Bureau of Reclamation WaterSMART Program
Planning and Project Design Project FY 2024

Town of Johnstown Water Master Strategy Plan Project

Applicant Contact:

Matt LeCerf, Town Manager
450 S. Parish Are
Johnstown, CO 80534
970-587-4664
mlecerf@johnstownco.gov

Project Manager:

KC Young, P.E.
2809 E. Harmony Rd
Ft. Collins, CO 80528
970-377-3602
Kyoung@jub.com

Table of Contents

Technical Proposal and Evaluation Criteria

Executive Summary

Applicant Info: The Town of Johnstown

Date: May 17, 2024

Applicant Name:
Matt LeCerf, Town Manager
450 S. Parish Ave.
Johnstown, CO 80534-9078
mlecerf@johnstownco.gov
970-587-4664

Project Manager:
Steve James, P.E.
2809 E. Harmony Rd.
Ft. Collins, CO 80528
sjames@jub.com
970-377-3602

Applicant Category: Category A, Local Authority with Water Delivery Authority

Eligible Project: Task A: Water Strategy Project

Project Funding Request: $163,200

Total Project Cost: $326,400

Project Summary

A one-paragraph project summary that provides the location of the project, a brief description of the work that will be carried out, any partners involved, concerns in your project area, and how this project is expected to help alleviate impacts of those conditions, and identification of any planning documents that support the project. This information will be used to create a summary of your project for our website if the project is selected for funding.

The Town of Johnstown (Town) is proposing to create a comprehensive Water Master Strategy Plan (Plan). Their current Water Master Plan was last updated in 2015. At that time, much of the planning focus was to address existing system deficiencies. Since then, water supply reliability, with a significant population boom in Northern Colorado, has caused the Town to face increased risk to water supply and system resiliency. A long-term strategy is needed that addresses the needs of Johnstown. The updated Waster Master Strategy Plan will analyze the system's delivery capacity, infrastructure vulnerabilities, and drought and climate change resilience. Stakeholder input will be crucial in guiding solutions for water conservation, infrastructure improvements, and future planning.

Length of Time and Estimated Completion Date

State the length of time and estimated completion date for the proposed project (month/year).

This project is ready to begin once funding is secured, with a targeted completion by the end of May 2027.

Federal Facility

Whether or not the proposed planning or design effort is focused on a Federal facility or will involve Federal land.

The proposed project is not located or focused on a Federal Facility or will involve Federal land.

Project Location

The proposed planning project is located within the city limits of Johnstown, Colorado. Johnstown is located mostly in Weld County, with a small portion of the Town located in Larimer County. The project latitude is 112°4’37” , and the longitude is 41°39’4”. See Attachment A: Project Location Map.

Project Description

Provide a more comprehensive description of the technical aspects of your project, including the specific activities to be accomplished and the approach to complete the work. Proposals should address all project-specific requirements (e.g., planning steps, project components, design products to be developed.

Background:

The Town of Johnstown, Colorado, is part of both Weld and Larimer counties and is situated in the fastest-growing region in Northern Colorado. The Town is strategically located between Fort Collins, Loveland, and Greeley, Colorado, less than two hours from Rocky Mountain National Park. Johnstown has a beautiful view of the Rockies' front range and a historic downtown with unique businesses and services. With approximately 19,500 residents, Johnstown has a service area of approximately 48 square miles.

Johnstown has been primarily a bedroom community for many years, but that trend is changing. The Town is broadening its water and wastewater infrastructure to prepare for the increased population. Along with several road and drainage projects in progress, it is a transformational time for the Town of Johnstown as they continue to improve and expand its infrastructure capabilities to meet the community's needs.

An updated Water Master Strategy Plan will be a tool to evaluate the existing system and identify system components needing further improvement. The Plan will include a detailed improvement schedule, including trigger points for future expansion of the new supply and pumping facilities, expanded storage, including a future storage tank, and transmission pipe sizing and looping.

This Plan is intended to be a "living" document that will change as the system needs to change. The last time the Plan was updated was in 2015 and is now obsolete. The planning period for this update is specifically for the next twenty years. Still, it also examines anticipated conditions at system build-out to help secure long-term water supply and system planning. The Town's vision is "to connect the community with opportunity." As Johnstown continues to thrive, the Town's priority remains to enhance its residents' and businesses' quality of life. They want to hold firm to their small-town community identity while enjoying the benefits of big-town opportunities.

Public Outreach and Partnership Planning

A kickoff meeting will start the engagement with shareholders and community partners at the onset of updating the Water Master Strategy Plan. This will include an overview of the Plan goals, objectives, and schedule.

- Develop a public engagement plan that describes how the public will be involved and when public comment will occur throughout the study and design project
- Outreach to potential partners and stakeholders, which may include:
  - Consolidated Home Supply Ditch & Reservoir Company-The Town is a large shareholder and receives the majority of its public water supply from this system
  - Consolidated Hillsborough Ditch Company. Irrigation and supply ditch that passes through Johnstown. The Town owns shares in the ditch and could benefit from a raw water supply pipeline connecting the ditch to the water treatment plant.
  - Little Thompson Water District-the main interconnect with Johnstown's water system.
  - Two fire departments have service areas within Johnstown- Front Range Fire Rescue and Loveland Fire Rescue Authority.
  - Neighboring municipalities' water systems
  - Colorado Department of Public Health and Environment
  - Publish draft document for review and comment by stakeholders

- Review stakeholder input with the Town and add the Outreach Summary section to the Water Master Strategy Plan, including a description of how input was solicited, the input received, how the input was addressed in the course of the planning activities and in developing the strategy, and future outreach plans for future project phases.

Analysis, Scoping, and Planning Activities

Water Production and Consumption
The SCADA information from the Town's water treatment plant (WTP) production, pumps, and tank levels will be utilized to analyze overall trends and seasonal water use. Water use will be updated based on records from 2018 to 2023 to determine per-acre demands for existing land uses and project 20-year and ultimate build-out demand for the system.

Land use and population projections from the Town Planning Department will be used to update the ultimate service area system needs and capacity. The Town will evaluate the last five years of water treatment plant production data and geo-located water meter data to determine water usage trends and peaking factors on a per-connection basis. Johnstown will also use this data to analyze water demand for different land uses. These water production and meter record data will also be used to estimate unaccounted-for water for the system, which can be used in the water loss evaluation to seek grant funding for meter replacements.

Description of the Existing System
The existing system description will be updated based on available mapping, record drawings, and information from Town staff. This section will include updated information, as available, for raw water supply, treatment facilities, water storage tanks, pumping systems, pressure-reducing valves, and existing distribution piping based on the Town's most current system data (WaterCAD, GIS, Excel, AutoCAD, and other readily available existing computer formats).

Water Supply Evaluation
This section of the Plan will update and evaluate the current, 20-year, and build-out supply needs for the water system. Existing and 20-year demands are assumed to be already done/in progress between the ongoing WTP project and raw water supply projects. The Plan will incorporate a summary of the existing and 20-year demands and evaluate potential build-out demand based on projected land uses provided by the Town. This section will include a summary of Town water rights and their adequacy to meet future demand, treatment needs, and potential WTP sitting.

