Bureau of Reclamation WaterSMART
Water and Energy Efficiency Grants
Phase 1 Grant Application
NOFO No. R24AS00052

CHIMNEY ROCK IRRIGATION DISTRICT
Diversion Structure Replacement and Canal Automation Project

Project Applicant

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Abbreviations

The District	Chimney Rock Irrigation District
The Project	Chimney Rock Irrigation District Diversion Structure Replacement & Canal Automation Project
NPNRD	North Platte Natural Resources District
NDNR	Nebraska Department of Natural Resources
PRRIP	The Platte River Implementation Program
Pathfinder	Pathfinder Irrigation District
NPVIA	North Platte Valley Irrigators Association
NSIA	Nebraska State Irrigation Association

Technical Project Proposal

Executive Summary

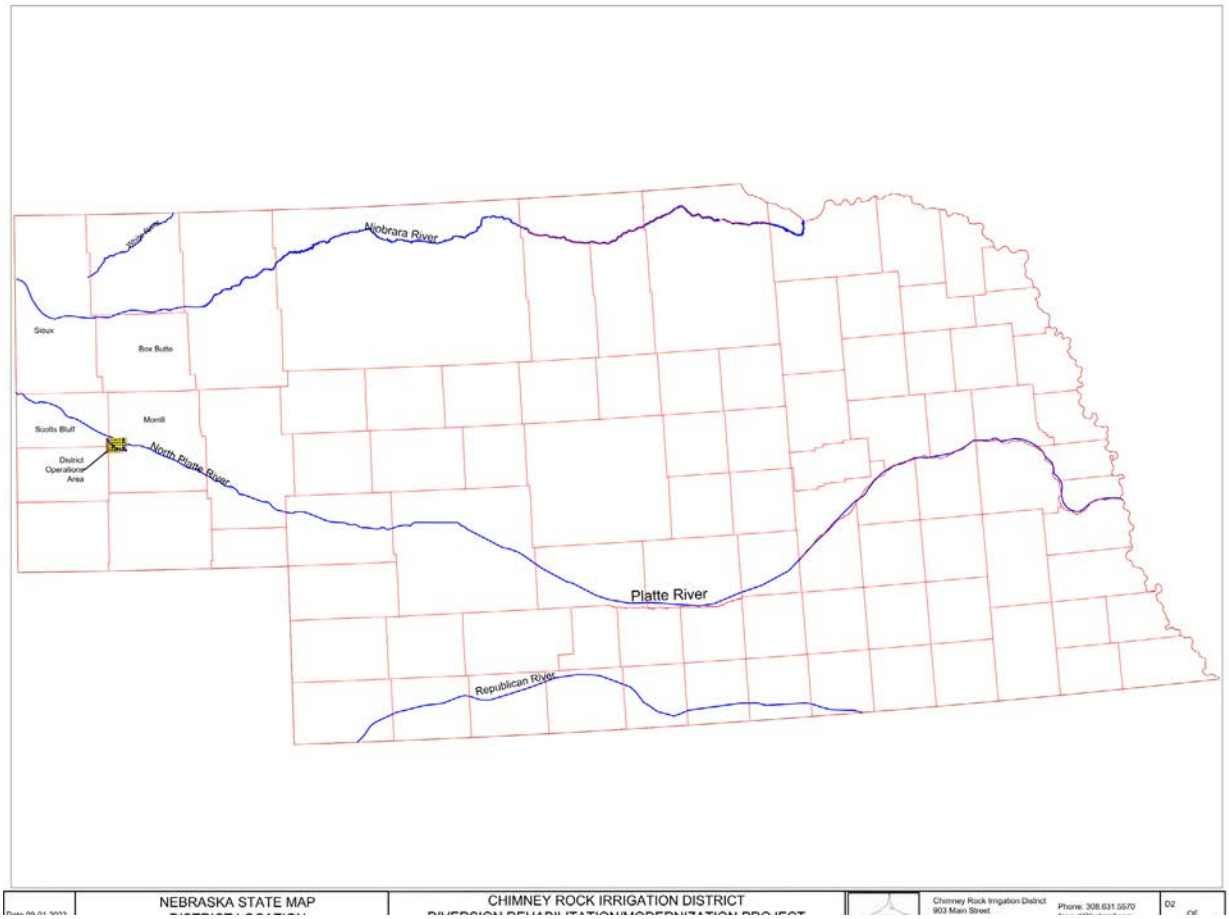
The North Platte River courses across Nebraska, playing a key role in local and state agriculture, recreation, and biodiversity. The North Platte River Basin is home to Chimney Rock Irrigation District and the focus of this proposal, the Chimney Rock Canal. Via a diversion structure three miles southwest of Bayard, Nebraska, the Chimney Rock Canal services 65 users and 5730.4 permitted acres. Chimney Rock Irrigation District (the District) operates the aging infrastructure at its disposal to manage its water right as reliably as possible, but with increased variability in conditions due to climate change and wear and tear on the water system, that oversight is proving insufficient; In a basin declared over appropriated by the Nebraska Department of Natural Resources, Chimney Rock unintentionally exceeded its water right diversions on 31% of operating days. In response to this infrastructural issue, the District proposes the Diversion Structure Rehabilitation, Automation, and Betterment Project (the Project) which will replace the aging diversion infrastructure with a more modern structure with automated controls to better regulate irrigation diversions, minimize spills, and eliminate waste. Expected benefits include accurate measurements and stabilized flows in the North Platte River and Chimney Rock Canal, increased reliability in deliveries to District water users and appropriators downstream, and improved resiliency for Platte River ecosystems. At present, flows fluctuate significantly at the stage in the river at the District's diversion, resulting in shortages and excesses. The sole District employee is charged with diversion regulation and maintenance as well as deliveries to individual irrigators along the length of the canal, resulting in limitations on and variations in canal flows, which in turn causes increased spills and shortages. The Project will address the fluctuations in the canal, allowing more time for staff to conduct maintenance and regulate individual water deliveries. Additionally, due to leaks in the headgate it is not possible to entirely seal the structure. These leaks cause shortages that affect Chimney Rock's irrigators and excess diversions that affect downstream appropriators who are shorted until corrections can be made. The Project will positively affect the hydrology and ecology of southwest Nebraska and the state at large, reducing tension over the finite flows of the Platte River and accommodating the District's inhabitants and industries.

Project partners include the State of Nebraska Department of Natural Resources (NDNR) and the Nebraska State Irrigators Association (NSIA). Chimney Rock Irrigation District is a Category A applicant and none of the proposed activities are located at a federal facility.

