

BUREAU OF RECLAMATION
WaterSMART Small-Scale
Water Efficiency Projects

NOFO No. R24AS00059

FY25

**CLINTON CITY
AMI PROJECT
PHASE I**

APPLICANT CONTACT:
Trevor Cahoon, City Manager
2267 N 1500 W
Clinton, UT 84015
801-614-0730
tcahoon@clintoncity.com

PROJECT MANAGER:
Bryce Wilcox, Project Manager
466 N 900 W
Kaysville, UT 84037
801-547-0393
bkw@jub.com

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Technical Proposal and Evaluation Criteria

Executive Summary

Applicant Information

Date: 07/09/2024

Applicant Name: Clinton City

City, County, State: Clinton City, Davis, UT

Applicant Category: [A]

Requested Reclamation Funding: \$100,000; **Total Project Costs:** \$225,782

One Paragraph Project Summary

Provide the location of the project, work that will be carried out, any partners involved, expected benefits and how those benefits relate to the water management issues you plan to address

Clinton City, Utah, will upgrade 1,000 water meters to Advanced Metering Infrastructure (AMI) in its culinary water distribution system. This project aims to improve water management by enabling real-time leak detection, enhancing water conservation efforts, and providing data-driven insights for decision-making. The upgrade aligns with the City's Water Conservation Plan, addressing water loss and promoting responsible water use in the face of increasing scarcity. Phase I of a multi-phased project will install radio meter antennas throughout the City.

Project Timeline

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

Assuming an agreement is in place with Reclamation by March/May 2025, the proposed project will begin in May/June 2025, install antennas from June to October 2025, and continue from April to October 2026 with final reports and close out November 2026 /January 2027. The Meter Radio Antennas will be installed during the spring, summer, and fall months when the existing meters are not covered in snow. The Clinton City Public Works department staff will install the meter radios. All components of the project will be completed within the two-year allowance.

Federal Facility

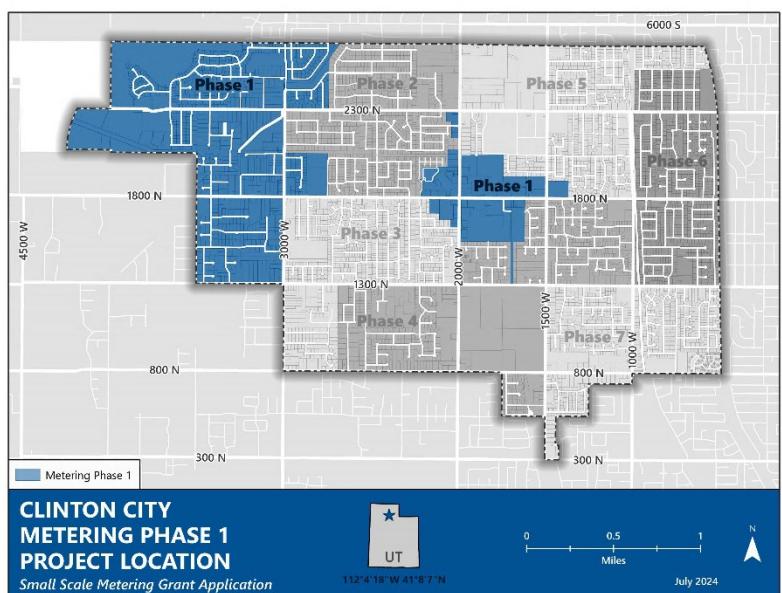
Is the proposed project located on a Federal facility?

No. The project is not located on a Federal facility.

Project Location

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

The project is located in Clinton City in Davis County, Utah. Clinton City is along the Wasatch Front, 10.5 miles south of Ogden and 33 miles north of Salt Lake City. The proposed project is Phase I of a multi-phased project to install radio meter antennas throughout the City. The latitude is roughly {41°08'07" N}, and the longitude is roughly {112°04'18" W}. For a larger Map see Attachment A – Project Location Map.



Technical Project Description

Provide a comprehensive description of the technical aspects of your project, including the scope of work to be accomplished and the approach for the on-the-ground project..

Clinton City is initiating the first phase of a comprehensive upgrade of its water metering infrastructure. This phase encompasses the installation of 1,000 Advanced Metering Infrastructure (AMI) radio antennas onto existing water meters. This upgrade represents the initial step in a larger project aimed at modernizing approximately 7,000 water connections throughout the City. Currently, 86 percent of the culinary water provided by the City's residential and commercial users is purchased from Weber Basin Water Conservancy District (WBWCD). The City has one well that provides 14 percent of its water needs. They have worked with WBWCD over the past few years to implement many of the WBWCD's suggested conservation methods for indoor and outdoor water use, which has resulted in reduced water use.

The City's outdoor water is provided by the Davis and Weber Counties Canal Company (DWCCC) through a secondary water system. This water comes from Echo Reservoir, which is a Reclamation project. DWCCC is currently installing radio read meters on all its secondary connections.

The City's culinary system lacks real-time tools to monitor and guide residents regarding how much culinary water they use. Their current culinary water meters measure water flow and are read by hand. When the meters cannot be read in the winter, the users are billed based on an estimated amount and then set up in March or April. They do not have the capability for real-time data transmission. The AMI upgrade involves retrofitting these meters with radio antennas. These antennas will collect water flow data from the meters and transmit it wirelessly to a central receiving tower. The data will then be relayed to the City's analytics software for processing and billing. This process will require minimal site preparation, as the existing meter infrastructure is already in place. Installing the radio antennas is non-invasive and can be done by the City staff. The ultimate goal is to create a comprehensive, city-wide AMI network that enables real-time monitoring and management of water consumption.

The data collected by the AMI system will be utilized in several ways:

- **Leak Detection:** The hourly data will enable rapid identification of leaks, minimizing water loss and system inefficiencies.
- **Water Conservation:** By understanding consumption patterns, the City can develop targeted conservation programs and encourage responsible water use.
- **Customer Engagement:** An online portal will be developed to give customers access to water usage data, fostering transparency and accountability.
- **Data Sharing:** Clinton City plans to share its water data with the Weber Basin Water Conservancy District (WBWCD) to collaborate on regional water conservation efforts.

This project represents a significant step in modernizing Clinton City's water infrastructure and promoting sustainable water use practices.

Evaluation Criteria

Evaluation Criterion A – Project Benefits

Benefits to the Category A Applicant's Water Delivery System:

Clearly explain the anticipated water management benefits to the Category A applicant's water supply delivery system and water customers. Consider: Will the project result in more efficient management of the water supply? Where any conserved water as a result of the project will go and how it will be used?

The proposed project offers significant water management benefits for Clinton City's culinary water system and its customers:

- **Real-Time Data and Enhanced Leak Detection:** AMI technology provides real-time water consumption data, enabling the City to detect leaks quickly and respond promptly, reducing water loss. This enhanced leak detection capability directly contributes to more efficient water supply management.
- **Improved Water Conservation:** The detailed water usage information provided by AMI enables the City to implement targeted conservation programs and educate consumers about their water consumption patterns. This fosters responsible water use and contributes to overall water conservation goals. Cities implementing AMI technology have typically seen water savings ranging from 2 percent to 10 percent. For example, San Jose Water in California, after installing AMI meters, saw a reduced indoor water use by 14 percent within four weeks, saving an average of 6,280 gallons per household per year. However, the exact percentage can vary depending on the age and condition of existing infrastructure, climate and region factors, and level of customer engagement. Clinton estimates an average of 5 percent water savings with the installation of AMI.
- **Data-Driven Insights for Water Management:** AMI data, collected at 15-minute intervals and accessible through a cloud-based system, allows the City and consumers to track water usage. This granular data empowers data-driven decision-making, helping to identify inefficiencies, optimize operations, and manage water resources more effectively.
- **Reduced Reliance on External Water Supply:** By conserving water through leak reduction and improved consumption practices, Clinton City can decrease its reliance on the Weber Basin Water Conservancy District (WBWCD), the source of 86 percent of its water supply. If we had an average of 5 percent savings of our water by implementing the AMI technology, this would equate to an annual savings of 14 acre-feet for the 1,000 meters we installed for this project. When all phases are completed, we will have an annual savings of 98 acre-feet of water that we are not drawing from WBWCD and our well. This water can stay in the reservoir and Weber River system for extended periods or be used for other WBWCD users. This will benefit the entire region.
- **Infrastructure Investment Optimization:** Efficient water management through AMI can help the City defer or avoid costly infrastructure investments by maximizing the utilization of existing resources, especially as its population grows.

Overall, the AMI project offers a holistic water management approach, benefiting the City and its residents. The project ensures a more sustainable and resilient water future for Clinton City by reducing water loss, promoting conservation, and providing data-driven insights.

Explain the significance of the anticipated water management benefits for the Category A applicant's water delivery system and customers. Consider:

In response to the severe mega-droughts of 2022, the Weber Basin Water Conservancy District (WBWCD) implemented a 10 percent reduction in culinary water for all users and a 40 percent reduction for secondary and agricultural water users. In Clinton City, many residents used culinary water for their gardens due to the shortened irrigation season (May 15 - September 15) and extreme summer heat. While WBWCD and DWCCC maintain some water restrictions, they are less severe than those implemented in 2022.

In Fall 2022, Utah's reservoir levels were significantly below average due to the on-going drought. Thirty-two of the forty-two largest reservoirs were below 55 percent of their capacity. Despite recent snowfall providing temporary relief, the region is still recovering from a two-decade-long drought. Reservoir levels remain a concern, as demonstrated by the low levels in Fall 2022. While the record-breaking snowpack of 2023/24 helped alleviate immediate water scarcity, the mega-drought of 2022 is

a stark reminder of the need for proactive water management, making projects like Clinton City's AMI upgrade crucial for ensuring a sustainable water future.