Water rights
Water rights that are held and potential issues will be discussed, including legal mechanisms for transferring water and legal constraints on existing water rights. A discussion will include quantifying of the Town's water rights, consumptive use, diversions, and return flows to determine how much water is available to meet water supply needs while avoiding impacts to downstream water users.

Water Storage and Emergency Water Supply
The Plan will evaluate the storage needs for each pressure zone using the town-defined fire flow and emergency storage criteria. The Town will partner with neighboring water systems which are interconnected with Johnstown’s water system, including the Central Weld County Water District, the City of Greeley, and the Little Thompson Water District, for emergency demand possibilities and the potential to share water in times of drought. The analysis will evaluate the impacts of water storage at specific areas within the Town for both existing and future needs, including the existing North and South Tanks, anticipated future West Tank, WTP site storage, and any other potentially identified opportunities for

expanded storage. Recommended water storage volumes and improvements will be summarized along with an Opinion of Probable Construction Cost for each of the recommended projects and trigger points for the construction schedule based on demand.

Distribution System
The Town's existing hydraulic model will be reviewed and updated, including an extended period simulation (dynamic model). The Town's recently compiled GIS database information will be used to update the model with waterlines, pumps, and tank storage facilities. Current operational data will be provided by the Town and included in the model. Assumptions for water demand will be verified using summer and winter demands using Town-provided water and pump meter records. The Town will provide current land use and projected development for future projections.

Once the updated existing system is in the model, the model will be calibrated using fire flow tests, existing data from the Town SCADA system, and data logger pressure monitoring. The Town will work with a consultant to review model results and verify that the model reflects actual system behavior. They will also use this date as a calibrated model to examine system bottlenecks under peak summer and low winter demand conditions and will work with the Town to determine areas of high historical maintenance. In general, the hydraulic model will be used to evaluate the following:

- Existing North and South Tanks and control valve settings
- Impact of anticipated future West Tank and trigger point for construction
- Distribution system bottlenecks and transmission line sizes
- Future distribution system line sizes and locations in growth areas based on anticipated land use

The updated growth projections within the system boundary will be used to model "build-out" conditions and a build-out system plan. If the Town chooses, planned improvements can also be designated as either required by growth or system maintenance for use in a rate study. A list of recommended improvements to the distribution system will be developed along with an Opinion of Probable Construction Cost for each.

Rate and Impact Fee Analysis
The existing user rate and fee structure will be evaluated to determine the ability to meet operational costs, annual maintenance, and repair costs, and identified capital improvements. Estimated project costs for capital improvements will be allocated between user rates and development impact fees based on estimated beneficial use. Annualized water system budget will be balanced with projected income from rates and impact fees to determine a rate/fee schedule, with the goal of providing funding for annual operational costs and necessary capital improvements.

Drought Resiliency Consideration
Johnstown realizes that a drought resilient Master Strategy Plan is critical to the Town adapting to the changing climate. System drought preparedness will be evaluated, and improvements will be identified that can improve the Town's long-term resiliency to drought and climate conditions. This evaluation will provide a basis for potential grant funding applications to help fund capital improvements, as noted in the following Capital Improvement Plan.

Capital Improvement Plan
Recommended capital improvement projects and opinions of capital and life-cycle costs (based on 2025 dollars) identified in the system analysis will be summarized and prioritized based on criteria to be developed with the Utilities Department. These criteria may include improvement of local system pressures, mitigating water delivery risks to current and future water users, serving new development, elimination of major bottlenecks, routine water main replacement, water conservation, and efficiency improvements (such as lining or piping canals), or improvement of fire flows that present the greatest potential risk.

Once prioritized, projects will be incorporated into a phasing plan and tied to projected system demands to help ensure the highest priority projects are implemented first. The phasing plans will be categorized as follows:

- Existing deficiencies and Year 0-5 improvements
- Year 5-10 improvement plan
- Beyond 10-year improvement plan – Replacement

Workshop to Evaluate Progress
Town staff will review missing data in a workshop to determine if any additional data needs to be collected. This workshop will address the extent and configuration of the system as well as discuss current high maintenance and problem areas of the system. This is expected to include existing system set points (storage tank elevation settings, pump start elevations, pump curves, the distribution system, PRV settings, etc.). This workshop will present a map of the system on the most current aerial photographs and topography available in order to summarize the existing infrastructure and to identify key system problem areas.

Development of a Water Master Strategy Document

Review Criteria
Johnstown will examine and establish the review criteria to coincide with the Town's long-term goals, including production, operational storage, emergency storage, and fire protection. This section will be reviewed with the Utilities, Planning, Engineering, and Fire Departments and with the Colorado Department of Public Health and Environment to confirm or update the criteria as necessary. A summary will follow the items outlined in the Plan and will include the recommended improvements, budgetary costs, and Capital Improvement Plan.

Discussion of Lessons Learned
The Plan will include a section will describe how the development of the strategy benefitted the Town, identify lessons learned through the course of developing the strategy, evaluate stakeholder and public input, and identify any feedback for Reclamation on the process or program.

Culmination of Planning: Develop a comprehensive Water Strategy Plan, integrating findings, analysis, and insights from project phases. This Plan will serve as a roadmap to ensure long-term water resilience and optimize resource management for the Town.

Key Components: The Report will include:

- Summary of stakeholder and public engagement, demonstrating a collaborative approach.
- Clear presentation of identified problems, needs, and potential solutions, including a comparison of considered alternatives.
- Prioritized list of projects with maps, enabling data-driven implementation.
- Explanation of proposed taxes and fees by Unit, ensuring fiscal alignment with infrastructure needs.
- Detailed implementation strategy with steps for execution, including lessons learned to streamline future actions.

Next Steps Planning
A report section will focus on the next steps and implementation strategy for the processes and improvements noted in the Water Master Strategy Plan. Any need for project design or

engineering will be discussed, along with any information gaps and need for additional analysis. Applicable next steps to address permitting, environmental compliance, or legal requirements, financing needs or plans, and/or water rights or infrastructure issues will be addressed. Project performance monitoring parameters will be outlined.

Community Access and Transparency: A presentation of the Draft Water Strategy Plan will gather feedback from Johnstown, stakeholders, and the public. After incorporating relevant comments, a final Plan will be submitted to Reclamation for review and approval by the Town. The finalized Plan will be publicly available on the Johnstown website.

Evaluation Criteria

Evaluation Criterion A. Project Benefits (35 Points)

In responding to the following criteria, please identify the water supply reliability issues in the area of your proposed planning or design project, and how your project will help address those issues.