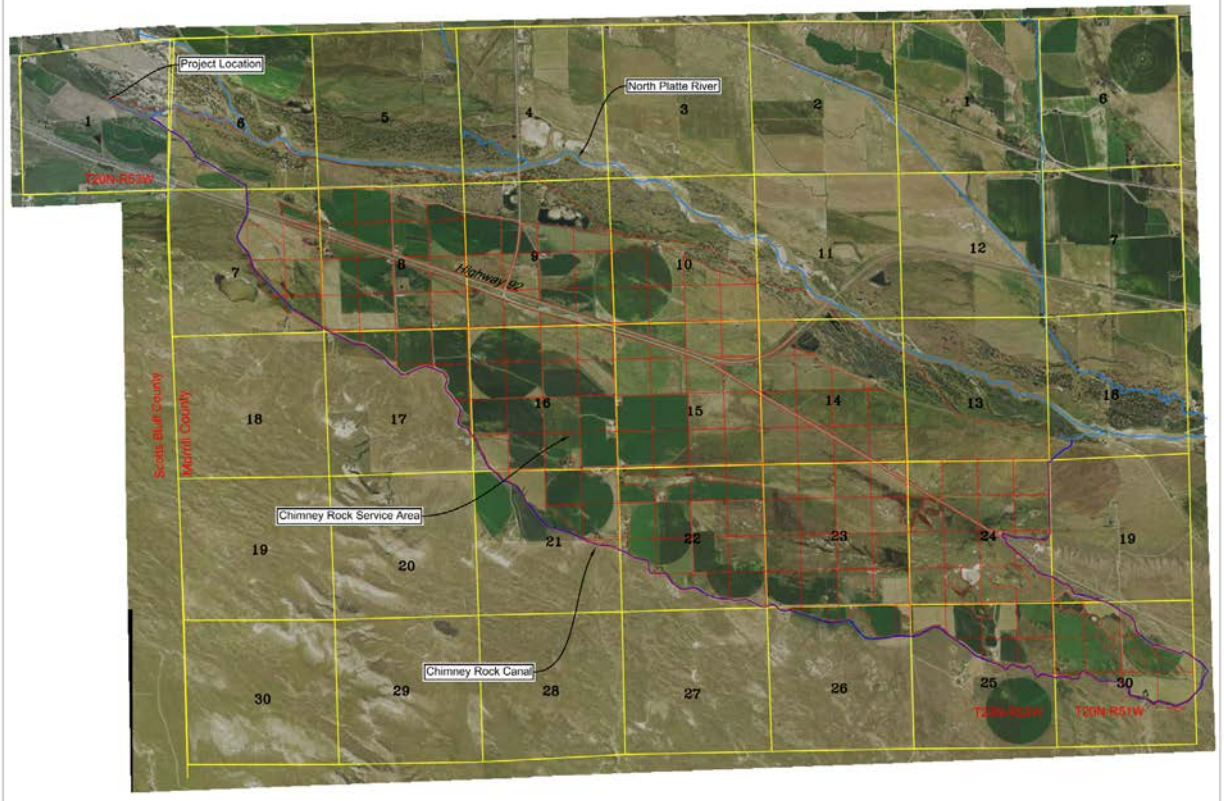
Project Location

The Project is located on the south bank of the North Platte River in the SW¼NE¼ of Section 1, Township 20N, Range 53W of the 6th P.M., Scotts Bluff County Nebraska. The location is approximately 3 miles southwest of Bayard, Nebraska, just North of Nebraska State Highway 92 in Section 1. The Project location is latitude is 41 °44'15" N and longitude is 103 °22'44" W.

Three maps are provided to show Project location and Chimney Rock Irrigation District's operational area (see next page and ***Appendix A***).



	NEBRASKA STATE MAP	CHIMNEY ROCK IRRIGATION DISTRICT	Chimney Rock Irrigation District 903 Main Street Phone: 308.631.5570	D2



Date 09-01-2023	DISTRICT MAP	CHIMNEY ROCK IRRIGATION DISTRICT DIVERSION REHABILITATION/MODERNIZATION PROJECT	Chimney Rock Irrigation District 903 Main Street Bayard, NE 69334 Phone: 308.631.5570 lneud@hotmail.com	D3 OF 6

Technical Project Description

Engineering Design

To properly design the headgate and diversion structures, analysis and modeling of the North Platte River statistical, historical flow rates was completed by Chimney Rock Irrigation District's contracted engineering firm. This analysis provided the basis for ensuring that the size of the structures, number of gates, and proposed elevations will allow the system to function for river flow measurement and irrigation water delivery.

The diversion structure will consist of 2 – 8' X 6' openings with hydraulic radial gates to control the flow. Flows through the diversion structure will continue to flow down the North Platte River. When the radial gates are fully open flow through the opening is calculated using the weir equation. Similarly, peak flows over the overflow weir are also calculated using the weir equation. A weir coefficient (C) of 3.0 was assumed for both structures. The headgate structure will feature 2 Rubicon SlipMeter gates with 4.3' X 5' openings to allow for flow measurement at the headgate structure and automation of the diversion and headgate structures to optimize water diversion.

Construction

The construction of this project is broken down into TASK A-D below.

TASK A – Temporary Cofferdam to Bypass River Flows; Demolition, Removal, and Re-construction of the Diversion Structure and Overflow Weir

Task A consists of diverting water into the irrigation canal during the irrigation season by constructing a temporary earthen coffer dam across the entire south channel with culvert pipes to allow for a dry work area to install the concrete diversion structure and steel sheet pile overflow weir. The coffer dam will be reinforced with revetment to protect it against overtopping. Water will continue into the Chimney Rock Canal to fulfill the Irrigation District's obligations and excess water will be spilled back into the river via the existing wasteway structure per normal operating procedures.

Upon completion of the coffer dam, construction of the diversion structure and overflow weir will commence by driving steel sheet pile for the weir and cutoff walls and supports for the diversion structure in the proposed locations. The steel sheet pile will prevent under seepage and provide a stable base for the concrete structure to be built upon. Next, forming the base and floor of the structure will occur. All concrete will be reinforced with steel and each joint will have a water stop installed. Once the base and floor are poured, the walls will be formed, and concrete poured. After the walls are built and adequate concrete cure time is provided, the gates will be installed, along with railing and walkway.

Once the overflow weir and diversion structure are finished the grading adjacent to the structures will be completed as well as the riprap installation and final seeding/stabilization measures on the north bank of the channel as it will be inaccessible once the coffer dam is removed. The coffer dam across that portion of the river channel can be removed to allow excess flows from precipitation events to flow through and not overwhelm the existing wasteway and headgate structures and prevent damage to the canal.

EXISTING CONCRETE DIVERSION STRUCTURE - UPSTREAM

EXISTING CONCRETE DIVERSION STRUCTURE - DOWNSTREAM

Existing infrastructure.

For more drawings, see the "JEO Diversion & Headgate Structure Improvements Drawings" attachment.

EXISTING STEEL BRIDGE

EXISTING CONCRETE WASTEWAY STRUCTURE - UPSTREAM

EXISTING CONCRETE WASTEWAY STRUCTURE - DOWNSTREAM

EXISTING CONCRETE HEADGATE STRUCTURE - UPSTREAM

EXISTING CONCRETE HEADGATE STRUCTURE - DOWNSTREAM

TASK B – Construction of the Headgate and Decommissioning of the Existing Wasteway and Headgate Structures

Once the irrigation season has ended and Task A has been completed, all flow will be routed through the diversion structure and overflow weir, and culvert pipes will be removed from the coffer dam. This will allow the canal to be emptied and a dry work area for construction of the new headgate structure at the entrance to the canal adjacent to the diversion structure. The existing wasteway and headgate structures will be

decommissioned. Construction of the proposed headgate structure will follow an almost identical process as the diversion structure.

