



— BUREAU OF —  
RECLAMATION

# Bear River Water Conservancy District

## Culinary Water Production Wells and Tank Project

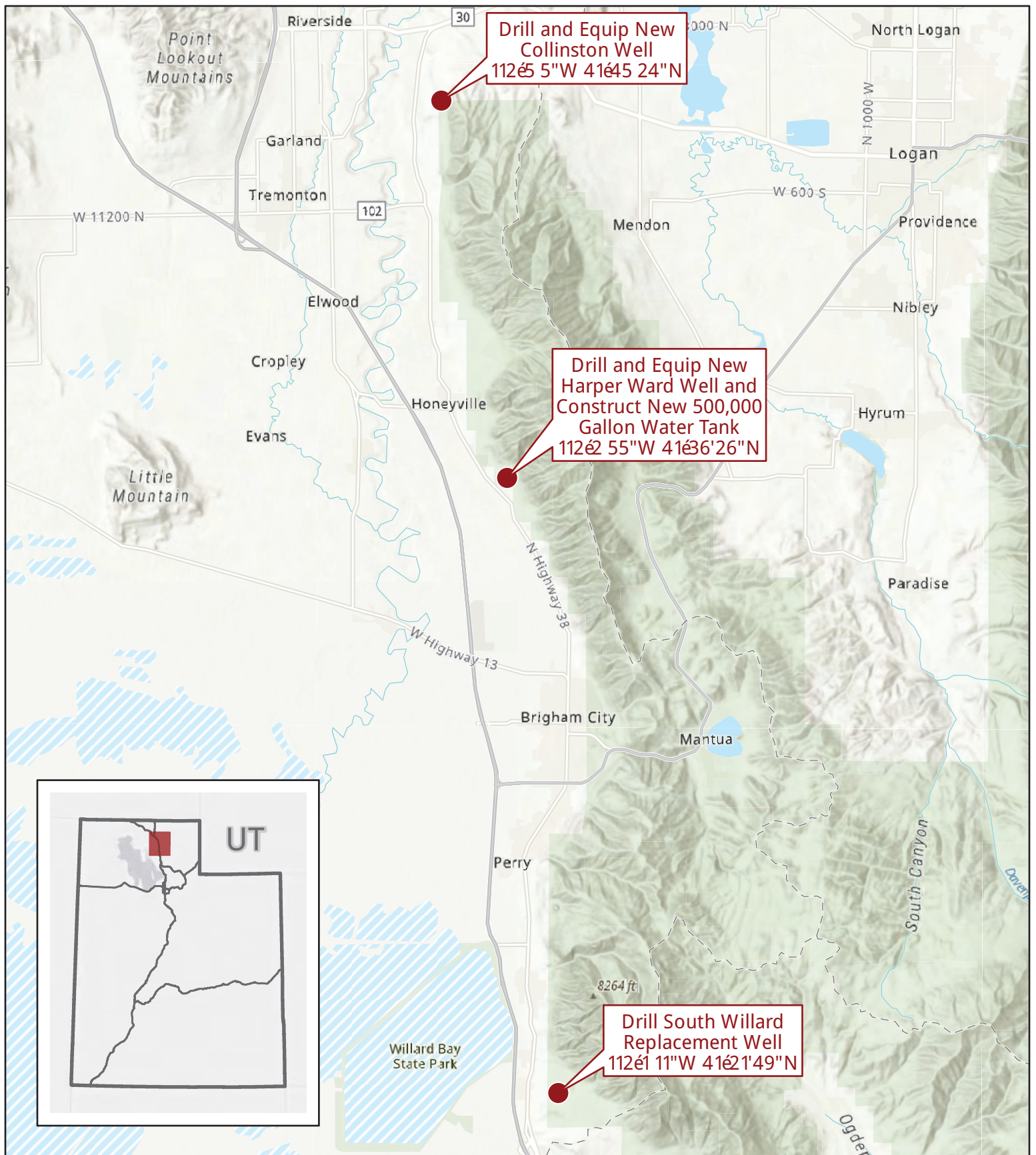
WaterSMART: Drought Resiliency Projects for FY22 - NOFO No. R22AS00020

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# BRWCD CULINARY WATER PRODUCTION WELLS & TANK







# Malad and Bear River Groundwater Policy Area

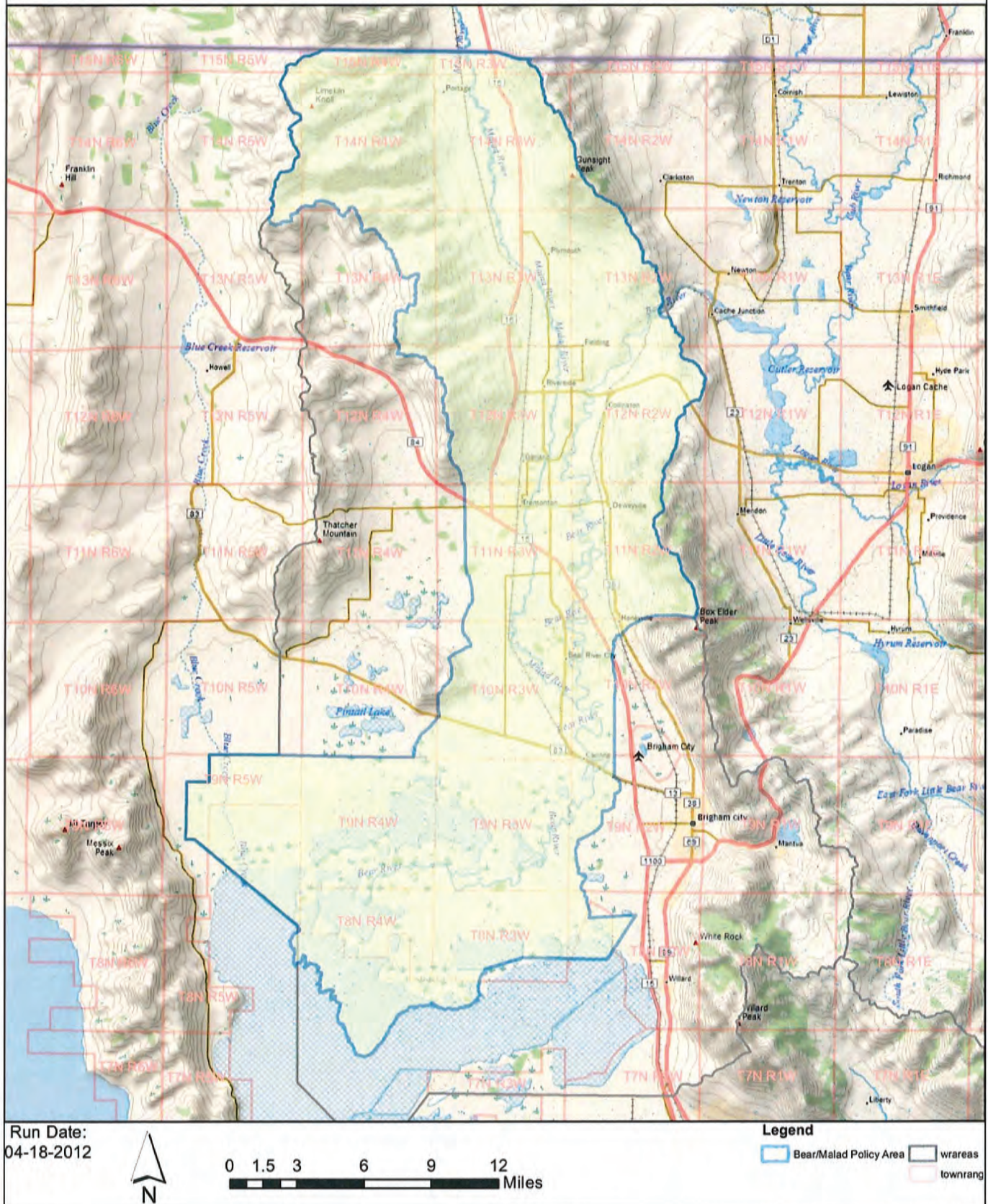


Figure 1. Map of policy area

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## Technical Proposal and Evaluation Criteria

### Executive Summary

*Date:* October 5, 2021

*Applicant Name:* Bear River Water Conservancy District

*City, County, State:* Brigham City, Box Elder County, Utah

*Project Manager:*

*Name:* Chris Slater

*Phone:* 435-713-9514

*E-mail:* cslater@JUB.com

*Applicant Category:* “Category A” Applicant

*Project Funding Request:* Funding Group II – \$2,000,000; Total Project Cost – \$4,157,750

*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, recent drought conditions in your project area. Describe how this project is expected to help alleviate impacts of those conditions, and identify any drought plans or other planning documents that support the project. This information will be used to create a summary of your project for our site if the project is selected for funding.*

Bear River Water Conservancy District (BRWCD or The District), located in Box Elder County, Utah, will construct and equip two new production wells, one replacement well, and a 500k-gallon storage tank. This infrastructure will be located in three unincorporated areas within the District’s service area: Collinston, Harper Ward, and South Willard. This project will help BRWCD get back on their feet and prepare for current/future drought conditions by providing access to an estimated 807 acre-feet per year of clean, culinary water. Of the 807 acre-feet per year, up to 475 acre-feet per year is needed under existing District obligations, while 332 acre-feet per year would be additional water developed to provide additional resiliency for drought and growth.

