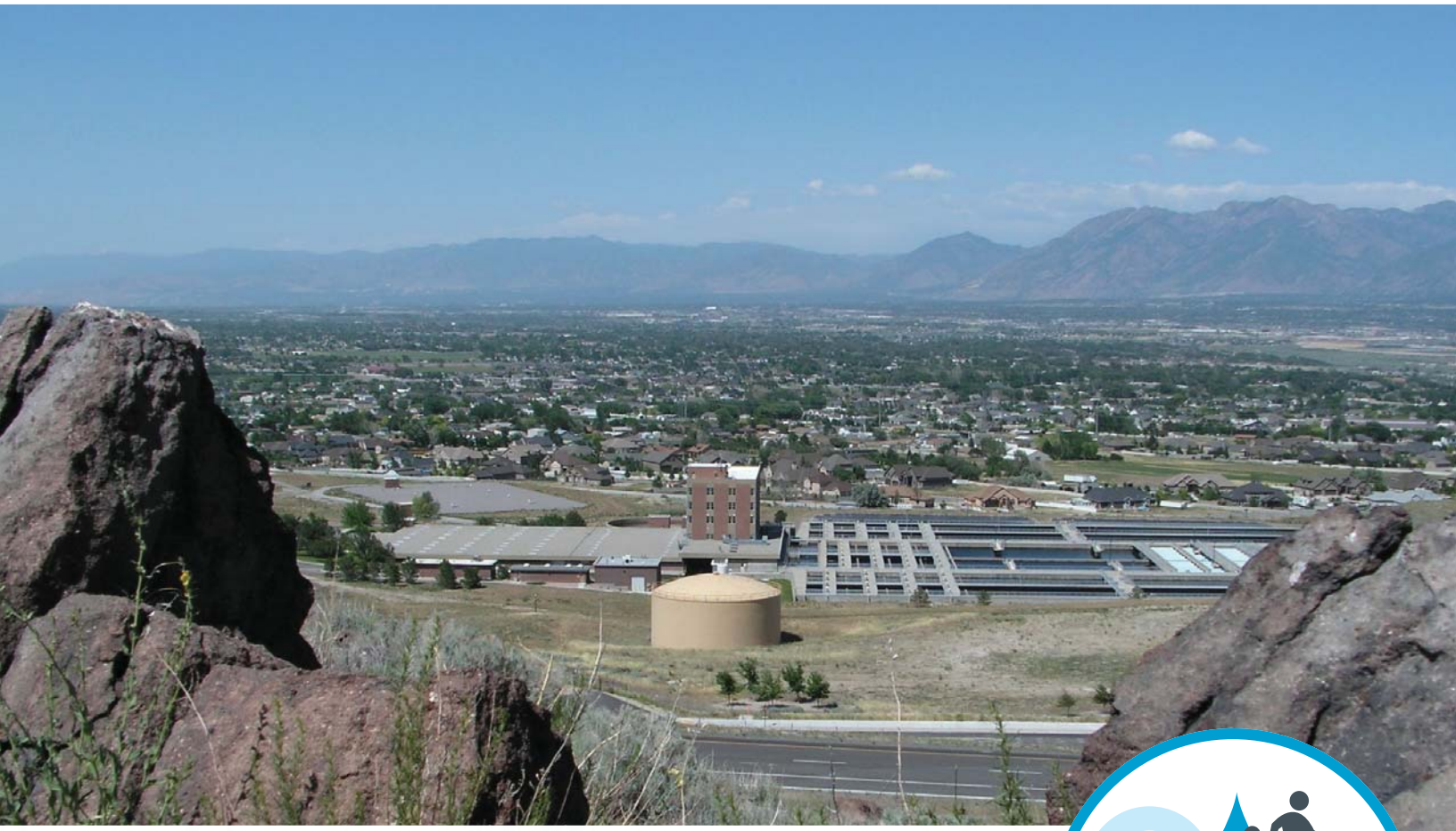
JORDAN VALLEY WATER CONSERVANCY DISTRICT

Funding Opportunity BOR-DO-18-F007

WaterSMART Drought Response Program: Drought Contingency Planning Grants for Fiscal Year 2018



Jordan Valley Water Conservancy District
Drought Contingency Plan

MONITORING // MITIGATION // RESPONSE

February 7, 2018

WaterSMART

Drought Response Program: Drought Contingency Planning Grants for Fiscal Year 2018 Funding Opportunity BOR-DO-18-F007

Jordan Valley Water Conservancy District Drought Contingency Plan

February 2018

This is an application submitted by:
Jordan Valley Water Conservancy District
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Technical Proposal

Executive Summary

Date: February 7, 2018

Applicant name: Jordan Valley Water Conservancy District (JVWCD)

City, county, and state: West Jordan, Salt Lake County, Utah

One paragraph project summary that specifies how the proposed project contributes to accomplishing the goals of this FOA.

JVWCD will lead the development of a Drought Contingency Plan (DCP) for all facilities and water users within its service area, which includes nearly a quarter of Utah's population. JVWCD and its service area are facing a continuation of the most recent drought, which started in 2012. Already, this drought has contributed to public-health issues that threaten state economic growth, restrictions to agricultural users and recreational activities, and damage to the vibrant ecosystems surrounding the shrinking Great Salt Lake and Utah Lake. In May 2017, JVWCD completed a study called *Preparing for Climate Change—A Management Plan*, which indicates that the drought mitigation projects of the 20th century are likely inadequate to compensate for the impacts of climate change and to mitigate the area's longest droughts. There are currently no formalized drought response agreements or planning documents for the stakeholders in and around the JVWCD service area. Stakeholders agree that planning to mitigate the risks associated with a severe drought can no longer be delayed. JVWCD is assembling these stakeholders from the municipal and industrial (M&I), agricultural, recreational, and environmental communities to establish the projects, actions, and partnerships needed to prepare for and reduce water shortages and provide better drought resilience for the area's diverse water users.

State the length of time and estimated completion date for the proposed project

Assuming an award date from Reclamation of June 2018, JVWCD will contract a consultant and form the Drought Planning Task Force with 60 days to begin work by September 1, 2018. The project will be completed by August 30, 2020 and will allow for the 30-day review by Reclamation before final approval of the DCP. An estimated project schedule based on the planning tasks is included in Evaluation Criterion C: Project Implementation.

State whether or not a reclamation project, facility, or activity is located within the geographic area to be addressed in the proposed Drought Contingency Plan

JVWCD has a long history of working with Reclamation to achieve our common objectives. By agreement with Reclamation, JVWCD operates and maintains Reclamation's Jordan Aqueduct in Salt Lake County, which is the backbone supply main to the entire service area. JVWCD is also the largest petitioner in Reclamation's Central Utah Project (CUP) and also receives supplies from Reclamation's Provo River Project (PRP).

Background Data

The Jordan Valley Water Conservancy District (JVWCD) Drought Contingency Plan (DCP) includes planning for approximately two thirds of the developed land area in Salt Lake County, Utah, and a small portion of neighboring Utah County. Salt Lake County is the most

populous county in Utah and is home to the state capital, Salt Lake City. The proposed geographic boundary for the DCP (Plan Area) includes the service area for JVWCD and its member agencies. The DCP will include agricultural, municipal and industrial (M&I), recreational, and environmental interests in the Plan Area. **Attachment A** includes a figure illustrating the location information. This section provides a description of the Plan Area.

Water Users and Usage Types

There is a wide variety of water uses in the Plan Area. Almost all M&I water users within the Plan Area are served by JVWCD and its 17 member agencies, while much of the agricultural water use is served by a network of canals that divert water from the Jordan River near the line between Salt Lake County and Utah County. The natural water bodies within the Plan Area facilitate a variety of recreational activities and provide critical environmental benefits.

Municipal and Industrial (M&I): JVWCD estimates its current service area population to be 680,000, but it also provides a portion of the water supply to the Metropolitan Water District of Salt Lake and Sandy (MWDSLS), which serves a population of 430,000. JVWCD also serves water on a retail basis to approximately 8,800 connections in Salt Lake County.

The southern end of Salt Lake County and the northern end of Utah County, areas served by JVWCD, have become known as the Silicon Slopes because of the influx of tech companies, mimicking the early growth of Silicon Valley in California. Approximately 20 data centers have been constructed in the region, the most significant of which is the U.S. National Security Agency's (NSA) $1 billion data center.

Figure 1: *Data centers continue to grow in the region.*

Figure 2: *Salt Lake County farmland*

Agricultural: The network of canals that service agricultural water needs in the area are owned and operated by various canal companies formed to serve these water users. More than 630 farms total nearly 80,000 acres of farmland and 10,000 head of livestock in the County. Most of this farmland falls within the Plan Area.

Figure 3: *Great Salt Lake wetlands*

Environmental: Among the countless environmental benefits provided by the natural water bodies in the Plan Area, perhaps the most significant is served by the unique system of saltwater and freshwater wetlands surrounding the Great Salt Lake. Tens of thousands of birds use the Great Salt Lake as a resting point in their journey from Canada to Central and South America, in large part because of the rich feeding ground that the wetlands provide.

Recreational: Utah Lake, the Jordan River, small irrigation reservoirs, and the Great Salt Lake provide a host of recreational activities for residents of the community and visitors to the state. Utah Lake is a popular destination for fishing and motorized boating and the Great Salt Lake is popular for sail boats and hikes to scenic overlooks. As an urban waterway, the Jordan River hosts boat ramps providing access for canoe and kayak tours and a trail system that now nearly spans the entire length of the river and is used for biking, walking, and access for fishing.

Figure 4: *Recreational use of the Jordan River*

Sources of Water Supply and Water Rights

JVWCD has rights to various sources through direct ownership of the water rights, ownership of shares in companies that own the underlying water right (e.g. Provo River Water Users Company [PRWUCO]), or as a result of perpetual contracts (e.g. Central Utah Project [CUP] supply contract with Central Utah Water Conservancy District [CUWCD]). The largest JVWCD supply is 50,000 acre-feet of the Reclamation CUP—Bonneville Unit, stored in Jordanelle Reservoir, which constitutes approximately half of JVWCD 's total M&I deliveries. Its next-largest supply comes from its ownership of shares in PRWUCO. These shares yield direct-flow water in the Provo River and water stored in Deer Creek Reservoir related to Reclamation's Provo River Project (PRP), which is supplemented by diversion from the Duchesne and Weber rivers. JVWCD also operates 30 high-quality groundwater wells and 8 brackish groundwater wells treated with reverse-osmosis membranes. JVWCD also treats a small amount of water from local Wasatch Mountain streams during the spring runoff.

These water supply facilities, along with portions of JVWCD's water supply and delivery system facilities, are shown in **Figure 5.** JVWCD has intentionally developed this diverse water supply portfolio to mitigate the impact of localized water shortages. Each of these sources of supply is susceptible to different environmental influences that could limit water supply. Drought is the one influence that could limit all sources of supply simultaneously. However, no formalized plan is currently in place for coordinated mitigation and response to water shortages in each of these sources.