Historically, water scarcity has led to conflicts and legal disputes over water rights in Utah, where water is a precious resource. However, 2022 intensified these challenges, with the Great Salt Lake reaching a historic low in July, escalating tensions and fueling a blame game over water usage. This crisis fueled several notable conflicts:

- **Environmental Groups vs. State Government:** Environmental organizations like the Great Salt Lake Advisory Council and FRIENDS of Great Salt Lake voiced strong concerns about the lake's decline, advocating for increased water conservation measures and policy changes. They criticized the state government for not protecting the lake and its ecosystem adequately.
- **Farmers vs. Environmentalists:** The agricultural sector, a major water user in the region, faced scrutiny from environmentalists who argued that excessive water diversion for irrigation contributed to the lake's shrinking. This led to tensions between farmers, who rely on water for their livelihoods, and environmentalists, who prioritized the lake's ecological health.
- **Urban vs. Rural Interests:** The conflict over water allocation also extended to urban and rural communities. The growing urban populations demanded more water for domestic and industrial use, and rural communities primarily dependent on agriculture sought to protect their water rights, thus leading to debates over water pricing, infrastructure development, and the prioritization of different water uses.
- **Industry vs. Public Health:** The shrinking of the Great Salt Lake exposed lakebed containing toxic dust, raising concerns about air quality and public health. Industries that rely on the lake's resources, such as mineral extraction, faced criticism for their potential contribution to the problem, leading to discussions about the balance between economic interests and public health concerns.

These conflicts highlighted the complex challenges surrounding water management in the Great Salt Lake region. They underscored the need for collaboration, compromise, and innovative solutions to ensure the sustainable use of water resources and protect the lake's delicate ecosystem.

Consequences of Inaction: Failure to implement the proposed AMI project over the coming years will lead to significant implications for Clinton City:

- **Increased Vulnerability to Droughts:** Without proactive water management tools, the City would be more susceptible to drought impacts, including stricter water restrictions and potential shortages.
- **Strained Water Supply and Infrastructure:** Continued overconsumption and inefficient use would strain the City's water supply and infrastructure, leading to higher costs for maintenance and upgrades. It would require additional costly water purchases for WBWCD. This past year, WBWCD increased wholesale water costs by almost 40 percent for secondary water and 50 percent for culinary water.
- **Economic and Environmental Impacts:** Water scarcity negatively affected the local economy, recreation, agriculture, and the environment. WBWCD, the primary water supplier for Davis County, where Clinton City is located, implemented water restrictions in 2022, including a 40 percent reduction for agricultural use. Farmers in the County experienced reduced yields, fallowed land, and crop losses due to limited water availability. In 2022, over \$3.9 million was distributed through ERP to Utah farmers, suggesting a substantial increase in claims compared to previous years.
- **Water Quality:** In 2022, the mega-drought significantly impacted water quality in Utah's reservoirs, with a notable surge in harmful algal blooms (HABs). Data from the Utah Department of Environmental Quality (DEQ) revealed a more than two-fold increase in the number of reported HABs compared to the average year. Additionally, these blooms occurred earlier in the season, starting in May instead of the usual June or July onset. This accelerated and intensified growth of

HABs had far-reaching consequences, affecting public health, recreational activities, tourism revenue, and the overall ecological balance of the reservoirs.

Broader Benefits: *Describe the broader benefits that are expected to occur as a result of the project. Consider:*

- *Will the proposed project increase collaboration and information-sharing among water managers in the region? Please explain.*

While the Clinton City AMI project may seem small in the grand scheme of Utah's water challenges, it represents a crucial step towards a more sustainable future. As the second driest state in the nation, every drop counts, and this project demonstrates a commitment to responsible water management. By promoting regional collaboration, fostering water conservation, and paving the way for a more resilient water future, the AMI project serves as an example of how even small-scale initiatives can make a significant difference in addressing the state's pressing water issues.

- **Regional Collaboration and Information Sharing:** By partnering with WBWCD, Clinton City is fostering collaboration and data sharing among regional water managers. This exchange of information about water use patterns, peak demands, and conservation strategies will enable more informed decision-making, coordinated efforts, and a unified approach to water management challenges.
- **Strengthened Water Conservation Efforts:** The project aligns with broader water conservation initiatives led by WBWCD, such as the Governor's Water Conservation Team and the Slow the Flow campaign. By contributing to these efforts, Clinton City is vital in promoting responsible water use and ensuring the long-term sustainability of the region's water resources.
- **Support from State Agencies:** The Utah Division of Water Resources (DWR) and WBWCD recognize the importance of metering projects, and DWR has actively supported them through grant and loan programs.
- **Increased Public Awareness and Engagement:** The project's emphasis on providing water usage data to residents and businesses will raise awareness about water consumption patterns and the importance of conservation. This increased awareness can drive behavioral change, leading to more responsible water use practices and a greater sense of community ownership over water resources.
- **Preparing for Future Growth:** With the Wasatch Front population expected to double by 2060, the project's focus on data-driven water management and conservation is essential for ensuring water security in the face of rapid growth. By understanding current water usage patterns and identifying areas for improvement, Clinton City can proactively plan for future water needs and ensure that development occurs sustainably.

- *Is the project in an area that is experiencing, or recently experienced, drought or water scarcity? Will the project help address drought conditions at the sub-basin or basin scale? Please explain.*

The proposed project is located in Davis County, Utah, where prolonged drought conditions have plagued the region for several years, with 2022 being documented as a mega-drought and Davis County listed as an area of exceptional drought. Even with a good snowpack year in Utah, the state is still considered to be in a drought. The current snowpack is helpful in the short-term, but it does not erase the long-term effects of the on-going drought.

The past 20 years have seen exceptionally low precipitation, creating a significant water deficit. One good snow year does not fully replenish the reservoirs and groundwater that have depleted over time. Utah's population is growing rapidly, putting more strain on water resources as water demand continues to rise, making it challenging to fully recover from the drought.

Climate change alters weather patterns, leading to extreme events like droughts and floods. Even with occasional good years, the overall trend leans towards a drier climate, necessitating on-going water conservation efforts.

Drought conditions have forced water restrictions and increased awareness of the susceptibility of the overall water supply and the need to implement better and more conservation efforts. Clinton City has not reduced the need for conservation efforts but has sustained them by implementing even more education and guidance to continue to conserve water. The proposed AMI project will help address the pressing issue of drought and water scarcity impacting Clinton City and the broader region and will continue to help preserve the water purchased from WBWCD, which provides water over the entire Wasatch Front. The data provided by AMI empowers the City to implement targeted conservation measures and educate residents about responsible water use, contributing to drought resilience. It is not merely an infrastructure upgrade but a strategic response to the pressing challenges of drought. By empowering Clinton City with the tools and information to manage its water resources effectively, the project will play a crucial role in mitigating the impacts of drought, ensuring water security for residents, and contributing to the long-term sustainability of the region's water supply.

- *Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a State listed species, or a species of recreational, or economic importance)? Please explain.*

By ensuring a more reliable and sustainable water supply, the conserved water can accumulate over time and play a valuable role – albeit a small one – in supporting the conservation of WBWCD water within the Weber River system. This extended water presence benefits a variety of species and ecosystems, from fish in the Weber River to migratory birds in the Howard Slough Waterfowl Management Area (HSWMA) and the Great Salt Lake.

- **Improved Instream Flows and Aquatic Habitats:** By reducing water loss and promoting conservation, the project will allow more water to remain in WBWCD's reservoirs and the Weber River. This increased flow can benefit aquatic species, particularly the Bonneville cutthroat trout and bluehead sucker, both listed as sensitive species in Utah. Maintaining adequate instream flows is crucial for their survival and reproduction.
- **Support for Waterfowl and Shorebirds:** The increased water availability in reservoirs and the Weber River will positively impact the HSWMA. This vital habitat supports numerous waterfowl and shorebird species, including millions of migratory birds using the Pacific and Central Flyways. Improved water levels will enhance these birds' nesting, breeding, feeding, and staging habitats.
- **Protecting the Great Salt Lake Ecosystem:** The Weber River is a major tributary to the Great Salt Lake, a critical ecosystem for migratory birds and other wildlife. By conserving water and ensuring adequate flows in the river, the proposed AMI project indirectly contributes to the health and stability of the Great Salt Lake ecosystem. This, in turn, benefits numerous species, including the eared grebe, Wilson's phalarope, and snowy plover, a species of conservation concern.
- **Addressing Water Quality Concerns:** Increased water conservation from the AMI project can help reduce the water needs of the City and allow WBWCD to have more water in its reservoirs for more extended periods and maintain optimal conditions in impoundments and wetlands, mitigating issues like sedimentation and potential contaminant inflow.

- *Will the proposed project positively impacts/benefit various sectors and economies within the applicable geographic area (e.g., impacts to agriculture, environment, recreation, and tourism)? Please explain.*

As previously stated, by reducing the City's reliance on WBWCD water, residents, farmers, ranchers, recreation users, and the environment will all benefit from an overall increase in available water supply. More water can remain in the Clinton City culinary water system, WBWCD's reservoir, and the Weber River for extended periods and is available for use. The Clinton City AMI project generates a ripple effect of positive impacts across multiple sectors. By promoting water conservation and ensuring a sustainable water supply, the project supports agriculture, protects the environment, enhances recreation and tourism, strengthens the local economy, and improves the overall quality of life for residents in the region.