The District has always received water (since 2015) for its Collinston System from “excess” water supplied by neighboring Deweyville Town by agreement. However, due to persisting drought conditions, the Town recently delivered to the District a Notice of Cancellation of the agreement, effective in two years. Likewise, the District has always been supplied water for its Harper Ward System (since 1994) by agreement from neighboring Brigham City. The District would like to replace this agreement with its own sources of water. The District’s South Willard System has been supplied by its own well. In June 2020, the pump for the South Willard Well was to be removed for well maintenance and treatment of iron bacteria, which arrived when the well was deepened in 2015. The pump got stuck in the well, is breaking apart, and is nearly unremovable. A replacement well is needed while the District continues to make every effort to rescue the existing well.

These wells and culinary tank are identified in BRWCD’s Drought Resiliency Plan as actions that would be effective in helping the District increase resiliency to current and future drought conditions. However, due to the Mega-drought and losing access to its existing sources of

## WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2022

water, the proposed wells and tank are no longer considered future needs. They are immediate needs that will help reduce the effects of drought and mitigate emergency response actions for the District's service area. See Appendix A – Project Location Map, Appendix B – Deweyville Source Agreement 2-year Cancellation Notice, and Appendix C – BRWCD Drought Resiliency Plan.

*State the length of time and estimated completion date for the proposed project including the construction start date (mm/yr) (if applicable) **Note: proposed projects should not have an estimated construction start date that is prior to July 2022.***

Based on the Reclamation contract timeline, BRWCD will start the environmental and preliminary design in August/September 2022. The final design will be completed in March/April 2023. They plan to bid on the project in April/May 2023. It is anticipated that the construction of the wells and tank will begin in June/July 2023 and be completed and be ready to bring online in June/July 2024. Final reports and project closeout will be in November 2024/January 2025. The project will be accomplished within the three-year allowance.

*Whether or not the proposed project is located on a Federal facility.*

The proposed project is not located on a Federal facility.

### Project Location

*Provide specific information on the proposed project location or project area including a map showing the geographic location. For example, [project name] is located in [county and state] approximately [distance] miles [direction, e.g., northeast] of [nearest town]. The project latitude is {##°##'N} and longitude is {###°##'W}.*

The proposed project is located Box Elder County, Utah, within the Bear River Water Conservancy District (BRWCD) service area. The proposed wells and tank will be located in three unincorporated areas: Collinston (Lat. 112°5'5"W, Long. 41°45'24"N), Harper Ward (Lat. 112°2'55"W, Long. 41°36'26"N), and South Willard (Lat. 112°1'11"W, Long. 41°21'49"N). See Appendix A – Project Location Map.

### Technical Project Description

*Provide a more comprehensive description of the technical aspects of your project, including the work to be accomplished and the approach to complete the work. This description should provide detailed information about the project including materials and equipment and the work to be conducted to complete the project. This section provides an opportunity for the applicant to provide a clear description of the technical nature of the project and to address any aspect of the project that reviewers may need additional information to understand.*

In recent weeks, Deweyville Town, who is contracted to provide up to 250 acre-feet of culinary water to BRWCD, gave notice that their agreement to use the Town's excess water supply will prematurely end in two years. A significant portion of the water obtained from Deweyville is supplied to Ukon Water Company for blending so that they can stay below the Maximum Contaminant Level (MCL) for arsenic and maintain good water quality. This water is delivered to Ukon through BRWCD's Collinston System. In addition, BRWCD's South Willard well is currently out of commission with a stuck and broken pump that has kept the well out of commission for over a year. BRWCD has gone through extensive lengths to remove the pump

with only very limited success. In addition, a pending large development is looming that the District is contracted to supply water to. In the past, the South Willard Well provided up to 123 acre-feet of water per year. Utah's Mega-drought has affected BRWCD's water supply in a big way, and without the proposed project, they risk running out of water. The proposed work outlined below must be accomplished for BRWCD to make up for the loss of up to 475 acre-feet of water supply per year, and to prepare for current and future drought conditions.

#### **Collinston Well**

This will be a new well that will help replace the water that has previously been provided through the Deweyville agreement. The well will be drilled using the mud rotary drilling method to approximately 500 feet and will be equipped with 200 feet of 8-inch PVC C-900 pipe to connect the well to an existing culinary water tank and distribution system. The site will include a well house to store the equipment. Equipment will include a flow meter, chlorination, and a pump. Underground power lines will also be installed to power the well pump. Well level monitors and SCADA equipment will be installed to monitor water levels and to provide information to water managers that will help evaluate any ground water level changes during droughts. It is estimated that this well will be able to produce 400 gallons per minute (gpm) and that the pump will operate an average of 12 hours per day. This is equivalent to 288,000 gallons per day (gpd) or 105 million gallons per year (about 323 acre-feet per year).

#### **Harper Ward Well and Tank**

The Harper Ward test well was previously dug to determine its site as a viable location for a reliable, clean source of culinary water. The test was successful, and now BRWCD is ready to develop it as a production well. As part of this project, a new 500k gallon water tank will be constructed at this location to store the water produced from this well. The well will be drilled using the cable tool drilling method at 390 feet and will be equipped with 2,400 feet of 8-inch PVC C-900 pipe to connect the well to the new water tank and distribution system. The site will include a well house to store the equipment. Equipment will include a flow meter, chlorinator, and a pump. Underground power lines will also be installed to power the well pump. Well level monitors and SCADA equipment will be installed to monitor water levels and to provide information to water managers. It is estimated that this well will be able to produce 300 gpm and that the pump will operate an average of 12 hours per day. This is equivalent to 216,000 gpd or 78.8 million gallons per year (about 242 acre-feet per year).

#### **South Willard Replacement Well**

This well will be a rebuild of the existing well and will be built next to the existing well. The existing well is currently inoperable due to failure of the pump and the inability to remove the pump from the existing well. BRWCD has gone through extreme lengths to break apart and remove the pump, but it is now stuck in the well shaft without hope of every being removed. This replacement well will be similar to the design and construction of the Collinston Well mentioned previously, but with only 50 feet of 8-inch PVC C-900 pipe to connect the new well to the existing wellhouse. This well site already has monitoring and SCADA equipment installed. It is estimated that this well will produce the same amount of water as the Harper Ward Well above.

## Performance Measures

*All applicants are required to propose a method (performance measure) of quantifying the benefits of their proposed project once it is implemented. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of the project.*

The benefits of implementing these new wells and water tank will be quantified in terms of added water supply delivered during dry summer periods. This will be accomplished by recording the volumes that are pumped by each of the three wells and recorded each year. This data will be provided as BRWCD actively monitors well water levels at each of its well locations through the use of well level monitors and SCADA. The proposed work will include the installation of monitoring and SCADA at each well site that doesn't already have this equipment in place. However, it is also necessary to mention that the District has a drought response plan in place that has reduced the amount of culinary water used this year in comparison to previous year's averages. This amount of water "saved" is also a quantified benefit and strategy that the District will use during drought conditions.

## Evaluation Criteria

### *E.1.1. Evaluation Criterion A – Project Benefits (30 Points)*

*How will the project build long-term resilience to drought? How many years will the project continue to provide benefits?*

**Self-Sufficient Water System:** BRWCD has historically relied on agreements with other water providers, such as Deweyville Town (Collinston System) and Brigham City (Harper Ward System) to supply culinary water to its users during difficult years; but because of current extreme drought conditions, excess water is disappearing. BRWCD understands that they must create redundancy of BRWCD-owned water supplies if they are to become self-sufficient and more resilient during difficult drought conditions.

**Additional Water Sources:** This project will build long-term resilience to drought by providing three additional sources of BRWCD-owned culinary water in key areas that have been historically hard to serve during these ongoing drought years.

**Additional Water Storage:** The new 500k-gallon water tank will also help them store water produced by the Harper Ward Well to build greater long-term resilience to drought.

With proper maintenance, the proposed wells and water tank will build long-term resilience to drought for 50 years or more based on their useful life.



*Will the project make additional water supplies available?*

- *If so, what is the estimated quantity of additional supply the project will provide and how was this estimate calculated? Provide this quantity in acre-feet per year as the average annual benefit over ten years (e.g., if the project captures flood flows in wet years, provide the average benefit over ten years including dry years).*

Yes, this project will supply an estimated 807 acre-feet per year, which will support existing obligations of up to 475 acre-feet per year, as well as 332 acre-feet per year of additional supply. Details for each system are as follows:

**The Collinston well** will provide replacement and additional water supply to the northeast of the District's service area including Collinston, Fielding, East Garland and Tremonton. The District has existing obligations of up to 250 acre-feet per year for this system. Current use is about 115 acre-feet per year. Estimated supply from this well is 323 acre-feet per year, which would be able to supply an additional 73 acre-feet per year. (Additional Supply = Estimated Supply – Obligations).