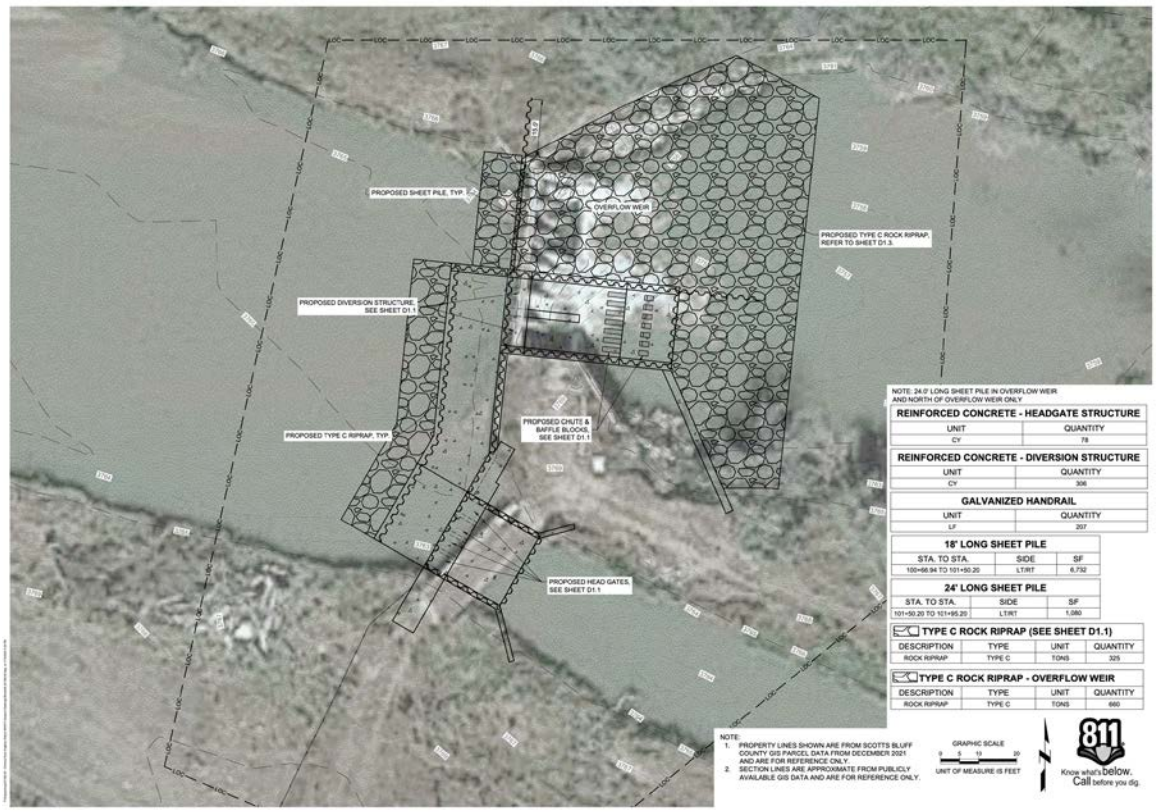
Upon the completion of the slide gate installation, the remaining grading adjacent to the structures will take place. Upon completion of the grading and any seeding/final stabilization that cannot be achieved from the south bank, the remainder of the temporary cofferdam will be removed to allow the new headgate structure to control flow into the irrigation canal.

TASK C – Installation and Commissioning of Controls

Upon completion of both structures, installation of the solar panels and gate controls will occur. The gates will be commissioned and tested to verify functionality of the system and associated controls.

TASK D – Seeding and Erosion Control

The final construction item will include restoration of the area, seeding and mulching, and any other necessary erosion control items such as erosion control blanket, silt fence, and/or straw wattles.



Proposed infrastructure.

For more drawings, see the "JEO Diversion & Headgate Structure Improvements Drawings" attachment.

Evaluation Criteria

E.1.1. Evaluation Criterion A — Quantifiable Water Savings

Describe The Amount of Estimated Water Savings and Describe Current Losses

Chimney Rock Irrigation District estimates that the Project will conserve 3,748 AF per year, a substantial reduction in the District's annual losses. The canal's flow is reregulated .33 miles downstream from the diversion at the Chimney Rock's measuring device. If the device detects a quantity of water in excess of the District's order or appropriation, the excess is spilled back into the North Platte River. With the travel time between the diversion structure and the measuring device, accurate management of the flow is not always possible. District operations staff report that the amount of water returning to the river at the spillway near the measuring device can be as high as 35 cubic feet per second (cfs), markedly exceeding the District's current 60.67 cfs water right. This discrepancy is mainly caused by fluctuations in the flow of the river and the inability to accurately divert the intended flow into the canal. The time interval between an adjustment and the corresponding reflection of that adjustment at the measuring device is 1 hour. Current losses or spills go back to the river through the spillway or at the end of the 12.7-mile-long canal where they are also released back to the river. The Project will incorporate the installation of Rubicon SlipMeter gates at the canal diversion, providing instantaneous measurement, thereby eliminating over diversion of water that results in spills.

Current losses are spilled back to the river and utilized by the next senior downstream appropriator. The timing of the excesses that are spilled back to the river can negatively impact the downstream appropriator if the water is not available at the appropriator's diversion when adjustments are being made, causing a shortage in divertible flow for the appropriator. If the downstream appropriator also has storage rights, it may call for the release of storage water from the Federal reservoirs many miles upstream to make up for the shortage in the diversion requirement. By the time the storage water reaches the downstream appropriator, the spills from the Chimney Rock canal may be available, causing a waste of the storage water.

Estimated water savings and spill quantities were derived from the Nebraska Department of Natural Resources (NDNR) records for diversions into the Chimney Rock Canal. 15 years of records, from 2005 to 2019, show 2,711 days in which the canal was diverting water for the District's appropriators. Of those 2,711 days, 840 days (30.98%) had diversions in excess of its natural flow water rights, requiring spilling water into its spillway. The spills resulting from the 840 days Chimney Rock Irrigation District exceeded its water right total 9,799 cfs of loss, for an average daily required spill of 11.7 cfs or 23 acre-feet. Chimney Rock averages 180 days of operation per year for a total annual spill of 4,165 acre-feet. The Project estimates that spills will be dramatically reduced by 90%, due to the accuracy and automation of the Rubicon SlipMeter gates, for a savings of 3,748 acre-feet/year. None of the estimates take into account days their diversion exceeded the order, when the order was less than its full water rights, especially early and late in the season when a full diversion is not required to meet the demand. Nor does this estimate take into account any savings achieved by reducing the spill at the end of the canal due to excesses flowing in the canal.

With the implementation of the Project, control of the diversion into the canal will be greatly improved. By eliminating the travel time between the point of measurement and the point of adjustment, Chimney Rock will be able to provide more consistent flows for its appropriators, reducing inconsistency of flows downstream of the diversion structure. This stabilization will provide the downstream aquatic ecosystem with more dependable flows, contributing to overall fluvial health.

Describe The Support/Documentation Of Estimated Water Savings

Estimated water savings for the Project are based on NDNR records for diversions into the Chimney Rock Canal from 2005 to 2019. Chimney Rock's data shows over diversion on 840 of 2,711 operational days, resulting in a measured loss of 9,799 cfs, for an average daily required spill of 11.7 cfs or 23 acre-feet. Chimney Rock averages 180 days of operation per year for a total annual spill of 4,165 acre-feet. The District conservatively estimates that the automation and modernization of the headgate and diversion structure will result in 90% savings, resulting in Chimney Rock saving 3,748 acre-feet/year of irrigation water.

The calculations are as follows:
[180 days per year x 23 acre-feet = 4,165 acre-feet loss per year]
[4,165 acre-feet x .9 = 3,748 acre-feet savings post-Project]

Estimated Water Savings from Compiled Data from Nebraska Department of Natural Resources
Table 1

	Total CFS of Spill	Average Daily Spill - cfs	Average Days/Year	Average Annual Spill - cfs	Average in Acre-ft.	Savings @ 90% in Acre-ft.
Data Period: 2005-2019 (15 years)	9799	11.70	180	2106	4165	3748

This table compiles data from 2,711 Total Days, with 890 days exceeding Chimney Rock's 60.67 cfs water right, totalling 30.98% of days exceeding that water right.

