WaterSMART Drought Response Program:
Drought Resiliency Projects for Fiscal Year 2024
Funding Opportunity Announcement No. R24AS00007

# City of Big Bear Lake

## Department of Water & Power

# Equipping Division Well No. 9 Project


**Applicant Information:** **City of Big Bear Lake**
**Department of Water & Power**
**41972 Garstin Drive/ P.O. Box 1929**
**Big Bear Lake, CA 92315**

**Project Manager:** **Reginald A. Lamson**
**General Manager**
**RLamson@bbldwp.com**
**Phone: (909) 866-5050 x 201**

# Table of Contents



# List of Tables



# List of Figures

# TECHNICAL PROPOSAL and EVALUATION CRITERIA

| | |
|---|---|
| **Date** | November 7, 2023 |
| **Applicant Name** | City of Big Bear Lake, Department of Water and Power (DWP) |
| **City, County, State** | Big Bear Lake, San Bernardino County, California |
| **Eligible Applicant & Explanation of Eligibility** | Category A Applicant - Local Authority with Water Delivery Authority |
| **Task Area & Funding Group** | Task A - Funding Group I |
| **Project Name** | Equipping Division Well No. 9 Project |
| **Project Length** | 2 years |
| **Estimated Completion Date** | November 30, 2025 |
| **Services Provided** | 16,000 |
| **Water Available in Unconstrained Year** | 3,100 AF per year |
| **10 Year Average Annual Water Supply** | 2,171 AF per year |

## Executive Summary

The City of Big Bear Lake, Department of Water and Power (DWP or BBLDWP) is located in the Bear Valley, a largely disadvantaged community within San Bernardino County, California. Despite not currently experiencing drought conditions, the Bear Valley has experienced severe droughts in the recent past and is widely expected to be impacted by severe drought in the coming years. The DWP's Urban Water Management Plan (UWMP) identifies this threat and addresses it by proposing new infrastructure projects such as the Equipping of Division Well No. 9 Project (Project), to improve drought resiliency and increase water system operational efficiencies. The Project will achieve this through the construction of a well pumping plant at DWP's new Division Well No. 9, which is expected to be a high producing well relative to the service area it lies within. The Project will, among other things, enable the DWP to mitigate drought impacts to its system as it will provide a new, alternative water source and increase water management flexibility. Also, the Bear Valley community at large will become more resilient to long-term drought and less likely to be reliant on emergency response actions, as the water produced by the Division Well No. 9 pumping plant can be transferred through an existing intertie to the DWP's only neighboring water agency within the Bear Valley. This is significant given the Bear Valley's isolated, mountaintop topography which renders the delivery of emergency imported water cost prohibitive. The Project is not located on Federal lands or facilities and the Project can begin construction as early as the Spring of 2025.

## Section 2. Project Location

The DWP's service area is approximately 6,750 feet above sea level at the eastern end of the San Bernardino Mountains in San Bernardino County, California and encompasses thirteen square miles primarily south of Big Bear Lake. The DWP serves the City of Big Bear Lake,

Sugarloaf-Erwin Lake, Lake William at the east end of the Valley, and Fawnskin to the north of the Lake. The proposed Project will be located on the North Shore in the Division Wellfield. The Project latitude is 34* 15’ 52.86 N and longitude is 116* 51’ 59.12 W.