**The Harper Ward Well and Tank** will provide replacement and additional water supply to the center of the District's service area, including the unincorporated area north of Brigham City (known as Harper Ward), Corinne City, and West Corinne (which is a very large area). The District only has existing obligations of about 100 acre-feet per year for this system; however, additional supplies could be made readily available to Corinne City (which has no other backup source) and West Corinne (which despite the drought is growing like a weed). Current use is about 80 acre-feet per year. Estimated supply from this well is 242 acre-feet per year, which would be able to supply an additional 142 acre-feet per year. This site will also receive a new 500k-gallon culinary water tank to help store water that can serve these areas now and, in the future, when drought conditions may get worse.

**The South Willard well** will provide replacement and/or additional water supply to the very south of the District's service area, including existing and future customers south of Willard City down to the Weber County Line. The District has existing obligations of up to 125 acre-feet per year for this system. Recent use has been as high as 123 acre-feet per year (2018). Estimated supply from this well is 242 acre-feet per year, which would be able to supply an additional 117 acre-feet per year. This well will replace the existing unusable well and/or serve as a redundant supply well if the District is able to return the currently unusable well to service. BRWCD has gone through extensive lengths to remove the pump to evaluate the extent of the damage to the well, but the pump is still stuck in the well casing, rendering the well useless for the past 14 months. Meanwhile, thirsty customers need water.

- *What percentage of the total water supply does the additional water supply represent? How was this estimate calculated?*

As shown in Table 1 below and based on usage records from the Utah Division of Water Rights, BRWCD currently delivers approximately 318 acre-feet of water per year to Collinston, Harper Ward, and South Willard from its existing sources. The District has

current and future obligations to deliver up to 475 acre-feet of water per year to these areas. It is typical for a water conservancy district to have contractual obligations in excess of current deliveries. If the proposed wells are developed, the District's future water supply will be approximately 807 acre-feet per year, which is an increase of 332 acre-feet per year or 70% of obligated deliveries. As shown in Calculation 1 below, additional water supply was determined by subtracting the obligated deliveries from the estimated supply; and Calculation 2 gives the percentage of the total water supply that the additional supply represents by dividing the additional supply by obligated deliveries.

$$\text{Calculation 1: } 807 \text{ af} - 475 \text{ af} = 332 \text{ af}$$

$$\text{Calculation 2: } 475 \text{ af} \div 332 \text{ af} = 70\%$$

Table 1 – Current Deliveries and Future Supplies for Collinston, Harper Ward, and South Willard

Area	Current Deliveries	Obligated Deliveries	Estimated Supply	Additional Supply	Details
	Acre-Feet per Year				
Collinston	115	250	323	73	New well to replace old Deweyville source
Harper Ward	80	100	242	142	New well to increase existing supply
South Willard	123	125	242	117	New well to replace and increase existing supply
Totals:	318	475	807	332	

- *Provide a brief qualitative description of the degree/significance of the benefits associated with the additional water supplies.*

In the past, BRWCD has relied upon agreements with other water providers for some of their water supplies – such as their agreements with Deweyville Town and Brigham City– to provide their excess water to the District. This was done to fill immediate needs at the time. However, due to current drought conditions, water providers no longer have the excess water to provide. The benefit associated with the proposed additional water supplies and water tank is that BRWCD will be able to continue to meet the water needs of water systems within the District's service area during dry periods without having to use water provided to the District by other water providers that are no longer able to do so. Having redundancy of BRWCD-owned culinary water supplies is how water companies are going to create greater resiliency during drought conditions and mitigate emergency response actions for their communities.

*Will the project improve the management of water supplies? For example, will the project increase efficiency, increase operational flexibility, or facilitate water marketing (e.g., improve the ability to deliver water during drought or access other sources of supply)? If so:*

- *How will the project increase efficiency or operational flexibility?*  
Each of these new wells will increase efficiency or operational flexibility by creating new sources of supply that the District will own and control in key areas that have been difficult to serve due to a dependency on outside sources for a supply of water. The adverse effects of current drought conditions have only made serving these areas more difficult.

This project will greatly improve BRWCD's ability to meet current obligations to its water users while becoming more resilient to climate change and the effects of drought. As a

water conservancy district with county-wide authority, BRWCD is relied upon by many other water providers to supply them with safe and reliable water supplies. With Utah's Mega-drought, BRWCD and other water providers need to use all the water they have to increase resiliency to climate change and drought for their own communities. In addition, the District is spearheading a conservation and drought response plan for the entire county. Becoming self-sufficient and water-wise is how BRWCD plans to increase efficiency and operational flexibility for its service area.

- *What is the estimated quantity of water that will be better managed as a result of this project? How was this estimate calculated? Provide this quantity in acre-feet per year as the average annual benefit over ten years (e.g., if the project captures flood flows in wet years, provide the average benefit over ten years including dry years).*

The estimated quantity of water better managed is 807 acre-feet per year. This includes 323 acre-feet per year (400 gpm at 12 hours per day) that the new Collinston Well will produce; 242 acre-feet per year (300 gpm at 12 hours per day) for the new Harper Ward Well; and 242 acre-feet per year (300 gpm at 12 hours per day) for the South Willard Replacement Well. (100 gpm at 12 hours per day = 80.65 acre-feet per year).

- *What percentage of the total water supply does the water better managed represent? How was this estimate calculated?*

100% of the 807 acre-feet developed under this application will be better managed for two reasons. First, the existing water supplies (totaling 318 to 475 acre-feet per year) are in one way or another being removed, necessitating their replacement. You can't manage what isn't there. Second, the water supply will be more reliable since they are new sources under the District's control and not subject to an outside entity's control.

- *Provide a brief qualitative description of the degree/significance of anticipated water management benefits.*

In past years, BRWCD has managed 318 acre-feet of culinary water per year for the areas the proposed project will serve. Of this amount, 238 acre-feet has been either lost or will be discontinued in the coming years due to the South Willard well no longer working and Deweyville cancelling their agreement, as explained previously. Further, in the past year, Brigham City renegotiated its water supply agreement with the District for the District's Harper Ward System. They have made it more expensive to supply the 80 acre-feet to the District's Harper Ward System by increasing the base cost by 60% and the overage cost by 220%. Brigham City has also made it difficult to supply water to new retail customers in Harper Ward and to supply emergency water to wholesale customers like West Corinne Water Company. For this reason, the District's Board of Directors has only entered into a three-year agreement with Brigham City, during which time, the District hopes to develop the new tank and well for Harper Ward. By developing all of these proposed sources and facilities, the District would no longer be a burden to other public water suppliers and would independently be able to supply all of its existing and future delivery obligations, plus have additional supplies for future and/or drought use.



- *Will the project make new information available to water managers? If so, what is that information and how will it improve water management?*

Yes, BRWCD actively monitors well water levels at each of its well locations through the use of well level monitoring equipment and SCADA. The proposed work will include the installation of monitoring and SCADA at each new well site and tank. Water level/use data from this monitoring equipment will be provided to BRWCD water managers throughout the area to understand how climate change, drought, and water use are affecting their water sources and to ensure reliable water levels for effective and efficient water delivery BRWCD culinary water users. This data will allow BRWCD to plan for additional water source needs and to determine better ways to deliver their water.

*If the proposed project includes any of the following components, applicants need to provide the additional information requested below for the specific project type. This additional information will be used in evaluating and scoring the proposal.*

#### Wells

- *What is the estimated capacity of the new well(s), and how was the estimate calculated?*

**Collinston Well:** 400 gpm. Admittedly, this is an estimate that is based on the performance of several other wells at similar elevations and depths along this mountain range. There are at least four other culinary water supply wells along the West Side of the Wellsville Mountain Range that produce in excess of 400 gpm that are believed to be in the same aquifer. Normally, the District likes to drill a small diameter test well before drilling a production well in an area. However, due to the circumstances of losing our existing water supply from Deweyville Town in a hurry, the District is using knowledge of the area from many existing wells to drill a production well before two years is up.

**Harper Ward Well:** 300 gpm based on performance of a small diameter test well drilled at the production well site. The small diameter (5-inch) well produced 7 inches of drawdown at 50 gpm. It is estimated that a 12-inch diameter production well can easily deliver 300 to 400 gpm with very reasonable drawdown.

**South Willard Replacement Well:** 300 gpm based on the past production of the old well at this location. The capacity of the well was between 300 gpm to 500 gpm, depending on how iron bacteria production affected the well. Severe underuse of the well most of the time allowed the iron bacteria to build-up and affect performance of the well. The new well will be shallower (in order to avoid iron bacteria) and will use a smaller pump (limited to 300 gpm). It will also be exercised more frequently, which will help keep it in better condition.

- *How much water do you plan to extract through the well(s), and how does this fit within state or local laws, ordinances, or other groundwater governance structures applicable to the area?*

The Collinston Well is expected to produce up to 323 acre-feet of water per year; The Harper Ward Well is expected to produce up to 242 acre-feet per year, and the South Willard Replacement Well is expected to produce up to 241 acre-feet per year.