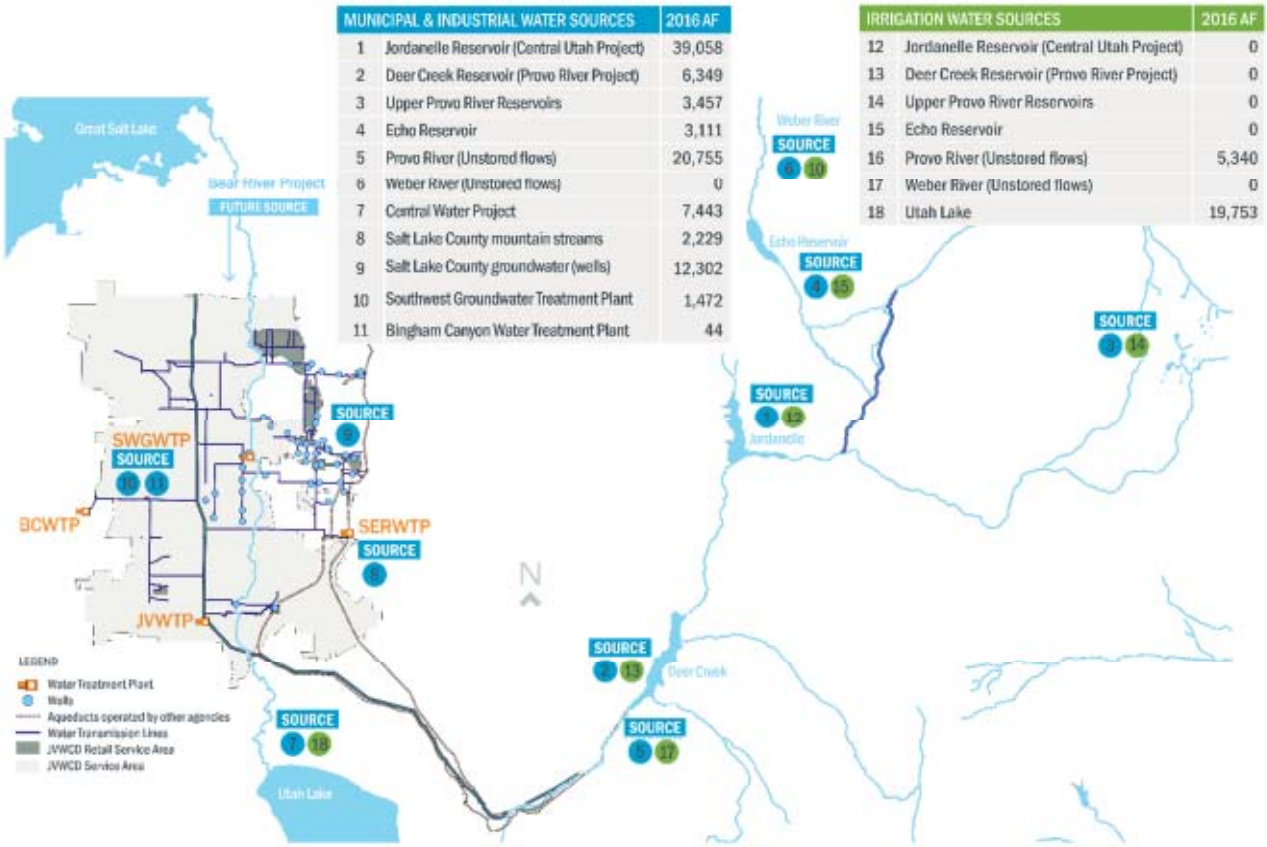


***Figure 5**: JVWCD's Diverse and Complex Water Supply and Delivery System Facilities Need Coordinated Plans for Responding to Shortages.*

Current and Projected Water Demands

JVWCD delivered over 122,000-acre feet of M&I and irrigation water in 2016. Significant increases in total water demand are projected for the Plan Area. While agricultural water demands may decline slightly in coming years, the growth in M&I demands will far exceed any reduction from agriculture because most of the land development for M&I uses will occur on lands that are currently not irrigated.

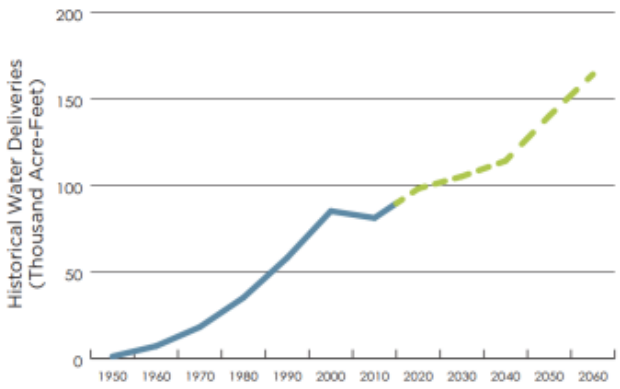


***Figure 6:** Historical and Projected JVWCD Water Deliveries*

JVWCD recognizes that conservation efforts are necessary to secure a sustainable water supply for future generations, and Plan Area water users have demonstrated a commitment to meet the State of Utah (State) goal of 25 percent reduction in per capita demand by 2025. However, with populations expected to grow by approximately half a million people in the Salt Lake Valley in the next 40 years, demands are still expected to increase significantly with population growth as shown in **Figure 6**.

Past Working Relationship with Bureau of Reclamation

As described later in **Evaluation Criterion D: Nexus to Reclamation**, JVWCD has a long history of working with Reclamation to achieve our common objectives. In addition to operating and maintaining (by agreement) Reclamation's Jordan Aqueduct, which begins in Utah County, and being one of the largest petitioners in Reclamation's PRP and CUP, JVWCD has successfully completed many projects using critical grant funding from Reclamation. JVWCD has appreciated partnering with Reclamation to fulfill both the objectives of Reclamation grant programs and JVWCD project objectives.

***Figure 7**: Recent Reclamation grants awarded to and successfully executed by JVWCD*

Urgency for a Drought Contingency Plan

Historically, JVWCD has developed and secured reliable, sustainable water supplies to meet both current and future demands of the community. However, the growing population in the Plan Area and a forecast for more severe drought conditions will stress JVWCD's water supplies more than ever.

In 2016 after several years of drought conditions that started in 2012, the level of Utah Lake fell to levels causing the Utah State Engineer to prohibit diversions of more than 100,000-acre feet of secondary storage rights (junior water right holders) in Utah Lake. The low water levels also intensified a wide-spread algal bloom in Utah Lake prompting public health advisories. An above average snowpack in 2017 temporarily reversed the downward trend in Utah Lake, but conditions as of February 2018 indicate the downward trend will resume and damaging consequences are likely.

Even more concerning, the recently completed Weber River and Bear River tree-ring stream flow reconstructive studies and JVWCD's *Preparing for Climate Change—A Management Plan* forecast the likelihood of much more severe and longer-term droughts in the future. It will be critical for JVWCD to develop a robust DCP to minimize the damaging effects of future droughts. The Evaluation Criterion A section of this applications provides a detailed description of the urgent need for a DCP.

Project Description

This proposal is for Task A, Develop DCP referenced in the Funding Opportunity Announcement BOR-DO-18-F007 (FOA). This technical study description describes the specific activities to be accomplished for the development of a DCP that meets the requirements of the Drought Response Program. The technical study description includes the six elements of a DCP (Task 4 through Task 9 below) and several required procedural steps. The DCP will incorporate the supply and demand planning work done by JVWCD and the other stakeholders.

Task 1: Complete Initial Drought Contingency Planning Steps

Following finalization of the financial assistance agreement, JVWCD will work with Reclamation to establish a Drought Planning Task Force (Task Force) and develop a detailed work plan, as well as a Communication and Outreach Plan, before development of the DCP begins:

- **Establish the JVWCD Drought Planning Task Force (Task Force):** For a description of how the Task Force will be formed, see Evaluation Criterion B: Inclusion of Stakeholders.
- **Develop a detailed work plan:** This Project Description and Evaluation Criterion C: Project Implementation below will be expanded to provide each of the work plan elements described in **Section F.2.3 of the FOA**.
- **Develop a Communication and Outreach Plan:** The description provided in Evaluation Criterion B: Inclusion of Stakeholders will form the basis for the Communication and Outreach Plan.

Task 2: Compile Background and Plan Area Description

The purpose of this task is to fully define the Plan Area, existing water facilities, key water resources, and drought planning and analysis conducted to date to provide a critical foundation for the DCP. To achieve this objective, JVWCD will:

- Compile the Executive Summary, Background Data, and Criterion D sections of this proposal and add relevant detail as identified with the other stakeholders.
- Review and summarize other relevant background information including relevant water contingency and drought plans, water management plans, Reclamation drought planning guidelines, Utah Division of Water Resources drought management guidelines, etc.

Task 3: Summarize Water Supplies and Demands

This task documents baseline and projected conditions to determine the most appropriate future conditions for the vulnerability analysis. JVWCD will:

- Extract this information for all M&I users from its *Demand, Supply, and Major Conveyance Study* update that is currently underway.
- Add similar information from the stakeholders representing agricultural water users.
- Identify the impacts drought would have to each purveyor's water supply and water quality and compare the affected supply to demand.

Task 4: Define the Drought Monitoring Process | Required Element 1

This task describes how water supply conditions are monitored at the local level. To achieve this objective, JVWCD will:

- Select the indicators, classifications, and triggers that are most appropriate for the stakeholder group by reviewing the drought monitoring procedures that are currently being used in the region.
- Establish a process for monitoring near- and long-term water availability based on the selected indicators, classifications, and triggers.

Task 5: Perform a Vulnerability Assessment | Required Element 2

The purpose of this task is to determine how a drought affects the resources of JVWCD and various other sectors within the Plan Area. It will describe the reliability and vulnerability of the water supply to seasonal or climatic shortage including the effects of climate change and uncertainties related to changing hydrologic conditions. Evaluation Criterion A: Need for Plan or Plan Update elaborates on some of the vulnerabilities that the Plan Area faces. Specific threats to the region's critical water resources that may reduce availability and reliability of existing and future water supplies must be understood for effective drought contingency planning. Specifically, JVWCD will:

- Define the uncertainty factors and risks to determine the likelihood of shortages in each source.
- Quantify the consequence of each vulnerability.
- Summarize the range of possible climate change scenarios and their resulting impact on supply planning.
- Define drought impacts across various sectors (e.g. M&I, agriculture, recreation, public heath, commerce).

Task 6: Identify Mitigation Actions | Required Element 3

This task identifies, evaluates, and prioritizes drought mitigation actions and activities that will build long-term resilience to drought, mitigate the risks posed by drought, decrease sector vulnerabilities, and reduce the need for response actions. The prioritized list of mitigation actions will be developed through the following:

- Identify potential drought mitigation measures, particularly those that make use of existing resources, facilities, and infrastructure.
- Screen proposed mitigation actions using criteria established by the task force.
- Estimate project costs for each mitigation action meeting the criteria.
- Fully define the benefits that are expected from each mitigation action on the short-list.
- Describe how the identified projects have a nexus to Reclamation project activities.

Task 7: Identify Response Actions | Required Element 4

The purpose of this task is to identify, evaluate, and prioritize near-term drought response actions that can be triggered during specific stages of drought to manage the limited supply and decrease the severity of immediate impacts. Response actions will be developed through the following:

- Establish a staged approach that consider the best way to equitably allocate drought water resources to the various types of water needs.
- Estimate water savings, impact to various users, lead time to activate response actions, implementation costs, and procedural requirements.

Task 8: Develop the Operational and Administrative Framework | Required Element 5

This task develops an operational and administrative framework to identify who is responsible for undertaking the actions necessary to implement each element of the DCP, including communicating with the public about those actions. This will be accomplished by:

- Defining a water shortage response team and protocol for public communications, interagency coordination, and cost sharing.
- Identifying roles, responsibilities, and procedures necessary to conduct drought monitoring and to initiate response and implement mitigation actions.

Task 9: Document the Plan Development and Update Process | Required Element 6

The purpose of this task is to document the approach taken to develop the DCP and how the DCP will be kept current and used as a dynamic plan in the future. JVWCD will define the frequency/triggers for DCP updates and the organizational framework and process that will be followed for those updates.