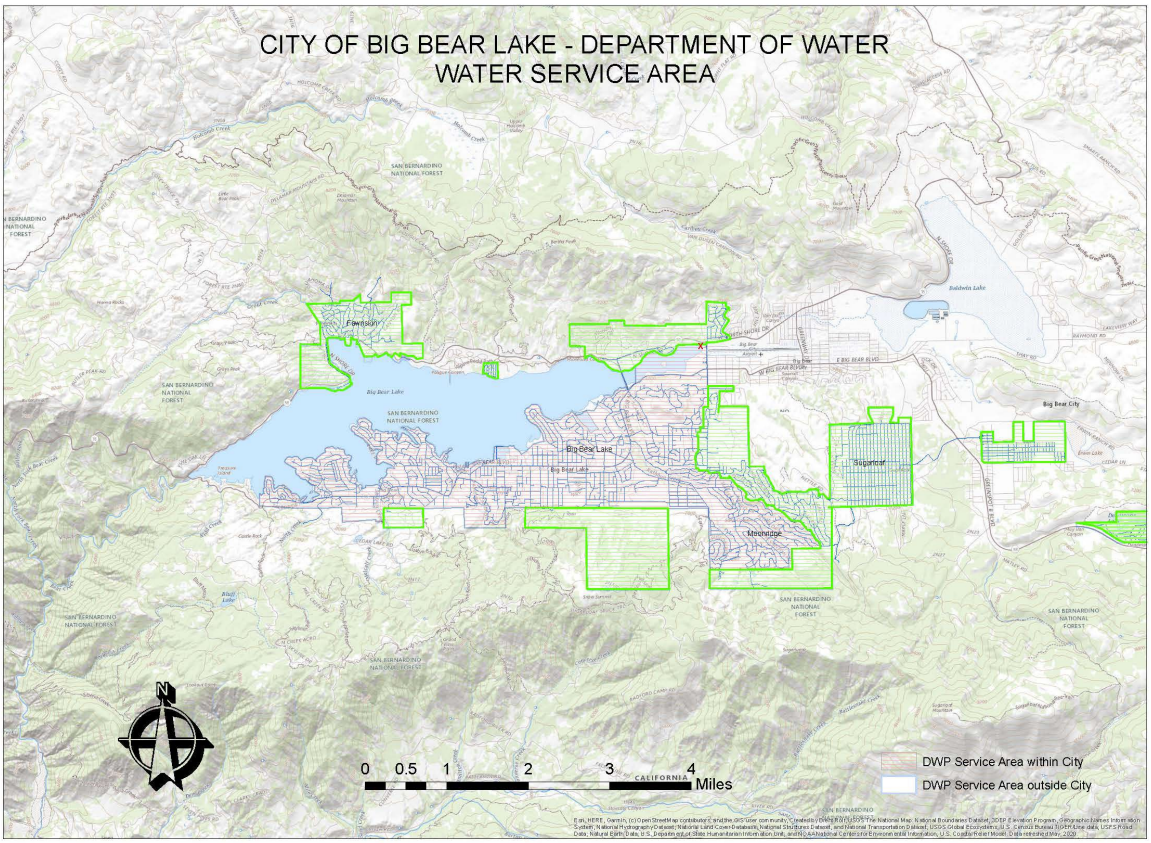


Figure 1 DWP Water Service Area

# Section 3. Technical Project Description

The proposed Project is the equipping of a new pumping plant at the recently drilled Division Well No. 9. The pumping plant is expected to pump water from a newly drilled, high producing well within DWP’s water system which will serve as an alternative source of water supply to proactively prepare for severe to exceptional drought conditions expected to impact the Bear Valley in the near future.

In August 2021, the DWP hired Water Systems Consulting, an engineering consultant, to design the Project. In September 2021, the DWP collaborated with Tom Dodson and Associates, an environmental consultant, to evaluate the drilling and equipping of Division Well No. 9. In October 2021, Tom Dodson and Associates filed a Notice of Exemption for the Categorical Exemption Class 2 with the County of San Bernardino for the Project.

In January 2022, once the drilling design portion of the project was completed, the DWP advertised a Notice Inviting Bids for the drilling of Division Well No. 9 and held a Pre-Bid Meeting for interested contractors. In February 2022, the DWP Board of Commissioners

awarded the contract to the lowest responsive bidder South West Pump & Drilling, Inc. for the drilling and construction of a new municipal-supply water well targeted to produce 200 to 300 GPM. The average producing well in the DWP system is typically only 160 GPM. The drilling of the Division Well No. 9 was delayed until the Contractor could obtain the permitting from Caltrans required to bring their oversized drill rig up the San Bernardino Mountains. In September 2023, Caltrans issued the permit, and the drill rig and other equipment arrived on site. The drilling of the Division Well No. 9 is currently under construction and is expected to be completed in December 2023.