The District already has the water rights needed to legally extract the water from the South Willard and Harper Ward wells. The District is currently in the process to obtain a water right to be pumped from the Collinston well and has in fact already filed an application for

500 acre-feet per year in the Collinston Area. A decision for this application is pending, however, this area is open for new groundwater appropriations. See Appendix D – Groundwater Management Policy for Malad and Bear River Drainages in Water Right Area 29. Several applications have been approved in this area since the policy was adopted in 2018.

- *Will the well be used as a primary supply or supplemental supply when there is a lack of surface supplies?*

BRWCD water supply comes from groundwater. These wells will be used to provide primary water supply to meet existing and increased water needs and reduce the impacts from drought. Groundwater is a more certain source, is inherently cleaner, and requires less if any treatment vs surface water.

- *Please provide information documenting that proposed well(s) will not adversely impact the aquifer it/they are pumping from (overdraft or land subsidence). At a minimum, this should include aquifer description, information on existing or planned aquifer recharge facilities, a map of the well location and other nearby surface water supplies, and physical descriptions of the proposed well(s) (depth, diameter, casing description, etc.). If available, information should be provided on nearby wells (sizes, capacities, yields, etc.), aquifer test results, and if the area is currently experiencing aquifer overdraft or land subsidence.*

As stated previously, The District already has the water rights needed to legally extract the water from the South Willard and Harper Ward wells, which means that the State Engineer has already determined that these new wells will not have an adverse effect on the aquifer and that the area is not currently experiencing any aquifer overdraft or land subsidence. In 2017, the Utah Division of Water Rights (headed by the State Engineer) completed a multi-year groundwater study for the Malad and Bear River Drainages in Box Elder County. A public meeting was held to discuss the findings of the study and to receive comments from concerned parties. In 2018, the State Engineer adopted a groundwater policy for this area stating that *“The State Engineer will allow an additional 10,000 acre-feet/year of potential groundwater withdrawals.”* See Appendix D – Groundwater Management Policy for Malad and Bear River Drainages in Water Right Area 29. The District is currently working to obtain a water right for the water to be pumped from the proposed Collinston well, but this nearby area is also not expected to have adverse effects on the aquifer.

- *Please describe the groundwater monitoring plan that will be undertaken and the associated monitoring triggers for mitigation actions.*

BRWCD actively monitors water levels at each of its well locations through the use of system level sensors and SCADA. The District also actively monitors other wells and springs in strategic locations for each of the well sites. There are existing monitored locations for Harper Ward and South Willard. These locations were identified by the State Engineer when he approved the water right applications for these areas. The District has identified monitor locations for the Collinston System; however, none of these sites are likely to be installed unless funding is garnered to drill the proposed Collinston Well. Records of water levels are kept and can be reported to the Division of Water Rights at any time. Withdrawals from

water sources are also always kept and reported to the Division of Water Rights' Water Use Program at:

[https://www.waterrights.utah.gov/asp\\_apps/generalWaterUse/WaterUseList.asp](https://www.waterrights.utah.gov/asp_apps/generalWaterUse/WaterUseList.asp).

Mitigation, if required in whole or in part can be made with some of the additional water produced or by purchasing an adjacent water right or share, as applicable and available, or by purchasing the water right in question. An equivalent amount of "depletion water" would be provided as ordered by the State Engineer or a competent court of law. Thus, mitigation would only be made by order of the State Engineer, a competent judge, or as agreed upon by the District and affected party(ies).

- *Describe how the mitigation actions will respond to or help avoid any significant adverse impacts to third parties that occur due to groundwater pumping.*

The groundwater monitoring creates a record from the time monitoring begins, going forth. The data collected is valuable to reflect groundwater conditions under varying circumstances and water use conditions. It has been found that these datapoints are very valuable to present to the State Engineer when impairment is alleged by those who don't keep their own monitoring records. It allows the State Engineer to regulate the water resources more appropriately and establish baseline conditions as well as withdrawal limitations. In essence, it takes a lot of the guess work out of managing the resource.

#### ***E.1.2. Evaluation Criterion B – Sustainability and Supplemental Benefits (20 points)***

***1. Climate Change:*** E.O. 14008 emphasizes the need to prioritize and take robust actions to reduce climate pollution, increase resilience to the impacts of climate change, protect public health, and conserve our lands, waters, oceans, and biodiversity. Examples in which proposed projects may contribute to climate change adaptation and resiliency, may include but are not limited to the following:

- *In addition to drought resiliency measures, does the proposed project include other natural hazard risk reductions for hazards such as wildfires or floods?*

Climate change has had a severe impact on BRWCD's service area and all of Box Elder County which it serves. Reduced rainfall and snowpack directly result from climate change, which has resulted in extreme to exceptional drought conditions for BRWCD's service area that have further limited an already limited supply of culinary water. According to Krishna B. Khatri and Courtenay Strong, in their Division of Water Resources report titled "Climate Change, Water Resources, and Potential Adaptation Strategies in Utah," warming temperatures are affecting Utah's snowpack and precipitation, which in turn affect streamflow and reservoir storage in Utah's river basins. They also state that extreme high temperature events and drought are among the most important consequences of a warming climate, which the entire state of Utah finds itself experiencing, and that "...these events will pose direct and indirect risks to water resources and water management" in the future. Regarding the severity and duration of drought in Utah, and thereby the proposed project area, they say, "Most climate variability studies indicate that more intense droughts are expected in the future. Higher temperatures will amplify the effects of naturally occurring dry spells by



increasing the rate of loss of soil moisture. The projected increase in the intensity of naturally occurring droughts may increase the occurrence and severity of wildfires. Burned vegetation within watersheds can exert direct impacts on local hydrologic cycles, infiltration rates, runoff, sediment loads and ecological life in water bodies.” Therefore, this project will provide additional water supplies and water storage that can be used to help fight wildfires in the area.

- *Does the proposed project include green or sustainable infrastructure to improve community climate resilience such as, but not limited to, reducing the urban heat island effect, lowering building energy demands, or reducing the energy needed to manage water? Does this infrastructure complement other green solutions being implemented throughout the region or watershed?*

No.

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

No.

- *Does the proposed project seek to reduce or mitigate climate pollutions such as air or water pollution?*

No.

- *Will the proposed project reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation?*

No.

- *Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses?*

No.

- *Does the proposed project contribute to climate change resiliency in other ways not described above?*

No.

**2. Disadvantaged or Underserved Communities:** E.O. 14008 and E.O. 13985 affirm the advancement of environmental justice and equity for all through the development and funding of programs to invest in 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 through water quality improvements, new water supplies, or economic growth opportunities.*

New safe drinking water and water storage sources are essential to ensuring continued public health for BRWCD’s predominantly rural communities, especially in Mega-drought conditions. This drought combined with an inactive well and the loss of 250 acre-feet of water from Deweyville in the coming years has placed a heavy burden on BRWCD’s 18,000 culinary water consumers who must now come up with new sources of culinary water. Historically, Collinston, Harper Ward, and South Willard have been

difficult areas to serve due to limited resources even in good water years. Developing these new sources is more important now than ever for the health and safety of BRWCD's communities. The Collinston System is also the only means that Ukon Water Company has of staying below the MCL for arsenic and maintaining good water quality. All components of this project will help make up for this loss of valuable water resources and continue to maintain good water quality for the area.

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

BRWCD's service area, which includes all of Box Elder County, is a primarily agricultural community that mostly consists of Manufacturing and Retail Trade. Between the ongoing drought (reduced water availability) and the COVID-19 pandemic (closures and/or low demand in Manufacturing and Retail) have forced many farmers and ranchers who cannot sell their products to sell off livestock, dump milk, and dispose of perishable products that they cannot store. These conditions have ultimately resulted in lower income levels across the County. In 2018, Box Elder County's poverty rate was 10.2 percent, which is above the average poverty level for the State of Utah – 8.9 percent.

According to Box Elder County's 2019 Moderate Income Housing Plan, Box Elder County's median income or Area Median Income (AMI) was \$55,514 in 2016. Compared to other northern Utah counties, Box Elder County has a lower AMI. Approximately 36 percent of households in the County earned under \$35,000 a year and 21.5 percent or 1 in 5 households in the unincorporated area.

Box Elder County residents, especially those in unincorporated areas like Collinston, Harper Ward, and South Willard are struggling to support their families and lifestyles, and news of an impending loss of culinary water due to the Deweyville notice of cancellation and the inoperable South Willard well has created additional stress for these residents. During COVID-19, many residents' income levels were also hurt when they lost jobs or had to quit to stay home with their children who could not go to school due to closures. All of these factors have put much strain on Box Elder County's economy, making them a disadvantaged community.

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

N/A.