- Identify the threats to water supply, water quality, and river-based ecosystem or watershed health within the geographic area of the planning or design project. This could include threats from drought conditions, climate change vulnerabilities, changes to stream conditions or water quality, significant water shortages, or other threats to the environment or watershed health. Your response should include:
  - Information regarding past, current, and projected threats to water supplies, water quality (including surface or ground water), or river-based ecosystem or watershed health.
  - Documentation supporting your response (e.g., the Drought Monitor, referenced statistical data, excerpts from or citations to relevant studies or analyses, local climate change data, etc.).

Issues Causing Potential for Water Supply Scarcity

Drought and Climate Change

The National Oceanic and Atmospheric Administration (NOAA) have found that temperatures in Colorado have risen an estimated 2.5° F since the beginning of the 20th century. Temperatures area projected to rise drastically under both the higher and lower emissions pathways. See Figure 1: NOAA Colorado Climate Summary. They also found that warming has occurred in all four seasons. The hottest year on record was 2012, with an average temperature that was 3.4°F above the long-term average. Future projected changes in annual precipitation in tandem with warming temperatures is projected to reduce the overall water availability in the state that depends on snowmelt and runoff into the four major rivers.

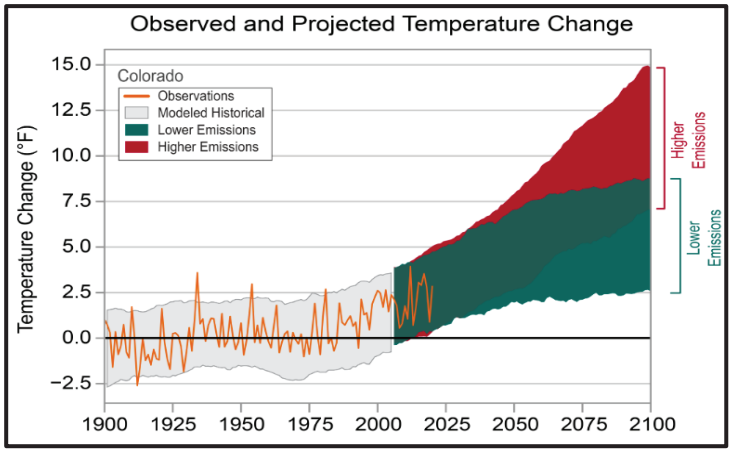

Figure 1: NOAA Colorado Climate Summary

Droughtmonitor.gov found that as recently as November 2022, 53.82 percent of Weld County and 44.76 percent in Larimer County were experiencomg Extreme drought conditions. See Figure 2: Weld and Larimer Counties Drought Conditions. Although Weld and Larimer Counties see precipitation in the fourteen to seventeen inch ranges, the projected increase in annual temperatures, reduction in snowpack, and spring runoff occuring earlier in the spring, have impacted the effects of climate change in the area around Johnstown.

Plan will address system-wide drought preparedness will be evaluated, and improvements will be identified that can improve the Town's long-term resiliency to drought and climate change.

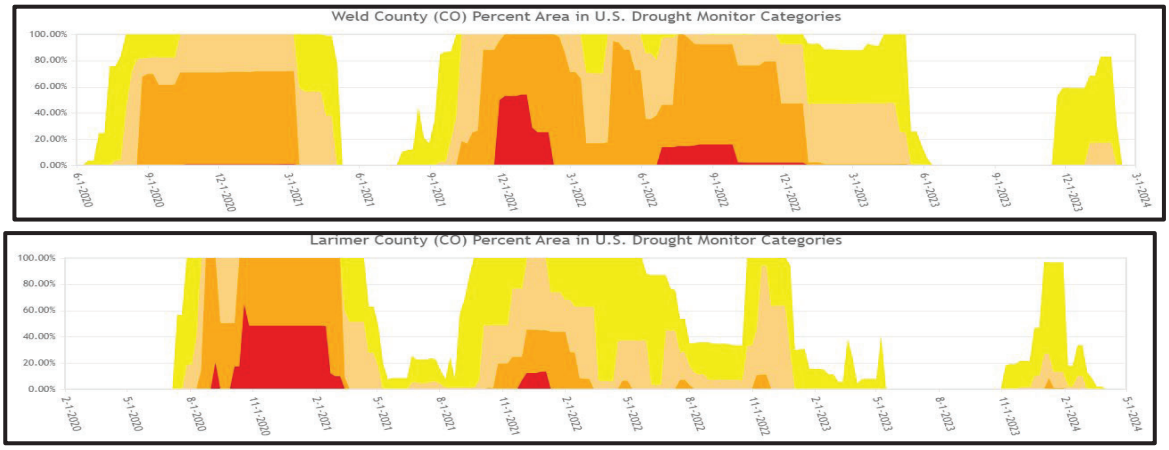

Figure 2: Weld and Larimer Counties Drought Conditions

Growth

Since 2000, the Town of Johnstown has seen its population grow seven times larger than it was. New development at I-25 and Highway 60 could soon house more people than what the Town's entire population was in 2000. The Town has seen and will continue to see significant growth, and with these developments, it has also annexed several thousands of acres of land into its community.

The current and projected growth will significantly impact the existing water system but also present an opportunity to improve the system over time. Town staff have been evaluating growth impacts on the system and making improvements on a development-by-development basis. As the total number of developments and potential new connections has risen, the Town has identified the need for more comprehensive planning to determine developments' impacts, develop a long-term plan for the system, and identify and prioritize critical projects and their anticipated costs. The proposed Water Master Strategy Plan will assist the Town to adapt to the growth using the results of analyses, public input, and long-term resilience in mind.

Lack of System Resilience

The Town of Johnstown currently lacks a redundant water source, adequate water storage, adequate pipeline sizing, capacity at the water treatment plant, and the outline of how to respond effectively. The project will provide the framework for Johnstown to create an infrastructure and capital improvements plan that will address the following:

- ✓ Fire suppression.
- ✓ Need of storage tank
- ✓ Adequate pipeline sizing
- ✓ Need for additional water treatment plant capacity
- ✓ Need for and availability of alternate water sources

Supporting Documentation:

- US Drought Monitor: https://droughtmonitor.unl.edu
- NOAA Colorado Climate Summary: https://statesummaries.ncics.org/chapter/co/
- NOAA National Center for Environmental Information https://statesummaries.ncics.org/chapter/co/
- BOR Water Reliability in the West 2021 SECURE Water Act Report: https://www.usbr.gov/climate/secure/docs/2021secure/2021SECUREReport.pdf
- Attachment G: Reclamation West-Wide Climate Assessments: Hydroclimate Projections:

- Attachment B**:** Johnstown Strategic Plan, 2023-2032 https://johnstown.colorado.gov/sites/johnstown/files/documents/Town%20of%20Johnstown%20Strategic%20Plan%20-%20FINALV2.pdf
- Attachment C: Johnstown Water System Master Plan, 2015

- How do the threats identified in your response to the preceding bullet impact specific water uses or sectors in the geographic area of the planning or design project? Specific water uses or sectors could include agriculture, municipal water supplies (i.e., drinking water, public health and safety, etc.), hydropower or energy production, the environment, or watershed health (i.e., aquatic and riparian ecosystems, species, and habitat reliant on water supplies), Tribal ceremonial, commercial, recreational, or subsistence or fishing, tourism, river-based recreation, forestry, energy or threats to infrastructure or other sectors or water uses. Your response should include:
    - Information about the specific impacts to water uses or sectors resulting from supply reliability issues within the project area. Only address impacts to those specific water uses or sectors that are relevant to your project area.

