WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2023

Bureau of Reclamation Notice of Funding Opportunity No. R23AS00008

City of Alamosa

City of Alamosa Cattails Golf Course Irrigation Replacement Project

Please refer to the official Notice of Funding Opportunity No. R23AS00008 (Updated May 2022).

- *See the Application Checklist (pp iii) & Section D.2.2 Application Content*
- *Reminder that applicants must complete the required mandatory Federal Forms for your application to be considered complete (See Sec. D.2.2.1). If you are applying for a grant, please complete and submit your application using Grants.gov Workspace.*
- *For greater detail on completing this template, turn on document markup to view comments.*

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Jul 27, 2022

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Table of Contents

1. **Detailed Project Budget**
2. **Letters of Support**
3. **Appendix A1 - Area Conditions**
4. **Appendix A2 - Course Condition Photos**
5. **Appendix B - Current Pump Usage Graphs**
6. **Appendix C - CIty of Alamosa WEP**
7. **Appendix D - Rio Grande Basin Watertrends**
8. **Appendix E - Project Detailed Timeline**
9. **Appendix F - Back 9 Preliminary Design Docs**
10. **Appendix G - Rio Grande BIP Volume 1**

TECHNICAL PROPOSAL AND EVALUATION CRITERIA

Executive Summary

Date: 7/21/22

Applicant Name: City of Alamosa

Alamosa, Alamosa, Colorado

Category Applicant: A

Funding Group: I

Project Duration: 19 Months

Estimated Project Completion Date: 10/31/2024

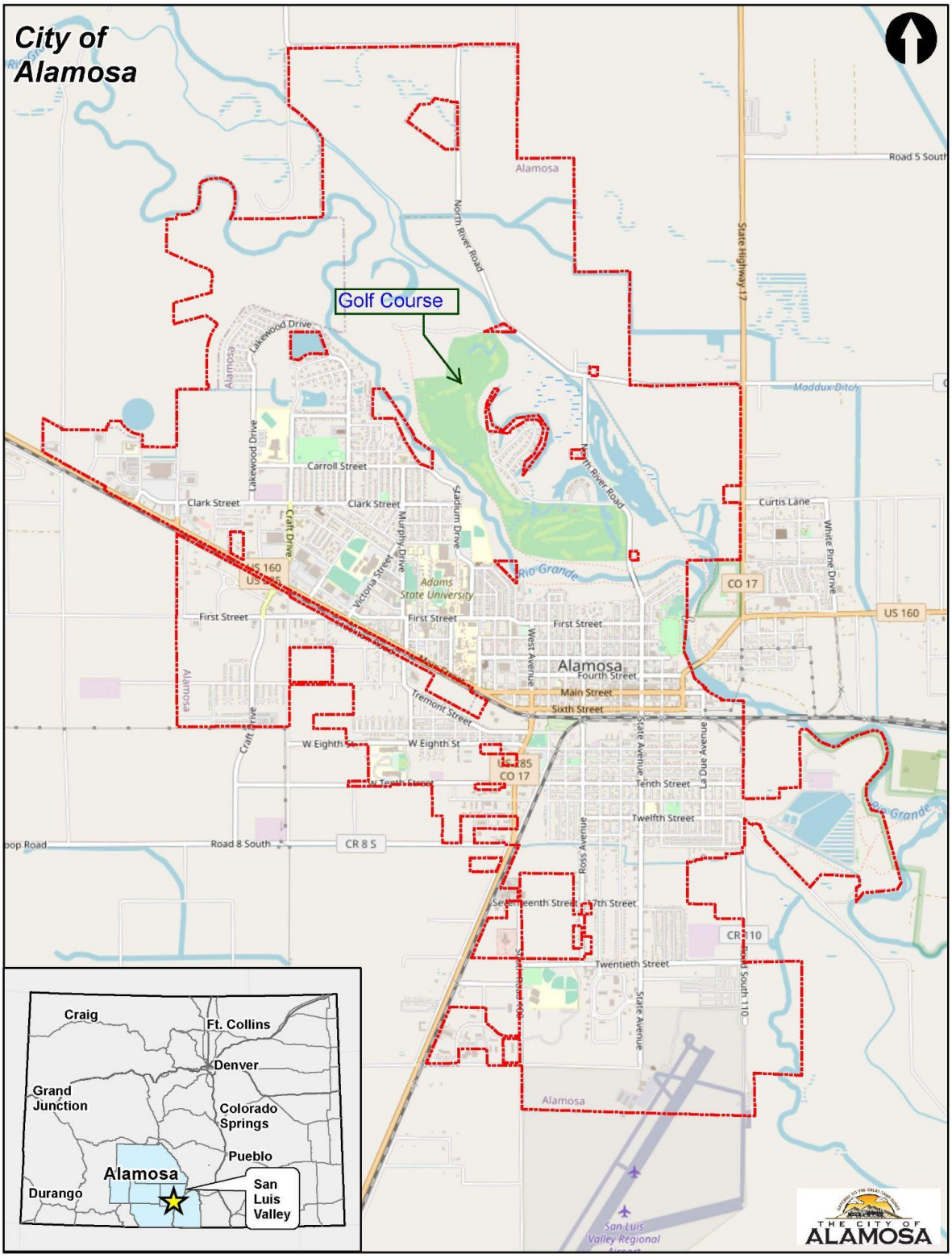
Located on Federal Facility: No

Project Summary:

The City of Alamosa (the City) is pursuing the replacement of the irrigation system of the back nine holes of the City's Cattails Golf Course. The system is nearing 30 years old and failing. The new system with smart controls and high efficiency heads will save an estimated 14.2 acre feet of water per year. The entire Rio Grande Basin has been in a sustained drought and is now characterized as experiencing aridification as demand for agricultural use, ranching and increased recreation are depleting both surface water and the unconfined aquifer to unprecedented levels. The City completed a State of Colorado approved Water Efficiency Plan (WEP) in 2020 with an overarching goal of reducing municipal water use. Optimizing the water use of the Golf Course was the top priority action item recommended. This project would accomplish multiple regional goals through conserving water while enhancing economic and quality of life considerations.