Task 10: Develop the Drought Contingency Plan Document

This task summarizes all task efforts and findings into a DCP document. The DCP document and associated appendices, maps, figures, tables, and computer models will be developed and reviewed through the following process:

- Present task results to the Task Force and Outreach Group at milestones to gather input.
- Submit the initial draft of the DCP for review and comment by the Task Force.
- Submit the draft of the DCP to Reclamation and the public for review at least 6 months from the end of the 2-year project period.
- Incorporate review comments from the public and Reclamation and submit the final DCP to Reclamation for review and acceptance at least 1 month from the end of the 2-year project period.

Task 11: Project Management

Provide regular updates of project status to Reclamation; quality control checks on project deliverables; and management of progress against budget and schedule commitments.

Evaluation Criteria

Evaluation Criterion A: Need for Plan or Plan Update

Up to 40 points may be awarded based on the extent to which the proposal demonstrates a compelling need to develop or update a DCP.

Recent District studies such as *Preparing for Climate Change—A Management Plan* and *Demand, Supply, and Major Conveyance Study* have identified drought planning as a gap in JVWCD's current supply planning efforts, and recent events have highlighted the urgency of addressing this gap. During the most recent drought cycle, public-health issues associated with shrinking lake levels have emphasized the need for a new look at drought mitigation and response strategies. Adding to the urgency for drought planning is the fact that the most recent drought cycle has happened simultaneous to unprecedented economic and population growth in the state, increasing the strain on water supplies and potential impacts of severe drought. As of February 5, 2018, precipitation levels during winter 2017/18 are 51 percent of the average, indicating a continuation of the drought that started in 2012. No formalized drought response agreements or planning documents are currently in place for the stakeholders within the proposed Plan Area, and the stakeholders agree that planning to mitigate the risks associated with a severe drought can no longer be delayed. The following paragraphs elaborate on these critical needs and others identified by the JVWCD studies.

Describe the severity of the risks to water supplies that will be addressed in the DCP.

The following three water supply vulnerabilities have heightened the stakeholder group's awareness of the risks that drought poses to public-health and social concerns, environmental concerns, and potential economic losses.

1. Algae Blooms in Utah Lake

Researchers believe that low Utah Lake levels from the recent drought (as illustrated in Figure 4) are contributing to increased algal blooms. The lower volume of water results in a higher concentration of the nutrients on which the cyanobacteria (referred to as algae) feed, triggering the rapid overgrowth.

The algal blooms create a challenging dynamic for drought mitigation planning. It increases the importance of minimizing withdrawals from the watershed upstream of Utah Lake to keep lake levels as high as possible. At the same time, if an algal bloom in the lake triggers a canal closure, there is a greater demand for withdrawals from the upstream watershed to replace the water that would normally be pulled from the lake for the canals.

- **Public health and social concern:** These cyanobacteria can produce cyanotoxins, which have harmful health effects ranging from skin irritation to liver, neurological, and respiratory problems making the water unsafe for recreation and growing crops. During the summers of 2016 and 2017, Utah Division of Water Quality issued health advisories limiting the use of Utah Lake water.
- **Environmental concerns:** The most common environmental impact of the algal blooms is

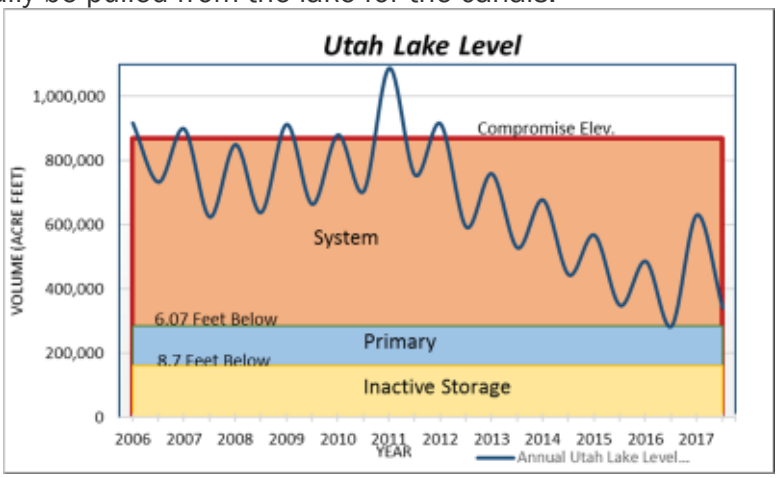


Figure 8: Low Utah Lake levels starting with the drought starting in 2012 contribute to algae blooms, resulting in public-health threats and loss of supply for agricultural and M I de mands.

the loss of animal life. Animals drinking the water can experience the same serious health problems as humans. The overgrowth of cyanobacteria also consumes the available oxygen in the water, leaving none for the aquatic life that relies on it.

- **Economic concerns:** The 2016 warning resulted in the closure of the many canals that convey Utah Lake water to agricultural lands and residences throughout the Plan Area. Many farmers lost valuable crops during the canal closure and many residents switched from using secondary water to maintain gardens and landscapes to potable water, resulting in a peak demand on the JVWCD system that was nearly 12 percent higher than any peak demand previously experienced. Building the water treatment and conveyance infrastructure to support this kind of peaking as M&I demands continue to increase would be very costly. The 2017 advisory did not result in canal closures but still made the lake unusable for water sports and other recreational activities. The Utah Lake Commission estimated that the 2017 algal bloom alone cost the lake's recreation community more than $1 million.

2. Shrinking Great Salt Lake Level

All surface source waters used in the Plan Area ultimately discharge to the Great Salt Lake. Receding lake levels from the current drought pose the following risks:

- **Public health and social concerns:** Scenic hikes and drives around the lake are impacted by the reduced lake level.
- **Environmental concerns:** The wetlands surrounding the Great Salt Lake are an important stop for tens of thousands of migratory birds each year.
- **Economic concerns:** The lake's brine shrimp population relies on a tolerable range of salinity in the lake to survive. The combination of commercial activities harvesting these brine shrimp (largely for the fish food industry) and others extracting minerals (used for producing fertilizers and lightweight metals) are reported to have a combined economic impact on the state of $1.3 billion annually.

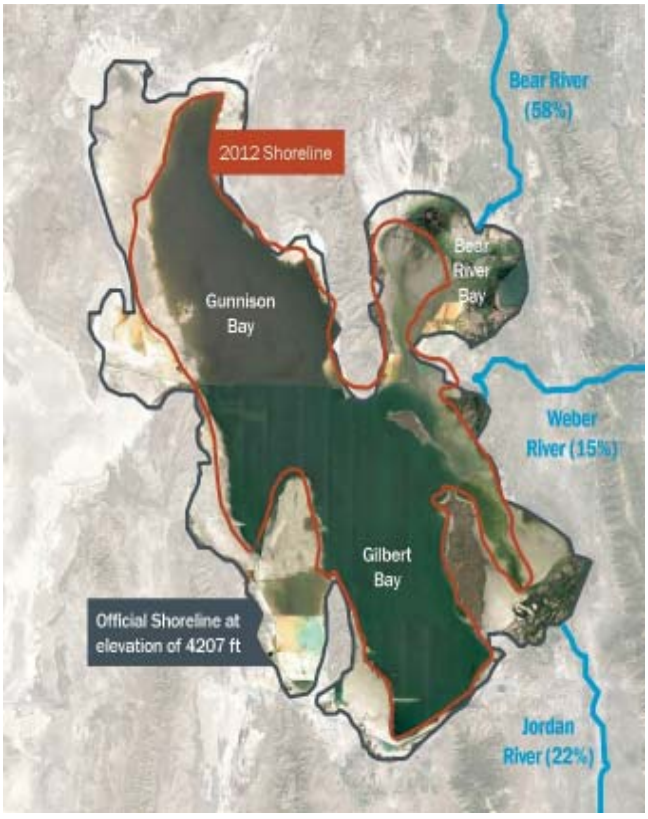


Figure 9: Receding Great Salt Lake levels from 2012 to 2016 pose threats avian and aquatic life and the state economy

Figure 9 shows the reduction in the Great Salt Lake level from 2012 to 2016.

3. Growth in Demand Exceeds Supply

Utah Governor Gary Herbert has stated, "The overall challenge we face right now is growth, and the only limiting factor we have on that is water." If not managed properly, the growth in

the Plan Area will deplete water supplies potentially resulting in ground subsidence from aquifer depletion, the previously mentioned environmental impacts from surface water body depletion, and limitation to economic growth.

The U.S. Census Bureau reported that Utah was the fastest-growing state in the country in 2016 and the third-fastest in 2017. The state's growth rate is attributed to a combination of high birth rates in the state and in-migration driven in large part by an exceptionally strong economy and access to outdoor activities in the state. Considering that nearly 25 percent of the state's population lives in the Plan Area, comprehensive drought planning is required to minimize the potential for access to water to limit that growth.

- **Public health and social concerns:** In addition to using water for the basic life sustaining and sanitation needs, residents in the Plan Area place a high value on home gardens/landscaping and well-maintained municipal parks the support outdoor team sports and other forms of family recreation.
- **Environmental concerns:** Many residents are drawn to the Plan Area because of the access it provides to outdoor lifestyles. These lifestyles generate strong interests in protecting the environment and natural water systems that support them.
- **Economic concerns:** The American Legislative Exchange Council (ALEC) report has named Utah the number one state for economic outlook for 10 consecutive years. Utah was also named the top state for business by CNBC in 2016 and finished in the top 10 again in 2017. This economic growth is led by water-intensive industries such as construction and hospitality. It is also led by a booming tech industry with data centers that rely on large volumes of water for computer cooling systems. For example, the City of Bluffdale, which purchases all its water from JVWCD, supplies millions of gallons of water per day to the NSA data center . With Salt Lake County serving as the economic hub of the state, many of the businesses driving economic growth rely on JVWCD and each member agency's ability to provide the reliable water supply required to support their operations.

Describe the existing or potential drought conditions to be addressed in the Drought Contingency Plan.

The Plan Area is at significant risk from drought because it appears that the drought that started in 2012 will continue, and possibly worsen, through 2018. This concern is compounded by recently observed climate change, reducing the effectiveness of drought mitigation measures put in place in the 20th century.

The outcome of the current winter season will determine if the current drought is curtailed or becomes a significant issue for stakeholders this summer. High precipitation in winter 2016 and 2017 offered a reprieve from the drought. However, as shown in **Figure 5**, water storage volumes are trending back to levels recorded in summer 2016, where they dipped below the primary storage level and triggered a restriction on all secondary storage right holders in the lake. This was a result of the abnormally low precipitation in summer and fall 2017. Precipitation totals this winter are trending toward a continuation of the drought. The snowpack in the Provo-Jordan River watershed—where JVWCD obtains most of its water—is at 51 percent of its average as of February 5, 2018.

JVWCD's recent efforts to understand the most probable impact of climate change on water supplies to the Plan Area concluded that there will be less snowpack in the mountains and a shift in runoff to earlier in the season. These changes will require significant adaptations to current drought mitigation strategies. Currently, snowpack in the watershed serves as a natural storage reservoir, gradually discharging water to surface water bodies throughout the summer. This has made it possible for water supply stakeholders to construct reservoirs that are sized primarily for drought mitigation instead of seasonal storage needs. In northern Utah, climate change is projected to permanently reduce annual mountain snowpack totals, especially below an elevation of 8,500 feet. This is because a greater percentage of precipitation in lower mountainous regions during winter months will consist of rain. In addition, it is projected that runoff due to snowmelt will occur earlier in the year, perhaps with higher intensity and lower duration. Subsequently, stream flow in late summer months will be reduced. Figure 6 shows the projected change to the runoff hydrograph for the Bear River watershed, a proposed future water source for JVWCD, that is representative of watersheds from which JVWCD currently gets its water. As a result, a greater portion of existing storage reservoir volumes will be needed for seasonal storage to hold water supplies from earlier runoff and supplement stream flows in the later summer months. Consequently, there will be less storage volume to mitigate drought.