The engineering design for the equipping of Division Well No. 9 is scheduled to be completed by October 2024. Early 2025, DWP will go through the public bid process and award the contract to the lowest responsible bidder. If this grant application is successful, the construction and equipping of the Division Well No. 9 Pumping Plant will begin in the Spring of 2025, after the winter season.

This Project will include the installation of a 200 to 300 GPM vertical turbine pumping unit, the construction of a concrete block building with a metal roof to protect the pumping unit, the installation of sodium hypochlorite disinfection equipment, the installation of Variable Frequency Drive (VFD) control equipment to maintain a constant pumping water level, as well as site grading, piping and paving.

Figure 2 Example Well Pumping Plant (Sawmill Well)

The concrete block building is necessary to reduce noise output, comply with local noise ordinances, as well as protect the pumping plant equipment. Additionally, the proposed pumping plant will be powered by the currently operational Division Wellfield Solar Plant, utilizing a clean renewable energy source. This solar plant has the capacity to supply 100% of the annual energy demand of the existing Division Well Pumping Plants Nos. 2, 6, 7 and 8 and the proposed Division No. 9 Well Pumping Plant.

## Section 4. Performance Measures

The performance measures to quantify actual benefits upon completion of the Project is the estimated increase water supply reliability in long term drought conditions of 400 AF per year. Currently, DWP's average annual water demand is 2,150 AF per year. As such, the percentage increase in water supply to build long-term drought resiliency for DWP customers is estimated at 18.60 percent (400 AFY/2,150 AFY).

Moreover, the Project benefits the entire Bear Valley Groundwater Basin. The Big Bear City Community Services District (CSD) is the only other public water provider in the Bear Valley which sources water from the same Bear Valley Groundwater Basin. The DWP and CSD have

intertie connections that allow the two agencies to balance water availability in the event of natural disasters or extreme drought conditions through mutual aid agreements. This Project not only enhances the DWP's ability to deliver water to its customers from an alternative water supply when climate change and long-term drought conditions impact DWP's critical resources, this drought resiliency Project will also increase DWP's ability to deliver water to CSD customers through the interties that connect the DWP and CSD water systems. The average annual water demand of the CSD is 950 AF per year. Therefore, the percentage increase in water supply to build long-term resiliency to drought conditions for the Bear Valley is estimated at 12.90 percent (400 AFY/3,100 AFY).

# Section 5. Evaluation Criteria

## Evaluation Criterion A: Project Benefits

## Sub-Criterion A1a: Adds to Available Water Supplies

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

The Project builds long-term resilience to drought through the equipping of a new pumping plant within the Division Well field. The Project is an effective Drought Resiliency Project because it results in a new conveyance system, or pumping plant, to deliver water to DWP customers from an alternative source of water supply. It is estimated the well pumping plant will produce 200 to 300 GPM which makes the Project an excellent alternative source of water supply to ensure DWP customers continue to have access to water during long-term exceptional drought conditions. The Project has an expected life span of fifty years.

DWP receives 100% of its water supply from the Bear Valley Basin. There are nine sub-basins within the Bear Valley Basin. During drought conditions, the amount of rainfall can vary significantly within the Bear Valley Basin, which impacts the recharge quantities for any given sub-basin. The average annual precipitation of the Bear Valley for the past ten years is 31.70 inches. Long-term drought conditions negatively impact DWP's groundwater supply because the aquifers are only recharged when there is precipitation in the Bear Valley.

Due to the limitations imposed by its mountaintop location, it is essential the DWP properly manage its available water supply. Importing water into the Bear Valley would be cost prohibitive because it would require multiple trucks hauling water up the mountain passes. Furthermore, the Bear Valley is not connected to the State Water Project and a connection would cost an estimated $100 million dollars, plus significant annual operation and maintenance expense. This is not a viable alternative for a water system with about 16,000 connections. Therefore, having sufficient groundwater operational flexibility and alternative sources of water supply, such as this Project, is of paramount importance for our community to build long term drought resilience and ensure the Bear Valley sustains a reliable water supply.