Project Location

The Cattails Golf Course Irrigation Replacement Project is located on the north edge of the City of Alamosa in Alamosa County, Colorado. Project Latitude and Longitude are 37.485282°N, 105.880136°W.


City of Alamosa
Golf Course
Alamosa
Road 5 South
North River Road
State Highway 17
Maddux Ditch
Lakewood Drive
Carroll Street
Clark Street
Craft Drive
Stadium Drive
Murphy Drive
Victoria Street
Adams State University
Rio Grande
CO 17
US 160
White Pine Drive
Curtis Lane
First Street
West Avenue
Fourth Street
Main Street
Sixth Street
Tremont Street
W Eighth St
Tenth Street
Twelfth Street
Ross Avenue
State Avenue
La Veta Avenue
Twentieth Street
Road South 110
CR 8 S
Road 8 South
Craig
Ft. Collins
Denver
Grand Junction
Colorado Springs
Pueblo
Durango
San Luis Valley
San Luis Valley Regional
THE CITY OF ALAMOSA

Technical Project Description

Evaluation Criteria

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

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

The Back 9 is allotted 120 acres of surface water for application per season. We are estimating the savings from a new irrigation system at **14.2 acre feet/year**. There are two main components to our estimate. One is the savings in more efficient actual application (adjustable nozzle flow rates,individual head control and weather-related sensors) and the second is addressing leaks in the piping. The 30 year old irrigation system on the back 9 holes was built with the best materials available for the time and is

at the end of its lifecycle. The newer materials we would use in the new system, High Density Polyethylene (HDPE) fused pipe, will create a system where there are no gasketed joints to leak as shown by the front 9's 2 year operation (The front 9 was replaced in 2019 - see Appendix B). Delivery efficiencies are getting worse averaging 1% deterioration each year in nozzle wear. The issue is the leaking pipe as shown with the cycling (see Appendix B).

The existing piping system is aging PVC which is suffering from "cyclic fatigue" causing small hairline cracks in the PVC and leaking small amounts of water that cumulatively add up to significant losses in water delivery efficiency. The back 9 irrigation system has 400 valve in-head zoned sprinklers turning on once an evening for 210 average days. This creates 84,000 cycles in the piping system each year. A normal PVC irrigation system will sustain 2,000,000 cycles in its lifetime before failures start. This would be approximately 24 years at Cattails and the cycling will continue to get worse each year and the gravelly soil at Cattails will not allow the operator the benefit of knowing where all the hairline cracks are occurring. The new system will be constructed with HDPE pipe with no gasketed or solvent weld joints to leak like PVC. Appendix B illustrates the differences between the pump cycles of both courses , the Back 9 will continue to take "pump jabs" (think boxing) at the rate of 11 times per hour while the HDPE front 9 gets the same slow cycle pressure swing once every two hours, same pressure less frequency. The wear and tear on the system, energy inefficiency of the pump cycling, and wasted water are all priority remedies for the system.

The Back 9 also lacks a central controller. There are 28 different clocks spread out throughout the back 9 that control all the heads, or 28 zones of the layout that staff adjusts as conditions dictate. Not only does this mean when it rains the superintendent has to go out and manually turn off 28 clocks but any adjustments to dry or wet spots are limited to manual zone adjustments resulting in wasted water to parts of the zone that do not need it. Exhibit A (see attached) shows photos of the over watering issues we have. In order to keep the grass green there are certain areas that get over watered and actually damages the turf. On a modern system like the front 9 (the front 9 system was replaced in 2019 with a state of the art smart controls and high efficiency heads) we can turn just these heads down 50% while the rest waters at 100%. With the current back 9 system, we have to turn that entire zone down to 50% and that would result in burning up the rest of the grass on that zone. An integrated on-site weather station prevents watering during precipitation as well. Not only will a new system significantly conserve water; it will be a tremendous labor savings as well.

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

We are conservatively estimating water savings at a substantial 14.2 acre feet of savings as a direct result of this project; 8.2 acre feet per year from more efficient application of irrigation water and six (6) acre feet from eliminating pump losses and leaks. This represents a 13% reduction in potential use of the allocated 110 acre feet

and similar savings with the 105 acre feet we have averaged using over the last three years. The actual calculations are addressed below in question 2.

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

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

Current losses are seeping into the ground and subject to some evaporation with an ever warming micro-climate. The course runs adjacent to the Rio Grande so losses conceivably end up back into the Rio Grande. Return flows to the Rio Grande would be allocated to senior water rights and/or required Rio Grande Compact delivery obligations.

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

Current losses are returning to the system with the considerations mentioned above.

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

Since some current losses are making their way back to the Rio Grande. Some of the seepage from the failing PVC pipes and the overwatering issues are likely benefiting the cottonwood forests that line the back 9 which provide valuable habitat for bird species.

2) *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.