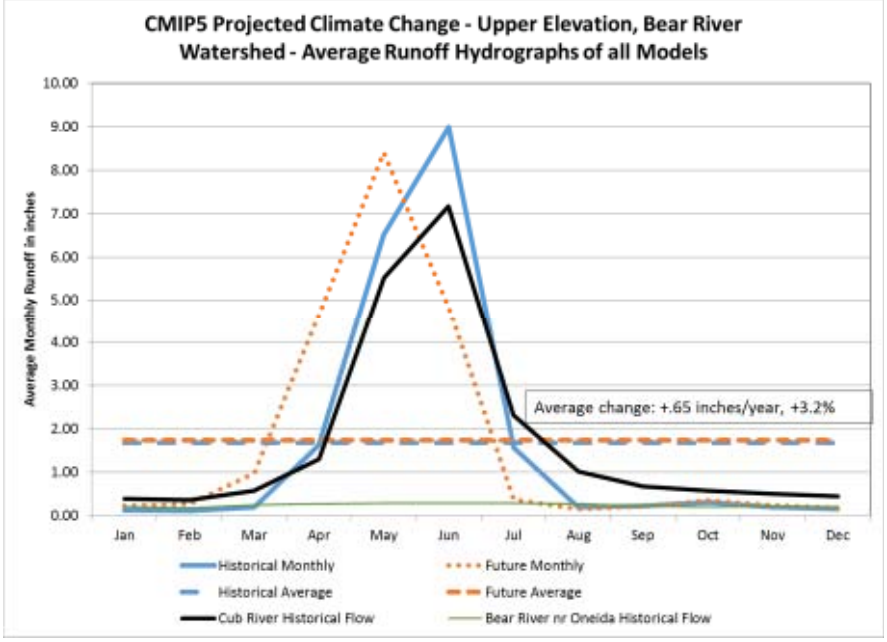


Figure 10: *Projected Watershed Runoff in Bear River indicates existing drought mitigation reservoirs will be needed for seasonal storage instead because of climate change*

In the short term, the proposed DCP will provide the coordination between stakeholders needed to navigate the risks of the current drought, and in the long term, it will identify the mitigation projects and response plans required to adapt current measures to the decreased snowpack and earlier runoff hydrographs from climate change.

Describe the status of any existing planning efforts.

JVWCD and its stakeholders do not have an existing DCP. JVWCD has a history of working to address various threats to water supply, including drought. However, these efforts have lacked the definition and documentation of comprehensive drought mitigation and response plans. The following efforts will be leveraged in the drought contingency planning effort to screen mitigation and response alternatives based on feasibility and effectiveness:

- ***Preparing for Climate Change—A Management Plan***: In May 2017, JVWCD completed this study to prepare for and manage the risk it faces because of changing climate conditions. It will inform the stakeholder group on changes to drought planning that need to be made to account for climate change.
- ***Demand, Supply, and Major Conveyance Study***: This study identified the infrastructure improvements needed to provide reliable water supply through buildout. JVWCD completed the last update of this report in 2005, and recently contracted a consulting firm to assist it in a comprehensive update to be completed this year. It will inform the drought contingency planning effort with updated demand projections and supply plans.
- **Localscapes:** The Localscapes approach is a series of landscaping patterns and practices that consider Utah's unique climate. JVWCD had a significant role in developing the Localscapes approach along with local businesses and other water conservancy districts in the state. This drought mitigation strategy could be incorporated into the DCP.
- **Slow the Flow, Save H_20:** This is an educational conservation campaign designed to raise awareness, empower people, and connect Utah residents to tools and resources. The campaign is funded by the governor's Water Conservation Team, of which JVWCD is one of six members. It is another primary drought mitigation strategy that will likely be influenced by the DCP.

Evaluation Criterion B: Inclusion of Stakeholders

Up to 30 points may be awarded based on the extent to which the proposal demonstrates that the planning process will be inclusive and incorporate input and participation by a diverse range of stakeholders.

JVWCD will employ a tiered approach to include the various stakeholders and broader community in the drought contingency planning process as shown in **Figure 11**. With more than 680,000 residents in the Plan Area and many other interests that extend far beyond the Plan Area, sifting through the spectrum of opinions to identify and address the community's priority concerns is the primary challenge to developing an effective DCP. JVWCD's approach to navigating this challenge is to rely on the organizations that have been formed to represent these diverse interests through varying levels of involvement and communications with those organizations. While JVWCD assumes the responsibility to lead the planning effort and produce the final DCP, it will form a Task Force to directly participate in the DCP development and an Outreach Group to verify the effectiveness of the DCP as it is being developed. Letters of support from some of the stakeholders that will be asked to participate in the Task Force and Outreach Group are provided in **Attachment B**. JVWCD will navigate

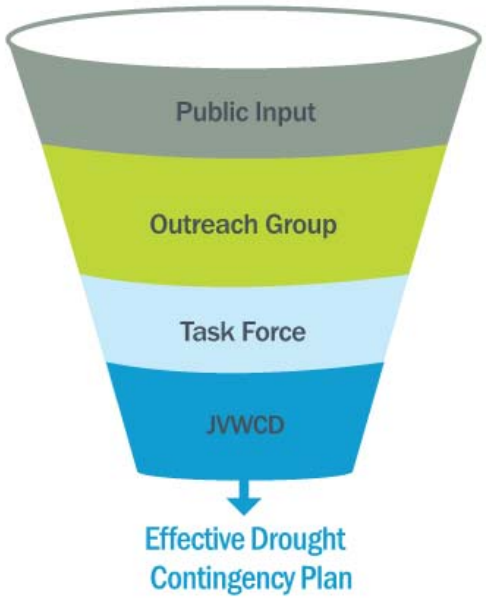


***Figure 11**: JVWCD will develop an effective DCP through a tiered approach to stakeholder engagement*

the needs and opinions, to identify the priority concerns that must be addressed in the DCP.

Identify stakeholders in the planning area who have committed to be involved in the planning process.

The Task Force will include representatives from the organizations that best represent the M&I, environmental, recreational, and agricultural communities impacted by the DCP. The task force will work together to develop the DCP through a series of workshops and reviews. Each member of the Task Force will have the following responsibilities:

- Gather input from the community, interest groups, and/or stakeholders that they represent
- Participate in DCP development workshops
- Review and comment on DCP documentation provided by JVWCD and its consultant team
- Communicate draft and final versions of the DCP to the group that they represent

JVWCD intends to keep the Task Force to 10 or fewer individuals who represent the broad group of stakeholders in the Plan Area. The following organizations have expressed willingness to participate on the Task Force, 4 by letter of support and the others through verbal commitment:

- **JVWCD** will represent the M&I water use interests within the Plan Area
- **Utah Lake Water Users Association** will represent the agricultural water users within the Plan Area
- **Utah Lake Commission** will represent the environmental and recreational interests in Utah Lake
- **Jordan River Commission** will represent the environmental and recreational interests in the Jordan River
- **State Division of Forestry, Fire and State Lands** (represented as a member of the Utah Lake Commission) will represent the environmental and industrial interests in the Great Salt Lake.
- **State Division of Water Resources** will represent the M&I and agricultural interests beyond Plan Area boundaries.

Describe stakeholders in the planning area who have expressed their support for the planning process.

The Outreach Group will include representatives from the broad group of stakeholders in the Plan Area. At key milestones in the planning process the Task Force will consult with the outreach group to identify drought concerns and priorities, validate mitigation and response strategies, and verify general direction and outcomes of the DCP. One of the first activities for the Task Force will be to determine all the organizations that should be included in the Outreach Group. The following stakeholders will be invited to participate in the Outreach Group. 11 of these organizations provided letters of support for the JVWCD DCP:

- City of Bluffdale
- Copperton Improvement District
- Draper City
- Granger-Hunter Improvement District
- Herriman City
- Hexcel Corporation
- Kearns Improvement District
- Magna Water District

- Midvale City
- Riverton City
- City of South Jordan
- City of South Salt Lake
- Taylorsville-Bennion Improvement District
- WaterPro, Inc.
- City of West Jordan
- White City Water Improvement District
- Metropolitan Water District of Salt Lake and Sandy
- Central Utah Water Conservancy District
- State Division of Wildlife Resources
- Friends of the Great Salt Lake
- Chamber West (Chamber of Commerce for western Salt Lake County)

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

In the early stages of the planning effort, the Task Force will develop a Communication and Outreach Plan to define the most effective methods for gathering input and garnering consensus from the public and Outreach Group. The Communication and Outreach Plan will include a combination of stakeholder group workshops, written communications, interactive online media, and, if needed, one-on-one meetings between Task Force members and the broad group of stakeholders. JVWCD and its consultant team have communication and graphics specialists on hand to employ multiple forms of media and facilitate the required collaboration among stakeholders. Each of these collaboration activities will be aligned with key milestones in the planning process to achieve the objective of emphasizing participation and input from local stakeholders. When a draft version of the DCP is available, a public hearing will be held to gather feedback from the general public that can be incorporated into the final DCP.

Evaluation Criterion C: Project Implementation

Up to 20 points may be awarded based on the extent to which the proposal supports the applicant's ability to meet the program requirements within the 2-year time frame, based on the following:

Describe the approach for addressing the six required elements of a Drought Contingency Plan within the 2-year time frame

Developing the six required elements of the JVWCD DCP will be done following the preliminary schedule presented in **Table 1** and will consist of three major components: (1) project administration, (2) DCP development, and (3) public outreach.

Project administration includes executing the financial assistance agreement with Reclamation, selecting a consultant to develop the JVWCD DCP, and grant reporting. JVWCD will be responsible for all project administration tasks. The deliverables include an executed financial assistance agreement, a consultant contract, and required grant reports. All required reports will be provided to Reclamation consistent with the terms of the financial assistance agreement.