**3. Tribal Benefits:** *The Department of the Interior is committed to strengthening tribal sovereignty and the fulfillment of Federal tribal trust responsibilities. The President’s memorandum, “Tribal Consultation and Strengthening Nation-to-Nation Relationships,” asserts the importance of honoring the Federal government’s commitments to Tribal Nations.*

- *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 through water quality improvements, new water supplies, or economic growth opportunities?*

No.

- *Does the proposed project support Reclamation’s tribal trust responsibilities or a Reclamation activity with a Tribe?*

No.

**4. Ecological Value:** *Drought resiliency projects often provide environmental benefits in addition to water supply reliability benefits for other users. Ecological resiliency is crucial to sustain ecosystems that can respond to and recover from external stressors resulting from climate change and drought.*

- *Does the project seek to improve ecological climate change resiliency of a wetland, river, or stream to benefit to wildlife, fisheries, or habitats? Do these benefits support an endangered or threatened species?*

No.

- *What are the types and quantities of environmental benefits provided, such as the types of species and the numbers benefited, acreage of habitat improved, restored, or protected, or the amount of additional stream flow added? How were these benefits calculated?*

No.

- *Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status?*

No.

**5. Other Benefits:** *Will the project address water sustainability in other ways not described above? For example:*

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

No.

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

No.

- *Will the project benefit a larger initiative to address sustainability of water supplies?*

No.



*E.1.3. Evaluation Criterion C – Drought Planning and Preparedness (15 Points)*

*Attach a copy of the applicable drought plan, or sections of the plan, as an appendix to your application. These pages will not be included in the total page count for the application.*

See Appendix C – BRWCD Drought Resiliency Plan

*Explain how the applicable plan addresses drought. Proposals that reference plans clearly intended to prepare for and address drought will receive more points under this criterion.*

The purpose of BRWCD's Drought Resiliency Plan was to develop a list of prioritized actions to mitigate possible drought effects, and to serve as a guiding document to help manage water supply and delivery in the event of severe or prolonged drought. This plan addresses drought monitoring, vulnerabilities, risks from drought, drought mitigation actions and priority projects, and recommendations to improve long-term drought resiliency. The District accomplished this through a multi-step process, which included:

1. Document a drought monitoring process
  2. Evaluate potential drought vulnerabilities and associated risks
  3. Identify key mitigation objectives
  4. Assess potential mitigation actions – including actions within the 2017 Master Plan – to meet the objectives
  5. Prioritize mitigation actions
- *Explain whether the drought plan was developed with input from multiple stakeholders. Was the drought plan developed through a collaborative process?*

As part of the Drought Resiliency Planning, the District conducted several stakeholder meetings consisting of water systems with vested interests in water supply and water management within the District's service area. The District was divided into six regions in order to communicate better and improve understanding of regional drought issues and needs within the service area. The purpose of these stakeholder meetings was to:

1. Build relationships between the District and the water system managers
  2. Give background to the stakeholders regarding the need for drought resiliency planning
  3. Share tools used to identify or assess current drought events
  4. Discuss past drought-related challenges
  5. Create a list of drought vulnerabilities
  6. Complete a risk assessment related to each identified vulnerability based on the perceptions of the stakeholders
  7. List potential mitigation actions for the identified vulnerabilities
- *Does the drought plan include consideration of climate change impacts to water resources or drought?*

Yes, there is a lack of specific data for the region, but the stakeholders recognize that climate change may create prolonged summer seasons and will affect the timing of water supplies and reduce above ground storage that is provided by snow.

*Describe how your proposed drought resiliency project is supported by an existing drought plan.*

The proposed project consists of multiple components identified in BRWCD's Drought Resiliency Plan that were evaluated and scored according to predetermined criteria. These mitigation actions were determined to be effective in helping the District in becoming more drought resilient.

- *Does the drought plan identify the proposed project as a potential mitigation or response action?*

Yes. The proposed wells and storage tank are referenced in Appendix D of BRWCD's Drought Resiliency Plan. See Appendix C – BRWCD Drought Resiliency Plan.

- *Does the proposed project implement a goal or need identified in the drought plan?*

Yes. The whole purpose of BRWCD's drought plan was to evaluate and develop a list of prioritized actions to mitigate the effects of drought by addressing drought-related vulnerabilities and to prioritize projects that would have the greatest impact. Due to recent losses in culinary water, as explained earlier, the proposed project and its components have become priority projects that will help BRWCD and its service area accomplish this purpose or goal.

- *Describe how the proposed project is prioritized in the referenced drought plan?*

The Collinston well and the Harper ward wells are in the top 5 or 6 drought mitigation actions based on the criteria developed in the drought plan. A new well in South Willard was evaluated and identified as a good action, but not ranked in the top ten when the drought plan was completed. Although priority rankings were assigned, any project listed in this plan could potentially be moved to the top of the list depending on the actual impacts of drought on District water supplies and systems. Due to Deweyville's recent notice of cancellation of 250 acre-feet of contracted out culinary water, the existing South Willard well recently going out of commission, and the ongoing extreme drought conditions, the proposed project and all of its components have been identified by the District as their top priority capital improvement projects.

#### ***E.1.4. Evaluation Criterion D – Severity of Actual or Potential Drought Impacts to be Addressed by the Project (15 Points)***

*What are the ongoing or potential drought impacts to specific sectors in the project area if no action is taken (e.g., impacts to agriculture, environment, hydropower, recreation and tourism, forestry), and how severe are those impacts? Impacts should be quantified and documented to the extent possible. For example, impacts could include, but are not limited to:*

- *Whether there are public health concerns or social concerns associated with current or potential drought conditions (e.g., water quality concerns including past or potential violations of drinking water standards, increased risk of wildfire, or past or potential shortages of drinking water supplies? Does the community have another water source available to them if their water service is interrupted?).*

As explained previously, New sources of safe drinking water and water storage are essential to ensuring continued public health for BRWCD's predominantly rural communities, but

with the impending loss of culinary water supplies due to drought, an inactive well, and loss of Deweyville water, BRWCD's 18,000 culinary water consumers are experiencing severe shortages of drinking water supplies. The loss of 115 acre-feet of Deweyville water and 123 acre-feet of South Willard water is significant and finding a replacement source is more important now than ever for the health and safety of BRWCD's communities. The Collinston System is also the only means that Ukon Water Company has of staying below the MCL for arsenic and maintaining good water quality. If no action is taken in the Collinston area, water quality will be adversely impacted. All components of this project will help make up for this loss and more to prepare for ongoing and potential drought impacts in the sector.

- *Whether there are ongoing or potential environmental impacts (e.g., impacts to endangered, threatened or candidate species or habitat).*

N/A.

*Whether there are local or economic losses associated with current drought conditions that are ongoing, occurred in the past, or could occur in the future (e.g., business, agriculture, reduced real estate values).*

BRWCD's service area, which includes all of Box Elder County, is primarily made up of agriculture. Therefore, Box Elder County's economy is heavily dependent on businesses that specialize in the production and sale of crops and livestock. Due to past and current drought conditions, farmers and ranchers are struggling to produce a sufficient number of crops or food for their livestock to financially sustain their businesses and families, which has a direct effect on Box Elder County's economy. While this project will not support the production of crops, it will provide farmers and ranchers with some financial relief in the form of affordable drinking water. If the proposed project is not completed, BRWCD would have to resort to more expensive means of obtaining culinary water, which would mean even greater financial burdens being placed upon BRWCD culinary water users through increased water rates.

- *Whether there are other drought-related impacts not identified above (e.g., tensions over water that could result in a water-related crisis or conflict).*

N/A.

*Describe existing or potential drought conditions in the project area.*

- *Is the project in an area that is currently suffering from drought or which has recently suffered from drought? Please describe existing or recent drought conditions, including when and the period of time that the area has experienced drought conditions (please provide supporting documentation, [e.g., Drought Monitor, [droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)]).*

Yes. BRWCD's Service Area, which covers all of Box Elder County, is currently experiencing Extreme to Exceptional Drought conditions, as shown on [Drought.gov](https://drought.gov), resulting in low streamflow and reduced water allotments. Figure 1 – Current Drought Conditions for Box Elder County below shows that 100 percent of the County is in an Extreme Drought and nearly 40 percent is in an Exceptional Drought. Since 1988, when BRWCD was formed, Box Elder County has experienced several years of both good and bad years with varying intensities. However, 2020 to 2021 have by far been the worst years the District has seen in