The heads on the back 9 put out about 50 gallons per minute. Each head runs for 15 minutes.
In addition, sample graphs of the back 9 irrigation pump operations (see Appendix B) show that the jockey pump (a jockey pump maintains the pressure in the sprinkler system to avoid non-emergency starting of the main pump. This keeps the main pump from short cycling, which shortens its life span) is turning on 66 times in a 6 hour period. Each time that pump turns on it runs for about a minute. The jockey pump is rated and pumping at 30-40 gallons per minute (gpm).
So our calculation of 35gpm X 66 turn ons = 2,310 gallons per six hours extrapolated to 9,240 gallons per day (gpd). This loss happens whether the pump is running or not so this daily total is the same from the date the system is charged to the day it is drained. Since we charge on the first of April and blow out on November 1st, that is 214 days. 9,240 gpd X 214 days = 1,977,360 gallons per year. This comes out to **6.07 AF a year**.

Between the loss of the leaks in the system and smart watering that is 14.2 af a year we are losing with the current system.

*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.*

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

Canal Lining/Piping

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.
N/A

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.

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)?

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?

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

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

Municipal Metering

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.
N/A

b) How have current system losses and/or the potential for reductions in water use by individual users been determined?

c) For installing end-user water service meters, e.g., for a residential or commercial building unit., refer to studies in the region or in the applicant's service area that are relevant to water use patterns and the potential for reducing such use. In the absence of such studies, please explain in detail how expected water use reductions have been estimated and the basis for the estimations.

d) What types (manufacturer and model) of devices will be installed and what quantity of each?

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

Irrigation Flow Measurement

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

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

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

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

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

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

Turf Removal

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

b) What is the total surface area of turf to be removed and what is the estimated average annual turf consumptive use rate per unit area?

c) Was historical water consumption data evaluated to estimate average annual turf consumptive use per unit area? If so, did the evaluation include a weather adjustment component?

d) Will site audits be performed before applicants are accepted into the program?

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

Smart Irrigation Controllers, Controllers with Rain Sensor Shutoff, Drip Irrigation, and High-Efficiency Nozzles

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

The heads on the back 9 put out about 50 gallons per minute. Each head runs for 15 minutes. Hypothetically, reducing only 40 heads out of the 300 total down to 50% flow rates (25 gallons per minute) or 13%, to eliminate the wet spots (this could easily be 20% or more as field conditions dictate), would save would save 375 gallons per head, equivalent to 15,000 gallons of water each night. Over a six month period of watering almost every night we would save 2,700,000 gallons of water (**8.2 acre feet**).
In addition, sample graphs of the back 9 irrigation pump operations (see Appendix B) show that the jockey pump (a jockey pump maintains the pressure in the sprinkler system to avoid non-emergency starting of the main pump. This keeps the main pump from short cycling, which shortens its life span) is turning on 66 times in a 6 hour period. Each time that pump turns on it runs for about a minute. So 35 (pump is rated at 30-40 gpm) X 66 pump turn ons = 2,310 gallons per six hours or 9,240 gallons per day. **This loss happens whether the pump is running or not** so this daily total is the same from the date the system is charged to the day it is drained. Since we charge on the first of April and blow out on November 1st, that is 214 days. 9,240 X 214 = 1,977,360 gallons per year. This comes out to AF a year. Between the loss of the leaks in the system and smart watering that is 14.2 AF a year we are losing with the current system. That is 18% of our annual total (115 af average) we use to irrigate the Back 9, a very significant savings.

b) Was historical water consumption data evaluated to estimate the percent reduction in water demand per unit area of irrigated landscape? If so, did the evaluation include a weather adjustment component?

Yes, the City keeps detailed records of yearly consumption data for the course. Weather adjustments have not been made though we have provided an overview of precipitation trends for the San Luis Valley courtesy the Rio Grande Water Conservation District.

c) What types (manufacturer and model) of devices will be installed and what quantity of each?

Note: All controllers will be Rainbird Inc or equivalent specs as judged by the project manager and all equipment for the project is subject to the City's open bid procurement process.

The Rain Bird central control system field components will be the Integrated Control System "IC System". A Cirrus Rain Bird computer central control package (1) shall be installed as per manufacturer recommendations. Integrated Control Technology shall be used to communicate between the computer and the field devices (valves, sprinklers and weather station). The central control package shall be supplied with an Integrated Control Interface "ICI" to provide communication between the central control software and the field components. The field components shall be Integrated Control Modules "ICM" as specified below and mounted directly on the Rain Bird Golf valve-in-head sprinklers or electric valves.

GENERAL FEATURES Central Controller:

- System to have the ability to manage flows as listed on the plans for a minimum of 50 groups or flow

zones.

- System to have 2-way communication between central computer and satellite ic decoders.
- System to be able to read an independent remote weather station via phone modem and/or hard wire.
- System to be able to ramp up demands in no more than 500 GPM graduations in 5-minute intervals.
- System to be able to interface Evapotranspiration readings with real time.
- System to have weather station alarms set to slowly shut down irrigation in the event of high winds, rain (end user defined), or freezing conditions, then restart the system.
- System will have the ability to set maximum cycle time and minimum rest time between applications.
- System will have the ability to increase or decrease irrigation applications for 1% to 200% of the base.

Please see the attachment "Detailed Project Budget" for a list of materials and quantities needed to complete the project.

d) Will the devices be installed through a rebate or direct-install program?

No

e) Will site audits be performed before and after installation?

Yes, irrigation is audited on a monthly basis

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

We will be able to verify water savings through a comparison of future metered measurements to current and historical metered measurements.