Address The Following According To The Type Of Infrastructure Improvement

You Are Proposing For Funding: Irrigation Flow Measurement

(a) How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.

The calculation was based on an estimated average spill of 23 acre-feet/day, over 180 days, with a 90% savings rate due to infrastructural improvements. Chimney Rock averages 180 days of operation per year. Of the 840 days Chimney Rock Irrigation District exceeded its water right over a 2,711 day sample, NDNR recorded 9,799 cfs of loss, for an average daily required spill of 11.7 cfs or 23 acre-feet per day. With the installation of Rubicon SlipMeter gates, which offer precise control and measurement, the District assumes a conservative estimate of 90% savings.

The calculation used is as follows:
[23 acre-feet x 180 days x 90% = 3,748 acre-feet saved each year.]

b) Have current operational losses been determined? If water savings are based on a reduction of spills, please provide support for the amount of water currently being lost to spills.

Chimney Rock's operational losses have been determined with NDNR diversion data from 2005-2019. Of the 2,711 days of operation, NDNR logged 840 days in which the District diverted above its water right, for a total loss of 9,799 cfs, for an average daily required spill of 11.7 cfs or 23 acre-feet. All water in excess of Chimney Rock's water right registered at the measurement point is released into a spillway into the North Platte River.

The calculation used to determine losses is:
[23 acre-feet x 180 days of operation per year = 4,165 acre-feet lost per year]

(c) Are flows currently measured at proposed sites and if so, what is the accuracy of existing devices? How has the existing measurement accuracy been established?

The measurement into Chimney Rock's canal is done using a rated section of the canal. After the section rated discharge table is established the section is periodically measured to make adjustments to the discharge table using a shift change, which can be either a plus or minus. USGS states that a good to fair rated section provides for an accuracy of 10-15% of the true value. The Rubicon gates provide an accuracy of 2.5% and will provide the measurement at the point of diversion from the river regardless of fluctuations in the river itself.

(d) Provide detailed descriptions of all proposed measurement flow devices, including accuracy and the basis for the accuracy.

The Rubicon FlumeGate gate will provide flow measurement with an accuracy of plus or minus of 2.5%. Accuracy of FlumeGate M-626-620 model was verified by Manly Hydraulics Laboratory in August 2005.

(e) Will annual farm delivery volumes be reduced by more efficient and timely deliveries? If so, how has this reduction been estimated?

Annual farm delivery volumes will be reduced due to on-farm conversion to center pivot irrigation. The planned project is estimated to save approximately 201 acre-feet per year at the diversion point. Net irrigation requirement in Scotts Bluff and Morrill Counties, is 14 inches per year. A gravity irrigation system, at best, is 55% efficient, whereas a center pivot system is 87% efficient at meeting the irrigation requirement. Most earthen canal systems in the area are 50-60% efficient (use 55%).

Calculations are as follows:
Gravity system [(14 inches/55%)/55% = 46.3 inches or a 3.86-acre-foot diversion requirement];
Center Pivot system [(14 inches/87%)/55% = 29.26 inches or 2.44-acre-foot diversion requirement].
Savings per acre [3.86-2.44=1.42 acre-foot/acre] [1.42 x 141.6 acres = 201 acre-feet] per year at the point of diversion.

(f) How will actual water savings be verified upon completion of the project?

Actual water savings will be verified using measurement data from the diversion structure and NDNR diversion data.

E.1.2. Evaluation Criterion B — Renewable Energy

E.1.2.1. Subcriterion No. B.1: Implementing Renewable Energy Projects Related To Water Management And Delivery

All relevant components described in E.1.2.2.

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

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

Not applicable to project.

(f) Will the project result in reduced vehicle miles driven, in turn reducing greenhouse gas emissions? Please provide supporting details and calculations.

With the automation of the diversion structure, less vehicle travel will be required in order to adjust the canal diversion from the river, thus reducing greenhouse emissions from the operator's vehicle. Currently, the District staff member estimates he is making 3-4 trips per day to the diversion dam to regulate its diversion. Round trip from half way down the canal to the diversion dam is 12.7 miles. With the installation of the Rubicon gates and SCADA system District staff will be able to monitor and control the amount being diverted from the office and only make 1 trip a day to the site to clear debris that accumulates at the diversion headgate. Chimney Rock diverts water for approximately 180 days each year. The District estimates that at least 75% of the trips will be eliminated with the headgate improvements, saving 6,858 miles and 685.8 gallons of gasoline per year, resulting in a reduction of 6.09 metric tons in emissions.

Calculation: [12.7 miles x 3 x 180 days= 6,858 miles saved / 10 mpg = 685.8 gallons saved x .008887 = 6.09 metric tons]

(g) Describe any renewable energy components that will result in minimal energy savings/production (e.g., installing small-scale solar as part of a SCADA system).

The project will use small-scale solar power for running the diversion gates and the SCADA system, resulting in small but significant energy savings as it will eliminate the need to source from power companies that are dependent on fossil fuel.

E.1.3. Evaluation Criterion C — Sustainability

E.1.3.1. Enhancing Drought Resiliency

(a) Does the project seek to improve ecological resiliency to climate change?

One of the Project's objectives is to enhance the ecological resilience to climate change by stabilizing the flow of the North Platte River. Climate variability resulting from climate change can disrupt precipitation patterns, leading to erratic river flows and water availability, negatively affecting ecosystems' health and functionality, as well as the species dependent on them. By stabilizing the river flow, the Project aims to bolster ecological resilience to climate change by ensuring a consistent water supply to ecosystems.

By implementing flow stabilization measures, the Project will further fortify ecological resilience to climate change by preserving the integrity of aquatic habitats along the North Platte River and supporting the diverse ecosystems thriving therein. Consistent river flows serve as a reliable water source for flora, fauna, and microorganisms, essential for their survival and reproduction. Additionally, stable flows foster natural processes like nutrient cycling, sediment transport, and floodplain connectivity, vital for ecosystem functioning and future resilience.

Moreover, this Project will contribute to mitigating climate change impacts by lessening drought and flood risk. Stable river flows facilitate the growth of vegetation along riverbanks, which in turn aids in soil stabilization and erosion prevention. This vegetation also serves as a carbon sink, absorbing and storing greenhouse gasses.

(b) Will water remain in the system for longer periods of time? If so, provide details on current/future durations and any expected resulting benefits (e.g., maintaining water temperatures or water levels.)

Water will not remain in the system for longer periods of time, but the stabilization of flows will alter its distribution, providing for a more stable flow downstream.

(c) Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species or particular recreational or economic importance)? Please describe the relationship of the species to the water supply, and whether the species is adversely affected by a Reclamation project or is subject to a recover plan or conservation plan under the Endangered Species Act (ESA).

The Project aims to support various endangered and threatened species including the piping plover, least tern, whooping crane, and pallid sturgeon. Initiated in 2006, the Platte River Recovery Implementation Program (PRRIP), led by the Department of the Interior along with the states of Colorado, Wyoming, and Nebraska, and local water users, focuses on addressing habitat requirements for these species. PRRIP's primary objective is to ensure consistent or enhanced water access, achieved through specific water projects designed to store environmental flows during certain months. By stabilizing downstream river flows, the Project aims to mitigate water shortages for downstream users, thereby reducing the need for water withdrawals from upstream federal reservoirs. This strategy also increases carryover in federal reservoirs, consequently boosting water supplies for both federal and downstream reservoirs, benefiting the listed species. The whooping crane relies on the North Platte River's banks during migration, so a section of the basin is designated critical habitat for the species. Chimney Rock is part of the larger regional hydrology that affects water levels within that critical habitat.