Below are some specific examples of benefits from other areas that have implemented AMI Technology. Clinton City feels that these examples demonstrate that AMI technology can generate significant positive impacts across various sectors. By improving water efficiency, promoting conservation, and providing valuable data for decision-making, AMI can contribute to a more sustainable and resilient water future for communities like Clinton City:

Eastern Municipal Water District (California): Implemented AMI technology, leading to a 10 percent reduction in water consumption and improved leak detection, saving an estimated 5 billion gallons of water per year.

Town of Cary (North Carolina): After installing AMI meters, the town saw a 5 percent reduction in overall water use, with some customers achieving savings of up to 20 percent.

City of Dubuque (Iowa): AMI technology helped the city identify and repair leaks, saving over 1 million gallons of water per year and reducing operational costs.

By conserving water and reducing the City's demand on WBWCD's supply, the project helps to ensure a more reliable water source for agricultural users in the surrounding areas. This is particularly crucial during a drought when water scarcity severely impacts crop yields and livestock production. Adequate water availability can support a thriving agricultural sector, contributing to local food production and economic stability.

The project's emphasis on water conservation directly benefits the environment by reducing stress on water resources, maintaining healthy stream flows, and preserving aquatic habitats. This contributes to the overall ecological balance of the region, supporting biodiversity and ecosystem services.

A healthy environment with ample water resources is essential for recreational activities like fishing, boating, and wildlife viewing. The project's contribution to maintaining water levels in Echo Reservoir and the Weber River can enhance recreational opportunities and attract tourists, generating economic benefits for the region. Additionally, a well-maintained water supply supports the area's aesthetic appeal, further boosting tourism.

A healthy environment, abundant recreational opportunities, and a thriving economy all contribute to residents' high quality of life. The AMI project's positive impacts on these various sectors ultimately enhance the well-being and prosperity of the community.

- *Will the project complement work being done in coordination with NRCS in the area (e.g., the area with a direct connection to the districts water supply)? Please explain.*

N/A.

Evaluation Criterion B – Planning Efforts Supporting the Project

Plan Description and Objectives: Is your project supported by a specific planning document or effort? If so, describe the existing plan. When was the plan developed? What is the purpose and objective of the plan?

The project aligns with multiple water conservation initiatives in the region. Notably, the project is supported by the 2021 Clinton City Drought Resiliency Plan, the 2022 Clinton City Water Conservation Plan, and the 2018 Weber Basin Water Conservancy District (WBWCD) Drought Contingency Plan. These comprehensive plans, developed to address the increasing challenges of water scarcity and drought, emphasize the importance of innovative technologies like AMI to achieve their shared water conservation goals and improved management practices.

Plan Development: Who developed the planning effort? What is the geographic scope of the plan? If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort.

Clinton City's 2021 Drought Resiliency Plan (DRP) was developed collaboratively, drawing upon the Weber Basin Water Conservancy District's (WBWCD) 2018 Drought Contingency Plan (DCP), in which Clinton City actively participated as a key stakeholder. The DRP and the subsequent 2022 Water Conservation Plan (WCP) were crafted in partnership with a local consultant, incorporating input from diverse stakeholders, including those identified in the earlier planning process, to formulate effective mitigation and response strategies. See **Attachment C – Planning Documentation**

Support for the Project: Describe to what extend the proposed project is supported by the identified plan. Consider:

- *Is the project identified specifically by name and location in the planning effort? Is this type of project identified in the planning effort? Explain whether the proposed project implements a goal, objective, or address a need or problem identified in the existing planning effort?*

The proposed project is specifically listed in all three planning documents as an action item or priority project—the 2022 WCP lists AMI under section 6, "Planned Conservation Practices" on page 11. Leak Detection and Repairs is listed as a prioritized project under "Mitigation Actions" on page 21 of the 2021 DRP. The proposed project is also critical to WBWCD's ability to implement and monitor Response Actions as listed on page 45 of the 2018 DCP. Demand Reduction Targets have been set by sector for each level of drought. Without AMI technology, water use data would continue to be collected monthly, reducing the data's accuracy and potentially leading to unnecessary actions.

- *Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.*

Several potential Mitigation Actions were evaluated and ranked within the above referenced planning documents based on how well they met a set of established main objectives, including Increased Supply, Financial Feasibility, Implementation and Risk Reduction, Environment, and Other Miscellaneous Objectives.

Evaluation Criterion C – Project Implementation and Results

- *Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.*

The proposed project will require roughly 30 minutes to remove and install each AMI antenna. Once an agreement is in place with Reclamation and Categorical Exclusion has been completed, Clinton City plans to complete the project at a rate of roughly 21 meters a week to finish the project within the two-year allotted timeframe. It is unlikely that any meters will be installed from November to March due to winter weather conditions.

<u>Milestone/Task</u>	<u>Start and End Schedule</u>
Sign WaterSMART contracts	March 2025 - May 2025
Categorical Exclusion prepared and approved by Reclamation	April 2025 - June 2025
Materials procurement	April 2025 – July 2025
AMI installation first year	June 2025 – October 2025
AMI installation second year	April 2026 – October 2026
Final report and project close-out	November 2026 – January 2027

- *Describe any permits and agency approvals that will be required along with the process and timeframe for obtaining such permits or approvals.*

No additional permits or approvals will be required to proceed with the proposed project. Clinton City owns all rights-of-way for the proposed project. The City will notify homeowners when the AMI antennas are installed. The impact will be minimal since the meter and the box are installed and located within the park strip.

- *Identify and describe any engineering or design work performed specifically in support of the proposed project. What level of engineering design is the project currently? If additional design is required, describe the planned process and timeline for completing the design.*

This project will not require additional design work; all water meters are already installed. This project would only require utilizing standard drawings and specifications previously developed. City staff will be used to complete the work if any additional details are needed.

- *Does the applicant have access to the land or water source where the project is located? Has the applicant obtained any easements that are required for the project? If the applicant does not yet have permission to access the project location, describe the process and timeframe for obtaining such permission.*

Clinton City owns all rights-of-way for the proposed project. The City will work with homeowners to minimize installation impacts and provide an improved service connection.

- *Identify whether the applicant has contacted the local Reclamation office to discuss the potential environmental and cultural resource compliance requirements for the project and the associated costs. Has a line item been included in the budget for costs associated with compliance? If a contractor will need to complete some of the compliance activities, separate line items should be included in the budget for Reclamation's costs and the contractor's costs.*

Environmental costs associated with the proposed project are included in the budget and are calculated based on previous metering projects of similar size. The local Reclamation office has not been contacted to discuss the project, but it is anticipated, based on previously completed projects of similar size and scope, that the proposed project will be cleared under a categorical exclusion environmental document. The project will take place within existing rights-of-way and pre-disturbed areas.

Evaluation Criterion D – Nexus to Reclamation

- *Is the proposed project connected to a Reclamation project or activity? If so, how? Please consider the following: Does the applicant have a water service, repayment, or operations and maintenance(O&M) contract with Reclamation? If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?*

Clinton City receives roughly 86 percent of its annual water supply from Weber Basin Water Conservancy District, the managing entity of Reclamation's Weber Basin Project.

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

The proposed AMI project in Clinton City will directly benefit the Weber Basin Project by significantly reducing water waste and promoting more efficient water use within the community. By providing real-time water usage data, the project empowers both the City and its residents to promptly identify leaks, make informed decisions about water consumption, and adopt conservation practices. This reduction in water waste directly translates to more water remaining in the Weber Basin Project's system, increasing the availability of this valuable resource for other users and purposes downstream.

Evaluation Criterion E – Presidential and Department of the Interior Priorities

E.1.5.1. Sub-criterion No. E1. 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:

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

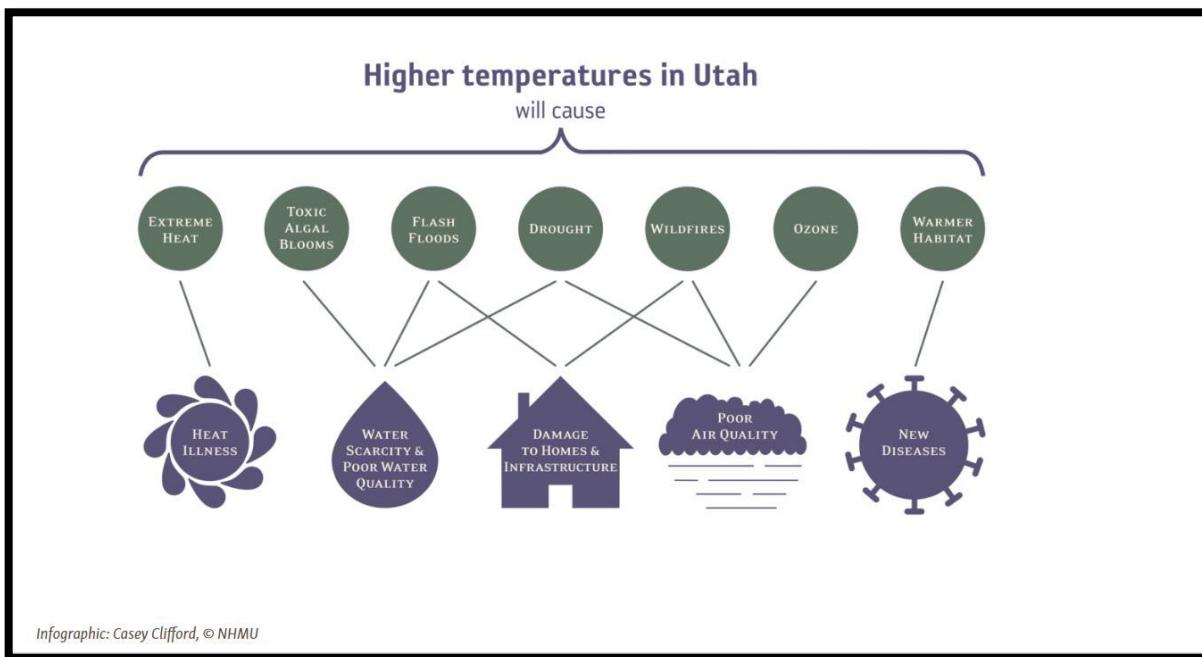
This project represents a vital step towards building a more resilient water future for Clinton City and the wider region. By addressing the root causes of water scarcity, the project not only helps to alleviate the immediate crisis but also lays the groundwork for sustainable water management practices in the face of an uncertain climate future. In March 2020, the Division of Water Resources developed the "Climate Change, Water Resources, and Potential Adaptation Strategies in Utah." On page 3 of this report under the title "Historical Temperature Change," it indicated that the average temperature in the western U.S. and Utah increased by about 2.5°F over the last century. There was also a rise in winter temperature (January) of about 1°F in the recent decade. This data does not include the 2021 and 2022 years, which were noted to be the hottest years on record in the summer and winter months. Over the last 50 years, Utah temperatures have risen at about twice the global average. A few degrees increase may not sound like much, but a hotter climate in our region has many ripple effects. We are already experiencing trends of increasing drought, wildfires, flash floods, and extreme heat waves. Often, these ripples intersect and reinforce each other. Their impacts on our communities and our health can really add up. See