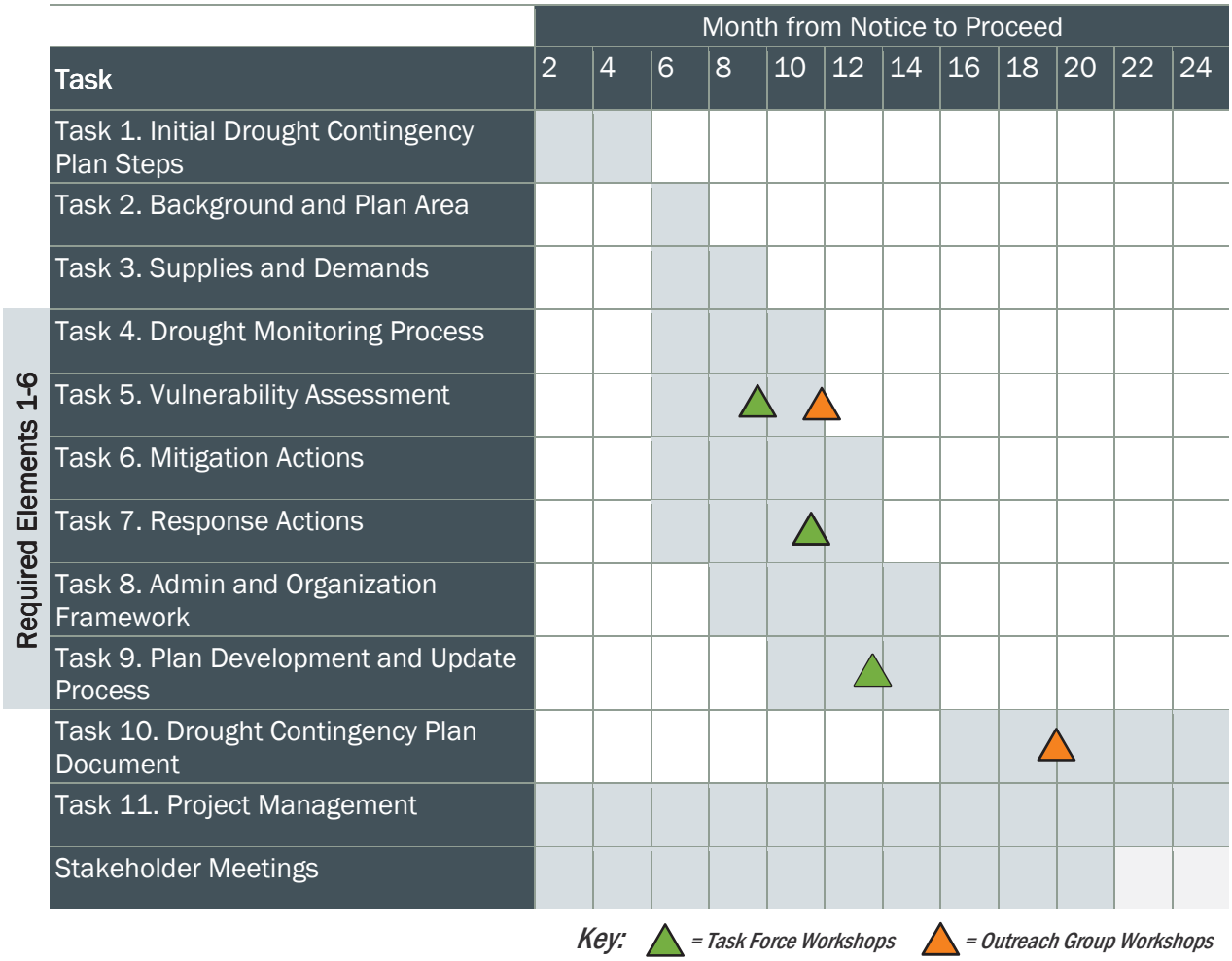
Plan development will be led by JVWCD with direct involvement from the Task Force throughout the process and input from the Outreach Group at key milestones. A total of 3 workshops will be held the Task Force with the intent to drive decisions on each of the six DCP elements. A kickoff workshop will be held to verify that all supplies and demands are accounted for and then define the monitoring process and supply vulnerabilities. The

second workshop will identify mitigation and responses actions, and the third workshop will define the organizational framework to implement the actions and plan update process. Between workshops JVWCD and the consultant team will incorporate feedback from the previous workshop and prepare recommendations for the Task Force to consider. At the completion of the workshops the Task Force will review the first draft of the DCP prior to presentation to the Outreach Group.

Two workshops will be held between the Task Force and the Outreach Group. The first will be held after completion of Tasks 1 through 5 in the Project Description and will present the drought monitoring process and vulnerability assessment to the Outreach Group and gather their input on possible mitigation and response strategies. The second workshop will be held after completion of the draft DCP (substantial completion of Tasks 6 through 10) to present the prioritized mitigation projects and prepare each member of the Outreach Group to gather comments in its public meetings. The Task Force will use comments gathered from the Outreach Group to finalize the DCP for submittal to Reclamation.

A 30-day review period for Reclamation to approve the DCP is programmed into the proposed schedule prior to the 2-year period of performance.

***Table 1**: The Six Elements of the Drought Contingency Plan Will Be Addressed within the Two-Year Time Frame*



Public outreach will be done primarily through the Outreach Group. Each Outreach Group member will be asked to promote the draft DCP and gather comments at its regularly scheduled public hearings. JVWCD will also promote the draft DCP and gather comments at one of its public meetings. Additional public outreach will include preparation of drought mitigation measure fact sheets, joint press releases, postings on social media, and other website updates to keep the public informed and provide the opportunity for the public to ask questions and provide input. The final DCP will be posted to a public website, and will also be available on each of the member agencies' websites.

Describe the availability and quality of existing data and models applicable to the proposed plan or plan update.

Many surface water and groundwater models and analyses have been developed by the local agencies that can be used in developing the DCP. Key models and data sources are listed in Table 4. Evaluation Criterion A describes the status of the existing planning efforts that are applicable to the proposed DCP.

Table 2: Key Models and Data Sources

Data/Model Name	Purpose	Geography
BEARSIM	A Bear River hydrologic model used by the Utah Division of Water Resources.	Bear River
Coupled Model Intercomparison Project 5 (CMIP5)	Estimate impacts to JVWCD's water supply and demand due to projected increasing temperatures and precipitation.	JVWCD, Provo River, Weber River, Duchesne River
Consolidated Model Intercomparison Project (CMIP3)	Predicted adverse climate conditions through downscaled global circulation modeling.	JVWCD, Provo River, Weber River, Duchesne River
CUPSIM	CUP water supply model, capable of predicting CUP water supply under various hydrologic conditions including projections involving climate change as predicted by global climate models. Predicts shortages to occur to JVWCD's CUP supply and to lower Provo River natural flow diversion rights.	JVWCD, Provo River, Weber River, Duchesne River
A millennium-length reconstruction of Bear River stream flow, Utah (Bekker 2015)	1,200-year calibrated and verified tree-ring reconstruction of Bear River stream flow.	Bear River drainage (adjacent to Provo River headwaters)
Weber River dendroclimatology study (Bekker 2014)	Provides palaeohydrology results showing significant annual and decadal climate variability over a 578-year period. Used to estimate annual stream flows needed for the CUPSIM model.	Weber River drainage (adjacent to Provo River headwaters)

Five Decades: JVWCD's history book	A history of JVWCD; provides information on the impacts of drought cycles occurring since the mid-20th century.	JVWCD, Salt Lake County
2014 Conservation Plan Update	Third update to JVWCD's water conservation plan first developed in 1999 to comply with the State's "Water Conservation Plan Act."	JVWCD
Annual reports	Each year JVWCD publishes an annual report for its stakeholders. The reports summarize water deliveries, financial stewardship, improvement activities, and outlook for the coming years.	JVWCD
Summary of Operations (July 2016–2017)	Analysis of previous documents to identify operational and water supply trends that may be valuable to evaluate.	JVWCD
Compilation of groundwater levels	Historical groundwater levels.	JVWCD and Salt Lake County

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

- **Travis Christensen**, Registered Engineer: Travis Christensen is a licensed Professional Engineer in the state of Utah and has been working as an engineer for JVWCD since 2013. Travis has designed and managed the construction of several distribution and transmission water lines ranging in diameter from 8 to 66 inches, rehabilitated culinary production wells, and oversaw the replacement of the control system for the entire JVWCD water system. He has a B.S. in civil engineering from the University of Utah and an M.S. in water resources from the University of Utah.
- **Alan Packard**, Assistant General Manager and Chief Engineer: Alan Packard is an Assistant General Manager and the Chief Engineer for JVWCD. He received a bachelor's degree in civil engineering from Utah State University and is a licensed Professional Engineer in the state of Utah. He has been with JVWCD for more than 25 years and has been involved with planning, design, construction management, operation, and maintenance of a wide variety of water supply, treatment, storage, pumping, and conveyance projects.
- **Shane Swensen**, Engineering Department Manager: Shane Swensen is the Engineering Department Manager for JVWCD. He received a bachelor's degree in civil engineering from Brigham Young University and is a licensed Professional Engineer in the state of Utah. Shane has more than 20 years of experience in the water industry and has been at JVWCD for 16 years. Currently he manages the Engineering Department and executes the capital improvement plan for JVWCD.
- **Bart Forsyth**, Assistant General Manager for Water Supply, Operations, and Public Outreach: Bart Forsyth earned a B.S. in civil engineering from the University of Utah in March 1985. He is a licensed Professional Engineer in the state of Utah. Bart was hired at JVWCD in 1985 and has held many positions in that time including Staff Engineer, Senior Staff Engineer, Engineering Department Manager, and Assistant General Manager. As Assistant General Manager Bart supervises and manages the Operations Department,

Communications and Water Conservation Department, and Water Resource Management group.

- **Matt Olsen,** Communications Department Manager: Matt Olsen is the Communications Department Manager for JVWCD, with responsibilities that include managing public outreach, conservation, customer service, and analysis services. Throughout his career, he has developed multiple technology and analytical solutions for enhancing organizational decision making, messaging, and operations. He has a B.S. in information systems from the University of Utah and an MBA from Western Governors University.
- **Linda Townes,** Public Information Manager: Linda Townes has worked in the water industry for 25 years. Starting as the Dispatcher for JVWCD, she quickly saw that this was where she wanted to spend her career. Pursuing a degree in marketing management led her to her current role as Public Information Manager. She loves spending time on the State legislature, speaking with reporters, and managing a vibrant team of creatives, who craft messaging for JVWCD's service area and beyond.
- **Todd Schultz,** Senior Business Data Analyst: Todd Schultz began his career in the private sector, operating his own business. His desire to work for an organization that offered substantial value to the public led Todd to JVWCD where he was hired in 2011, and currently contributes in a data analytics role. Todd has a passion for numbers, innovating new ideas and processes, and creatively solving problems. He is a firm believer that organizational decisions should be data-driven and frequently analyzed to verify effectiveness. Todd has an undergraduate degree in business management and an MBA from Western Governors University.

The JVWCD staff are expected to be supported by a multi-discipline team of water resources planners, hydrologists, climate change experts, environmental scientists, and public involvement specialists. It should be noted that the consulting team members described below have worked closely with JVWCD in the preparation of this grant proposal. However, if this grant is awarded, there may be a competitive process to select the consulting team that will support JVWCD with the preparation of the DCP.

- **Jacob Young** (Brown and Caldwell) has more than 13 years of experience in the water industry providing water supply planning and design services. He has been involved in water resource evaluation, demand projection, computer model development, and/or master planning for more than 30 city, service district, military base, or Native American reservation water systems across the country. As project manager for JVWCD's Demand, Supply, and Major Conveyance Study and SCADA HMI Replacement project; Jacob is very familiar with the JVWCD's sources, demand projections and characteristics, and facilities.
- **Melanie Holton** (Brown and Caldwell) is a water resources engineer with more than 18 years of experience preparing water system efficiency and master planning studies that include water demand projections, supply reliability analysis, asset management needs and risk analysis, and capital improvement program development. Melanie specializes in using hydraulic modeling to analyze water system infrastructure capacity and potential population growth impacts on existing systems. As a project engineer driving the effort, Melanie recently completed the Bay Area Regional Reliability (BARR) DCP.
- **Jeremy Williams** (Brown and Caldwell) has more than 15 years of experience in planning, design, and construction management of water treatment, infrastructure, and water resources projects. He has performed water reuse studies for CUWCD and WBWCD.

- **Colin Ricks** (Brown and Caldwell) has contributed to the success of many water system master planning projects across the country. He is proficient in the use of water modeling software to define infrastructure needs to improve system reliability and operability.
- **Mike Savage** (Brown and Caldwell) brings more than 40 years of experience in multi-agency regional water studies including Reclamation-funded programs, Mike brings insights to the team as he is currently managing two DCPs in California.