Agriculture – the Town's water supply is stored in Lone Tree Reservoir, which also supplies irrigation and agriculture demand in the area. The water supply is conveyed to Johnstown's water treatment plant by a combination of a pumped buried pipeline as well as an open gravity ditch (Home Supply Ditch) which carries water to Johnstown Reservoir located within Town limits near the water treatment plant. Home Supply Ditch also carries water into Johnstown's boundaries for agricultural use.

Reliability for Culinary Water Users: Residents can expect a reliable source of clean water for their daily needs, along with potentially lower water bills due to conservation efforts. Businesses will have a stable water supply for operations, which is crucial for industries like hospitality, manufacturing, and car washes. The project will propose strategies for water conservation, and resiliency planning to ensure long-term water security for all sectors.

    - Provide supporting documentation for your response. For example, you could include support for economic impacts to specific sectors, support quantifying water shortfalls to specific sectors, data and statistics regarding fish populations, ecosystem or watershed health, fishing or recreation, records of water quality issues, excerpts or citations to studies or analyses, etc. If your project will address a specific water supply shortfall, please provide support and documentation of the specific shortfall to be addressed by your project.

- Home Supply Ditch: https://homesupplyditch.com/history
- Attachment B**:** Town of Johnstown Strategic Plan, 2023-2032 https://johnstown.colorado.gov/sites/johnstown/files/documents/Town%20of%20Johnstown%20Strategic%20Plan%20-%20FINALV2.pdf

- How will the planning or design project help address the threats to water supplies and water uses identified in your response to the preceding bullets? Your response should include:
    - Information about the benefits that you expect to result from your planning or design effort and the projects you are planning or designing, to the extent known. Only address the benefits that are applicable to your project.

This Water Strategy Plan proactively tackles the threats to water supplies within the region. By prioritizing drought mitigation, infrastructure improvements, and conservation strategies, the Plan will maximize water resources within the watershed. Modeling and data-driven analysis will guide investments to minimize water loss and support informed drought preparedness. Metering, updated rate structures, and fiscal planning promote efficient, sustainable water use to support both growing populations and healthy ecosystems. The resulting strategy will reduce vulnerability to drought, safeguard water quality, support the region's growing economy, and contribute to the health of the South Platte River Basin.

    - Which sectors or water uses will benefit from your planning or design effort – and the projects you are planning or designing - and how? For example, how will your project help attain any of the following: reduce the likelihood of conflicts over water; increase resiliency to drought and climate change; sustain agricultural communities; support instream flows for species, recreation, or water quality objectives; improve the condition of rivers, streams and other

water bodies for environmental values; improve reliability of drinking water; result in an action plan to improve water management; or lead to modernized water delivery infrastructure?

Residential: Homeowners would benefit from secure and reliable drinking water supplies. The plan could identify ways to improve water efficiency in homes, reducing costs and lessening the burden on the water system.

Commercial: Businesses like restaurants, hotels, and car washes all rely on a steady supply of clean water. The plan could address commercial water usage and identify opportunities for conservation. The largest industries in Weld County are manufacturing (18,470 people), retail (18,405 people), and healthcare (18,133 people). All of these industries require reliable water.

Agriculture: While Johnstown has a growing residential sector, agriculture is still a significant land use. The plan could explore synergies with the public water supply. Agriculture is a smaller industry around Johnstown, employing fewer people, but the crops, animals and the workers live in the area and rely on reliable drinking water. Almost half of the agricultural jobs employ less than 4 staff.

Industry: Any industry requiring water for production would benefit from a secure and sustainable water source. The plan could identify alternative water sources or water reuse strategies for industrial users.

  - Provide supporting documentation for your response, including referenced statistical data, excerpts or citations from studies or analyses regarding the results of similar projects, or other references.

- Data USA: Weld County, CO | Data USA
- Attachment B**:** Johnstown Strategic Plan, 2023-2032 https://johnstown.colorado.gov/sites/johnstown/files/documents/Town%20of%20Johnstown%20Strategic%20Plan%20-%20FINALV2.pdf

- Is the planning or design effort for the purpose of providing domestic water supplies to a Tribe, insular area, or disadvantaged community(ies) that do not have reliable access to water supplies?

N/A

- Does the planning or design effort involve the improvement of nature-based features? If so, please describe.

No, the planning project does not involve the improvement of nature-based features.

- Is the project for the purpose of meeting existing environmental mitigation or compliance obligations under Federal or State law?

No, the project is not for the purpose of meeting existing environmental mitigation or compliance obligations.

Evaluation Criteria B – Inclusion of Stakeholders, Stakeholder Support, and Previous Planning Efforts (25 Points)

Sub-Criterion B1: Task A - Water Strategy Grants

- Will the project help meet the water supply needs of a large geographic area, region, or watershed? If the project will not address the water supply needs of a large geographic area, why is the area significant and appropriate for the proposed planning activity?

While the project's primary focus is on the water system of Johnstown, it offers significant benefits and implications for a larger geographic area. The strategy indirectly improves water security and management practices throughout the entire watershed by addressing infrastructure vulnerabilities, promoting water

conservation through efficient water management strategies, and strategically aligning planning and resiliency with growth projections.

- If the project is supported by an existing water planning effort, please describe that effort. Planning efforts may include, but are not limited to, water management plans, water conservation plans, system optimization reviews, drought plans, watershed restoration plans, integrated regional water management plans, or other types of plans. (Note: if this project represents an initial planning effort, you may refer to an existing local, state, or regional Plan with a nexus to the project to satisfy this requirement).
    - Does the referenced Plan identify the project as a potential water management action?
    - If identified in a plan, how is the project prioritized in the Plan?
    - If not identified in the Plan, does the proposed project implement a goal or need identified in the Plan?
    - Was the referenced Plan developed or updated using a collaborative process with input from multiple and diverse stakeholders?
    - If the referenced Plan was not developed collaboratively, please explain why, for e.g., the planning effort was focused on a very small area or concerns internal to the applicant.

The Town of Johnstown developed their first comprehensive Water Master Plan in 2000 and updated that plan in 2006 and in 2015. The 2015 update focused primarily on existing system deficiencies and the rapid growth of the Town. Since the 2015 updates, Johnstown has altered their goals and objectives through their Strategic Plan, 2023-2032. The past Water Master Plans and the Strategic Plan do not list capital improvement projects specifically, but do outline Strategic Pillars that align with the proposed project to create a Water Master Strategy Plan through the following:

- ✓ Engage, inform, and involve the community.
- ✓ Develop resiliency plans and establish a local emergency management program for continuity of operations.
- ✓ Develop programs and partnerships that prioritize sustainability.
- ✓ Guide growth in the community through appropriate annexation, zoning, planning and land use.
- ✓ Perform a condition assessment of assets and infrastructure.
- ✓ Meet or exceed all State and Federal standards for water, sewer, and storm water.
- ✓ Create, update, and administer infrastructure plans and studies that prioritize resiliency and stability.
- ✓ Develop and implement maintenance programs to improve and extend the life of existing public assets.
- ✓ Improve accuracy of mapping systems to assist with maintenance and replacing of infrastructure.