Stabilization of river levels will also benefit the nesting sites of the piping plover and least tern, as well as the pallid sturgeon, which require diverse depths threatened by reduced flow. The project's environmental impact,

(d) Please describe any other ecosystem benefits as a direct result of the project.

The project aims to enhance the efficiency of water utilization and management by stabilizing canal flows and ensuring dependable water delivery to irrigators. Additionally, it will decrease spills across the District's distribution system. By advocating for the efficient utilization of water resources from the North Platte River, the project will reduce spills and increase water accessibility to sustain local ecosystems during drought periods. This effort will contribute to maintaining consistent river flows, providing a steady water supply for flora, fauna, and microorganisms.

E.1.3.2. Addressing A Specific Water And/Or Energy Sustainability Concern(s)

Will the project address a specific sustainability concern? Please address the following:

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

Since 2002, the North Platte River systems have experienced water shortages in nine out of 21 years (43%). Water supplies have varied from 50% to 80% of a full supply. The Project will help address these shortages due to drought for current appropriators and/or future shortages due to climate change.

(b) Explain and provide detail of the specific issue(s) in the area that is impacting energy sustainability, such as reliance on fossil fuels, pollution, or interruptions in service.

Chimney Rock's current system relies on fossil fuel use, as the diversion is a 12.7 mile drive from the District office and maintenance and adjustment calls for 3-4 trips per day. As described above in section E.1.2.2 (f), the Project aims to cut this dependance on fossil fuels by 75%, enhancing the District's energy sustainability.

(c) Please describe how the project will directly address the concern(s) stated above. For example, if experiencing shortages due to drought or climate change, how will the project directly address and confront the shortages?

By reducing over-diversion, the Project will stabilize canal and river flows, benefiting downstream appropriators and reducing the likelihood of receiving a call for storage water due to shortages and fluctuations in river flows. Stabilizing the water flows in the river by not over-diverting will benefit downstream appropriators and reduce their demand on both storage water and groundwater sources to make up for shortages in available surface water. The North Platte Natural Resources District (NPNRD) is considered over-appropriated under state law. The NPNRD has an integrated management plan in place that regulates the use of groundwater (See ***Appendix E***).

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

The water conserved by the Project will primarily be used to reduce shortages that impact downstream appropriators' diversions or be left in the river system. This usage will reduce the demand on both storage water and groundwater resources to make up the shortage.

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

The mechanism used to put conserved water to its intended use is the automated diversion and canal improvements outlined within the Technical Project Proposal. The Project does not propose an additional mechanism.

(f) Indicate the quantity of conserved water that will be used for the intended purpose.

All quantifiable water savings, listed in E.1.1., will be used primarily for reducing shortages and adding to North Platte River flows.

E.1.3.3. Other Project Benefits

(1) Combating the Climate Crisis
Please describe how the project will address climate change, including the following:

(a) Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.

The Project aims to stabilize river flows, providing advantages to downstream appropriators by minimizing supply shortages and decreasing the need for storage water releases. This effort aligns with E.O. 14008, addressing the climate crisis through various means. Firstly, maintaining stable river flows contributes to the preservation of healthy habitats for plants and animals reliant on river ecosystems. Consistent water availability supports ecosystem resilience in the face of changing climate conditions, fostering biodiversity. Additionally, stable river flows play a crucial role in regulating water levels, reducing the susceptibility to floods and droughts, especially given the escalating frequency of extreme weather events associated with climate change. Effective flow management in the North Platte River enhances local communities' preparedness and response to such events. The stability of river flows also aids in water resource preservation, facilitating more efficient water management and reducing wastage—a critical consideration for regions along the North Platte River grappling with water scarcity and heightened demand due to climate change. Furthermore, stable river flows contribute to carbon sequestration, as healthy river systems serve as carbon sinks, capturing and storing carbon dioxide from the atmosphere. The initiative promotes the growth of vegetation along the riverbank, aiding in the absorption and storage of carbon. Collectively, these benefits work to mitigate greenhouse gas emissions and combat climate change.

(b) Does this proposed project strengthen water supply sustainability to increase resilience to climate change?

The Project will reduce calls for storage water from upstream federal reservoirs by providing drought protection and bolstering resilience to the impacts of climate change. By stabilizing the flows of the North Platte River, this project will help ensure a consistent supply of water and allow local communities to rely on the river as a source of drinking water and irrigation. Further, stable river flows will allow Chimney Rock to better plan and allocate water resources, reducing spills and maximizing water usage. Through more efficient water management, local reservoirs and other storage facilities will build up adequate water reserves during periods of high flow and ensure a dependable water supply during drier periods. Stabilizing flows along the North Platte River will also help maintain water quality, as adequate flow levels help dilute pollutants and flush out contaminants to ensure cleaner and healthier water for both human consumption and ecosystem health. Overall, this Project will strengthen water sustainability in the region and support the overall well-being of local communities, ecosystems, and the agricultural economy that depends on access to reliable water resources.

(c) Will the proposed project establish and utilize a renewable energy source?

The proposed Rubicon gates are powered by a 12 volt battery pack and a solar charging system. The battery pack powers the gates' motion and water measurement and recharges via solar panels.

(d) Will the project result in lower greenhouse gas emissions?

The Project will result in lower greenhouse gas emissions in the following four ways. First, automating diversion needed to regulate flow will reduce by 75% the miles driven each day by District staff to manage the diversion, and therefore greenhouse gases emitted by District vehicles. Second, by stabilizing flows along the North Platte River, the project will allow for more consistent and reliable hydropower generation along the river. This will reduce reliance on fossil fuels for electricity production, thereby reducing greenhouse gas emissions. Third, this project will result in a more reliable and consistent water supply that will enable local farmers to optimize their irrigation systems and ensure crops receive the necessary amount of water without excess waste. Efficient irrigation reduces the need for energy-intensive practices like pumping and transporting water, thus lowering greenhouse gas emissions associated with energy consumption. Fourth, this project will help ensure adequate flow levels in the North Platte River which will help dilute pollutants and contaminants, reducing the need for extensive water treatment processes. Water treatment and purification require energy intensive processes, which can contribute to greenhouse gas emissions.

(2) Disadvantaged or Underserved Communities
Please describe how the project supports E.O. 14008 and E.O. 13985 including (a) - (c):

Not applicable to project.

(3) Tribal Benefits
Please address the following, (a) - (c), if applicable.

Not applicable to project.

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

(a) Will the project assist States and water users in complying with interstate compacts?

The Project will help avoid unnecessary releases of storage water from Wyoming Bureau of Reclamation facilities on the North Platte River. By leaving more water in carryover storage, the District will aid in avoiding calls for regulation upstream of the federal reservoirs in Wyoming, as required by the U.S. Supreme Court Modified North Platte Decree.

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

The proposed Project will enhance conditions for local agricultural water users as well as downstream beneficiaries by stabilizing the flow of canals and rivers. This will prevent unnecessary spills and improve water delivery for irrigation purposes. The initiative will contribute to environmental well-being by maintaining stable river flows to support the aquatic ecosystem. Furthermore, it will benefit recreational activities such as fishing, bird watching, and canoeing. The stabilization of river flows along the North Platte River will also benefit downstream hydroelectric generators like the Kingsley Dam on Lake McConaughy. By ensuring a consistent water supply to the turbines, the Project will promote reliable and uninterrupted power generation, optimizing their efficiency.