Evaluation Criterion D: Nexus to Reclamation

Up to 10 points may be awarded based on the extent that the proposal demonstrates a nexus between the proposed project and a Reclamation project or activity. Please provide the following information regarding the connection to a Reclamation project, facility, or activity, or Department of the Interior Initiative:

JVWCD's largest single source of supply is the Reclamation CUP—Bonneville Unit. JVWCD's CUP petition amount is 50,000 acre-feet, which is the largest of any Bonneville Unit petitioner, and that amount constitutes more than half of JVWCD's current total M&I supply. JVWCD is also the largest petitioner of the Utah Lake Drainage Basin System (ULS) phase of the CUP. JVWCD paid a portion of the costs to enclose the Provo Reservoir Canal (now called the Provo River Aqueduct), which will be used to convey ULS water into Salt Lake County. JVWCD will rely on the ULS supply to meet the demands of the rapidly growing population in its service area. In addition to the CUP, JVWCD receives water from Reclamation's PRP attributable to its share ownership in PRWUCO, which in turn owns shares in the Provo River Water Users Association. This is also a significant portion of the JVWCD water supply portfolio.

JVWCD is also a member of the Utah Lake Water Users Association, which includes several governmental public water suppliers, private irrigation companies, and a major self-supplied industrial user. Members of the association jointly own and operate facilities necessary to use water stored in Utah Lake. Utah Lake is not only a key source of irrigation and industrial water in the region, but the early priority water rights held by members of the association together with the operation of Utah Lake significantly influence the operation of Reclamation projects (CUP and PRP).

In addition to relying on water supplies from Reclamation projects, JVWCD operates and maintains the Jordan Aqueduct by agreement with Reclamation, CUWCD, and MWDSLS. Reclamation constructed the Jordan Aqueduct reaches 1, 2, 3, and 4 as key features of the Bonneville Unit CUP facilities for deliveries to Salt Lake County. Reclamation maintains ownership of the Jordan Aqueduct but, by agreement, JVWCD performs all operation and maintenance activities.

The proposed DCP will assist JVWCD to optimize its use of supplies from Reclamation facilities and will enable JVWCD to minimize the potential damages that might otherwise occur because of a severe and/or extended drought. With the DCP, JVWCD will improve its long-term resilience to drought conditions consistent with Reclamation and Department of Interior initiatives.

Project Budget

Funding Plan and Letters of Commitment

Describe how the non-federal share of project costs will be obtained.

The estimated total cost for the DCP is $329,922. JVWCD commits to providing $169,922 in non-federal matching funds in support of the activities identified in this proposal. It is expected that this amount will be satisfied by JVWCD revenues including water supply charges, property taxes, and fees, as well as anticipated in-kind costs. Funding from entities other than Reclamation will not be requested.

The anticipated in-kind costs are estimated at $89,926 and reflect services related to the initial DCP steps including developing the Task Force, developing the detailed work plan, and communications and outreach as well as leading DCP technical tasks. The technical tasks that JVWCD staff will lead include documenting the background and plan area, and water supplies and demands, developing the process for monitoring near- and long-term water availability, and defining drought stages as trigger mechanisms for initiating drought mitigation measures and drought response actions. JVWCD will also define the administrative and operational framework for undertaking the actions necessary to implement the DCP and define the DCP update process. As of the date of this proposal no costs have been incurred on the project.

Table 5: Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. Jordan Valley Water Conservancy District: direct	$79,996
2. Jordon Valley Water Conservancy District: in-kind	$89,926*
Non-federal subtotal	$169,922
Other Federal Entities	
1. Not applicable (n/a)	n/a
Other Federal subtotal	n/a
REQUESTED RECLAMATION FUNDING	$160,000

Note: In-kind contributions are denoted with an asterisk (*).

Of the total cost of $329,922 for the DCP, federal funding obtained through this grant process would contribute $160,000 (49 percent), in-kind contributions from JVWCD would account for $89,926 (27 percent) of the cost, and JVWCD would contribute $79,996 (24 percent) of the cost directly. No other federal funds will be used to develop the JVWCD DCP.

Budget Proposal

Include detailed information on the budget categories and clearly identify all project costs, including those that will be contributed as non-federal cost share.

$89,926 of the total $329,922 effort will be JVWCD costs to administer, support, review, develop a portion of the technical analysis, and facilitate the project and $239,996 will be contractual costs. The budget proposal is shown in **Table 6**. The budget proposal is also shown in **Table 7** in a format that presents the in-kind effort by task.

Table 6: *Budget Proposal*

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	$/Unit	Quantity		
Salaries and Wages				
Assistant General Manager/Chief Engineer	67.37	188	hours	$ 12,666
Assistant General Manager of Supply and Operations	78.32	56	hours	$ 4,386
Project Manager/Engineer	32.9	467	hours	$ 15,364
Engineering Department Manager	52.1	62	hours	$ 3,230
Senior Business Data Analyst	32.9	74	hours	$ 2,435
Communication Department Manager	51.03	78	hours	$ 3,980
Public Information Manager	39.87	158	hours	$ 6,299
Engineering Intern	10.4664	32	hours	$ 335
Administrative Services	23.24	94	hours	$ 2,185
Fringe Benefits				
Full-Time Employees	--	--	--	$ 39,046
Part-Time Employees	--	--	--	$ -
Travel				
Trip 1	--	--	--	$ -
Trip 2	--	--	--	$ -
Trip 3	--	--	--	$ -
Equipment				
Item A	--	--	--	$ -
Item B	--	--	--	$ -
Item C	--	--	--	$ -
Supplies and Materials				
Item A	--	--	--	$ -
Item B	--	--	--	$ -
Contractual/Construction				
Contractor A	--	--	--	$ 239,996
Contractor B				$ -
Other				
Other				$ -
TOTAL DIRECT COSTS				$ 329,922
Indirect costs				
Type of rate	percentage	$base		**$** -
TOTAL ESTIMATED PROJECT COSTS				$ 329,922

Table 7: *Proposal Budget by Task*

Task/subtask		Assistant General Manager/Chief Engineer	Assistant General Manager of Supply and Operations	Project Manager/Engineer	Engineering Department Manager	Senior Business ata Analyst	Communication Department Manager	Public Information Manager	Engineering Intern	Administrative Services	Total
1	**Initial Drought Contingency Plan Steps**										
1.1	Drought Planning Task Force	4		36	2					8	50
1.2	Detailed Work Plan	8		24	2					4	38
1.3	Communication and Outreach Plan	8		16	2		4	40		4	74
2	**Background and Plan Area Description**										
2.1	Plan Area			16	2				4	8	30
2.2	Background			12	2				4	2	20
2.3	Review Plans			8						2	10
2.4	Drought History			12	2				8	2	24
3	**Water Supplies and Demands**										
3.1	Review Data and Models	4		4		4					12
3.2	Water Supplies (Surface, Ground, Other for M I and ag)	4		4		6					14
3.5	Urban Demands	2		4		6					12
3.6	Ag and Other Demands	8		16		8					32
3.7	Conservation Programs	2		4		6	4	12			28
3.8	Supply to Demand Comparison	6		6		12			8		32
4	**Drought Monitoring Process**										
4.1	Drought Indicators	8	8	24					4		44
4.2	Drought Triggers	8	8	16					4		36

Task/subtask		Assistant General Manager/Chief Engineer	Assistant General Manager of Supply and Operations	Project Manager/Engineer	Engineering Department Manager	Senior Business Data Analyst	Communication Department Manager	Public Information Manager	Engineering Intern	Administrative Services	Total
5	**Vulnerability Assessment**										
5.1	Assess Supply Vulnerability	4		4	2						10
5.2	No Action Consequences	2		2	2						6
5.3	Climate Change Impacts	2	16	2		20					40
6	**Mitigation Actions**										
6.1	Drought Mitigation Measures	8		4	2						14
6.2	Initial List of Drought Projects	8		6	6						20
6.3	Short List of Drought Projects	8		4	4						16
6.4	Benefits of Projects	8		4	4						16
6.5	Implementation	8		3	1						12
7	**Response Actions**	**2**		**8**	**1**						**11**
8	**Operational and Administrative Framework**										
8.1	Drought Response Organization	2		4			4	24			34
8.2	Member Agencies Process	2		4			4	16			26
8.3	Stakeholder Process	2		8			4	8			22
9	**Plan Development and Update Process**	**8**		**8**			**8**				**24**
10	**Drought Contingency Plan Document**										
10.1	First Draft	2	4	16	8		2	2		8	42
10.2	Second Draft	2	2	12	4		2	2		4	28
10.3	Final Report	2	2	12	4		2	2		4	28

Task/subtask		Assistant General Manager/Chief Engineer	Assistant General Manager of Supply and Operations	Project Manager/Engineer	Engineering Department Manager	Senior Business Data Analyst	Communication Department Manager	Public Information Manager	Engineering Intern	Administrative Services	Total
11	**Project Management and Meetings**										
11.1	Project Management			60						48	108
11.2	Progress Meetings	16	16	44	12	12	4	12			116
	Task Force Workshop 1 (Monitoring and Vulnerability)	8		12			8	8			36
	Task Force Workshop 2 (Mitigation and Response)	8		12			8	8			36
	Task Force Workshop 3 (Implementation and Update Process)	8		12			8	8			36
	Outreach Group Meeting 1 (Risks and Vulnerabilities)	8		12			8	8			36
	Outreach Group Meeting 2 (Draft DCP)	8		12			8	8			36
	Total Hours	188	56	467	62	74	78	158	32	94	1029
	Labor Rate per Hour	$67.37	$78.32	$32.90	$52.10	$32.90	$51.03	$39.87	$10.47	$23.24	–
	Salaries and Wages	$12,666	$4,386	$15,364	$3,230	$2,435	$3,980	$6,299	$335	$2,185	$50,880
	Fringe Benefits (includes substitute Social Security, URS Pension, 457, Medicare, Annual Leave, Sick Leave Insurance, Admin (10%))	$47.79	$53.93	$26.32	$38.60	$27.29	$37.43	$32.33	$8.22	$21.77	
	Fringe Benefits	$8,985	$3,020	$12,291	$2,393	$2,019	$2,920	$5,108	$263	$2,046	$39,046

Task/subtask		Assistant General Manager/Chief Engineer	Assistant General Manager of Supply and Operations	Project Manager/Engineer	Engineering Department Manager	Senior Business Data Analyst	Communication Department Manager	Public Information Manager	Engineering Intern	Administrative Services	Total
	Travel	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Materials/Supplies	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Contractual - Direct (See Table 5)										$239,996
	Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Total Direct Costs										$329,922
	Indirect Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Total Project Costs										$329,922

Budget Narrative

JVWCD Costs

JVWCD administration will include an allocation of up to 10 staff members with some level of responsibility in each of Tasks 1 through 11. JVWCD will take the lead on the following tasks:

- Task 1. Initial Drought Contingency Plan Steps
- Task 2. Background and Plan Area Description
- Task 3. Water Supplies and Demands
- Task 4. Drought Monitoring Process
- Task 8. Operational and Administrative Framework
- Task 9. Plan Development and Update Process

Travis Christensen will have project manager responsibility. As project manager he will participate in regular conference calls and meetings, contract consultant management, budget and schedule tracking, performance and documentation of project progress and success, overseeing and advising on technical complexities and local data needs, and reviewing contracted work products. He will lead the coordination with the other public agencies comprising the Task Force and Outreach Group. Travis will also be the lead for the Background and Plan Area Description and the Drought Monitoring Process, and will provide support to Alan Packard in his work in the Supplies and Demand section.