Documentation:

- Attachment D: Johnstown Water System Master Plan, 2005
- Attachment B: Town of Johnstown Strategic Plan, 2023-2032: https://johnstown.colorado.gov/sites/johnstown/files/documents/Town%20of%20Johnstown%20Strategic%20Plan%20-%20FINALV2.pdf
- Attachment C: Johnstown Water System Master Plan, 2015

- Identify stakeholders in the planning area who have committed to be involved in the planning process.
    - Describe what sector(s) the participating stakeholders represent and how they will engage in this effort, e.g., will they be part of the planning committee, contribute funding or in-kind services, or otherwise engage in the planning process?
    - Provide documentation of the commitment by stakeholders to participate in the planning process. This could include letters from stakeholders committing to be involved in the planning process; such letters should explain what their specific interest is and how they plan to participate.
- Describe stakeholders in the planning area who have expressed their support for the planning process, whether or not they have committed to participate. Supporting documentation for this sub-criterion could include letters of support from stakeholders or a description of feedback from interested stakeholders.

Johnstown has a long history of working with stakeholders including,

- Consolidated Home Supply Ditch & Reservoir Company-The Town is a large shareholder and receives the majority of its public water supply from this system
- Consolidated Hillsborough Ditch Company. Irrigation and supply ditch that passes through Johnstown. The Town owns shares in the ditch and could benefit from a raw water supply pipeline connecting the ditch to the water treatment plant.
- Two fire departments have service areas within Johnstown- Front Range Fire Rescue (See Attachment E: Letter of Support), and Loveland Fire Rescue Authority.
- Neighboring municipalities' water systems
- Colorado Department of Public Health and Environment
- Little Thompson Water District

The Front Range Fire Rescue included a Letter of Support, while other partners have been included in discussions around the creation of a Water Strategy Master Plan. The Colorado Department of Public Health and Environment, Weld County, and the Little Thompson Water District have voiced their support of creating an efficient water supply, creating a capital improvements list, and contributing to the project's success through participation in meeting, and alignment with the state requirements. Other partners, such as the Consolidated Home Supply Ditch & Reservoir Company and Consolidated Hillsborough Ditch Company have been long-term partners in maintaining a quality water supply to the region. These partners, and the public have been included in past planning efforts and will be participants in the proposed project.

- For tribal strategies or plans that will be developed collaboratively with multiple tribal interests, but do not include collaboration with external entities, please provide explanation as to why collaboration with entities external to the Tribe will not occur in the development of the strategy or Plan.

N/A

- Describe what efforts the applicant will undertake to ensure participation by a diverse array of stakeholders in the development of a plan (or plan update

Johnstown will identify key stakeholders during the Public Outreach and Partnership phase of the project. Efforts to engage stakeholders will include targeted personal outreach and continuation of ongoing collaboration. The public will be engaged through efforts including public announcements, information posted on the Town's website, flyers, local media and newspapers, and mailers. The consultant and Town staff will prioritize communication with all stakeholders and the public throughout the project.

- Is there opposition to the proposed planning effort? If so, describe the opposition and explain how it will be addressed. Opposition will not necessarily result in fewer points.

Johnstown anticipates no opposition to this planning project. Any concerns will be addressed through public and shareholder outreach, and solutions to resolve any opposition will be evaluated.

Evaluation Criterion C—Ability to Meet Program Requirements (20 Points)

- Describe how the project will address the program specific requirements described in the appropriate program-specific appendix.

Collaborative Planning and Public Engagement: The project features a robust outreach and partnership component. A detailed public engagement plan will guide activities, including stakeholder interviews, meetings, and opportunities for public comment on draft materials. Public input will occur throughout the planning process, ensuring the Water Master Strategy Plan reflects community priorities and concerns.

Technical Analysis & Planning Phase: Data collection and modeling will pinpoint supply limitations, drought vulnerabilities, and aging infrastructure weaknesses. This in-depth analysis will

directly support water system optimization by prioritizing projects that bolster supply reliability, promote efficient water use, and enhance drought resilience. Collected data will guide the development of infrastructure improvement plans and strategies for long-term water security, considering climate projections and potential nature-based solutions.

Comprehensive Water Strategy Report: The Development of a Water Strategy Report will synthesize information from all project phases, providing a roadmap for long-term water resilience. It will include a detailed outreach summary, documenting how public and stakeholder input shaped the plan. A comprehensive problem and needs section will ground the identified solutions and prioritized projects. The Report will offer a clear implementation strategy, addressing potential barriers, outlining next steps, and considering legal, environmental, and financial aspects. Additionally, it will highlight the lessons learned throughout the planning process and the benefits this comprehensive strategic process provides for the Districts.

- Describe the approach that will be undertaken to meet the applicable program components and requirements.

Outreach and Partnership Building. Our approach prioritizes diverse stakeholder input. A kickoff meeting will establish goals and a robust public engagement plan. Key stakeholder interviews will gather critical data, and regular public meetings will ensure ongoing feedback throughout the development of the Water Strategy Plan. This fosters community buy-in and ensures the Plan reflects everyone's concerns.

Analyses, Scoping and Planning Activities. Our technical analysis is data-driven. We will kick off with stakeholder alignment, then use detailed data collection and advanced modeling to understand water supply and demand. A dedicated drought resiliency chapter informed by stakeholder input will guide project prioritization and ensure investments in infrastructure are made strategically to enhance water security.

Development of a Water Master Plan Strategy Document. Our report will be a comprehensive roadmap, consolidating all project findings and insights. It will transparently document stakeholder input, outline specific water system needs, present solutions with analysis, and include detailed economic data. A public review of the draft report will ensure community feedback is incorporated, promoting buy-in and fostering transparent, collaborative water management.

- Include a preliminary project schedule that shows the stages and duration of the proposed work including major tasks, milestones, and dates. For each task and milestone, indicate who will have the primary responsibly for completion. Proposals that provide a detailed project schedule broken down by tasks and subtasks with identified milestones will be prioritized.

Johnstown will hire a qualified consulting firm. The consultant will complete the Tasks and Milestones, and Johnstown staff will work with the consultant through the planning process, attending meetings, consulting on the information developed, and receiving the monthly update reports.