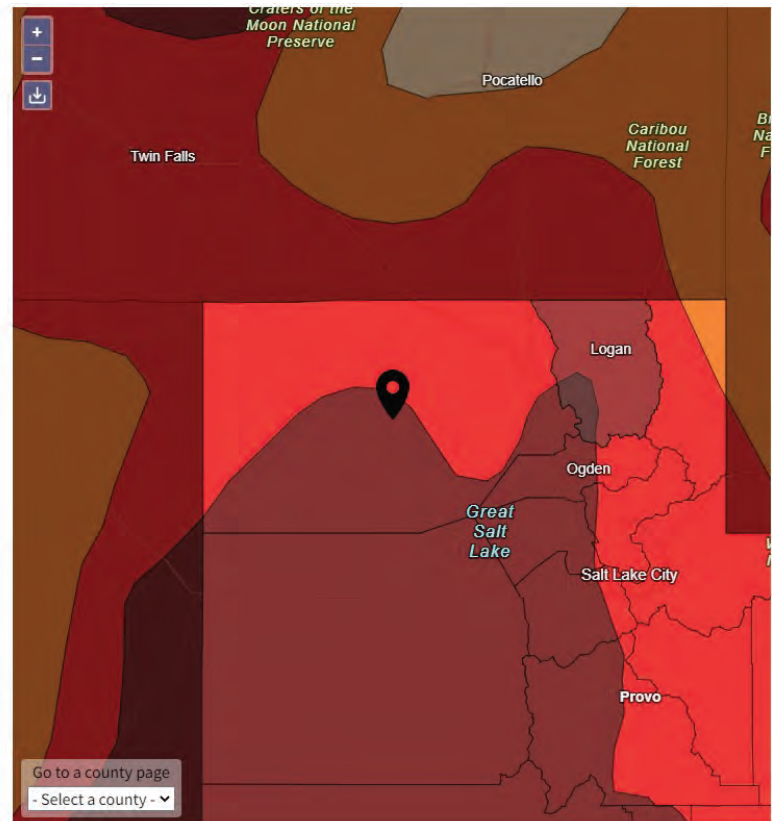
their service area. Figure 2 – Historical Conditions for Box Elder County (1988-2021) below shows Extreme Drought conditions reaching 100 percent and Exceptional Drought conditions not far behind. 2021 has been the driest year to date in 127 years for Box Elder County with water supplies being 3.12 inches below normal. Figure 3 – Water Supply in Box Elder County shows that of the 82 streamflow sites in the County, 81 sites are below normal.

*Figure 1 - Current Drought Conditions for Box Elder County*

The U.S. Drought Monitor (USDM) is updated each Thursday to show the location and intensity of drought across the country using a five-category system, from Abnormally Dry (D0) conditions to Exceptional Drought (D4). The USDM is a joint effort of the National Drought Mitigation Center, USDA, and NOAA. [Learn more.](#)



Source(s): U.S. Drought Monitor



Updated weekly - 08/24/21



Figure 2 - Historical Conditions for Box Elder County (1988-2021)

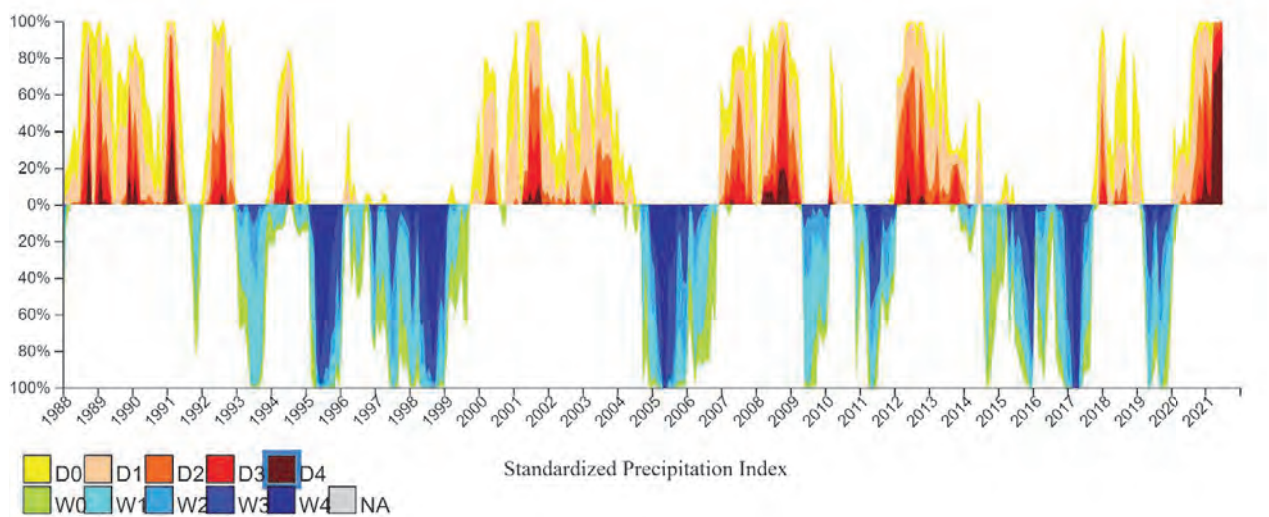


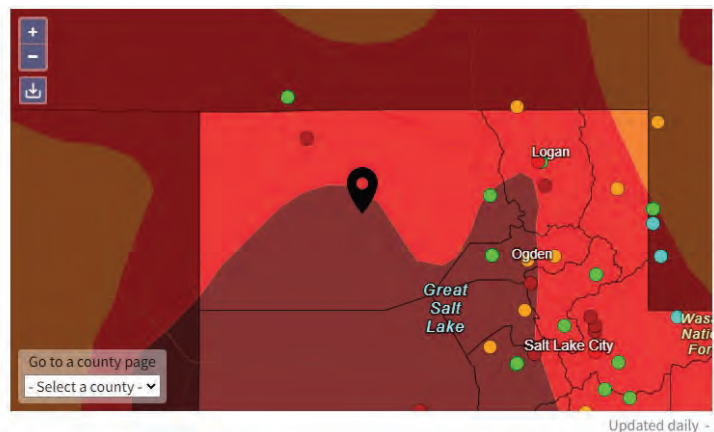
Figure 3 - Water Supply in Box Elder County

The U.S. Geological Survey (USGS) produces maps of real-time streamflow conditions compared to historical conditions. The map depicts streamflow conditions as computed at USGS streamgages. The colors represent real-time streamflow compared to percentiles of historical daily streamflow for the day of the year. Click on a streamgage to view more data for that location. [Learn more.](#)

■ Low  
■ Much below normal  
■ Below normal  
■ Normal  
■ Above normal  
■ Much above normal  
■ High  
■ Not-ranked

■ D0 ■ D1 ■ D2 ■ D3 ■ D4

Source(s): USGS



81 percent of streamflow sites that are below normal in Utah  
1 percent of streamflow sites that are above normal in Utah  
100 percent area of Utah with above normal precipitation probability  
0 percent area of Utah with below normal precipitation probability

- Describe any projected increases to the severity or duration of drought in the project area resulting from changes to water supply availability and climate change. Provide support for your response (e.g., reference a recent climate informed analysis, if available).

As quoted previously, according to Krishna B. Khatri and Courtenay Strong, in their Division of Water Resources report titled “Climate Change, Water Resources, and Potential Adaptation Strategies in Utah,” warming temperatures are affecting Utah’s snowpack and precipitation, which in turn affect streamflow and reservoir storage in Utah’s river basins. They also state that extreme high temperature events and drought are among the most important consequences of a warming climate, which the entire state of Utah finds itself experiencing, and that “...these events will pose direct and indirect risks to water resources and water management” in the future. Regarding the severity and duration of drought in Utah, and thereby the proposed project area, they say, “Most climate variability studies

indicate that more intense droughts are expected in the future. Higher temperatures will amplify the effects of naturally occurring dry spells by increasing the rate of loss of soil moisture. The projected increase in the intensity of naturally occurring droughts may increase the occurrence and severity of wildfires. Burned vegetation within watersheds can exert direct impacts on local hydrologic cycles, infiltration rates, runoff, sediment loads and ecological life in water bodies.”

As a result of these events in Utah, BRWCD’s already limited water supplies are being stretched even further, especially their culinary water, now that they are losing access to more than 373 acre-feet of already obligated water. As a result, the District has put in place several drought resiliency measures that encourage water conservation through limiting the amount of water individual users can consume; otherwise, they pay higher fees. BRWCD does not know how long current drought conditions will last or how big a role climate change will play in the future of their water supply. Still, it’s clear that greater drought conditions can be expected in the future. The purpose of constructing the proposed wells and storage tank is to help make up for lost water now and to provide additional water storage to help prepare for their future, mitigating the need to rely on other water providers for help so they too can provide for their own communities.

#### *E.1.5. Evaluation Criterion E – Project Implementation (10 Points)*

*Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Milestones may include, but are not limited to, the following: design, environmental and cultural resources compliance, permitting, construction/installation.*

- Environmental and Preliminary Design: August 2022 to April 2023
- Design and Permitting: August 2022 to April 2023
- Bid and Advertise: April/May 2023
- Construction: June/July 2023 to June/July 2024
- Final Reports and Project Closeout: November 2024/January 2025

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

For the new Collinston and Harper Ward wells, BRWCD will need to submit an application for a new appropriation to the Utah Division of Water Rights (DWRi); complete a Preliminary Evaluation Report (PER) before construction and a Drinking Water Source Protection Plan (DWSPP) after construction through the Utah Division of Drinking Water (DDW); obtain approval from DDW for drilling and equipping the wells; an operational permit from DDW after construction is completed, and a building permit from the County.