Other key JVWCD staff who will participate on this DCP project are as follows:

- **Assistant General Manager/Chief Engineer:** Alan Packard will be the technical lead of the Water Supplies and Demands task.
- **Engineering Department Manager:** Shane Swensen will provide project oversight.
- **Assistant General Manager of Supply and Operations:** Bart Forsyth will provide feedback on the drought monitoring process and will be the lead of the Climate Change Impacts subtask.
- **Senior Business Data Analyst:** Todd Schultz will aid with the Water Supplies and Demands analysis and will assist Bart Forsyth in his work in the Climate Change Impacts subtask.
- **Communication Department Manager:** Matt Olsen will lead the Conservation Programs subtask and will also be the primary reviewer of Linda Townes' efforts on communication outreach.
- **Public Information Manager:** Linda Townes will lead the development of the Communication and Outreach Plan and develop the drought response organization description and participating agencies process.
- **Engineering Intern:** JVWCD will use its engineering intern to support the efforts on DCP tasks including data gathering and information processing.
- **Administrative services:** Jessica Richards will support JVWCD staff in this proposed DCP project regarding project administrative and bookkeeping, word processing, and graphics development.

Employee tasks, hours, and labor rates have been clearly shown in the **Table 7**. Cost for Fringe benefits are shown separately. Fringe benefits include substitute Social Security, USR Pension, 457, Medicare, Annual Leave, Sick Leave Insurance, and Admin. Travel, equipment, materials, and supplies, as well as indirect costs, have been budgeted at zero dollars. If such out-of-pocket costs occur, JVWCD will absorb them with no offset from federal monies received.

Contractual Costs

JVWCD will contract the services of a multi-discipline team of water resources planners, hydrologists, climate change experts, environmental scientists, and public involvement specialists. **Table 8** presents the level of effort estimated for a team of consultants to provide the assistance needed to complete the DCP.

Table 8: *Contracted Costs*

Task/subtask		Labor Hours	Materials and Travel, $	Total, $
1	Initial Drought Contingency Plan Steps			
1.1	Drought Planning Task Force	12	$ -	$ 2,261
1.2	Detailed Work Plan	22	$ -	$ 4,445
1.3	Communication and Outreach Plan	12	$ -	$ 2,457
2	Background and Plan Area Description			
2.1	Plan Area	2	$ -	$ 446
2.2	Background	2	$ -	$ 446
2.3	Review Plans	2	$ -	$ 446
2.4	Drought History	2	$ -	$ 446
3	Water Supplies and Demands			
3.1	Review Data and Models	0	$ -	$ -
3.2	Surface Water Supplies	0	$ -	$ -
3.3	Groundwater Supplies	0	$ -	$ -
3.4	Other Supply Sources	0	$ -	$ -
3.5	Urban Demands	0	$ -	$ -
3.6	Ag and Other Demands	0	$ -	$ -
3.7	Conservation Programs	0	$ -	$ -
3.8	Supply to Demand Comparison	20	$ -	$ 3,585
4	Drought Monitoring Process			
4.1	Drought Indicators	12	$ -	$ 2,031
4.2	Drought Triggers	12	$ -	$ 2,031
5	Vulnerability Assessment			
5.1	Assess Supply Vulnerability	92	$ -	$ 16,116
5.2	No Action Consequences	64	$ -	$ 11,253
5.3	Climate Change Impacts	20	$ -	$ 4,044
6	Mitigation Actions			
6.1	Drought Mitigation Measures	46	$ -	$ 8,277
6.2	Initial List of Drought Projects	54	$ -	$ 9,589
6.3	Short List of Drought Projects	96	$ -	$ 14,796
6.4	Benefits of Projects	56	$ -	$ 9,437
6.5	Implementation	48	$ -	$ 8,482
7	Response Actions	**48**	$ -	$ 8,515

Task/subtask		Labor Hours	Materials and Travel, $	Total, $
8	Operational and Administrative Framework			
8.1	Drought Response Organization	10	$ -	$ 1,792
8.2	Member Agencies Process	10	$ -	$ 1,792
8.3	Stakeholder Process	10	$ -	$ 1,792
9	Plan Development and Update Process	**10**	**$ -**	**$ 2,207**
10	Drought Contingency Plan Document			
10.1	First Draft	176	$ -	$ 28,571
10.2	Second Draft	116	$ -	$ 17,871
10.3	Final Report	116	$ -	$ 17,871
11	Project Management			
11.1	Project Management	84	$ -	$ 13,079
11.2	Meetings and Workshops			
	Progress Meetings	98	$ 500	$ 19,959
	TF Workshop 1	33		$ 5,735
	TF Workshop 2	33		$ 5,735
	TF Workshop 3	33		$ 5,735
	Outreach Group Mtg 1	25		$ 4,378
	Outreach Group Mtg 2	25		$ 4,378
TOTAL		**1,401**	**$ 500**	**$ 239,996**

Required Permits or Approvals

Applicants must state in the proposal whether any permits or approvals are required for development of the proposed feasibility study and explain the plan for obtaining such permits or approvals.

No permits or approvals are needed for this DCP.

Existing Drought Contingency Plan

If there is an existing DCP addressing the relevant geographic area, please attach a copy of the existing plan.

No DCP is currently in place specific to the JVWCD service area. For a more detailed description of climate change planning documents, please see the Evaluation Criterion A: Need for Plan or Plan Update section.

Letters of Support

To demonstrate that the planning process will include a diverse range of stakeholders, please include letters from interested stakeholders supporting the development of a new drought contingency plan or plan update.

15 Letters of support are included in **Attachment B**.

Official Resolution

Include an official resolution adopted by the applicant's board of directors, governing body, or official authorized to commit the applicant to the financial and legal obligations.

An official resolution from the JVWCD Board of Trustees is scheduled to be approved in the February 14, 2018 Board Meeting. The approved resolution will be submitted within 30 days of this proposal deadline.

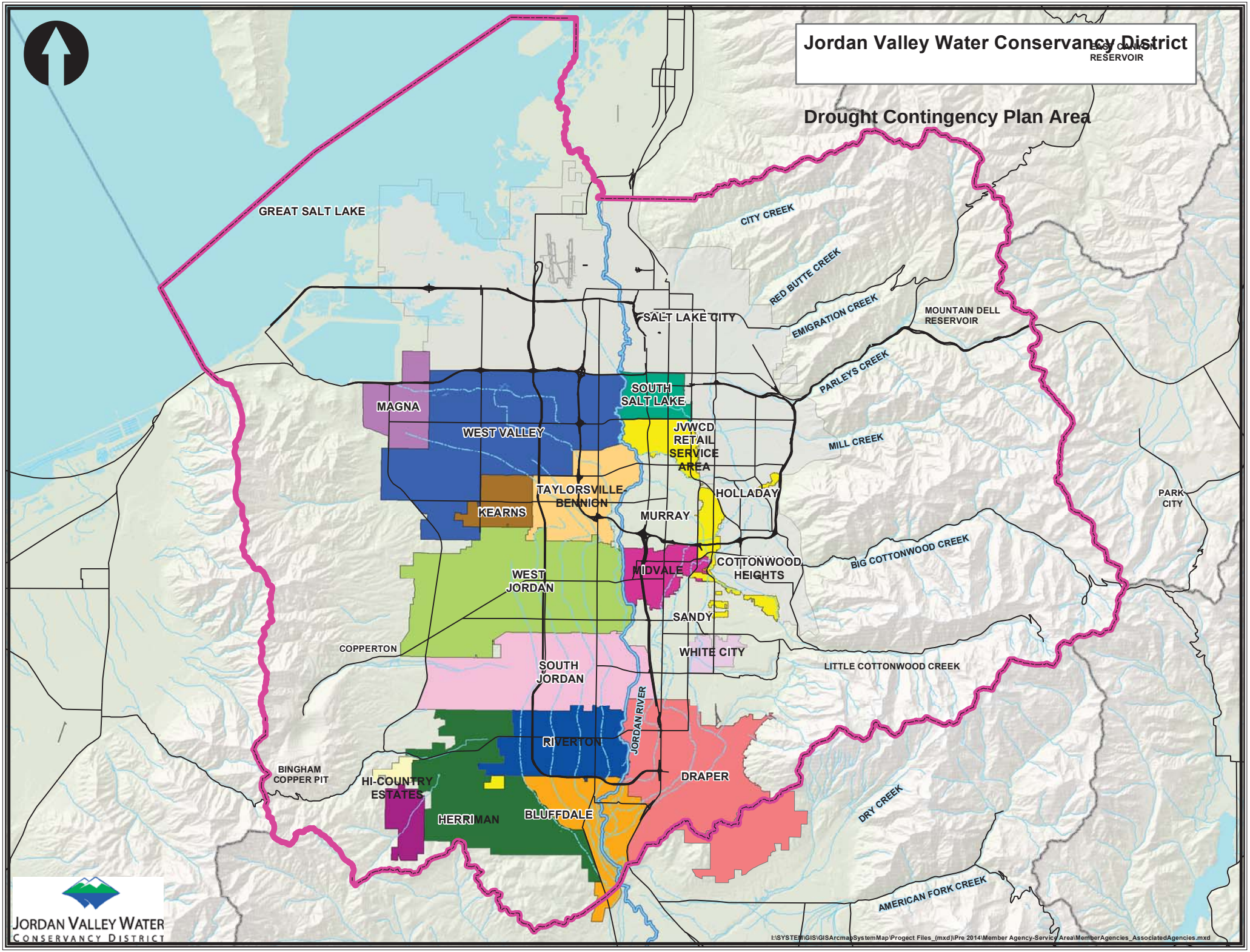
Request for Cost Share Reduction

No cost share reduction is request for this proposal.

Unique Entity Identifier and System for Award Management

JVWCD is registered in the federal government's System for Award Management (SAM) and in the Automated Standard Application for Payments (ASAP). JVWCD's DUNS Number in SAM is 008360265, CAGE: 3GKD6.

Attachment A


Jordan Valley Water Conservancy District
Drought Contingency Plan Area
GREAT SALT LAKE
CITY CREEK
RED BUTTE CREEK
EMIGRATION CREEK
PARLEYS CREEK
MILL CREEK
BIG COTTONWOOD CREEK
LITTLE COTTONWOOD CREEK
DRY CREEK
AMERICAN FORK CREEK
JORDAN RIVER
SALT LAKE CITY
MOUNTAIN DELL RESERVOIR
PARK CITY
MAGNA
SOUTH SALT LAKE
WEST VALLEY
JVWCD RETAIL SERVICE AREA
TAYLORSVILLE-BENNION
KEARNS
MURRAY
HOLLADAY
COTTONWOOD HEIGHTS
MIDVALE
WEST JORDAN
SANDY
WHITE CITY
COPPERTON
SOUTH JORDAN
RIVERTON
DRAPER
BINGHAM COPPER PIT
HI-COUNTRY ESTATES
HERRIMAN
BLUFFDALE
JORDAN VALLEY WATER CONSERVANCY DISTRICT
I:\SYSTEM\GIS\GISArcmapSystemMap\Progect Files_(mxd)\Pre 2014\Member Agency-Service Area\MemberAgencies_AssociatedAgencies.mxd

Attachment B

UTAH LAKE WATER USERS ASSOCIATION, INC.

February 6, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Drought Contingency Plan

Dear Application Review Committee members:

On behalf of the Utah Lake Water Users Association (Association), I am pleased to submit this letter of support for the Jordan Valley Water Conservancy District (Jordan Valley) application for a WaterSMART Drought Contingency Planning (DCP) Grant. The Association consists of several organizations including governmental public water suppliers, private irrigation companies and a major self-supplied industrial user which jointly own and operate facilities necessary to use water stored in Utah Lake. Utah Lake is not only a key source of irrigation and industrial water in the region, but the early priority water rights held by members of the Association and the associated operation of Utah Lake also influences the operation of the Bureau of Reclamation Projects (Provo River Project and Central Utah Project).

We welcome the opportunity to participate as a stakeholder in the Jordan Valley DCP. The Association will designate individuals from its governing board or staff from applicable member organizations to represent the interests of industrial, agricultural, and municipal water users through participation in the Jordan Valley DCP stakeholder group.