High-Efficiency Indoor Appliances and Fixtures

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

b) What types (clothes washers, shower heads, etc.) of appliances and fixtures will be installed and what quantity of each?

c) Have studies been conducted to verify the existence of non-efficient appliances and fixtures? Provide published water savings rates for each of these devices and reference the source for each of the device savings rates.

d) Will the devices be installed through rebate or direct-install programs?

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

Commercial Cooling Systems

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

b) Was historical water consumption data evaluated to estimate the percent reduction in water demand?

c) Specify type (manufacturer and model) of cooling tower system to be installed and/or provide a detailed description of the system retrofit plan.

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

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

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

Describe the amount of energy generated. For projects that implement renewable energy

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

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

- Clearly describe the work that will be accomplished through the WaterSMART Grant. Note: normal OM&R activities are not eligible for funding. The work being proposed must be an investment.

- Provide information about the capacity (in kilowatts) of the existing hydro system and the expected capacity once it is brought back on-line.

- Provide information about the duration that the hydro system has been offline and the reasons why it has been mothballed. Please include any regulatory reporting or filings (e.g., FERC filings) or other documentation regarding the system.

Describe any other benefits of the renewable energy project. Please describe and provide sufficient detail on any additional benefits expected to result from the renewable energy project, including:

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

- Expected environmental benefits of the renewable energy system

- 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.

AND/OR

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).

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

There will be a small amount of electrical energy savings from more efficient pump operation. Our calculation is as follows using information from https://revel-energy.com/irrigation-pumps-electricity-usage/ for average Kilowatts used per horse power size of the pump.
The jockey pump is 10 horsepower (HP). A 25 HP pump pulls 6,805 KW per year if running for 1 hour each day. This means each HP pulls 272.2 KW per year at one hour. Since it is 10 HP, it pulls 2,722 KW per year running at a one hour interval. The pump is currently running 4.4 hours per day which would give us an 11,976.8 KW yearly total. The jockey pump on the front 9 kicks on once every 6 hours for 30 seconds. This is 2 minutes per day. Using these same calculations breaking it down to the minute the Front 9 pump is pulling 4.54 KW per minute for the year. Since we are running 2 minutes a day that is only 9.08 KW per year.
Factoring in that the pump isn't on for 5 months out of the year so to adjusting the totals to 58% of the year totals results in:

Front 9 after 58% adjustment is 5.26 KW per year.
Back 9 after 58% adjustment is 6,946.55 KW per year.
The difference, or projected savings is 6,941.29 KW per year.

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

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

There are two pumps for the back 9: The main pump is a variable speed 75 horsepower.made by US Electric motors Model # BF645.The main pump runs off a three phase power supply and has the capacity of 695 GPM. The performance of this pump will be the same for a new system as now. There is also a jockey pump, to safely keep the main pump pressurized; it is a 10 HP, single phase Grundfos brand pump model # MS4000 Model B, with a capacity of 30 to 40 GPM. If the jockey pump is only coming on once every 6 hours instead of 66 times in 6 hours, there are obvious energy savings and reduced pumping whether is keeping the main pump charged or actual use of the main for irrigation. These calculations are provided in the relevant sections of the grant application.

- Please indicate whether your energy savings estimate originates from the point of diversion, or whether the estimate is based upon an alternate site of origin.

Savings is from the Back 9 pump house at Blanca Vista Pond.

- Does the calculation include any energy required to treat the water, if applicable?

No, raw water is used for course irrigation

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

There will be a reduction in greenhouse gas emissions as a result of this project. This will be realized as a result of fewer gas powered utility vehicle trips from the golf course maintenance shop to the back 9 to manually adjust the sprinkler system. It is 2.3 miles to drive around the back 9 from the maintenance shop and back. With a remotely controlled sprinkler system, it is estimated that half of the trips in a utility vehicle could be eliminated. This will result in savings of 104.40 kgs of CO2 annually or 3,132 kgs over the useful life of the irrigation system.
The calculations are as follows:

- 150 times around the back in a season multiplied by 2.3 miles per trip is 345 miles
- Half of that total is an estimated savings of 173 miles in a gas-powered utility vehicle
- Assuming the gas powered utility vehicle averages 18 miles per gallon
- Assuming 9.05 kgs of CO2 emissions are produced per gallon of petrol burned
- Assuming a 30-year useful life of the new irrigation system
- 173 fewer miles per year will result in 9.6 fewer gallons of petrol burned annually
- 9.6 gal. x 9.05 kgs CO2 = 104.4 kgs of CO2 savings per year
- 104.4 kg CO2 per year x 30 years = 3,132 kgs of CO2 savings over the life of the project

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

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

Enhancing drought resiliency. Please provide information regarding how the project will enhance drought resilience by benefitting the water supply and ecosystem, including the following:

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

Yes, the Cattails Golf Course Irrigation Replacement project will help the City of Alamosa become more resilient to ongoing climate change that has resulted in prolonged severe drought in the Rio Grande Basin. Because the Rio Grande is a snowpack-dominated runoff system, SLV communities are particularly susceptible to climatic changes. Projections by the Bureau of Reclamation (credit: Rio Grande Basin Implementation Plan) suggest that in the coming century, the upper Rio Grande will experience warming temperatures, a decrease in water availability, changes in timing of

river flows, and an increase in frequency, intensity, and duration of both droughts and floods. These predictions emphasize the critical need for local stakeholders to come together to improve the health and resilience of the Rio Grande and the communities it supports.
The City of Alamosa has surface water rights which is used to irrigate pasture (ranchers lease City property), it fills our 33 acre fishing pond at Blanca Vista Park, and it floods areas on the City property specifically designated for habitat. With water savings at Cattails Golf Course, more water can be diverted off the Rio Grande for our wet pastures and ponds. This water is essential for many species of birds and aquatic wildlife. Furthermore the surface water is critical for maintaining the Cottonwood forest on City property which provides important habitat. Less consumption of water at Cattails Golf Course will have an overall positive ecological impact on the open spaces in Alamosa.