(c) Will the project benefit a larger initiative to address sustainability?

Chimney Rock's Project benefits the North Platte Natural Resources District's sustainability projects, as well as statewide water stewardship initiatives. The hydraulically connected alluvial aquifer which provides water within the NPNRD is considered over-appropriated by the Nebraska Department of Natural Resources. The NPNRD is working to reduce its water usage to a sustainable level to protect the future of the aquifer and those who depend on it.

(d) Will the project help to prevent a water-related crisis or conflict? Is there frequent tension or litigation over water in the basin?

In water-short years, tensions are high in the North Platte River Basin as appropriators experience more frequent and severe water shortages, corresponding to strict regulation of surface water rights. Litigation has occurred in the past between the states of Nebraska and Wyoming that have resulted in U.S. Supreme Court decrees, most recently Nebraska v. Wyoming, 515 U.S. 1 (1995), and Nebraska v. Wyoming, 507 U.S. 584 (1993), on the basis of equitable apportionment detailed in the Court's 1945 opinion. Downstream surface water projects have filed suit against the NPNRD for overuse of the commingled water supply in the past. The Project will reduce the over-diversion by Chimney Rock, thereby reducing shortages to downstream appropriators. The District seeks to provide accurate measurement and equitable apportionment to lessen the likelihood of future conflict over the North Platte River Basin.

E.1.4. Evaluation Criterion D — Complementing On-Farm Irrigation Improvements

(1) Describe any planned or ongoing projects by farmers/ranchers that receive water from the applicant to improve on-farm efficiencies

.

(a) Provide a detailed description of the on-farm efficiency improvements.
(b) Have the farmers requested technical or financial assistance from NRCS for the on-farm efficiency projects, or do they plan to in the future?
(c) 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.
(d) Applicants should provide letters of intent from farmers/ranchers in the affected project areas.

There is one Chimney Rock on-farm improvement project planned for the next year or two. The project is a conversion from gravity irrigation to center pivot irrigation, utilizing 4 small center pivot systems. The location within the District is shown on Drawing 5 (See ***Appendix A***, DISTRICT MAP ON-FARM PROJECTS). Drawing 6 (***Appendix A***, DISTRICT MAP ON-FARM PROJECTS DETAILED MAP) shows more detail for the four planned pivots and the acres associated with each pivot.

The farm does not receive NRCS assistance and does not have eligibility documentation available at this time.

See ***Appendix B*** for Letters of Commitment and Support for a letter of intent from the farmer.

(2) Describe how the proposed WaterSMART project would complement any ongoing or planned on-farm improvement.

(a) 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
(b) Will the proposed WaterSMART project complement the on-farm project by maximizing efficiency in the area? If so, how?

The Project will help facilitate the on-farm improvements planned. The on-farm project will benefit greatly from the Project, since it is located near the end of the Chimney Rock Canal, where fluctuations in canal diversion have the greatest impact on deliveries to the farm. The automation of the diversion site will significantly reduce fluctuations in canal flows, making it more reliable for pumping to a center pivot system, avoiding pivot shutdowns when levels are low and spills with levels are high.
By stabilizing the flows in the canal, the Project will encourage other irrigators to move to more efficient irrigation practices. Drawing 3 (***Appendix A***) demonstrates that several irrigators have already installed center pivot systems to improve their water efficiency.

(3) Describe the on-farm water conservation or water use efficiency benefits that are expected to result from any on-farm work.

a) Estimate the potential on-farm water savings that could results in acre-feet per year. Include support or backup documentation for any calculations or assumptions.

The planned project is estimated to save approximately 201 acre-feet per year at the diversion point. Net irrigation requirement in Scotts Bluff and Morrill Counties, is 14 inches per year. A gravity irrigation system, at best is 55% efficient. A center pivot system is 87% efficient at meeting the irrigation requirement. Most earthen canal systems in the area are 50-60% efficient (use 55%).
Calculations are as follows:

Gravity system [(14 inches/55%)/55% = 46.3 inches or a 3.86-acre-foot diversion requirement]
Center pivot system [(14 inches/87%)/55% = 29.26 inches or a 2.44-acre-foot diversion requirement]
Savings per acre [3.86 - 2.44 = 1.42 acre-foot/acre] [1.42 x 201.7 acres = 286.41 acre-feet] per year at the point of diversion

(4) Please provide a map of your water service boundaries.

See ***Appendix A*** for map of service area boundaries.

E.1.5. Evaluation Criterion E — Planning and Implementation

E.1.5.1. Subcriterion No. E.1.: Project Planning

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

Provide the following information regarding project planning:

(a) 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.
(b) 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).
(c) If applicable, provide a detailed description of how a project is addressing an adaptation strategy specifically identified in a completed WaterSMART Basin Study or Water Management Options Pilot (e.g., a strategy to mitigate the impacts of water shortages resulting from climate change, drought, increased demands, or other causes).

A WaterSMART Basin Study has not been conducted for the North Platte River Basin. Chimney Rock, as well as most surface water districts in the area, were part of developing the NDNR Drought Contingency Plan which includes implementing projects that conserve water and/or improve water management. Specific projects, however, are not mentioned in the NDNR Drought Contingency Plan. Chimney Rock is also a member of the NPNRD's Hazard Mitigation Plan which addresses several types of hazards, including flooding. See ***Appendix E*** for NDNR Upper Platte River Drought Contingency Plan and NPNRD Hazard Mitigation Plan.

This Project will provide remote operation of Chimney Rock's diversion dam to better manage canal flows to avoid waste and spills. The system will also help prevent localized flooding within the District's service area during flood events.

E.1.5.2. Subcriterion No. E.2.: Readiness To Proceed

(a) Identify and provide a summary description of the major tasks necessary to complete the project. Note: please do not repeat the more detailed technical project description provided in Section 1.3; this section should focus on a summary of the major tasks to be accomplished as part of the project.

The major Project tasks to be pursued by the engineering firm are finalizing the design, obtaining the requisite permits, opening the bid process, and contracting with the strongest candidate. Once a contractor is selected mobilization and construction will commence. Complete rehabilitation of the diversion infrastructure will be completed by June 2025.

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

Chimney Rock's Project requires the following permits:

- A Categorical Exclusion (Cat-Ex) document following guidance from the Bureau of Reclamation will be required to comply with the National Environmental Protection Act (NEPA).
- A United States Army Corps of Engineers (USACE) Clean Water Act (CWA) 404 Permit – submission of application upon finalization of design footprint. We anticipate this project will be permitted under a Nationwide Permit (NWP), specifically NWP 3(a). The permit application will be submitted to the USACE Omaha Regulatory Office.
- A NPDES Construction Stormwater – submission of application during final design process. A construction stormwater permit (CSW) will be obtained through the Nebraska Department of Environment and Energy (NDEE). This will include development of a Stormwater Pollution Prevention Plan (SWPPP) to specify the erosion control measures included in the contract documents.
- A Local Floodplain – submission of application with final design. The permit application is provided to the local jurisdiction, Scottsbluff County, with certification of meeting the local floodplain permitting requirements.

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

JEO Consulting group, a licensed professional engineering consultant, has been hired to complete a preliminary design of the diversion structure. The final design is in process and will continue towards final through 2023 into early 2024. The consultant will prepare bid documents for public bidding.

The preliminary design included the following components: site survey, geotechnical investigation, hydrology and hydraulic modeling, and structural engineering. Many of the surveying and analysis tasks were done in concert with the Castle Rock Irrigation District and Bridgeport Irrigation District projects, as they share the North Platte River Basin.