Year 1 (May 2025 – April 2026)

Major Task	Milestones	Start Date	Completion
Outreach and Partnership Building	* Kickoff Meeting * Develop Public Engagement Plan * Stakeholder interviews * Draft findings review	May 2025	Ongoing throughout
Technical Analyses	* Project Management Kickoff * Data Collection * Model Updates * Draft Drought Resiliency Chapter	May 2025	Dec. 2027
Economic Analysis	* Sub-consultant Selection * Capital Facility/Debt Review * Cost-of-Service Analysis * Draft Fee Recommendations	Jan. 2026	April 2026

Year 2 (May 2026 – May 2027)

Major Task	Milestones	Start Date	Completion
Project Prioritization & Alternatives	* Evaluate and Prioritize Projects * Develop CIP List * Stakeholder/Public Draft Review	May 2026	Sept. 2026
Development of Water Strategy Report	* Compile Information * Draft Report * Stakeholder/Public Meetings	Feb 2026	Nov. 2026
Finalization & Approval	* Incorporate Feedback * District Board Presentations * Submission to Reclamation	Aug. 2026	Dec 2026
Completed Report Submitted	*Submission to Reclamation	Dec. 2026	May 2027

- Proposals with a budget and budget narrative that provide a reasonable explanation of project costs will be prioritized.

See Attachment F: Budget Summary and Narrative and Attachment F2: BOR Budget Detail and Narrative.

- If prior planning work will be relied on to meet any of the required program components, please explain and describe the work that will be relied on. For example, if you are applying for a Drought Contingency Plan and already have a water shortage allocation based on drought stages, please describe this and how it will be incorporated into the Drought Contingency Plan.

Prior planning from Johnstown will not be relied upon as part of the required program requirements. The information and data in the previous Water Master Plans is outdated.

- Describe the availability and quality of existing data and models[1] applicable to the proposed Plan or design.

Previous models were created using outdated methods and technologies. All modeling associated with the proposed project will be conducted using updated technologies and will be based on the criteria needed to assess the infrastructure needs and in the creation of updated maps.

- Identify staff with appropriate technical expertise and describe their qualifications. Describe any plans to request additional technical assistance from Reclamation or by contract.

The Town of Johnstown will undertake an appropriate selection process outline in their procurement process to secure a highly qualified consulting firm. The Town will prioritize demonstrated expertise in water system analysis, infrastructure assessment, drought resilience planning, economic analysis of water rates, and stakeholder engagement.

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

Fee and Rate Structures: Findings from the Plan's economic analysis could call for revisions to existing fees and the implementation of new rates. This will require Town approval and extensive public outreach, potentially involving public hearings.

Conservation Measures: If the Plan recommends new water conservation strategies, policies may be needed to incentivize their adoption (e.g., tiered rate structures, rebates for water-efficient appliances, or landscaping regulations).

Infrastructure Management: The Plan may identify the need for policies governing infrastructure upgrades, maintenance schedules, or emergency response procedures.

Drought Response: Depending on the Plan's drought resiliency recommendations, Johnstown may need to update or create formal drought response policies, including water use restrictions, trigger points for various stages of action, and communication plans.

Evaluation Criterion D—Presidential and Department of the Interior Priorities (15 points)

Sub-criterion No. D1. Climate Change

Points will be awarded based on the extent the project will reduce climate pollution; increase resilience to the impacts of climate change; protect public health; and conserve our lands, waters, oceans, and biodiversity. Address the following as relevant to your project. 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.

Johnstown sits in the South Platte River Basin within the Missouri River Basin, at an elevation of 4,800 feet. The Bureau of Reclamation 's Secure Water Act 2021 Report, found that increasing temperatures, decreasing snowpack, changes to the volume of precipitation, and changes to runoff timing and volume across the West are affecting water management. The results of climate change are projected to affect the water delivery, water quality, and flood control management in the Basin and in the Town of Johnstown.

Water Delivery
Projected increases in temperatures, decreases in snowpack, and runoff occurring earlier in the year—with a corresponding reduction in supply in summer months—make supplies less predictable and water deliveries more difficult to manage. End of water year storage is projected to decrease in the South Platte and Missouri River Basins.

Water Quality
Anticipated warming water temperatures, sea level rise, and more wildfires will likely impact ecosystem health. Changes in precipitation and runoff will likely affect pollutant transport into and within water bodies. In the South Platte and Missouri River Basins, water quality characteristics have also changed over the past several decades as a result of land use practices, increased urbanization, atmospheric deposition of pollutants, and dam construction and regulation.

Documentation:
Attachment G: Reclamation West-Wide Climate Risk Assessment

- Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?

Improved Data and Planning:

- Climate Impact Assessment: The plan can assess the specific threats climate change poses to Johnstown's water sources. This could include changes in precipitation patterns, increased evaporation, or potential disruptions to current water supplies.
- Demand Forecasting: By analyzing population growth trends and future development plans, the updated plan can forecast water demands and identify potential shortages.

Strategic Responses:

- Diversification of Water Sources: The plan could explore options for diversifying water sources, such as capturing rainwater, treating greywater for non-potable uses, or investigating alternative sources like groundwater or other surface waters.
- Conservation Measures: Implementing water conservation programs like public education campaigns, rebates for efficient appliances, or leak detection initiatives can significantly reduce water use.
- Infrastructure Improvements: Upgrading water infrastructure like repairing leaky pipes or improving irrigation systems can minimize wasted water.

- Drought Management Strategies: The plan can establish clear protocols for water restrictions and allocation during periods of drought.

Funding and Collaboration:

- Grant Opportunities: The updated plan can identify grant opportunities and funding mechanisms to support water conservation and infrastructure projects aligned with the Colorado Water Plan.
- Collaboration with Stakeholders**:** The planning process should involve residents, businesses, and regional water authorities to build consensus and encourage community-wide water stewardship.

Sub-criterion No. D2. Disadvantaged or Underserved Communities

E.O. Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool, available online at Explore the map – Climate & Economic Justice Screening Tool (https://screeningtool.geoplatform.gov) to identify any disadvantaged communities that will benefit from your project.

The CEJST shows that the census tracts that include portions of Johnstown, 2108, 2101, 2104 and 2107 in Weld County and 1713 and 1714 in Larimer County, are not designated as Historically Disadvantaged. See Figure 3: Project Census Tracts. But, the community of Johnstown does rank very near the threshold for a disadvantaged community in the following areas:

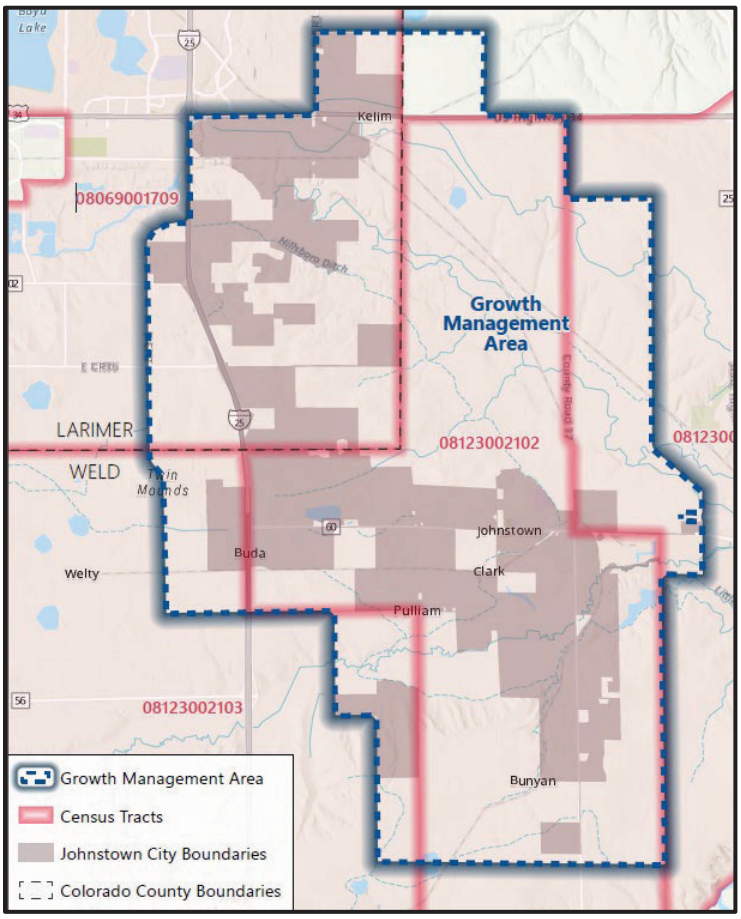

Figure 3: Project Census Tracts

Tract 2102 Disadvantages:

- Lack of green space. Amount of land, not including crop land, that is covered with artificial materials like concrete or pavement=91st percentile (threshold is 90th percentile)
- Wastewater discharge. Modeled toxic concentrations at parts of streams within 500 meters-82nd percentile (threshold is 90th percentile)

The EPA IRA Disadvantages Communities Map shows that the census blocks 1082 and 1083 are designated as EPA's IRA Disadvantaged Communities. Both blocks rank as a State Supplemental Index of greater than 90 percent. The meet this threshold of disadvantaged, the EPA analyzes thirteen environmental indicators combined with socio-economic data. See Figure 4: EPA's IRA Supplemental Index <90%.

Other screening tools identify the census tracts as experiencing disadvantages. According to the USDOT Equitable Transportation Community (ETC) Explorer, Weld County experiences the following disadvantages:

- PM 2.5 level particulates is at 81.4th percentile (threshold is 65th percentile)
- Air toxics cancer risks is at 77.4th percentile (threshold is 65th percentile)

Figure 4: EPA's IRA State Supplemental Index <90%

According to the EPA's Environmental Justice Screening and Mapping Tool, Johnstown experiences the following disadvantages:

- Unemployment rate of 87th percentile
- Population under the age of 5 is at the 86th percentile

The census tracts that comprise Johnstown are not designated as Historically Disadvantaged. This does not mean that there are not residents in Johnstown that fall below the poverty line, experiencing the impacts of a lower income, and barriers to housing, employment, and community services. The residents in census tract 2108 face a 20.95 percent poverty level and spend $14,072 annually on transportation costs. With the median home value at $461,100, this means that those in the community that face transportation and income burdens, spend a disproportionate amount of their income on housing. Households that spend more than 30 percent of their income on housing are considered Rent Overburdened. As shown in Figure 5: Annual Income Spent on Housing, those that rent, especially seniors 65 years and older, face more severe impacts to their quality of life, than their more affluent neighbors.

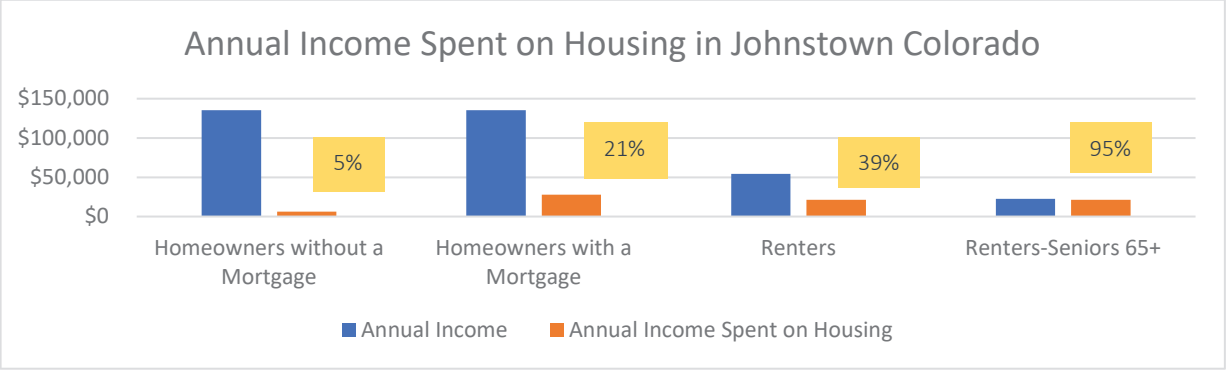

Figure 5: Income Spent on Housing

- If applicable, describe how the project benefits those disadvantaged or underserved communities identified using the tool. For example, does the project increase reliability of water supplies, improve water quality, provide economic growth opportunities, improve or expand public access to natural areas or recreation, or provide other benefits in a disadvantaged or underserved community?

This project directly benefits identified disadvantaged communities within the service area by enhancing economic security and overall quality of life. Prioritizing infrastructure improvements and water conservation measures ensures reliable water access for all residents, mitigating potential disruptions to businesses and services that low-income communities rely on. Metering and leak detection lead to more equitable water use patterns and can significantly lower utility bills for disadvantaged households. Drought preparedness efforts protect jobs by maintaining water service to vital industries within these communities. Additionally, the project has the potential to create new jobs related to infrastructure upgrades and conservation programs. Where feasible, we will explore the potential for expanded public access to water-related recreation or revitalization of natural areas, boosting tourism and providing economic opportunities within these communities.

Specific Economic Benefits:

- ✓ **Reliable Water for Businesses:** Lower-income communities may have many small businesses or services vital to daily life (e.g., laundromats, restaurants) that depend on reliable water.
- ✓ **Bill Stability:** Metering makes water bills more predictable, helping households' budget effectively.

- ✓ **Job Creation:** Infrastructure projects and expanded conservation initiatives can bring immediate job opportunities to the area.
- ✓ **Long-term Attractiveness:** Parks, green spaces, and recreational access make areas more attractive, potentially raising property values and boosting local economies.

Sub-criterion No. D3. Tribal Benefits

- Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for a Tribe?
- Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?
- Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?

No, the project does not directly benefit a Tribe, support Tribal resiliency, or Reclamation's Tribal responsibilities or activities.

Evaluation Criterion E— Nexus to Reclamation (5 points)

- Is there a Reclamation project, facility, or activity within the planning area?

No. there is not a Reclamation project, facility, or activity within the planning area of the project.

- Is the planning area in the same basin as a Reclamation project, facility, or activity?

No, the planning area is not in the same basin as a Reclamation project, facility, or activity.