- 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).

Yes, the back 9 uses diverted from the Rio Grande which is stored in the 33 acre acre Blanca Vista Pond, part of the City's Blanca Vista Park. The area is the center of outdoor recreation in the City and the pond is used for fishing and floating during the spring-fall. The balance between keeping enough water to sustain a fishery and water-based recreation versus use for the Back 9 has been difficult to manage as many years the City's surface water rights go out of priority by the end of July meaning, only the portion of the seven inches of annual precipitation that falls in the Valley is the only source of replenishment. As a result the City closely monitors the Back 9 use to balance these competing demands. By eliminating leaks and efficient application; the City will maximize water savings and quality of life considerations.

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

Alamosa's portion of the Rio Grande contains habitat for two endangered species, the Yellow Billed Cuckoo and the Southwestern Willow FlyCatcher. Any reduction of diversion pumping helps maintain the associated Willow habitat. The City is part of the San Luis Valley's Habitat Conservation Plan (SLVHCP) which seeks to preserve, protect and enhance these species habitats. Streamflows and appropriated use are closely monitored by Colorado's Department of Water Resources (and users like the City). The HCP also includes yearly monitoring of habitat conducted by the Rio Grande Water Conservation District (RGWCD). Water diverted to Cattails Golf Course is reported monthly to DWR and RGWCD produces an annual report. Though upstream agricultural users have a much greater effect on streamflows, the data already collected can be used to analyze effects of the project on Rio Grande flows. Through water savings at

Cattails Golf Course, more of the City's surface water can be diverted to open spaces that sustain Cottonwood galleries and mature willows stands which are important habitat for the endangered species of birds mentioned above.

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

Cattails Golf Course can be characterized as a typical riparian Cottonwood gallery common in the southwestern United States. Even efficient irrigation will also benefit the hundreds of trees and native vegetation in the Course's footprint.

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

Yes, as described above water is the precious resource for the City from municipal supply and recreation considerations. Combined with agricultural use, water is arguably the biggest economic and ecological issue facing the Valley for the future. The City, under its current WEP, strives to be a leader in conservation and responsible water use. This project will clearly enhance this mission.

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

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

Demand for agricultural use, ranching and increased recreation are pressuring surface rights and the subsurface unconfined aquifer (San Luis Valley Aquifer, as defined in City of Alamosa Water Efficiency Plan pg. 9 - Appendix C) the City uses to unprecedented levels. The industries and water users are working together under a Colorado DWR subdistrict program (Division 3 Well Rules) to recharge the aquifer via carefully managed adjudication and monitoring of pumping and diversions.
"In March 2021, the Colorado Division of Water Resources Division 3 Well Rules and Regulations (well rules) came into effect, resulting in a mandate to achieve sustainable aquifer levels in the Rio Grande Basin. The Basin was divided into distinct geographic boundaries based on geology and aquifer dynamics, and each geographic subdivision has a unique aquifer level sustainability requirement, as specified in the well rules. While aquifers in some parts of the Basin are currently at sustainable levels, others, especially the unconfined aquifer in the west central San Luis Valley (most of which is located in Groundwater Management Subdistrict #1), are at a substantial deficit. The Colorado State Engineer has been tasked with monitoring the declining aquifer levels and has warned that "the state engineer will be put in the unenviable, but required position of curtailing groundwater diversions from Subdistrict 1 wells if the Subdistrict does not remedy the storage deficit." (Source - Rio Grande Implementation Plan; Rio Grande Basin Roundtable) The takeaway from these State mandates is that water conservation is a top priority for the livelihood of the entire region.

- 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.
N/A

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

The project will efficiently distribute a diminishing resource crucial to our community and region. Reduced supply both historical and projected have led to local, regional, state and federal recommendations around conserving water. Using as little water as possible on a popular public amenity that benefits the region in a variety of ecological, economic, and recreational means directly addresses the concerns stated above and mitigates shortages.

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

The conserved water will allow for extended recreational use of Blanca Vista pond and reduced diversion. In theory, reduced diversion help deliveries obligated under the Rio Grande Compact

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

These systems are already in place as the regular delivery channels

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

14.2 acre feet

Other project benefits. Please provide a detailed explanation of the project benefits and their significance. These benefits may include, but are not limited to, the following:

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

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

The Cattails golf course is irrigated both via raw surface water diverted for the back nine (Independent Ditch - Rio Grande) and subsurface raw water (well) for the front nine. The entire Rio Grande Basin has been in a sustained drought and in particular, the San Luis Valley is already experiencing increased drought, with several of the driest years on record occurring in the last twenty years. Extended drought has a ripple effect on the community, impacting agricultural producers, recreation opportunities, and harming fish and wildlife, as available water cannot support historic aquatic and riparian habitat. The region is also vulnerable to flooding; drought years have encouraged construction in the historic floodplain, and sedimentation and erosion have reduced channel capacity upstream of and through the City of Alamosa. Current Drought conditions can be seen here:
(https://www.drought.gov/states/colorado/county/alamosa).
There is no doubt increasing efficiency of the irrigation of the Back 9 of Cattails Golf Course helps address the impacts of climate change. Less water diverted means more water for senior water rights and potentially more delivered under the Rio Grande Compact.
To quote the Bureau of Reclamation's own SECURE Water ACT 2021 report referenced in the question: "In the Rio Grande Basin, drying wetlands could diminish wildlife watching opportunities, drought conditions could lead to reduced game populations for hunters, and changes in runoff flow and timing could shorten fishing seasons in headwater streams." This project directly addresses some of these issues given the Back 9 water source (Blanca Vista Pond) is also a public fishing area and the Course is adjacent to protected wildlife habitat under the SLV Habitat Conservation Plan

- Does this proposed project strengthen water supply sustainability to increase resilience to climate change?