- The consultant's survey of the proposed site location collected elevations, site features, property boundaries from GIS data, and existing utilities to create an AutoCAD electronic drawing detailing these specifications. The site survey also collected available property pins, sections, and corners for legal descriptions required for the Project.
- The consultant obtained 3 borings to approximately 30' depth adjacent to the Riverbank and diversion structure as specimens for the geotechnical investigation. The borings were then lab tested to provide soil properties, resulting in a brief report. Additional geotechnical investigation will be performed in the final design phase.
- Basic hydrologic tests and hydraulic modeling was performed to support the design and the Local Floodplain Permit.
  - A duration analysis was completed to determine the percentage of time the North Platte River discharges were at selected levels. Using the current NDNR gaging station 0668200 North Platte River near Minatare and the historical USGS stream gage 0668199 to obtain daily discharge data from 1958-2023, the consultant completed analyses for annual and quarterly flows, considering that flow in the North Platte River is significantly impacted by the operation of the reservoirs and irrigation projects. The analysis found that on an annual basis 50% of the time the peak flow, at the gage, would exceed 572 cfs but in the 3rd Quarter, during peak irrigation season, the peak flow would only exceed 471 cfs 50% of the time. CRID diverts water from a south channel of the North Platte River. Through the south channel of the North Platte River, where CRID infrastructure is located, the flow rate with a 50% exceedance rate annually is 148 cfs. Next, the headgate structure which conveys flows to the Chimney Rock Canal was analyzed to ensure the permitted flows could be achieved during periods of low flow on the North Platte River. The water rights for the Chimney Rock Canal are 60.67 cfs.

- The positioning and dimensions of the Diversion Structure and overflow weir was decided by calculating flow through the gates using the standard weir equation with a weir coefficient (C) of 3.0.
- A two dimensional (2D) hydraulic model was created to evaluate the potential improvements during large discharge events using HEC-RAS software version 6.3.1. The existing conditions topographic surface was created using USGS 2020 LiDAR data and modified in the main channel of the river to include estimated bathymetry. A land cover surface was created using data from the 2019 National Land Cover Database. Manning's 'n' values were assigned based upon the land cover surface and aerial imagery. Channel 'n' values were set at 0.025 for the North Platte River and 0.03 for the Chimney Rock Canal while overbank 'n' values ranged from 0.03 to 0.085. The diversion structure, headgate structure and overflow weir were all modeled as a 2D connection within HEC-RAS. Unsteady flow files were created for the 2-Year and 100-Year flood events. The structure was modeled assuming all four headgates were closed and both radial gates were fully open. During the 100-year event a significant portion of water in the south channel bypasses the diversion structure and overflow weir to the north, while during the 2-year event all of the water in the south channel can be conveyed through the structure and overflow weir. For both the 2-year and 100-year events the main channel of the North Platte River still conveys a larger share of the flow than the south channel. At this time there is limited data to fully assess the impacts of the existing and potential future bypass channels that may be naturally created by the North Platte River during large storm events.
  From these data sets and models, the consultant ran structural engineering analyses to determine floor and wall thickness, reinforcement, and sheet pile length.

JEO anticipates that the final design stage will be reached by July 2024.

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

Not applicable to project.

(e) Please also include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.

Milestones associated with the Project Schedule below include:

- Conclusion of Permitting and Commencement of Bidding Process - By July 1 2024
- Project Contractor Selected - By August 1 2024
- Mobilization - By October 1 2024
- Construction and Installation (100%) - By June 1 2025

Chimney Rock Irrigation District - Diversion Structure Replacement and Canal Automation Project Schedule

	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Survey																													
Preliminary Design																													
Final Design																													
Permitting (Environmental and Cultural)																													
Bidding																													
Contracting																													
Construction																													

E.1.6. Evaluation Criterion F — Collaboration

Please describe how the project promotes and encourages collaboration. Consider the following:

(a) Is there widespread support for the project? Please provide specific details regarding any support and/or partners involved in the project. What iis the extent of their involvement in the process?

The Nebraska Department of Natural Resources (NDNR) is a supporter and funding partner for the proposed project. The North Platte Natural Resource District (NPNRD) is a non-funding partner that is in support of the proposed project. The Nebraska State Irrigation Association (NSIA) is providing in-kind support to assist water districts, including Chimney Rock, with securing funding assistance for improving water management and efficiencies in their systems and in-kind assistance with grant writing. The North Platte Valley Irrigators Association (NPVIA) is a non-funding local supporter of the project and they are providing in-kind assistance with grant writing.

(b) What is the significance of the collaboration/support?

The NDNR will provide substantial financial assistance and support the Project as it contributes to goals identified in the NPNRD Drought Mitigation and Hazard Mitigation plans (See ***Appendix E***). The NPVIA is a local association of irrigation districts and canal companies that work to assist member districts and others with issues relating to their operations. The NSIA is a statewide association of irrigation districts, public power districts, canal companies, reclamation districts, and individuals working to support surface water irrigation in Nebraska. The support of these organizations speaks to the importance of the Project on a local and state level.

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

Chimney Rock hopes to inspire water conservation improvement projects in similar water districts in the North Platte River Basin and in the larger Nebraska irrigation community. The Project will increase the likelihood of future WaterSMART applications and linked initiatives by proving the feasibility of this scale of project.

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

See attached letters of support and commitment in Appendix B.

E.1.7. Evaluation Criterion G — Additional Non-Federal Funding

State the percentage of non-Federal funding provided using the following calculation: Non-Federal Funding / Total Project Cost.

$1,703,696.00 (Non-Federal Funding) / $3,034,486.00 (Total Project Cost) =
56.1% Non-Federal Funding

If federal funding is approved, this Project will be supported by 56.1% non-federal funding and 43.9% federal funding.

E.1.8. Evaluation Criterion H — Nexus To Reclamation

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

(a) Does the applicant have a water service, repayment, or O&M contract with Reclamation?

Chimney Rock Irrigation District has a Warren Act contract through which it pays operations and maintenance (O&M) costs for the federal reservoirs in Wyoming.

(b) If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?

No.

(c) Will the proposed work benefit a Reclamation project or activity?

The proposed work will benefit the eight irrigation districts in Wyoming and Nebraska that receive water from the Glendo Unit of the Pick-Sloan Project, as well as the thirteen Wyoming and Nebraska irrigation districts in The Bureau of Reclamation's North Platte Project. Improved control of Chimney Rock's diversion will stabilize flows downriver, reducing demand by Reclamation contractors for storage water from federal reservoirs in Wyoming, such as the Pathfinder Reservoir, thereby leaving more water in the system to the benefit of all water users.

(d) Is the applicant a Tribe?

No.

Performance Measures

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

Chimney Rock will quantify benefits from the Project by comparing NDNR diversion data used to estimate spills with diversion data from the new Rubicon SlipMeter gates. Chimney Rock expects to see a 90% reduction in over diversion at the point of control, leading to immense water savings estimated at 3,748 AF acre-feet per year.

The District will also track employee miles driven in order to calculate the Project's impact on emissions. Throughout the first year of automated operation, the Chimney Rock staff member will be asked to log the number of trips taken to the diversion structure. This figure will then be compared to the pre-Project figure to determine the overall gas conserved by the Project.

Project Budget

Funding Plan and Letters of Commitment

The funding plan for Chimney Rock Irrigation District's Project will be split according by percentage as follows, amounting to the total Project cost of $3,034,486.00:

- 54.5% Nebraska Department of Natural Resources match: $1,653,696.00
  - committed as of July 18, 2023. See ***Appendix B*** for letter of commitment by NDNR Director Tom Riley.
- 1.6% Chimney Rock Irrigation District applicant share: $50,000.00
- 43.9% Reclamation WaterSMART Grant: $1,330,790.00
  - proposed as of February 15, 2024.