Attachment D – Pages from Climate Change Utah Report

Utah winters used to be longer; the average time between the first freeze in the fall and the last freeze in the spring is about 37 days shorter today than in the 1930s. Winter temperatures are warmer too, and shorter. Warmer winters are causing more of Utah's precipitation to fall as rain rather than snow and decreasing our average mountain snowpack. A warmer climate is also causing a cascade of changes that worsen air and water quality, damage homes and infrastructure, and create favorable conditions for new diseases.

The figure below shows some of the health challenges caused by Utah's changing climate. Higher temperatures make the environmental health threats we already face more frequent and intense. Some threats, like wildfires and flash floods, are dangerous to the people directly in their paths and also have secondary impacts on broader community health, like poor air and water quality. Natural History Museum of Utah report called A Climate of Hope / Understanding Climate Change in Utah <https://nhmu.utah.edu/climate-of-hope/climate-change-utah>

The region is experiencing an unprecedented 20-year period of low snowpack and precipitation, threatening water security and straining reservoirs like Echo, which reached a mere 17 percent capacity in 2023. Most of Utah's reservoirs have come up, but a bad snow year can quickly deplete them. This underscores the critical need for proactive water management solutions.



As previously stated, Clinton City gets its water from WBWCD, a major regional water supplier that faces immense pressure to meet the demands of over five counties. Dwindling water levels and increasing demand necessitate immediate action to conserve and manage water resources. The ongoing drought, intensified by climate change, has triggered water restrictions, increased wildfire risks, and threatened agricultural productivity. This reality underscores the urgency of implementing sustainable water management practices.

Clinton City's proposed AMI project directly responds to these challenges. By enabling real-time leak detection, promoting informed water use, and empowering data-driven decision-making, the project enhances water efficiency and conservation, mitigating drought and climate change impacts.

- *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?*

Completing this project will result in improved water management and use efficiency. As extreme drought conditions continue, efficient use and storage of limited available water become even more critical to drought resiliency. The project will help build a more resilient community to the on-going effects of drought and climate change that are being felt throughout the region.

E.1.5.2. Sub-criterion No. E2. Disadvantaged or Underserved Communities

Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.

- *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.*

Several disadvantaged communities served by WBWCD will benefit from increased overall water supply and more efficient use of the limited resources available in the State. According to the Economic Justice Screening Tool, parts of Ogden, Roy, Clearfield, Layton, and Bountiful are

considered disadvantaged—over 700,000 residents within the Ogden and Weber River drainages—all serviced by WBWCD's water supply. The proposed project will help Clinton City reduce its reliance on WBWCD and allow for more water to stay in the Weber River system and eventually into the Great Salt Lake.

A recent article published June 21, 2024 in the “One Earth Journal” indicated that restoring the Great Salt Lake to a healthy water level reduces disparities in harmful dust exposure experienced by different racial/ethnic and socioeconomic groups and delivers other ecological and economic benefits to these groups. See Attachment F – Pages from June 21, 2024 Study.

- *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?*

The proposed project will help Clinton City water users understand their water use and is anticipated to improve water management and efficiency. Any water conserved due to the proposed project will reduce Clinton City's reliance on WBWCD. The increase in overall water supply will directly benefit these disadvantaged communities by improving water supply reliability in the area.

Budget Narrative

See Attachment B – Budget Detail and Narrative, Attachment B1 – Wage and Fringe Justification, and Attachment B2 – AMI Bid from Mountainland for budget clarification

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. Will the proposed project impact the surrounding environment (e.g. soil,(dust), air, water (quality and quantity), animal habitat)?*
Impacts will be those associated with the installation of water meter antennas. The water meter and meter boxes have already been installed, and all work will be done within the existing meter boxes. This project is anticipated to have minimal impacts.
- *Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area?*
Clinton City is unaware of any impacts concerning threatened or endangered species in the project area.
- *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.*
Clinton City is not aware of any wetlands in the project area.
- *When was the water delivery system constructed?*
The culinary water system was built in the mid-1900s. Since 1980, Clinton City has been replacing all the older pipes in the system. There are very few pipes older than 1960 remaining in their system.

BOR WaterSMART Grants: Small-Scale Water Efficiency Projects for FY24/25 ♦ R24AS00059

- *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.*
No, the project will not result in any modifications or effects to an irrigation system's features.
- *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.*
A cultural resource inventory will be completed as part of the submitted environmental document. All the work will be done in existing meter vaults that are in the street right of way.
- *Are there any known archeological sites in the proposed project area?*
Clinton City is unaware of any impacts to or locations of archeological sites.
- *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?*
No. The project will not be near, nor will it impact any tribal lands.
- *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?*
No, the project will be conducted in contained areas. No outside soil or foliage will be introduced into the area.

Required Permits or Approvals

No permits or approvals are required for this project.

Overlap or Duplication of Effort Statement

There are no overlap or duplication of efforts at the time of submission.

Conflict of Interest Disclosure Statement

There is no actual or potential conflict of interest at the time of submission.

Uniform Audit Reporting Statement

Clinton City was required to submit a Single Audit Report for FY21. The Employer Identification Number associated with that report is 87-6113995. The report will be posted on the Federal Audit Clearinghouse Internet Data Entry System per 2 CFR requirements.

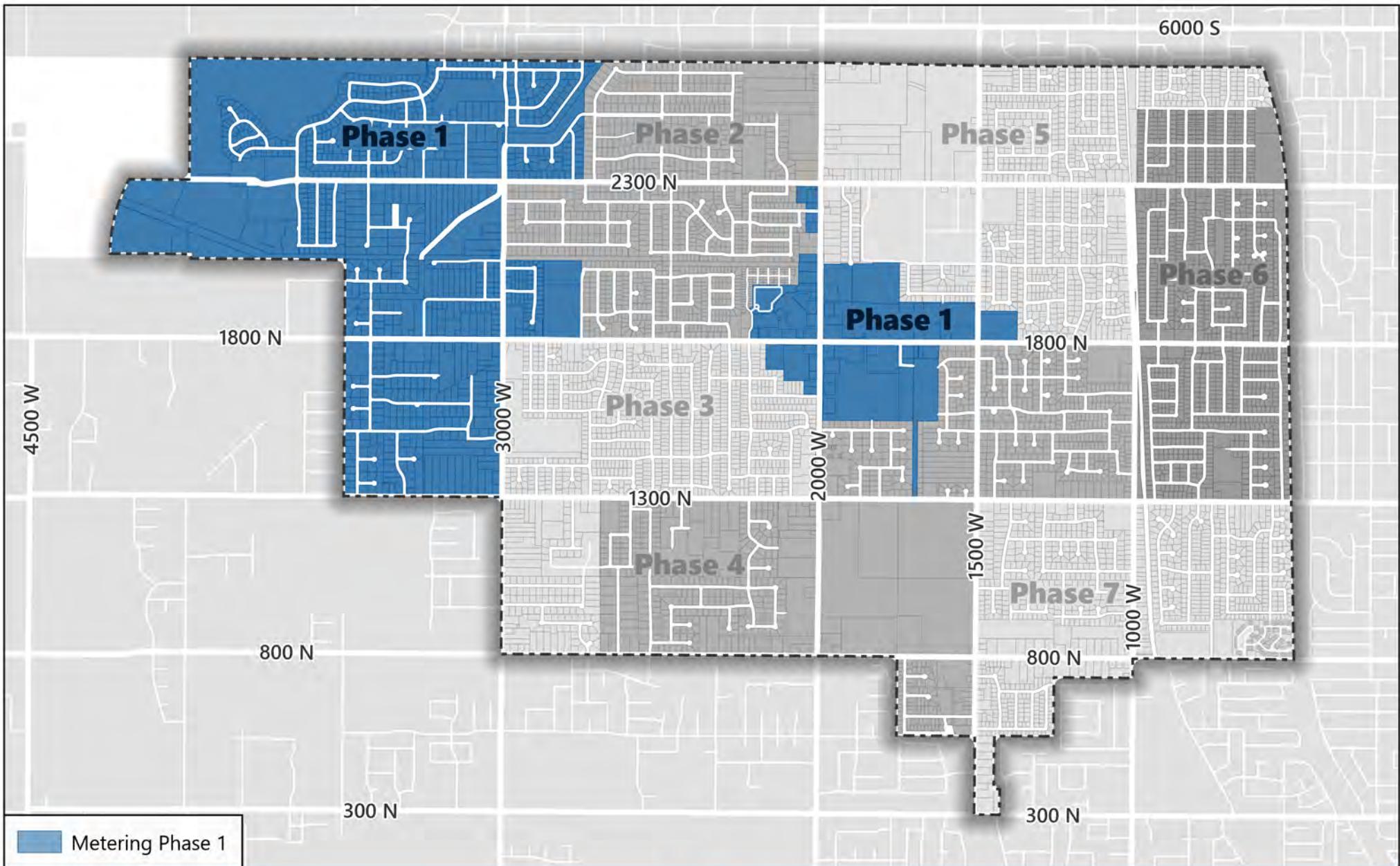
Certification Regarding Lobbying

Please see the GG Lobbying Form V1.1 Certification Regarding Lobbying.