For the South Willard replacement well, the District will need to submit a replacement well application to DWRi; receive approval for drilling and equipping from the DDW; and an operational permit from DDW after construction is completed.

For the new Harper Ward storage tank, the District will need to have plans for the tank approved through DDW and obtain an operational permit from DDW after construction is completed.

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

BRWCD completed a drought resiliency addendum to the District water master plan in 2021 that identified these projects as projects that will effectively reduce the effects of drought on its communities. An engineering consultant created conceptual costs estimates for these projects as part of that plan. The Harper Ward well has already had some environmental evaluation done and a test well was drilled at this site to determine how much water is available to pump at this location.

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

There are no new policies or administrative actions required to implement this project.

***E.1.6. Evaluation Criterion F – Nexus to Reclamation (10 Points)***

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

- *Does the applicant have a water service, repayment, or O&M contract with Reclamation?*  
No.
- *If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?*  
No.
- *Will the proposed work benefit a Reclamation project area or activity?*  
BRWCD serves as a backup water supply for the South Willard Water Company and vice versa. Some residents on the South Willard System are able to receive and use secondary water from Pineview Reservoir, a Reclamation Project. This secondary water is used for watering outdoor lawns and gardens and helps reduce strain on both BRWCD and South Willard culinary water resources since these residents are not using culinary water for outdoor watering.
- *Is the applicant a Tribe?*  
No.

## Project Budget

### Funding Plan and Letters of Commitment

*Describe how the non-Federal share of project costs will be obtained. Reclamation will use this information in making a determination of financial capability.*

BRWCD's non-Federal share of project costs will come from their impact fees and depreciation savings account and will be supplemented with a loan request from the Division of Water Resources (DWRe). It is expected that the District will have the funds available and in place at the time of the award.

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

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

BRWCD will use funds from their impact fees and depreciation savings account and obtain a loan from DWRe.

- *Any costs that will be contributed by the applicant.*

N/A

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

N/A

- *Any cash requested or received from other non-Federal entities.*

N/A

- *Any pending funding requests (i.e., grants or loans) that have not yet been approved and explain how the project will be affected if such funding is denied.*

As stated above, BRWCD will use their impact fees and depreciation savings account and request a loan from DWRe. The Water Resources Board funds nearly 100 percent of the loans that are requested to them.

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

- *The project expenditure and amount.*

N/A

- *The date of cost incurrence.*

N/A

- *How the expenditure benefits the project.*

N/A

### Budget Proposal

Table 2 – Total Project Cost Summary

Source	Amount
Costs to be reimbursed with the requested Federal funding	\$2,000,000



# WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2022

Costs to be paid by the applicant	\$2,157,750
Value of third-party contributions	\$0
<b>Total Project Cost</b>	<b>\$4,157,750</b>

Table 3 – Non-Federal and Federal Funding Sources Summary

Funding Sources	Amount
<b>Non-Federal Entities</b>	
1. BRWCD Impact Fees and Depreciation Savings Account	\$83,155
2. Utah Board of Water Resources Loan (BWR)	\$2,074,595
<b>Non-Federal Subtotal</b>	<b>\$2,157,750</b>
<b>Requested Reclamation Funding</b>	<b>\$2,000,000</b>

Table 4 – Budget Proposal

Budget Item Description	Computation		Quantity	Total
	\$/Unit	Quantity	Type	Cost
Salaries and Wages				
Fringe Benefits				
Travel				
Equipment				
Supplies and Materials				
Contractual/Construction				\$4,157,750.00
<b>Collinston Well</b>				<b>\$1,407,000.00</b>
<b>Preliminary Work</b>				
Permits (PER)	LS	1	\$30,000.00	\$30,000.00
Environmental	LS	1	\$30,000.00	\$30,000.00
<b>Well Drilling</b>				
Design, Permitting and Bidding	LS	1	\$35,000.00	\$35,000.00
Construction	LS	1	\$650,000.00	\$650,000.00
Construction Engineering	LS	1	\$30,000.00	\$30,000.00
<b>Well Equipping</b>				
Building and Equipment Design	LS	1	\$45,000.00	\$45,000.00
Construction	LS	1	\$500,000.00	\$500,000.00

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Construction Engineering	LS	1	\$45,000.00	\$45,000.00
Source Protection Plan	LS	1	\$25,000.00	\$25,000.00
Well Level Monitor and SCADA Equipment	LS	1	\$10,000.00	\$10,000.00
8-inch PVC C-900 Pipe	LF	200	\$35.00	\$7,000.00
Harper Ward Well and Tank				\$2,079,000.00
<b>Preliminary Work</b>				
Preliminary Engineering Report (PER)	LS	1	\$30,000.00	\$30,000.00
Environmental	LS	1	\$50,000.00	\$50,000.00
<b>Well Drilling</b>				
Design, Permitting and Bidding	LS	1	\$35,000.00	\$35,000.00
Construction	LS	1	\$325,000.00	\$325,000.00
Construction Engineering	LS	1	\$30,000.00	\$30,000.00
<b>Well Equipping</b>				
Building and Equipment Design	LS	1	\$45,000.00	\$45,000.00
Power Line	LS	1	\$150,000.00	\$150,000.00
Construction	LS	1	\$400,000.00	\$400,000.00
Construction Engineering	LS	1	\$45,000.00	\$45,000.00
Well Level Monitor and SCADA Equipment	LS	1	\$10,000.00	\$10,000.00
Source Protection Plan	LS	1	\$25,000.00	\$25,000.00
<b>Water Tank</b>				
500,000 Gallon Tank	LS	1	\$750,000.00	\$750,000.00
8-inch PVC C-900 Pipe	LF	2,400	\$35.00	\$84,000.00
Design Engineering	LS	1	\$60,000.00	\$60,000.00
Construction Engineering	LS	1	\$40,000.00	\$40,000.00
South Willard Replacement Well				\$671,750.00
<b>Well Drilling</b>				
Design, Permitting and Bidding	LS	1	\$35,000.00	\$35,000.00
Construction	LS	1	\$325,000.00	\$325,000.00
Construction Engineering	LS	1	\$30,000.00	\$30,000.00
Environmental	LS	1	\$30,000.00	\$30,000.00

## WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2022

Well Equipping				
Building and Equipment Design	LS	1	\$20,000.00	\$20,000.00
Construction	LS	1	\$200,000.00	\$200,000.00
Construction Engineering	LS	1	\$30,000.00	\$30,000.00
8-inch PVC C-900 Pipe	LF	50	\$35.00	\$1,750.00
Other				\$0.00
Total Direct Costs				\$4,157,750.00
Indirect Costs				\$0.00
Type of rate	Percentage	\$base		\$0.00
Total Estimated Project Costs				\$4,157,750.00

### Budget Narrative

#### *Salaries and Wages*

No BRWCD staff salaries or wages will be included; all services will be contracted. BRWCD's 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*

Equipment will be part of the contracted portion of the project.

#### *Materials and Supplies*

Materials and Supplies will be part of the contracted project and will be documented as required.

#### *Contractual*

To determine unit costs included in the cost estimate for this project, BRWCD relied upon their Drought Resiliency Plan. Contract unit prices from similar projects recently completed were used by an engineering firm to estimate those costs. BRWCD will follow its procurement policy and bid out the construction portion of the project to several prequalified construction companies. The contractual costs shown are estimates for each component to design and build BRWCD's Culinary Water Production Wells and Tank project and other items. Generally, the low bidder will be selected based on a determination of acceptable qualifications.

#### *Third-Party In-Kind Contributions*

N/A

## WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2022

### *Environmental and Regulatory Compliance Costs*

The total environmental review cost is \$110,000 (\$30,000 for Collinston Well site, \$50,000 for Harper Ward Well and Tank, and \$30,000 for South Willard Replacement Well). It is expected to take up to \$110,000 to evaluate the required information for each well/tank site, prepare reports, and update any changes required from Reclamation.

### *Other Expenses*

No other expenses are included.

### *Indirect Costs*

No indirect costs are included.

### *Total Costs*

Applicant: \$2,157,750

Reclamation: \$2,000,000

Total: \$4,157,750

## 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.*

Impacts will be those associated with the construction and equipping of the three proposed wells and water tank. In the past, similar projects have had minimal impacts. The surface vegetation will be restored upon completion of the project.

*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? If so, would they be affected by any activities associated with the proposed project?*

BRWCD is not aware of any impacts concerning threatened or endangered species in this 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.*

BRWCD is not aware of any impacts to wetlands in this area.

*When was the water delivery system constructed?*

BRWCD's culinary water system for Harper Ward was built in 1994. BRWCD's culinary water system for South Willard was built in 2009. BRWCD's culinary water system for Collinston was built in 2015.

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

N/A



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

A cultural resource inventory will be completed as part of the submitted environmental document(s).

*Are there any known archeological sites in the proposed project area?*

BRWCD is not aware 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.

*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.