As of February 13th 2024, Chimney Rock Irrigation District has spent $57,536.28 on survey, design, and engineering costs. The last cost occurence was on January 24th, 2024. Benefits of this cost expenditure include a better estimate of what construction costs may be by having quantifiable improvements and materials. The concept design can be evaluated by geotechnical engineers and refined through final design to provide an expedited schedule.

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

(a) Any monetary contributions by the applicant towards the cost-share requirement and source of funds (e.g., reserve account, tax revenue, and/or assessments)

Chimney Rock Irrigation District is committing $50,000 toward the cost-share requirement with funds generated from appropriator assessments.

(b) Any costs that will be contributed by the applicant.

Not applicable to project.

(c) Any third party in-kind costs (i.e., goods and services provided by a third party)

The North Platte Valley Irrigators Association (NPVIA) and the Nebraska State Irrigation Association (NSIA) are providing in-kind assistance with grant writing.

(d) Any cash requested or received from other non-Federal entities

The Nebraska Department of Natural Resources (NDNR) is generously supporting this Project with a $1,653,696.00 grant toward the cost-share requirement.

(e) 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.

Not applicable to project.

Budget Proposal

Table 2. — Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed by proposed Federal funding	$1,330,790.00
Costs to be reimbursed by applicant	$50,000.00
Costs to be reimbursed by third party contribution - State funding	$1,653,696.00
TOTAL PROJECT COST	$3,034,486.00

Table 3. — Budget Proposal

BUDGET ITEM DESCRIPTION	$/Unit	Quantity	Quantity Type	TOTAL COST
Personnel Salaries and Wages				
Included in Contractual	N/A	N/A	N/A	$0.00
Fringe Benefits				
Not applicable	N/A	N/A	N/A	$0.00
Travel				
Not applicable	N/A	N/A	N/A	$0.00
Equipment				
Included in Construction	N/A	N/A	N/A	$0.00
Supplies and Materials				
Included in Construction	N/A	N/A	N/A	$0.00
Contractual				
Engineering, Survey, Architecture Design Services	See Appendix D			$440,736.00
Construction				
Equipment, Materials, Supplies, and Labor for Project Tasks A-F	See Appendix D for itemized breakdown of construction costs.			$2,075,000.00
20% Contingency	See Appendix D			$518,750.00
TOTAL DIRECT COSTS				$3,034,486.00
Indirect Costs				
Not applicable	N/A	N/A	N/A	$0.00
TOTAL ESTIMATED PROJECT COSTS				$3,034,486.00

For more information on the Project Budget, please see the Budget Narrative file included with this application and the cost estimate supplied in ***Appendix D.***

Note Pertaining to Chimney Rock's SF424C Form:
Since the SF424C does not accept decimal points in the percentage box on the bottom of the page, the federal share was rounded to the nearest whole percentage. The result is that the SF424C reads a federal share of $1,335,173.84, 44%, as opposed to the Project Proposal's $1,330,790.00, or 43.9%. The latter is the grant request amount.

Environmental and Cultural Resources Compliance

Chimney Rock is working with the environmental compliance team at JEO to ensure that all processes are undertaken with the greatest concern for environmental impact. As the proposed project excavates a diversion structure, creates a cofferdam to divert river flow, and installs new Rubicon gates it will have temporary effects on the surrounding environment such as increased noise, dust, river turbidity, and traffic re-routing. Procedure for mitigating these effects will be supplied to the selected contractor. Disturbances to the soil and water will be minimized with physical processes while disturbances like noise will be minimized by the time of day that the work is completed. As the Project is just north of Nebraska State Highway 92, Chimney Rock will work with local authorities to mitigate traffic disruption.

Chimney Rock Irrigation District is named after the Chimney Rock National Monument, a spire-like rock that towers 482 feet above the river valley. The rock formation is significant to the history of the Oregon Trail and westward migration, and to the Lakota Sioux, indigenous peoples of the area. The Chimney Rock Museum and the Chimney Rock Historical Marker along Nebraska State Highway 92 commemorate and preserve these histories, welcoming visitors year round. The Project will not disturb the area around the national monument nor the activities that take place in proximity to it.

State and federally threatened species in the North Platte River Basin should not be greatly affected by the interim steps of construction. The Project will go through an environmental review process in accordance with NEPA to confirm that all activities are carried out with the utmost awareness of ecosystem impact.

The proposed Project should not have an adverse effect on low income or minority populations. No Indian sacred sites or archaeological sites have been identified in the Project location.

The Project is committed to restoration of the area surrounding the structure, and will be seeding and mulching the areas disturbed by construction. As this restoration takes place, the contractor will be required to remove toxic weeds and non-native plant species.

Required Permits or Approvals

The Project includes the following permitting activities in compliance with municipal, state, and federal guidelines:

Environmental Review/Cat-Ex in accordance with NEPA
United States Army Corps of Engineers (USACE) Clean Water Act (CWA) 404 Permit, Nationwide Permit (NWP), specifically NWP 3(a) via the USACE Omaha Regulatory Office.
Local Floodplain Permitting via Scottsbluff County.
NPDES Construction Stormwater Permit on Stormwater Pollution Prevention Plan (SWPPP) and a Construction Stormwater Permit (CSW) through the Nebraska Department of Environment and Energy (NDEE).

Conflicts of Interest Disclosure

There are no known conflicts of interest with regard to Chimney Rock Irrigation District and the proposal for federal assistance.

Single Audit Reporting Statement

Chimney Rock Irrigation District has not spent more than $750,000 in U.S. Dollars this fiscal year.

Unique Entity Identifier and System for Award Management

Chimney Rock Irrigation District is registered with SAM under the Unique Entity Identifier YPENQZWLCP19.

Appendix C

Official Resolution

RESOLUTION

OF

CHIMNEY ROCK IRRIGATION DISTRICT

Date 10-9, **2023**

WHEREAS, the Chimney Rock Irrigation District (District) was organized and formed under Nebraska State Statute, with irrigation water rights from the North Platte River dated December 3, 1890 Appropriation D-844; with supplemental storage water use from Pathfinder Reservoir; and

WHEREAS, the District is charged with the operation, maintenance, repair and replacement of the irrigation facilities to the benefit of its water right holders; and

WHEREAS, the District continually takes steps, investing its own resources to improve on the performance of the facilities for water conservation, operation and maintenance;

BE IT THEREFORE RESOLVED that the Board of Directors of the Chimney Rock Irrigation District has reviewed and authorizes the District's Board Chairman to pursue a Department of Interior WaterSMART grant for the rehabilitation and automation of the District's diversion from the North Platte River. Project name: "Chimney Rock Irrigation District Diversion Structure Rehabilitation/Automation and Betterment Project", on behalf of the District; and

BE IT FURTHER RESOLVED that the Board of Directors of the Chimney Rock Irrigation District by authority granted under Nebraska State Statute, commits to the financial and legal obligations associated with receipt of a financial assistance award under this Notice of Funding Availability.

THEREFORE, BE IT RESOLVED.

ENACTED THIS 9 DAY OF October, 2023.

CHIMNEY ROCK IRRIGATION DISTRICT

Frank Nerud

Roger Eirich

Joe Essay

BOARD OF DIRECTORS

ATTEST:

Amanda Kepler

Secretary