Letters of Support for the Project

See Attachment E – Letters of Support

Weber Basin Water Conservancy District - Jonathan Parry, PE, Assistant General Manager



CLINTON CITY METERING PHASE 1 PROJECT LOCATION

Small Scale Metering Grant Application



112°4'18"W 41°8'7"N

Attachment A

0 0.5 1
Miles



July 2024



WEBER BASIN WATER CONSERVANCY DISTRICT

2837 EAST HIGHWAY 193 • LAYTON, UTAH • PHONE (801) 771-1677 • SLC (801) 359-4494 • FAX (801) 544-0103

July 6, 2024

Scott W. Paxman, PE
General Manager/CEO

Board of Trustees:

Marlin K. Jensen
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Weber County

Jared A. Andersen
Morgan County

Mark D. Anderson
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Kym O. Buttschardt
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Randy B. Elliott
Davis County

Scott K. Jenkins
Weber County

Angie Osguthorpe
Weber County

Christopher F. Robinson
Summit County

Paul C. Summers
Davis County

Clinton City
c/o Trevor Cahoon, City Manager
2267 North 1500 West
Clinton, UT 84015

RE: Bureau of Reclamation WaterSMART Small-Scale Efficiency Grant Proposal

Dear Mr. Cahoon,

The Weber Basin Water Conservancy District (“District”) is writing in support of Clinton city’s (the “City”) request for grant monies to assist in their efforts improve their meter data analytics and water management through the installation of advanced metering infrastructure (AMI) in their water distribution system.

The District’s Drought Contingency Plan supports this project as a mitigation measure to ensure that water use is monitored and appropriately used. The District understand and appreciates the importance of metering projects and understands that AMI will increase Clinton city system’s resilience to drought conditions that are frequently felt across the state of Utah. AMI also allows for near real-time assessment of the efficiencies and operations of water systems. Water loss assessments and more timely leak detection will work to improve the water distribution system.

Through the installation of AMI the City will gain the ability to collect near real-time water flow data and transmit it to the City and end user, if desired. Educating water users regarding their water use, identifying areas for improvement, and collaboratively working towards improving our use of water is imperative to achieving sustainable water use. The District is committed to assisting the City in achieving an elevated level of customer engagement using software and technology.

The District is in support of this request and is committed to assisting Clinton city in completing this work.

Sincerely,

Jonathan Parry, PE
Assistant General Manager

JP/dh

ATTACHMENT B
BUDGET DETAIL AND NARRATIVE TEMPLATE

Summary			
6. Budget Object Category	Total Cost	Federal Estimated Amount	Non-Federal Estimated Amount
a. Personnel	\$11,093		
b. Fringe Benefits	\$7,250		
c. Travel	\$0		
d. Equipment	\$0		
e. Supplies	\$199,439		
f. Contractual	\$8,000		
g. Construction	\$0		
h. Other Direct Costs	\$0		
i. Total Direct Costs	\$225,782		
i. Indirect Charges	\$0		
Total Costs	\$225,782	\$100,000	\$125,782
Cost Share Percentage		44%	56%

ATTACHMENT B
BUDGET DETAIL AND NARRATIVE TEMPLATE

6a. Personnel

This category includes salaries and wages of employees of the applicant organization that will be working directly on the project. Generally, salaries of administrative and/or clerical personnel are classified as indirect or overhead costs in your organization's accounting system included as a portion of the stated indirect costs. If these salaries can be adequately documented as direct costs, they can be included in this section; however, a justification must be included in the narrative. Recommend reviewing **§ 200.430 Compensation - personal services** for more information on the specific requirements regarding compensation costs, including the **Standards for Documentation of Personnel Expenses at §200.430(i)**.

Narrative: For key personnel such as the project manager or principal investigator, identify the name individual and position/title. Other personnel should be identified by position only. For all positions, identify the project tasks that will be performed. Compensation rates can be expressed as hourly rates and number of hours or annual salary and percentage effort that will be contributed to each task, but must be consistent with your organization's accounting and timekeeping policies. Include estimated hours for compliance with reporting requirements, including the final project report and evaluation. For multi-year projects, identify the level of effort anticipated for each budget year and any estimates increases in compensation rates. Within the budget narrative, provide a certification that the labor rates included in the budget proposal represent the actual labor rates of the identified personnel/positions and are consistently applied to Federal and non-Federal activities. *Note: The annual/hourly labor rate must not include fringe benefits.*

Links: [§ 200.430 Compensation - personal services.](#)

Personnel

Position Title	Time (Hrs or %)	Rate (Hr or Salary)	Total Cost	Rate Basis	Comments (as needed)
Maint. Worker III	250	\$25	\$6,193	Base Rate Per Hour	In-Kind Info from Clinton City Public Works director see Attachment B1
Maint. Worker I	250	\$20	\$4,900	Base Rate Per Hour	In-Kind Info from Clinton City Public Works director see Attachment B1
			\$0		
Total			\$11,093		

Additional Narrative/Comments:

ATTACHMENT B
BUDGET DETAIL AND NARRATIVE TEMPLATE

6b. Fringe Benefits

Fringe benefits are allowances and services provided by employers to their employees as compensation in addition to regular salaries and wages. Fringe benefits include, but are not limited to, the costs of leave (vacation, family-related, sick or military), employee insurance, pensions, and unemployment benefit plans. Fringe costs should also include employer contributions required by law such as payroll taxes such as FICA, unemployment, and workers compensation. Fringe does not include federal income taxes, employee portion FICA, or other such costs. Recommend reviewing **§ 200.431 Compensation - fringe benefits** for more information on the allowability and allocability of fringe benefits. *Note: Car allowances and cars furnished to employees for personal and work use are unallowable as a fringe benefit, regardless of whether the costs is reported as taxable income, and must be excluded from fringe benefit rates.*

Narrative: Fringe benefits can be expressed as an hourly rate or percentage of personnel costs, but must correspond to how the costs are documented in your organization's accounting system. In the narrative, identify the fringe benefit rates/amounts for each position. If the fringe benefit rate is less than 35% of the estimated employee compensation, no additional information is necessary. If the fringe benefit rate is more than 35%, provide a description and breakdown of the benefits. If the rate is established within a negotiated indirect cost rate agreement (NICRA), provide a copy of the agreement with the application. Do not combine the fringe benefit costs with direct salaries and wages in the personnel category.

Links: [§ 200.431 Compensation - fringe benefits](#)

Fringe Benefits

Position Title	Compensation	Quantity	Total Cost	Comments (as needed)
Maint. Worker III	17	250.00	\$4,250	In-Kind Info from Clinton City Public Works director see Attachment B1 for fringe breakdown
Maint. Worker I	12	250.00	\$3,000	In-Kind Info from Clinton City Public Works director see Attachment B1 for fringe breakdown
			\$0	
			\$0	
			\$0	
Total		\$7,250		

Additional Narrative/Comments:

ATTACHMENT B
BUDGET DETAIL AND NARRATIVE TEMPLATE

6e. Supplies

Supplies is defined in §200.1 as all tangible personal property other than those described in the definition of equipment. A computing device is a supply if the acquisition cost is less than the lesser of the capitalization level established by your organization for financial statement purposes or \$5,000, regardless of the length of its useful life. Recommend reviewing **§ 200.453 Materials and Supplies Costs, Including the Costs of Computing Devices**, regarding the allowability of costs. Supply items must be direct costs to the project and not duplicative of supply costs in the indirect rate. For post-award requirements regarding supplies, recommend reviewing **§ 200.314 Supplies**. For financial management requirements related to supplies, recommend reviewing **§ 200.302(b)(4)**

Narrative: List all expendable supplies noting their purpose in the project and the basis of cost (e.g. vendor quotes, catalogue prices, prior invoices, etc.) For each item, provide the estimated unit cost, quantity, and total cost. General categories may be used, but if a category is viewed as too general or the associated amount is too high, further itemization may be requested.

Links: [**§200.1 Definitions**](#) [**§ 200.453 Materials and Supplies Costs, Including the Costs of Computing Devices**](#) [**§ 200.314 Supplies**](#) (post award requirements) [**§ 200.302\(b\)\(4\)**](#) (financial management requirements related to supplies)

Supplies					
Supply Item	Quantity	Unit Cost	Total Cost	Basis of Cost	Purpose
Sensus 520M Single Port SMPT Radio PIT-Set	1000	\$199	\$199,439	Bid from MountainLand Supply see Attachment B2	AMI Radio Culinary Water Meter Pit Antenna
			\$0		
			\$0		
			\$0		
			\$0		
			\$0		
			\$0		
			\$0		
Total		\$199,439			

ATTACHMENT B
BUDGET DETAIL AND NARRATIVE TEMPLATE

6f. Contractual

Include all contracts and subawards, (other than those for construction activities) under this Budget Object Class Category. Per § 200.1, a *contract* means, for the purpose of Federal financial assistance, a legal instrument by which a recipient or subrecipient purchases property or services needed to carry out the project or program under a Federal award. The term as used in this part does not include a legal instrument, even if the non-Federal entity considers it a contract, when the substance of the transaction meets the definition of a subaward.