Yes, see above answer

- Will the proposed project establish and utilize a renewable energy source?

No

- Will the project result in lower greenhouse gas emissions?

Yes, will pumps running much less and less vehicle trips around the course, greenhouse gas emissions will be lowered. These calculations are provided in the relevant sections of this application.

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

- Does the proposed project directly serve and/or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to: public health and safety through water quality improvements, new water supplies, new renewable energy sources, or economic growth opportunities.

Most of the play at Cattail Golf Course is local players. Many Alamosans struggle economically, as the median household income is just $34,840; roughly half of the Colorado household median income. Rates are kept relatively affordable and the course has seen an increase in play since the beginning of the Covid pandemic. Yet tourism and visitor play is important to every golf course. The dual benefit of an affordable recreational amenity for residents and a quality Golf Course for visitors is crucial to our isolated community. Enhancing course conditions through efficient irrigation will enhance economic development through greater revenue and more visitor play. Cattails has experienced record revenue the last two years as evidence of these trends.

- If the proposed project is providing benefits to a disadvantaged community, provide sufficient information to demonstrate that the community meets the disadvantaged community definition in Section 1015 of the Cooperative Watershed Act, which is defined as a community with an annual median household income that is less than 100 percent of the statewide annual median household income for the State, or the applicable state criteria for determining disadvantaged status.

Census Tract 9602 in Alamosa, CO is designated as an Area of Persistent Poverty as indicated by the Areas of Persistent Poverty Project (APP) and Historically Disadvantaged Community (HDC) Status Tool found on the Transportation.gov website. This census tract includes North Alamosa (within the City of Alamosa) and the unincorporated community of East Alamosa.
https://datahub.transportation.gov/stories/s/tsyd-k6ij

- If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.

The San Luis Valley is an 8,000 square mile, six-county region with a population of roughly 46,000. It is routinely cited as one of the most socioeconomically depressed areas of the state. According to the San Luis Valley Development Resources Group's 2019 Annual Comprehensive Economic Development Strategy (CEDS), unemployment in the valley consistently trends above the state average and the per capita income is 30% lower than the state average. Over 15% of households in the region live below the

poverty level. Over 47% of households identify as Hispanic and 30% speak Spanish at home.
Located in south-central Colorado, Alamosa is the largest full-service city in the San Luis Valley with a population just over 9,000. The City operates as a council-manager form of government with six council members and a mayor. The Alamosa community has an unemployment rate exceeding 8% with a median income of approximately $28,600. Minorities comprise approximately 64% of the total population. Over 27% of the population is living at some level of defined poverty. The city of Alamosa is among only a handful of communities across the nation that has been at this level of poverty for over 25 years.
However, the Alamosa economy is very resilient and has continued a long term trend of slow growth. Record visitation at Great Sand Dunes National Park, a reinvigorated Downtown and growing outdoor recreation industry in recent years has also increased sales tax dollars. The health of the golf course and revenue affects the local economy just as any revenue generating business does.It is also a component of the City's "new economy;" supplementing agriculture, healthcare, the University and other key economic sectors. Hence, the entire population benefits from a vibrant recreational amenity such as Cattails Golf Course, not just the patrons.

Historically Disadvantaged Community
According to the Areas of Persistent Poverty Project (APP) and Historically Disadvantaged Community (HDC) Status Tool, Census Tract 9602 in Alamosa, CO is not designated as a historically disadvantaged community.
https://datahub.transportation.gov/stories/s/tsyd-k6ij

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

    - Does the proposed project directly serve and/or benefit a Tribe? Will the project increase water supply sustainability for an Indian Tribe? Will the project provide renewable energy for an Indian Tribe?
      N/A

    - Does the proposed project directly support tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety through water quality improvements, new water supplies, or economic growth opportunities?

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

    - Will the project assist States and water users in complying with interstate compacts?

Potentially yes, since more water left in the Rio Grande would be delivered from Colorado to New Mexico under the Rio Grande compact when the source pond is full.

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

Covered previously - Recreation being the primary benefactor

    - Will the project benefit a larger initiative to address sustainability?

Yes, it is the top recommendation in the City's WEP and listed in the Rio Grande Basin Improvement Plan as a recommended project.

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

Not directly

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

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

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

      N/A
    - Have the farmers requested technical or financial assistance from NRCS for the on-farm efficiency projects, or do they plan to in the future?
    - If available, provide documentation that the on-farm projects are eligible for NRCS assistance, that such assistance has or will be requested, and the number or percentage of farms that plan to participate in available NRCS programs.
    - Applicants should provide letters of intent from farmers/ranchers in the affected project areas.

- Describe how the proposed WaterSMART project would complement any ongoing or planned on-farm improvement.
    - Will the proposed WaterSMART project directly facilitate the on-farm improvement? If so, how? For example, installing a pressurized pipe through

WaterSMART can help support efficient on-farm irrigation practices, such as drip-irrigation.