We appreciate Jordan Valley's plan to bring stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. Being involved in the development of this drought contingency plan will build on our history of collaboration and will better prepare us for inevitable drought cycles as well as challenges related to climate change.

We look forward to Jordan Valley being awarded this critical funding, being an active participant in developing the DCP, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Laura Briefer, Director of Salt Lake City Public Utilities and Chair
Utah Lake Water Users Association, Inc.
Salt Lake City, Utah

cc: Alan Packard, Jordan Valley Water Conservancy District

UTAH LAKE COMMISSION

January 29, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District
Drought Contingency Plan

Dear Application Review Committee members:

On behalf of the Utah Lake Commission (Commission), I am pleased to submit this letter of support for the Jordan Valley Water Conservancy District (Jordan Valley) application for a WaterSMART Drought Contingency Planning (DCP) Grant. The Commission is an agency established by interlocal agreement between 17 governmental entities including municipalities, Utah County, Central Utah Water Conservancy District, Utah Department of Environmental Quality, Utah Department of Natural Resources, and Utah Division of Forestry Fire and State Lands. The purposes of the Commission include promoting multiple uses of Utah Lake, and protecting Utah Lake's natural resources.

Drought conditions pose a serious risk to the environmental health and recreational resources of Utah Lake and we welcome the opportunity to participate as a stakeholder in the Jordan Valley DCP. We appreciate Jordan Valley's plan to bring stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. Participating in the development of this drought contingency plan will build on our history of collaboration and will better prepare us for inevitable drought cycles as well as challenges related to climate change.

We look forward to Jordan Valley being awarded this critical funding, being an active participant in developing the DCP, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Eric Ellis, Executive Director
Utah Lake Commission
Provo, Utah

Utah Lake Commission
Historic Utah County Courthouse
51 South University Ave.
Suite 109
Provo, Utah
84601

ph. (801) 851-2900
fx. (801) 851-2903

http://utahlake.gov

JORDAN RIVER COMMISSION

JORDANRIVER
OUR RIVER ~ OUR FUTURE

January 31, 2018

Bureau of Reclamation
Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Drought Contingency Plan

Dear Application Review Committee members:

On behalf of the Jordan River Commission, I am pleased to submit this letter of support for the Jordan Valley Water Conservancy District application for a WaterSMART Drought Contingency Planning (DCP) Grant. The Commission is a voluntary group of cities, counties, state agencies, and districts, established by an Interlocal Agreement, working together to improve, restore, and revitalize the Jordan River corridor. The Commission works to preserve and rehabilitate natural habitats including wetlands within the river corridor, and also works to facilitate greater access and recreational use of the river corridor.

Drought conditions pose a serious risk to the environmental health of the Jordan River and we welcome the opportunity to participate as a stakeholder in the Jordan Valley DCP. We appreciate Jordan Valley's plan to bring stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. Participating in the development of this drought contingency plan will build on our history of collaboration and will better prepare us for inevitable drought cycles as well as challenges related to climate change.

We are currently working with other agencies on similar DCP projects, and see this focus as vital to our future during this period of climate change and impacts in the West.

We look forward to Jordan Valley being awarded this critical funding, being an active participant in developing the DCP, and in turn, following through to coordinate efforts and implement solutions that protect, conserve and enhance our increasingly valuable water resources.

Sincerely,

Soren Simonsen
Executive Director

195 North 1950 West • PO Box 526081 • Salt Lake City • Utah • 84152-6081
801-536-4158 • www.jordanrivercommission.com

GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Water Resources
ERIC L. MILLIS
Division Director

February 5, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Drought Contingency Plan

Dear Application Review Committee members:

The Utah Division of Water Resources (Division) is fully supportive of the Jordan Valley Water Conservancy District's (Jordan Valley) application for a WaterSMART Drought Contingency Planning (DCP) Grant. The reliability of water resources throughout the State are often challenged by drought conditions and it is increasingly important to prepare for those conditions.

We welcome the opportunity to participate as a stakeholder in the Jordan Valley DCP. We appreciate Jordan Valley's plan to bring stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. Participating in the development of this DCP will build on our history of collaboration and will better prepare us for inevitable drought cycles as well as challenges related to climate change.

We look forward to Jordan Valley being awarded this critical funding, being an active participant in developing the DCP, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Eric L. Millis, P.E.
Director

1594 West North Temple, Suite 310, PO Box 146201, Salt Lake City, UT 84114-6201
telephone (801) 538-7230 • facsimile (801) 538-7279 • TTY (801) 538-7458 • *www.water.utah.gov*

BLUFFDALE
EST. 1848

THE CITY OF BLUFFDALE
2222 W 14400 South
Bluffdale, Utah 84065
(801) 254-2200
Fax (801) 253-3270

January 26, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

Bluffdale City is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, Bluffdale relies on JVWCD for 100% of its drinking water supplies to serve 14,000 residents. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Mark Reid
Bluffdale City Manager

c: Wm. Brent Johnson, JVWCD Trustee

DRAPER CITY

January 25, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

Draper City is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, Draper relies on JVWCD for 100% of its drinking water supplies to serve 25,000 residents. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

David Dobbins
City Manager

c: Ron E. Sperry, JVWCD Trustee

Draper Irrigation Company
PO Box 156
12421 South 800 East
Draper, UT. 84020
801-571-2232

January 29, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

Draper Irrigation Company is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, Draper Irrigation provides culinary water service to approximately 35,000 residents in Draper City and approximately 15% of the Draper Irrigation drinking water supply is purchased from JVWCD. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

David A Gardner
Assistant General Manager

c: Ron E. Sperry, JVWCD Trustee

GRANGER-HUNTER
IMPROVEMENT DISTRICT

2888 South 3600 West • P.O. Box 701110 • West Valley City, Utah 84170-1110 • Phone (801) 968-3551 • Fax (801) 968-5467 • www.ghid.org

January 29, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

Granger-Hunter Improvement District (GHID) is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, GHID provides culinary water service to more than 115,000 residents in West Valley City and approximately 80% of the GHID water supply is purchased from JVWCD. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Clint Jensen, CPA
General Manager

c: Corey L. Rushton, JVWCD Board Chair
Karen D. Lang, JVWCD Trustee

HERRIMAN CITY

January 25, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

Herriman City is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, Herriman relies on JVWCD for approximately 50% of its drinking water supply to serve 45,000 residents. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Brett Wood
City Manager, Herriman City

c: Wm. Brent Johnson, JVWCD Trustee

5355 W. Herriman Main Street • Herriman, Utah 84096
(801) 446-5323 office • (801) 446-5324 fax • herriman.org

Kearns Improvement District

BOARD OF TRUSTEES
Gregory R. Christensen
Cheryle A. Hatch
Jeff Monson

GENERAL MANAGER
Pamela R. Gill

January 29, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee Members:

Kearns Improvement District (KID) is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, KID provides culinary water service to 52,000 residents in the Kearns Metro Township, and parts of West Jordan City, West Valley City, and Taylorsville City. We purchase over 90% of the KID water supply from JVWCD. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Pamela Gill

Pamela Gill
General Manager

c: Greg R. Christensen, JVWCD Trustee

P.O. Box 18608
5350 West 5400 South
Kearns, UT 84118

Phone 801-968-1011
Toll Free 1-800-874-1579
Fax 801-968-1023

www.kearnsid.org

MAGNA WATER DISTRICT

January 25, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

Magna Water District (Magna) is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, Magna provides culinary water service to __35,000____ residents in the Magna Metro Township and approximately 15% of the Magna drinking water supply is purchased from JVWCD. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Terry L. Pollock,
General Manager
Magna Water District

c: Greg R. Christensen, JVWCD Trustee

PO Box 303, 8885 W 3500 S, Magna, UT 84044-0303 • 801.250.2118 • fax 801.250.1452
www.magnawater.com

7505 South Holden St.
Midvale, UT 84047
801-567-7200

January 25, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

Midvale City is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD. Beginning in 2019, Midvale will rely on JVWCD for approximately 40% of its drinking water supply to serve approximately 34,000 residents. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Kane Loader, City Manager

c: Ron E. Sperry, JVWCD Trustee

SOUTH JORDAN
UTAH

PH: 801.446-HELP @SouthJordanUT

January 25, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

The City of South Jordan is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, South Jordan relies on JVWCD for 100% of its drinking water supplies to serve over 70,000 residents. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Gary L. Whatcott, City Manager

TAYLORSVILLE BENNION IMPROVEMENT DISTRICT
WATER DISTRIBUTION · WASTEWATER COLLECTION

1800 West 4700 South • P.O. Box 18579 • Taylorsville, Utah 84118 • (801) 968-9081 • Fax. (801) 963-3199

January 29, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

Taylorsville-Bennion Improvement District (TBID) is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, TBID provides culinary water service to about 70,664 residents with approximately 35% of the TBID water supply being purchased from JVWCD. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

Keith J. Lord, General Manager

c: Gary C. Swensen, JVWCD Trustee

City of West Jordan
Department of Public Works
8000 South Redwood Road
West Jordan Utah 84088
Office: (801) 569-5070

February 1, 2018

Bureau of Reclamation – Water Resources and Planning Division
Drought Contingency Planning Grants FY 2018
Application Review Committee members

Subject: Letter of support for the Jordan Valley Water Conservancy District Regional Drought Contingency Plan

Dear Application Review Committee members:

The City of West Jordan is pleased to write this letter in support of Jordan Valley Water Conservancy District's (JVWCD) application for the Bureau of Reclamation's FY2018 WaterSMART Drought Contingency Planning Grants. As one of 17 wholesale member agencies served by JVWCD, West Jordan relies on JVWCD for approximately 90% of its drinking water supply to serve 116,000. Planning for a sustainable, resilient water supply to meet the various municipal, industrial, agricultural, recreational, and environmental uses will require consistent coordination, cooperation, and focused planning and management.

We appreciate JVWCD's plan to bring various stakeholders together to determine the most effective activities to monitor for drought, mitigate the risks posed by drought in advance, and respond to various stages of drought. We feel that our ability to collaborate with JVWCD and its other member agencies to reduce our collective per capita water demand by 17% in recent years demonstrates our ability to work together to effect positive changes. Participating in the development of the JVWCD Drought Contingency Plan will build on our history of collaboration in the face of pending climate change and inevitable drought cycles.

We look forward to JVWCD being awarded this critical funding, being an active participant in developing the Drought Contingency Plan, and in turn, implementing solutions that protect and enhance our increasingly valuable water resources.

Sincerely,

David R. Brickey
City Manager

c: Chad Nichols, JVWCD Trustee

JORDAN VALLEY WATER
CONSERVANCY DISTRICT

Attachment A: Areas Affected By Project

The areas affected by the project are primarily all within the Salt Lake County. The cities which are in the plan area that rely on a portion or their entire water supply from the Jordan Valley Water Conservancy District are:

- Magna, Utah
- West Valley City, Utah
- Kearns, Utah
- City of Taylorsville, Utah
- West Jordan City, Utah
- City of South Jordan, Utah
- Riverton City, Utah
- Herriman City, Utah
- Bluffdale, Utah
- South Salt Lake City, Utah
- Midvale City, Utah
- Murray City, Utah
- Holladay City, Utah
- White City, Utah
- Draper City, Utah

The project will also evaluate water sources which are located outside of Salt Lake County but are used to supply water to the plan area. These sources include but are not limited to:

- Utah Lake, Utah County, Utah
- Deer Creek Reservoir, Wasatch County, Utah
- Jordanelle Reservoir, Wasatch County, Utah

Attachment B: Congressional Districts

The program/project Congressional Districts includes the following:

- UT-002
- UT-003
- UT-004

The plan area covers the Salt Lake County portion of the three Congressional Districts listed above.