For additional information on subrecipient and contractor determinations, see § 200.331 Subrecipient and contractor determinations. Do not include construction contract costs in this subsection. Construction costs should be included in Budget Object Class Category 6g, Construction.

Links: [§ 200.1 Definitions](#)
[§ 200.331 Subrecipient and contractor determinations.](#)

For each contract, regardless of dollar value, describe the services to be obtained and the applicability or necessity of each to the project. Identify the total estimated cost and the basis(es) used to develop the estimate. For each contract with an estimated amount meeting or exceeding \$250,000 or represents 35% or more of the total project cost, provide a separate detailed description of the estimated costs. A detailed estimate can be included with the application in lieu of a description. For contracts with an estimated cost equal to or greater than the micro-purchase threshold (currently \$10,000) identify the anticipated procurement method to be used and the basis of selection.

NOTE: Only contracts for architectural/engineering services can be awarded using a qualifications-based procurement method. If a qualifications-based procurement method is used, profit must be negotiated as a separate element of the contract price. See **§200.318 General Procurement Standards** for additional information regarding procurements, including required contract content. The procurement method used must be compliant with **§ 200.319 Competition**, and **§ 200.320 Methods of procurement to be followed**. Recommend reviewing **§200.459 Professional service costs**.

Links: [§ 200.318 General procurement standards](#)
[§ 200.319 Competition](#)
[§ 200.320 Methods of procurement to be followed.](#)
[§ 200.459 Professional service costs](#)

Contractor Name	Purpose and Contracting Method	Total Cost	Description of costs	Basis of cost
TBD/Reclamation	NEPA Compliance and award process	\$8,000	Consultant coordination with Reclamation to prepare	Based on previous experience with similar Federally funded projects to complete the pre-award process/environmental
		\$0		
		\$0		
		\$0		
		\$0		
		\$0		
Subtotal		\$8,000		

Additional Narrative/Comments:

Subawards

If known, identify the recipient of each subaward. Describe the activities to be performed under each subaward and indicate the applicability or necessity of each to the project. Provide a separate detailed budget for each subaward, regardless of dollar value. **A detailed estimate may be included with the application in lieu of a description of budgeted costs.** Identify who prepared the estimate (subrecipient, applicant personnel, etc.) and indicate the basis used to estimate each cost. Include any indirect/overhead costs anticipated to be paid and the rate used. If the subrecipient has a Federal negotiated indirect cost rate agreement (NICRA), include a copy of the NICRA with the application.

Subrecipient Name	Description of Activities	Total Cost	Description of budgeted costs	Basis of Cost
		\$0		
		\$0		
		\$0		
		\$0		
Subtotal		\$0		

Additional Narrative/Comments:

TOTAL CONTRACTUAL	\$8,000
-------------------	---------

ATTACHMENT B
BUDGET DETAIL AND NARRATIVE TEMPLATE

g. Construction

Construction costs are costs incurred in the construction, renovation, and/or equipping of a facility or structure. Costs include, engineering, design, permitting, demolition, acquisition of materials, and installation of improvements.

Identify all construction related costs other than personnel and fringe benefits costs, including, but not limited to applicant-owned equipment use, rental equipment, construction supplies, equipment that will be purchased and installed, construction contracts, permitting, and environmental compliance. Personnel and fringe benefits costs related to construction should be included in Budget Object Class Category 6a and 6b, as applicable.

Recipient-Owned Equipment Use Costs

If you propose to use equipment that you own under the project, provide the use rates and hours for each piece of equipment owned and budgeted. These should be ownership rates developed by the recipient for each piece of equipment (do not include operator costs). If these rates are not available, the U.S. Army Corp of Engineer's recommended equipment rates for the region are acceptable. Rates for your region can be found at the link below.

Links: [EP1110-1-8 Construction Equipment Ownership and Operating Expense Schedule](#)

Equipment Item	Hours	Rate	Total Cost	Basis of Cost	Purpose
			\$0		
			\$0		
			\$0		
			\$0		
			\$0		
			\$0		
			\$0		
Subtotal			\$0		

Additional Narrative or Comments:

Construction Materials

Identify any construction materials and non-movable equipment that will be purchased from a vendor. Include estimated purchase price, quantity, total cost, and the basis used to estimate the cost (published prices, quotes, previous project, etc.)

Item	Quantity	Unit Cost	Total Cost	Basis of Cost	Comments (as needed)
			\$0		
			\$0		
			\$0		
			\$0		
			\$0		
			\$0		
Subtotal			\$0		

Additional Narrative/Comments:

Contractual

For each contract, regardless of dollar value, describe the services to be obtained and the applicability or necessity of each to the project. Identify the total estimated cost and the basis(es) used to develop the estimate. For all construction contracts and each contract with an estimated amount meeting or exceeding \$250,000 or representing 35% or more of the total project cost, provide a separate detailed description of the estimated costs. A detailed estimate can be included with the application in lieu of a description. For contracts with an estimated cost equal to or greater than the micro-purchase threshold (currently \$10,000) identify the anticipated procurement method to be used and the basis of selection.

NOTE: Only contracts for architectural/engineering services can be awarded using a qualifications-based procurement method. If a qualifications-based procurement method is used, profit must be negotiated as a

Attachment B1

Clinton City - Labor Cost Sheet
(July 2024)

Labor Costs	Base Rate per hour	Benefits/ Fringes	Social Sec 6.20%	Medicare 1.45%	FUTA 0.60%	SUTA 0.82%	Workman's Comp	Sub-total	Overhead 10.00%	Total w/overhead	Total of B&F and other Labor Costs/Overhead
Maint. Worker III	24.77	10.68	1.54	0.36	0.15	0.20	0.32	\$38.02	\$3.80	\$41.82	\$17.05
Maint. Worker I	19.60	7.05	1.22	0.28	0.12	0.16	0.25	\$28.68	\$2.87	\$31.55	\$11.95

Noted:

Benefits and Fringes includes: sick and vacation leave, retirement fund, health, dental, and eye insurance

Benefits

Medical/Dental	502.50/Month	3.14\$/hr. (based on cost rather than percentage)
Sick leave	7.38 hrs./mo.	2.31% Converted to percent of time by dividing annual sick leave by total annual work hours
Vacation	11.06 hrs./mo.	4.62% Converted to percent of time by dividing vacation leave by total annual work hours
Retirement	17%	17% Employer share of retirement

Overhead

10% Calculated after all additives



Attachment B2

Bid

S105818046.001

\$199,439.10

BILL TO:

CITY OF CLINTON (METERS)
2267 NORTH 1500 WEST
CLINTON, UT 84015

SHIP TO:

CLINTON CITY WATER DEPT
WATER DEPT.
1700 WEST 1700 NORTH
CLINTON, UT 84015

Customer #	Salesman	Release #	Job Name
14905	TRAVIS HERZOG		Radio Quote

Ship Via	Terms	Expiration Date	Order Date	Ordered By	Writer
	NET 30TH	12/27/2023	11/27/2023	Dave	TYSON ALLSOP

Part #	Qty	Description	UoM	Price	Ext.
224321	1000	SENSUS 520M SINGLE PORT SMPT RADIO PIT-SET WITH TRPL TOUCHCOUPLER INTERVAL DATA	ea	\$199.439	\$199,439.10

All prices herein supercede all prior quotes and are subject to change without prior notice. No guarantee is made as to the accuracy of the quantities listed. *** NOTE- All Special Order Material is Non-Returnable ***

Due to the impact of COVID-19 supply chain interruptions, trucking shortages, and resulting price increases, this pricing is based on material in stock at time of quotation. Please verify all quantities and part numbers prior to placing your order.

Subtotal	\$199,439.10
Est. S&H	\$0.00
Est. Tax	\$0.00
Due	\$199,439.10

Clinton City

Water Conservation Plan

2022 Update



Prepared by:
Clinton City Public Works Department

With the Assistance of:
J-U-B Engineers
466 North 900 West
Kaysville, Utah 84037
801-547-0393

6 PLANNED CONSERVATION PRACTICES

6.1 Landscaping Ordinance

Clinton City has the goal of passing an updated landscaping ordinance that would allow residents to participate in the rebate programs promoted by Weber Basin Water Conservancy District. These programs, such as flip-your-strip, would incentivize residents to relandscape their park strip with more water wise landscaping. The updated landscaping ordinance would clarify the standards for residents interested in relandscaping, helping them stay in conformance with city code.

(Implementation Timeline: 2022-2023)

6.2 Water Conservation Webpage

Clinton City has the goal of adding a webpage to their city website that includes information on how residents can conserve water. The webpage would include links to Weber Basin Water Conservancy District incentive programs such as flip-your-strip or water efficient fixture conversions. These programs play a vital role in the regions conservation efforts and improving publicity for them would help increase resident participation.

(Implementation Timeline: 2022-2023)

6.3 Relandscaping City Facilities

This past year, Clinton City budgeted for the relandscaping of city facilities to more water wise landscaping. Many park strips near city facilities have turf sod and are difficult to water efficiently. The City plans to create a phased relandscaping plan to prioritize areas of high-water use. The continued funding of the city facility relandscaping plan would require the future support of City Council.