## Required Permits and Approvals

*Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.*

For the new Collinston and Harper Ward wells, BRWCD will need to submit an application for a new appropriation to the Utah Division of Water Rights (DWRi); complete a Preliminary Evaluation Report (PER) before construction and a Drinking Water Source Protection Plan (DWSPP) after construction through the Utah Division of Drinking Water (DDW); obtain approval from DDW for drilling and equipping the wells; an operational permit from DDW after construction is completed, and a building permit from the County.

For the South Willard replacement well, the District will need to submit a replacement well application to DWRi; receive approval for drilling and equipping from the DDW; and an operational permit from DDW after construction is completed.

For the new Harper Ward storage tank, the District will need to have plans for the tank approved through DDW and obtain an operational permit from DDW after construction is completed.

## Existing Drought Contingency Plan

*If there is an existing drought contingency plan addressing the relevant geographic area, please attach a copy (or relevant sections) of the existing plan. (Note, this will not count against the application page limit.)*

Yes, see Appendix C – BRWCD Drought Resiliency Plan

## Letters of Project Support and Letters of Partnership

*Please include letters from interested stakeholders supporting the proposed project. To ensure your proposal is accurately reviewed, please attach all letters of support/ partnership letters as an appendix. Letters of support received after the application deadline for this NOFO will not be considered in the evaluation of the proposed project.*

Letters of Project Support have been included from the following, found in Appendix E – Letters of Project Support.

- Corinne City Corporation
- Tremonton City
- Ukon Water Company
- West Corinne Water Company

## Official Resolution

*Include an official resolution adopted by the applicant's board of directors or governing body, or, for State government entities, an official authorized to commit the applicant to the financial and legal obligations associated with receipt of a financial assistance award under this NOFO. If the applicant is unable to submit the official resolution by the application deadline because of the timing of board meetings or other justifiable reasons, the official resolution may be submitted to <mailto:bor-sha-fafoa@usbr.gov> up to 30 days after the application deadline.*

The Official Resolution for BRWCD's Culinary Water Production Wells and Tank project will be submitted within 30 days after the application deadline.

**CORINNE CITY CORPORATION**  
**20 N 000 W ~ PO BOX 118**  
**CORINNE, UT 8 07**  
**Phone (4 ) 744-5566 ~ Fax (4 ) 744-3 0**  
**Email: kendra@corinnecity.com**

September , 2021

To: USBR Drought Resiliency Watersmart Grant Program Review Committee

From: Corinne City

RE: Letter of Support for Bear River Water Conservancy District Application

Dear Committee:

Corinne City (Corinne) is pleased to write this letter of support on behalf of Bear River Water Conservancy District (Conservancy District) as part of their application for funds under the Drought Resiliency Watersmart Grant Program administered by USBR. Corinne is a long-established Municipal Water System serving approximately 347 connections and an estimated population of 790 persons in Corinne, Utah. Our existing sources of water include Batty Spring, the Cutler Well and a backup connection to the Conservancy District. Our water rights and supply from the spring and well are limited and Corinne will depend on water supply being developed by the Conservancy District to meet the additional needs of our customer base.

The community of Corinne is growing at a rapid pace that we have never seen before because it is a favorable place to live in, a desirable area to work in, and a good community to raise a family in. These traits coupled with housing market conditions are bringing in rapid growth to our community. In preparation for these events, Corinne has been working cooperatively with the Conservancy District as the Conservancy District updates their Master Plan and has recently produced a drought resiliency section of that plan. We are also making efforts to conserve water, particularly with the present drought situation.

Corinne City is very supportive of the Conservancy District drilling their own wells for their Harper Ward System under this proposed funding application. Due to our location and source constraints, the Conservancy District is our only source of backup water supply and future water supply as we exhaust our own water rights and sources. For these reasons we respectfully request that you consider approving the Conservancy District's funding application.

Thank you for considering these circumstances and the Conservancy District's application.

Sincerely,



Brett Merkley

Corinne City Mayor



September 1, 2021

To: USBR Drought Resiliency Watersmart Grant Program Review Committee

From: Tremonton City

RE: Letter of Support for Bear River Water Conservancy District Application

Dear Committee:

Tremonton City (Tremonton) is pleased to write this letter of support on behalf of Bear River Water Conservancy District (Conservancy District) as part of their application for funds under the Drought Resiliency Watersmart Grant Program administered by USBR. Tremonton is a Municipal Water System serving approximately 3643 connections and an estimated population of 8820 persons in Tremonton, Utah and the surrounding area. Our existing sources of water include a well, several springs and a wholesale connection to the Conservancy District. Our water rights and supply from the springs and well are limited and Tremonton depends on a growing secondary irrigation system, as well as water supply from the Conservancy District to meet the additional needs of our customer base.

The community of Tremonton is growing at a rapid pace that we have never seen before because it is a favorable place to live in, a desirable area to work in, and a good community to raise a family in. These traits coupled with housing market conditions are bringing in rapid growth to our community. In preparation for these events, Tremonton has been following our own Master Plan and working with the Conservancy District on their updated Master Plan and a new regional Drought Resiliency Plan. We are also making efforts to conserve water, particularly with the present drought situation.

Tremonton City and the Conservancy District have a long history of working together to provide water to Tremonton residents. As pertaining to this particular application, Tremonton is highly interested and supportive of the District being able to develop the Flat Canyon Well which produces high quality drinking water. This well would connect to the Conservancy District's Collinston Water System, which Tremonton has a connection to. Historically, the Conservancy District could not supply Tremonton with water from this system due to limited supply constraints. If the Conservancy District can get approval of this funding application and develop a pump station and pipeline for the Flat Canyon Well, additional water could be made available to Tremonton from the Conservancy District's Collinston System.

Thank you for considering these circumstances and the Conservancy District's application.

Sincerely,

Paul Fulgham  
Tremonton City Public Works Director



September 1, 2021

To: USBR Drought Resiliency Watersmart Grant Program Review Committee

From: Ukon Water Company

RE: Letter of Support for Bear River Water Conservancy District Application

Dear Committee:

Ukon Water Company is pleased to write this letter of support on behalf of Bear River Water Conservancy District (Conservancy District) as part of their application for funds under the Drought Resiliency Watersmart Grant Program administered by USBR. Ukon Water Company is a long-established Community Water System serving approximately 520 connections and an estimated population of 2080 persons in Fielding, Utah and the surrounding area. Our existing sources of water include springs, a well and a wholesale connection to the Conservancy District. Our water rights and supply from the springs and well are limited. Ukon Water Company depends on a water supply from the Conservancy District to meet the additional needs of our customer base.

The community of Fielding and our surrounding service area is experiencing unprecedented growth. Ukon Water Company is committed to provide dependable and safe drinking water to our community. For these reasons Ukon Water Company has updated our Master Plan, purchased additional water from the Conservancy District and we are pursuing additional sources of water. We are also making efforts to conserve water, particularly with the present drought situation.

Ukon Water Company and the Conservancy District have a very interconnected relationship because the Conservancy District supplies us with blending water from their Collinston System so that our water quality meets state and EPA drinking water standards for arsenic. It would be very costly for Ukon Water Company to meet this standard without the Conservancy District's Collinston System. To meet the blending needs and to provide for the additional needs of our customers, it is critical to Ukon Water Company that the Conservancy District develop their Flat Canyon Well Source which funding is being applied for under this application process.

Thank you for considering these circumstances and the Conservancy District's application.

Sincerely,



Brian Shaffer  
Ukon Water Company President

September 1, 2021

To: USBR Drought Resiliency Watersmart Grant Program Review Committee

From: West Corinne Water Company

RE: Letter of Support for Bear River Water Conservancy District Application

Dear Committee:

West Corinne Water Company (WCWC) is pleased to write this letter of support on behalf of Bear River Water Conservancy District (Conservancy District) as part of their application for funds under the USBR Drought Resiliency Watersmart Grant Program. WCWC is a long-established Municipal Water System serving approximately 781 connections and an estimated population of 2200 persons in unincorporated Box Elder County, Utah. Our existing sources of water include Baker Springs, the Anderson Well and a backup connection to the Conservancy District. Our water rights and supply from the springs and well are limited and WCWC currently depends on water supply being developed by the Conservancy District to meet the additional needs of our customer base.

The community of West Corinne is growing at a rapid pace that we have never seen before because it is a favorable place to live in, a desirable area to work in, and a good community to raise a family in. These traits coupled with housing market conditions are bringing in rapid growth to our community. In preparation for these events, WCWC has been working cooperatively with the Conservancy District as the Conservancy District updates their Master Plan and has recently produced a drought resiliency section of that plan. We are also making efforts to conserve water, particularly with the present drought situation.

WCWC is very supportive of the Conservancy District drilling their own wells for their Harper Ward System under this proposed funding application. In 2020, over 24% of our water supply was provided by the Conservancy District. Due to our location and source constraints, the Conservancy District is our best source of backup water supply and future water supply as we exhaust our own water rights and sources. For these reasons we respectfully request that you consider approving the Conservancy District's funding application.

Thank you for considering these circumstances and the Conservancy District's application.

Sincerely,

A handwritten signature in cursive script, appearing to read "Steve Norman".

Steve Norman, President  
West Corinne Water Company