OR

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

- Describe the on-farm water conservation or water use efficiency benefits that are expected to result from any on-farm work.
  - Estimate the potential on-farm water savings that could result in acre-feet per year. Include support or backup documentation for any calculations or assumptions.

- Please provide a map of your water service area boundaries. If your project is selected for funding under this NOFO, this information will help NRCS identify the irrigated lands that may be approved for NRCS funding and technical assistance to complement funded WaterSMART projects.

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

E.1.5.1. Subcriterion E.1—Project Planning

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

Provide the following information regarding project planning:

1. Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, SOR, Drought Contingency Plan or other planning efforts done to determine the priority of this project in relation to other potential projects.

Improved efficiencies at the golf course was one of the project needs identified in the 2022 Rio Grande Basin Implementation Plan (see Exhibit G) as 7RG-2020-0007 Producing a Master Infrastructure Plan for the City of Alamosa - Phase 1. A diverse group of stakeholder's comprise the Basin Roundtable that produced the recommended projects. Also, it is listed as the first priority project in the City of Alamosa Water

Efficiency Plan (WEP - See Exhibit C). The plan can also be accessed via the following link:
https://cityofalamosa.org/departments/city-planning/water-efficiency-plan/
Both documents are the premier guides for water managers in the City and region.

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 purpose of this Water Efficiency Plan (WEP) for the City of Alamosa (City) is to provide a guidance document to evaluate, prioritize, and implement water efficiency activities. The goals developed during this planning process are:

- to provide public education on water efficiency to the City
- to lower peak day water usage
- to assess new development for water use
- to reduce water consumption in parks by improving irrigation infrastructure
- to increase public awareness and support for the water efficiency activities
- to reduce metered residential water usage to 100 gallons per capita per day (gpcd)

Two examples of programs implemented include several landscape demonstration areas where xeric plants and drip irrigation have replaced turf grass. A comprehensive resident education campaign is on-going in conjunction with mandatory watering restrictions. Analyzing and reducing the use of water by Cattails Golf Course is the top recommendation of unaccomplished tasks in the plan.

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

Water conservation is extremely important across Colorado, but Alamosa and the San Luis Valley (the Valley), consistent with its “high desert” classification, is in a constant state of water shortage, with water supplies in the Valley severely over-appropriated. The City of Alamosa has demonstrated a long-term commitment to wise-water stewardship and responsible and efficient use of its water resources through it’s WEP. The City has been successful in implementing a number of water conservation measures, and has now identified future measures that particularly focus on education and outdoor water efficiency to reduce water demand and provide reasonable cost savings for water utility customers. Optimizing the water use of the Cattails Golf Course was the top priority water efficiency activity project recommended in the 2020 WEP and fits perfectly within the City and region’s role of conserving water while balancing economic and quality of life considerations.

The project's status as a recommended endeavor in the Rio Grande Roundtable BIP (Basin Implementation Plan) also shows a directly identified strategy for addressing adaptation to climate change in a completed Basin study.

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

Applications that describe a detailed project implementation plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.

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

The project involves four distinct phases. Design, Procurement/Contractor Selection, Installation and Testing/Balancing. Preliminary designs have been completed. It is estimated this project can be completed in around six months from design to completion. Though procurement and contractor availability have been challenging for everyone the last couple years. With a proposed 2024 timeline, that should give the City plenty of time to pre-qualify contractors, assess material availability and properly plan for the project.

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

There are no permits required for this project beyond Bureau of Reclamation requirements.

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

A preliminary redesign of all 18 holes was completed by Larry Rodgers Design Group Inc. in 2013-14. The City contracted with the firm for the 2019 design of the front 9 replacement which was subsequently executed and Rogers Design also completed preliminary designs for the back 9 at this time (see exhibit D). Final designs would be contracted if and when a notice to proceed is issued.

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

The City's procurement policy will require a bid process since the project is over $50,000. The City Council would need to approve the expenditure and recommendation

of the contractor from City Staff. The design firm does not do installation so a separate contractor will install the system based on the bid process.

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

See attached Appendix E for a detailed Proposed Project Timeline. The project itself and the timeline for the environmental and cultural compliance has been discussed with the Environmental Lands Division of the Albuquerque Area Office (AAO) of the Bureau of Reclamation. Staff indicated most likely a categorical exclusion would apply to any NEPA or 404 permitting related to the project given the footprint of the Course is not changing and no adjacent habitat will be affected. If the grant were awarded, the City will reach out to the AAO to ground-truth these statements

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

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

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

Support for the project is broad-based and extensive. Organizations such as the Rio Grande Water Conservation District, Alamosa Convention and Visitors Bureau, and the Colorado Division of Water Resources and the Cattails Golf Club Advisory Board have expressed their support in the attached letters. Alamosa City Council will express their support via an official Resolution. Each of the community partners listed has a strong and collaborative relationship with the City. Some will be more involved in the project by the nature of the activity. For example, the State DWR monitor's surface water allocations and use so they will be highly involved in project evaluation.

- What is the significance of the collaboration/support?

The City and the Valley are known for their strong collaboration and partnerships. In a community and region with persistent poverty, scarce natural resources, and a challenging climate; we have evolved to work together and the results really are remarkable. From an ever-increasing vibrant downtown and improved community health

to a remarkable 25-mile trail system; the partners listed are true collaborators and the synergy of collaboration is evident.

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

It would be an assumption to say yes but it is fair to say Alamosa, as the hub of the region, does strive to be a leader in community development and balanced local government services. One example would be if other area golf courses chose to upgrade their irrigation systems. An example of this is the City of Monte Vista recently built an Ice Rink a few years after the City of Alamosa. Also, by accomplishing recommendations of the City's WEP, it enhances credibility with the public and increased awareness and compliance usually result from the user side.