(Implementation Timeline: 2023-2028)

6.4 Advanced Metering Infrastructure

The City would like to upgrade the current water meter reading system with advanced metering infrastructure (AMI). The AMI would provide real-time water usage data to residents and has been shown to provide substantial water savings. AMI would allow automatic notification to residents and city personnel of detected leaks in the system or abnormally high usage. The primary barrier to the installation of AMI is the high cost of replacing every existing meter in the system. The City plans to investigate different funding options, especially grants, for the future implementation of this goal.

(Implementation Timeline: 2023-2028)

achieved in a given year is 326,679 acre-feet. It is important to monitor this because the storage that is downstream of the mouth of Weber Canyon cannot be as easily treated or utilized to meet needs throughout heavily populated areas of the District.

3. U.S. Drought Monitor Classification (only a trigger for the advisory level)

Another tool used only to help establish the normal and advisory drought levels is the U.S. Drought Monitor Intensity Classification. This tool was created by the National Drought Mitigation Center (University of Nebraska) and is found at <https://droughtmonitor.unl.edu/> It provides a summary of drought conditions across the United States and is updated weekly by combining a variety of data-based drought indices and indicators and input from local experts.

Drought Risks

Drought Vulnerabilities	Risks Associated with Vulnerabilities	Risk Level
Available Water Supply During Drought	Overuse of culinary water as secondary supply is limited	High
	Reduced culinary water as supply is limited	High
	Loss of crops and production	Moderate
	Culinary contamination	Low
Water System	Increased well pumping costs	High
	Increased fire hazards and vulnerabilities	Moderate
	Increased operation and maintenance costs	Moderate
	Clinton's dependency on WBWCD increases risks to other Junior water right holders	High
Lack of Drought Information for Water Users	Failure to collaborate and educate	High

6 – 3 Mitigation Actions (See Appendix D for Mitigation Actions Rankings)

Mitigation actions are essential to building drought resiliency and are actions taken prior to a drought that will help offset the impacts of a drought. Several mitigation actions were evaluated and ranked based on how well they met main objectives, including Increased Supply, Financial Feasibility, and Other Miscellaneous Objectives. The top-ranking mitigation actions are as follows:

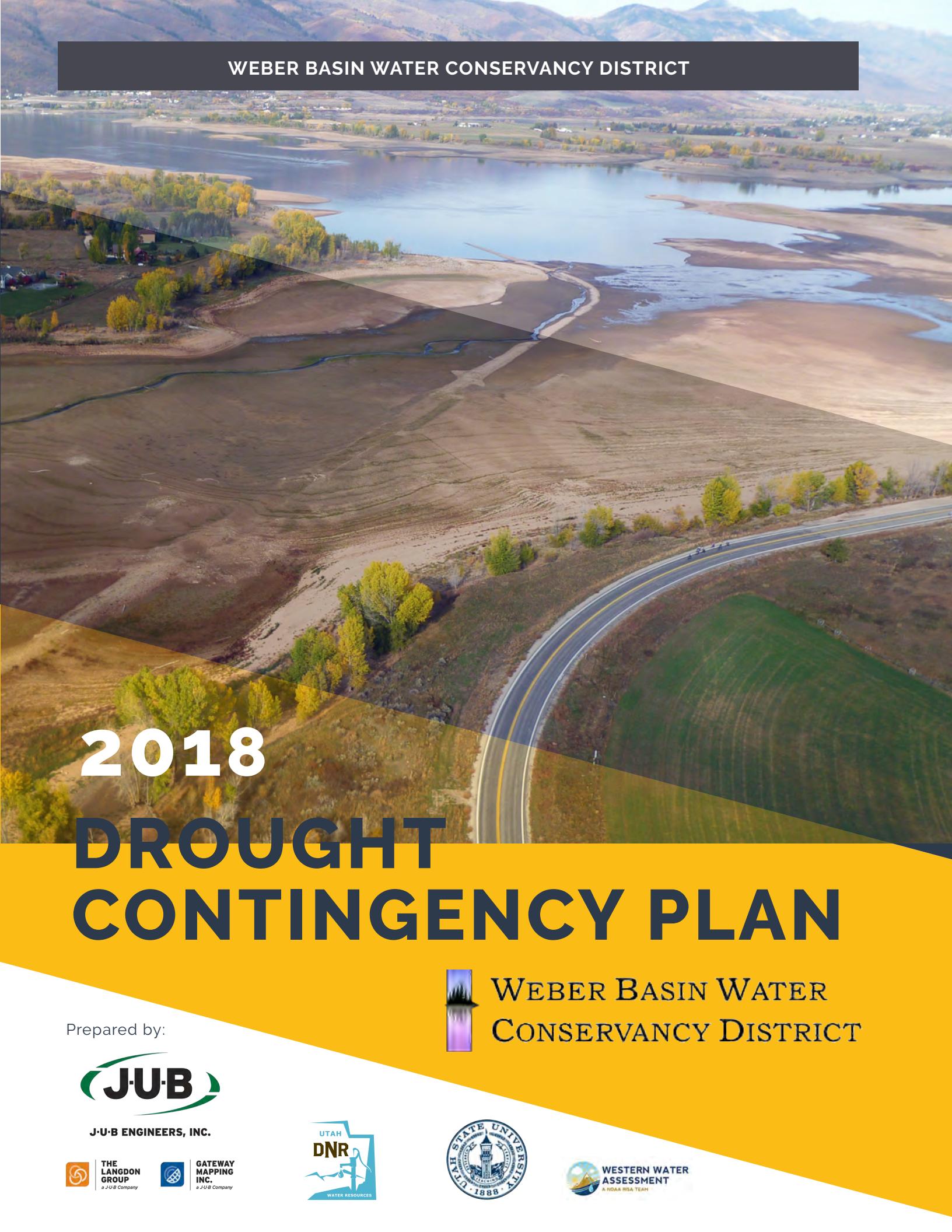
1. Additional City Well – Would increase the reliability of water supply available to the City by enabling access to its additional 585-acre-foot groundwater right. This would decrease the City's dependency on WBWCD water supply during drought, allowing the City to continue to deliver water during a drought, and would reduce the need for emergency response actions.
2. Work with Secondary Water Provider to Meter All Secondary Connections – Reduced usage of secondary water during drought years results in more water available for culinary use.

3. Water Pricing – Implement drought surcharge fee structures and drought rate surcharge educational campaign.
4. Additional 1.5M Gallon Storage Tank – This would improve the City's ability to offset the effects of a drought by storing additional supply that could be made available during drought.
5. Internet Water Supply Dashboard and Educational Outreach – This would be a web-based system that reports current water use and drought conditions as well as what conservation measures individual users should be taking. This would help increase education and awareness surrounding drought and help reduce water use with a collaborative approach.
6. System Redundancies – Agreements in place with other Cities and water districts to share supplies during drought.
7. High Efficiency Indoor Appliance Subsidies – Implement a subsidy program for users to install high-efficiency technology that conserves water.
8. Leak Detection and Repairs – Ongoing operation to upgrade distribution system.

6 – 4 Response Actions

Response actions have been developed that are triggered with different drought levels and will help mitigate the resulting impacts. These actions should be frequently monitored, evaluated, and tweaked over time based on their effectiveness in reducing usage targets.

Advisory Code	Water Shortage Description	Response Action
Blue	Normal	Continue current conservation efforts to meet statewide goal to reduce per-capita M&I usage by 25% between 2000 and 2025
Gray	Advisory	Begin public outreach and awareness campaign to inform residents that water shortages are possible if drought conditions continue and that conservation efforts are needed.
Yellow	Moderate	Increase public outreach and awareness, implement yellow drought rates and shorten irrigation season, and increase advisory group meetings
Orange	Severe	Increase public outreach and awareness, implement orange drought rates and cut lawn watering in half, reduce agricultural water use, start indoor water reduction strategies, and increase advisory group meetings
Red	Extreme	Increase public outreach and awareness, implement red drought rates and no residential lawn watering, continue indoor water reduction strategies and increase advisory group meetings



2018 DROUGHT CONTINGENCY PLAN

Prepared by:



J-U-B ENGINEERS, INC.



THE
LANGDON
GROUP
a J-U-B Company



GATEWAY
MAPPING
INC.
a J-U-B Company



WEWEBER BASIN WATER
CONSERVANCY DISTRICT

STAKEHOLDER INVOLVEMENT



WBWCD does not have control over how all of the water is managed within the district boundaries. As such, it is very important that irrigation companies, municipal water systems, industrial water users, environmental water user groups and other stakeholders participate in the creation and implementation of this plan.

The planning process included two levels of stakeholder involvement. Level one included a small group of stakeholders who were invited to be part of the "Task Force." Level two included a larger

group called an "Advisory Group."

These two groups comprised of agriculture users, decision-makers, community residents, local businesses, environmental advocates,

and other stakeholders. This extensive stakeholder involvement helped to provide an excellent foundation for the more in-depth work required to formulate an all-inclusive drought plan.



WBWCD understands the need for public involvement rather than merely conducting a public relations campaign. Public involvement is a process of including stakeholders in developing an array of alternatives and a decision-making process for selecting a solution. In contrast, public relations is the process of gaining public acceptance of a predetermined solution. Public involvement seeks to gain stronger support from stakeholders than mere public relations because stakeholders are part of the solution.