- In what way will the proposed project benefit a basin where a Reclamation project, facility, or activity is located? For example, will the project improve watershed health in a river basin that is adversely impacted by a Reclamation water project?

the proposed project does not benefit a basin where a Reclamation project, facility, or activity is located.

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

The Town of Johnstown does not have a water service, repayment, or O&M contract with Reclamation.

- If the applicant does not hold a type of contract named above, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?

N/A

Project Budget

See Attachment F: Budget Summary and Narrative

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. Town of Johnstown	$163,200
Non-Federal Subtotal	$163,200
REQUESTED RECLAMATION FUNDING	$163,200

Environmental and Cultural Resources Compliance

An environmental and cultural resource compliance is not required to complete a Water Master Strategy Plan.

Required Permits or Approvals

There will be no ground disturbance or environmental impacts as part of the current planning process. However, since the Water Master Strategic Plan will likely lead to future infrastructure projects or on-the-ground actions, it will include a framework for ensuring environmental and cultural resource compliance during those subsequent phases.

Overlap or Duplication of Effort Statement

There are no current or proposed overlap or duplication of efforts at the time of submission, neither through Federal nor non-Federal funding.

Conflict of Interest Disclosure Statement

There are no actual or potential conflicts of interest at the time of submission. Johnstown will take appropriate steps to avoid conflicts of interest with respect to financial assistance agreements and disclosure of any conflicts of interest in accordance with §CFR 200.112.

Uniform Audit Reporting Statement

Johnstown has not received or expended more than $750,000 in federal awards in any fiscal year and has not been required to submit a Single Audit as of this application.

Letters of Support

Please see Attachment E: Letter of Support from Front Range Fire Rescue. Weld County and the Colorado Department of Public Health and Environment have voiced their support.

Official Resolution

If the project is selected, Johnstown will submit an Official Resolution prior to award.

Letters of Commitment

The Town of Johnstown will provide the required matching funds of $163,200. There are no additional partners contributing to the project costs.

FRONT RANGE FIRE RESCUE

PO Box 130, Milliken, CO 80543
970-587-4464 / Fax: 970-587-0324
Courage ★ Compassion ★ Professionalism

Serving Johnstown, Milliken and Larimer & Weld Counties for more than 100 years

May 15, 2024

Matt LeCerf, Town Manager
450 S. Parish Ave
Johnstown, CO 80534
mlecerf@johnstownco.gov

Dear Mr. LeCerf,

Front Range Fire Rescue is pleased to support Johnstown's application to the Bureau of Reclamation's WaterSMART: Planning and Project Design Grant program. We appreciate your efforts to preserve and protect a critical water source from drought, climate change, growth and potential water scarcity.

The Town of Johnstown Water Master Plan Strategy Project will be a collaborative effort, utilizing technical analyses and assessments to determine and evaluate conditions, study their system, assess alternatives, and build a long-term plan that addresses the specific needs of the Town. A Water Master Strategy Plan will be developed, including the results of the analyses and assessments, identifying solutions, and outlining an implementation strategy.

Front Range Fire Rescue recognizes the importance of this project as it will support Johnstown in responding to these challenging issues and ensuring a safe and healthy water source for years to come.

Front Range Fire Rescue is one of the public fire departments that provides both emergency support to residents and businesses within Johnstown. We also collaborate with the Town's development services programs to provide pre-construction plan review.

Front Range Fire Rescue is committed to the collaboration process by continuing to work closely with Town staff to determine minimum expectations for available water storage to meet fire flow demands for the known risks and hazards within Town Limits, and to ensure that proposed new developments meet all established requirements for compliance with the Town's adopted fire code.

We strongly support your grant application and appreciate the advancements it will make in creating a more sustainable and resilient water source.

Sincerely,

J. Michael West
Fire Chief
Front Range Fire Rescue

Tyler Drage
Deputy Chief/Fire Code Official
Front Range Fire Rescue

Budget Summary

Total Project Cost Summary

Source	Amount	Percentage
Town of Johnstown	$163,200	50%
Requested Reclamation Funding	$163,200	50%
Total Project Cost	**$326,400**	**100%**

Budget Item Description	Computation		Quantity Type	Total Cost
	$/Unit	Quantity		
Personnel				**$0.00**
Fringe Benefits				**$0.00**
Travel				**$0.00**
Equipment				**$0.00**
Supplies				**$0.00**
Contractual				**$326,400**
Project Management				
Project Management	$220/HR	183	HR	$40,200
Reclamation Reporting	$150/HR	51	HR	$7,600
Public Outreach and Partnership Planning				
Develop a Public Engagement Plan	$194/HR	17	HR	$3,300
Outreach of stakeholders and partnerships	$150/HR	18	HR	$2,700
Draft document for review	$194/HR	29	HR	$5,600
Create Outreach Summary	$172/HR	21	HR	3,600
Analysis, Scoping, and Planning Activities				
Water production and consumption	$180/HR	203	HR	$36,600
Description of existing system	$172/HR	48	HR	8,200
Water supply evaluation	$220/HR	68	HR	$14,900
Water rights	$220/HR	101	HR	$5,700
Water storage and emergency supply	$172/HR	82	HR	14,100
Distribution system	$220/HR	400	HR	88,300
Rate and impact fee analysis	$180/HR	190	HR	34,300
Drought resiliency consideration	$172/HR	45	HR	7,800
Capital improvement plan	$172/HR	91	HR	15,600
Review Process				
Review criteria	$180/HR	22	HR	$4,000
Discuss lessons learned	$172/HR	20	HR	$3,500
Culmination of planning and key components	$172/HR	18	HR	$3,000
Next steps and community access	$172/HR	22	HR	$3,780
Development of Water Master Strategy Document				
Develop draft Plan	$194/HR	66	HR	$12,800
Public Meeting and comments	$172/HR	40	HR	6,960
Prepare final document	$194/HR	20	HR	3,860
Construction				**$0.00**
Other Direct Costs				**$0.00**
Total Direct Costs				**$326,400**
Indirect Costs				**$0.00**
Total Cost				**$326,400**

Budget Narrative

Personnel

Johnstown staff salaries or wages will not be included; all services will be contracted. Johnstown staff time will be over and above the project's cost.

Fringe Benefits

No fringe benefits will be required.

Travel

No Travel will be necessary.

Equipment

No equipment will be required.

Supplies

No supplies will be required

Contractual

The contractual cost of $326,400 is an estimate for hours and rates for each participating consultant for the planning project. As several specialized consultants will be collaborating on the tasks listed in the budget proposal above, the rate shown is an average of the rates for those who will be participating. The following are the rates for the consultants anticipated to participate in this planning project:

Lead Project Engineer	$194.00	HR
Program Manager	$275.00	HR
Project Designer CAD	$144.00	HR
Senior Environmental Specialist	$206.00	HR
GIS Analyst	$196.00	HR
Senior Planner	$250.00	HR

Construction

This is strictly a planning project and will have no construction costs.

Other Direct Costs

There are no other direct costs as part of this project.

Indirect Costs

No indirect costs will be part of this project.