, and Acquisition of Access and Right of Ways. Engineering firm will also oversee construction, along with the KDID project manager. A contractor will complete the purchasing of materials and installation.

Bid packages will be sent out to contractors and they will be selected on a competitive procurement basis. Engineering and/or consulting services will be awarded based on qualifications.

Third-Party In-Kind Contributions

Identify all work that will be accomplished by third-party contributors, 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. Third-party in-kind contributions, including contracts, must comply with all applicable administrative and cost principles criteria, established in 2 CFR Part 200, available at www.ecfr.gov, and all other requirements of this FOA.

No known third party in-kind contributions are known at this time.

Environmental and Regulatory Compliance Costs

Prior to awarding financial assistance, Reclamation must first ensure compliance with Federal environmental and cultural resources laws and other regulations ("environmental compliance"). Every project funded under this program will have environmental compliance costs associated with activities undertaken by Reclamation and the recipient. 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 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.*
-

Environmental Compliance is in included in the Permitting and Mitigation Section of the budget. $14,510 is estimated for environmental and cultural investigations. Environmental and cultural duties will be shared between the KDID, Reclamation, and possibly consultant if needed. Several KDID board members are familiar with NEPA requirements and with SHPO requirements in the State of Wyoming.

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.

No other expenses are expected.

Indirect Costs

Indirect costs are costs incurred by the applicant for a common or joint purpose that benefit more than one activity of the organization and are not readily assignable to the activities specifically benefitted without undue effort. Costs that are normally treated as indirect costs include, but are not limited to, administrative salaries and fringe benefits associated with overall financial and organizational administration; operation and maintenance costs for facilities and equipment, and, payroll and procurement services

No indirect costs are expected.

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.

An environmental clearance will be required before construction can begin. The permits are not expected to have any major issues. Preliminary check of SHPO and National Wetlands Inventory show no apparent issues. All required permits should be relatively east to obtain.

One Call will be completed by contractors, allowing utility lines to be flagged and avoided.

Letters of Support

Please include letters from interested stakeholders supporting the proposed project.

Letters can be found in Appendix A.

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.*

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 orant application or plan under consideration by a Federal awarding agency.
Meeting the requirements set forth above is mandatory. *If the applicant is unable to complete registration by the application deadline, the unique entity identifier must be obtained and SAM registration must be initiated within 30 days after the application deadline in order to be considered for selection and award.*

Reclamation will not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time Reclamation is ready to make an award, Reclamation may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

Kirby Ditch Irrigation District is registered in SAM under DUNS # 078719113. The KDID will keep its SAM registration current during its agreement with Reclamation.

Appendix A

Letters of Support

Kirby Irrigation District
Board chairman Delbert Daniels

Re: Canal enclosure project

Mr. Daniels,

I am writing this letter in support of the Kirby Irrigation District ditch enclosure project being considered for the northernmost portion of the canal. This portion of canal has severe issues with washing out, seepage loss, silting and catches falling rock from sandstone cliffs above. The time and money spent repairing and cleaning this section has been constant since the first use of this canal. This project would fix all these problems and allow resources to be used in other areas.

The approval of this project would also open up the ability for individual landowners to work with NRCS to make irrigation improvements on their own acreage. If this project isn't approved this year then it should be considered again until it is accepted as these issues won't stop until the project is complete.

As a landowner I know I will continue to make improvements through available personal funding, NRCS, and other sources in order to improve irrigation systems.

Sincerely,

Warren P. Axtell, owner/operator Axtell ranch, LLC

10/1/19
Date

Appendix B

Signed Official Resolution

OFFICIAL RESOLUTION

of the

Kirby Ditch Irrigation District

RESOLUTION NO. 2019-2

WHERAS, the United States Department of the Interior, Bureau of Reclamation has announced the WaterSMART Water and Energy Efficiency Grants in order to prevent water supply crises and ease conflict in the Western United States, and has requested proposals from eligible entities to be included in the WaterSMART Program, and

WHEREAS, the Kirby Ditch Irrigation District has need for funding to complete the Kirby Ditch Lower Reach Piping Project.

NOW, THEREFORE, BE IT RESOLVED that the Board Members agree and authorize that

1. The Board Members have reviewed and support the application submitted;
2. The applicant is capable of providing the amount of funding and/or in-kind contributions, specified in the fundingplan; and
3. If selected for a WaterSMART Grant, the applicant will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

DATED: 9-29-19

Delbert Daniels, President

Dawn Peil, Treasurer

Dee Hillberry, Vice President

Chip Axtell, Member

Brett Belden, Secretary

Appendix C

WWDC Level II Studies

DRAFT REPORT
for
KIRBY DITCH CONSERVATION PROGRAM
LEVEL II

Prepared for:

Wyoming Water Development Commission
6920 Yellowtail Road
Cheyenne, WY 82002

Prepared by:

Anderson Consulting Engineers, Inc.
375 E. Horsetooth Road, Bldg. 5
Fort Collins, CO 80525
(ACE Project No. WYWDC28)

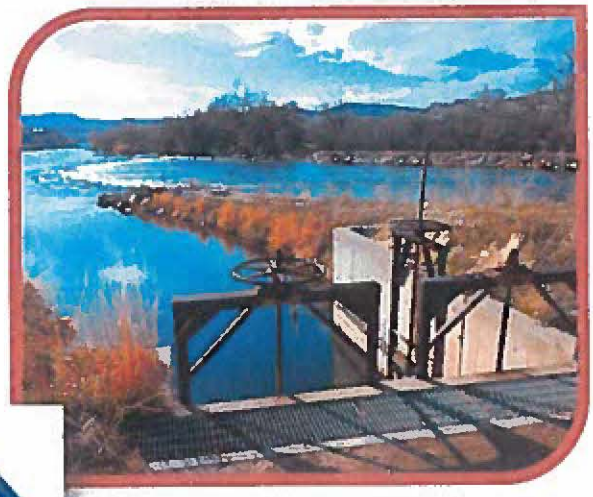
October 30, 2009

Amended Draft Final Report

Submitted to Wyoming Water Development Commission

July 2018

Kirby Ditch Rehabilitation, Level II Study



SAGE CIVIL ENGINEERING
ENGINEERS | SURVEYORS

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