Key Stakeholder Interview Summary

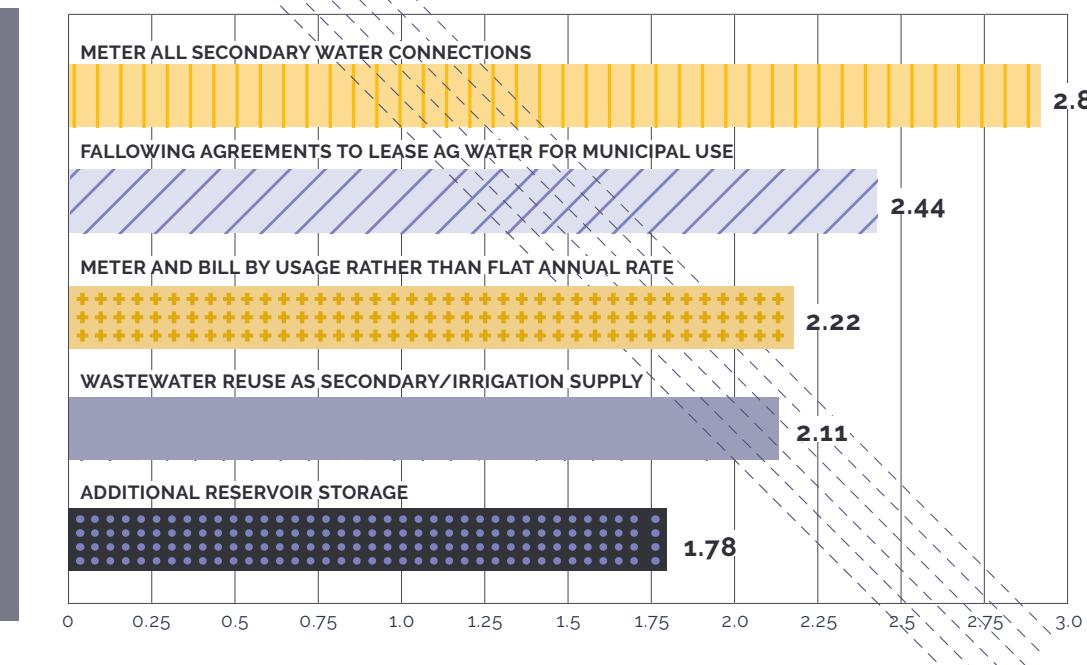
Members of the Task Force and Advisory Groups were interviewed. Key themes and insights from these interviews are listed below. Key person interviews provided an understanding of the key drought concerns as well as potential strategies to mitigate the effects of drought and ways to respond to drought.

THEMES	INSIGHTS
INFRASTRUCTURE & OPERATIONS	Maximizing the efficiency and capacity of the existing system through strategies such as improved metering, canal lining, aquifer storage and recovery and wastewater reuse will improve drought resiliency.
ENVIRONMENT	Water operations strategies such as pulsing water through the system during wet years or improving the connectivity of fish habitats should be evaluated and coordinated to minimize negative environmental impacts during droughts.
DATA, COMMUNICATION & COLLABORATION	Improved communication and collaboration through strategies such as; public notification of current drought level status, delivery of water consumption reports to users, creation of water sharing agreements between water entities, interconnection agreements between cities and cooperation between all water users will improve drought resiliency and ability to respond to drought conditions.
DROUGHT WATER PRIORITIES & RESTRICTIONS	A detailed drought plan is needed to prioritize water restrictions for future drought periods, set expectations with water users for drought responses and develop drought messaging.

During the interviews, key stakeholders were asked to provide responses to a few key questions. Some potential mitigation actions were presented and stakeholders were asked:

"How would you prioritize the following drought mitigation actions?"

AVERAGE SCORE OF MITIGATION ACTIONS

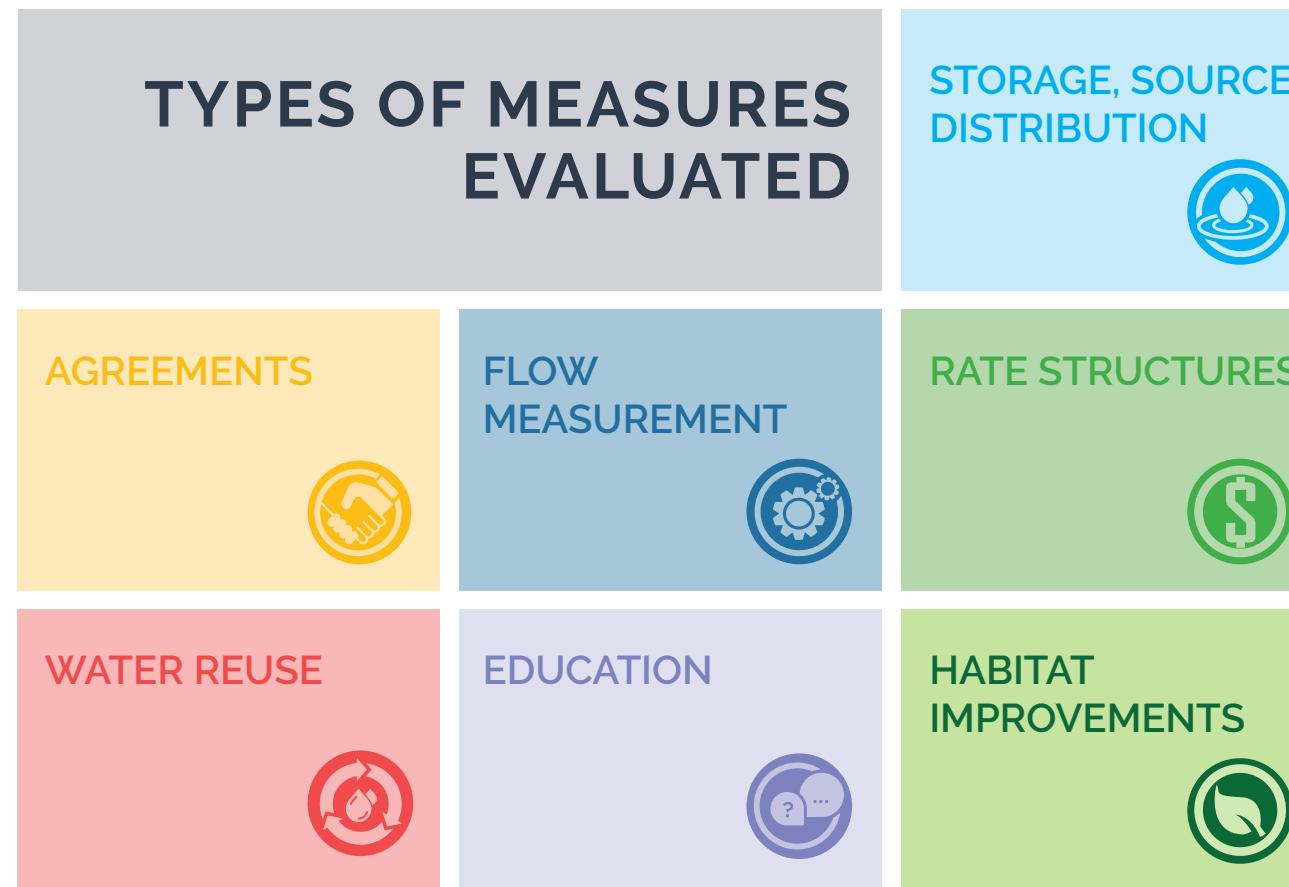


The stakeholders responded high, medium, or low. The actions were then scored based on the following weighted average point system:

High Priority = 3
Medium Priority = 2
Low Priority = 1

Ranked Mitigation Measures

More than 30 specific mitigation measures were evaluated and ranked based on how well they meet the identified drought objectives. DWRe ran scenarios in the Riverware model to help identify which mitigation measures best meet the objectives. During the evaluation, the list of specific mitigation measures was reduced to 22 and then those were ranked. The top 10 mitigation measures identified through the evaluation are shown on the opposite page.



Top 10 Mitigation Measures

- 1 **Internet Water Supply Dashboard** - Create a web-based system that reports current performance of system and drought levels and informs people what water conservation actions they should be implementing.
- 2 **Drought Surcharge Fees** - Study and develop a secondary water drought surcharge fee structure for Weber Basin to utilize during drought periods. Fee structures will provide revenue needed for system operation and maintenance and to fund response actions during droughts. (Assume all secondary connections are metered).
- 3 **WBWCD Secondary Water Metering** - Meter all secondary WBWCD water users and provide usage reports to the users. Save 35% average when going to meters. 11,000 services left to meter at a cost of \$1,200 per service.
- 4 **Short-Term Transfer Agreements** - Create a program and get contracts in place to compensate large agricultural users to fallow land or plant drought tolerant crops when asked.
- 5 **Other Systems Secondary Water Metering** - Start a WBWCD program to provide secondary water metering technical assistance and meter installation assistance for secondary systems in the district boundaries, but not owned by the District. Assume 80,000 meters added.
- 6 **Drought Surcharge Fees Education** - Educate cities and the public about rate structures. Prepare a sample ordinance to provide for cities for drought water rate adjustments. Visit cities to explain the rate structures and the benefits (50 customer agencies).
- 7 **Connect Farmington Wells to Culinary System** - Install transmission lines to connect existing wells in Farmington to WBWCD culinary water transmission systems.
- 8 **Advisory Group Meetings** - Continue meetings with Advisory Group, Division of Wildlife Resources, Trout Unlimited, and other habitat stakeholders to better define strategies to make river habitat more drought resilient while still meeting water delivery requirements. Strategies may include stream connectivity improvements and water pulsing through the river to clean channels during wet years.
- 9 **Weber Canyon ASR** - Develop ASR near mouth of Weber Canyon. Use purchased Echo or East Canyon water in wet years to be used later during drought.
- 10 **Create New Tiered Rate Structure and Short Term Transfer Water Fund** - Create a fund prior to a drought to purchase water through short term transfer agreements during times of drought. Use overage fees from water users that exceed a certain level of water use in any given month.