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

E.1.7. Evaluation Criterion G—Additional Non-Federal Funding (4 points)

$$\frac{\text{Non-Federal Funding } \$800{,}000}{\text{Total Project Cost } \$1{,}300{,}000} = .62$$

E.1.8. Evaluation Criterion H—Nexus to Reclamation (4 points)

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

- Does the applicant have a water service, repayment, or operations and maintenance (O&M) contract with Reclamation?
  N/A

- If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?
  N/A

- Will the proposed work benefit a Reclamation project area or activity?

Yes, in a sense regarding the Rio Grande Closed Basin Project. The Closed Basin project allows the City and other Independent Ditch rights holders the ability to divert some of this project's water intended to fulfill the Rio Grande Compact. Hence, pumping less water indirectly benefits the Closed Basin Project.

- Is the applicant a Tribe?

No

Performance Measures

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). For more information calculating performance measures, see Appendix A: *Benefit Quantification and Performance Measure Guidance.*

The difference in water applied to the Back 9 is the best objective measure of benefits. To account for variability in weather, an average over five years or so would be even better. A rolling average is used by the State DWR to assess the City appropriated 110 acre feet. The water is electronically metered for accuracy so the City will report yearly reductions as often as necessary.

Further metrics that we will use for success include additional acre feet of surface water (water saved through back 9 efficiencies) that will be diverted to City of Alamosa ranch, wetlands, ponds, and open spaces that provide valuable habitat for wildlife.

Furthermore, some ancillary benefits will include less staff hours spent manually controlling the back 9 sprinklers, less gallons of fuel driving to manual controls, and a golf course in better condition which is an important quality of life and economic driver for the City of Alamosa.

PROJECT BUDGET

Budget Proposal and Funding Plan

Table 1.— Summary of Non-Federal and Federal Funding Sources

See Attachment “WEEG FY23 Budget Proposal”.

Table 2.—Sample Budget Proposal Format

See Attachment “WEEG FY23 Budget Proposal”.

Budget Narrative

The total anticipated cost for the Cattails Golf Course Irrigation Project is $1,300,000. Of this total cost, the City is committing $800,000 in cash towards the project. We are requesting $500,000 from the Bureau of Reclamation to complete the project.

As the “front 9” irrigation system has recently been replaced, reliable cost estimates have been obtained for the completion of the “back 9”. Granted, supply chain shortages, a tight labor market, and inflation have drastically increased the cost of updating the back 9 system.

The attached “Detailed Project Budget” breaks down associated costs into four categories: (1) Irrigation Design, (2) Construction Mobilization, (3) Construction Materials, and (4) Construction Labor. City staff have had recent conversations with irrigation design and construction firms to determine realistic cost estimates as presented in this grant application.

Letters of Commitment

ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

- *Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.*

Golf Irrigation replacement projects are pretty remarkably low-impact when done correctly. For example, play remained open on the front 9 when that project was completed in 2019. Segmented zones allow work to be done on a few holes at a time, boring-type trench devices, and experienced crews are able to minimize ground disturbances with the right equipment. The impact on air, water and animal habitat is negligible. Only experienced and highly trained firms will be pre-qualified to bid on the project.

- *Are you aware of any species listed or 9roposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?*

The project and Course itself do not contain endangered species habitat.

- *Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “Waters of the United States?” If so, please describe and estimate any impacts the proposed project may have.*

  N/A

- *When was the water delivery system constructed?*

The original system was constructed 1991-1993

- *Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.*
  N/A

- *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.*
  N/A

- *Are there any known archeological sites in the proposed project area?*
  N/A
- *Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?*
  No

- *Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?*
  N/A

- *Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?*

Yes, the City is adept at treating noxious weeds and plans on mitigating any spread of existing noxious species. An integrated approach is used throughout the City including mechanical, chemical and even biological controls. For example, The Back 9 contains an area treated for knapweed with wasp larvae that control growth. The last couple of years the City has made quantifiable reductions in such species as Thistle, Pepperweed and Knapweed. We will control any spread from ground disturbance (usually on the Course perimeter) as they manifest.

REQUIRED PERMITS OR APPROVALS

None

LETTERS OF SUPPORT

Letters of support from the following entities are included in Appendix/Attachment __:

1. Colorado DWR Region 3
2. Alamosa Visitor and Convention Bureau
3. Rio Grande Water Conservation District
4. City of Alamosa Water Smarts Committee
5. Cattails Golf Course Advisory Board

LETTERS OF PARTNERSHIP

Letters of partnership from the following entities are included in Appendix/Attachment __:

1.

OFFICIAL RESOLUTION

Note: An official City Council Resolution in support of the project is scheduled to go before City Council on August 17th, 2022 and will be submitted within 30 days of the application submission. Review staff absences and timing of City Council meetings drove a slight delay in this process.

OVERLAP OR DUPLICATION OF EFFORT STATEMENT

No overlap of duplication of efforts exist for this project.

CONFLICT OF INTEREST DISCLOSURE

No conflict of interest exists in this proposal

UNIFORM AUDIT REPORTING STATEMENT

City Finance staff is well aware of this requirement and is preparing to change to a single audit should this project or a combination of grants or other Federal funding push us over the $750,000 threshold.

CERTIFICATION REGARDING LOBBYING

UNIQUE ENTITY IDENTIFIER AND SYSTEM FOR AWARD MANAGEMENT

Unique Entity ID
PVMEN7DYP488