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

The additional water supply this Project will generate represents an 18.6 percent increase for

the DWP and a 12.90 percent increase for the Bear Valley. This estimate was calculated by taking the expected volume of additional water supply the Project will provide (400 AF per year) and dividing it by DWP's average annual water supply (2,150 AF per year) as well as the Bear Valley's average annual water supply (3,100 AF per year).

- *If so, what is the estimated quantity of additional supply the Project will provide and how was this estimate calculated? Provide this quantity in acre-feet per year as the average annual benefit over ten years.*

The estimated quantity of additional water supply the Project will provide is 400 AF per year. This estimate was calculated by comparing the annual production of a nearby well that has a pumping capacity of about 250 GPM, which is the expected average capacity of the proposed well. If the proposed well was run continuously for a year, the additional water supply would be about 400 AF per year ((250 GPM X 60 min./hr. X 24 hr./day X 365 days/yr.)/ (7.48 gals./cu. ft. X 43,560 cu. ft./AF)).

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

The degree and significance of the benefits associated with the additional water supply is substantial because the DWP is a small water system serving approximately 26,000 equivalent fulltime residents, and the CSD is also a small water system serving approximately 12,000 fulltime residents. Because of the resort and tourism-based nature of the Bear Valley, the demand for water fluctuates dramatically. The Bear Valley experiences up to 150,000 visitors during peak seasons and holidays. Therefore, a reliable water supply, capable of meeting significant demand fluctuations, is critical to our community and our economy, and it bolters our ability to fight wildfires, increases our water management flexibility, and builds long term resilience to drought.

## Sub-Criterion A2a: Climate Change

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

Yes, the proposed Project specifically includes hazard risk reductions for wildfires. The U.S. Forest Service classifies the Bear Valley as a "High" to "Very High" fire threat. The risk of wildfire exists at all times due to the surrounding San Bernardino National Forest and is projected to be exacerbated by long-term drought conditions.

At all times, and especially during drought conditions, an alternative source of water supply is critically important to fighting wildfires in our alpine environment. At an altitude of approximately 6,750 feet and surrounded on all sides by the San Bernardino National Forest, the Bear Valley shares many properties of the community of Paradise, California where the Camp Fire killed eighty-six people and destroyed 18,804 buildings in 2018. According to an in-depth analysis conducted by the USA TODAY Network in 2019, Paradise, California had a score of 3.81 in wildfire potential (scored out of 5), while Big Bear Lake was scored at 4.36, and the communities of Big Bear City and Sugarloaf were scored at 4.20. The Bear Valley has a long history of wildfires. As recently as the Fall of 2023, the Radford Fire threatened the Bear Valley.

The perimeter of the fire was burning less than one (1) mile south of the DWP service area. Residents were on evacuation watch and visitors were discouraged from coming to the Valley.

The alternative source of water supply provided by this Project enhances DWP's ability to continue to provide water to its customers and sustain firefighting operations, throughout the Bear Valley in the event of a wildfire. Firefighters routinely connect to DWP hydrants to fill water dropping helicopters and water tender fire trucks to fight wildfires in and around the Bear Valley.

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

Yes, the proposed Project will use an established renewable energy source. Currently, the DWP's Division Well Field Solar System creates a surplus of power, in part because the combined load from Division Well Nos. 2, 6, 7, and 8 cannot utilize all of the power generated. The Division Well No. 9 is expected to have high capacity which will enable DWP to use the excess solar power generated by the Division Solar Field and offset grid power used at other well sites. Using solar power reduces carbon emissions and saves approximately $0.28/kWh . Roughly 20% of DWP's power demand is supplied by DWP's solar facilities.

- *Does the proposed project include green or sustainable infrastructure to improve community climate resilience?*

Yes, the proposed Project includes sustainable infrastructure to improve community climate resilience. The Project will reduce the energy needed to manage water. The new well pumping plant will be designed to have an overall pumping unit efficiency of 70%, which is significantly more efficient than many of DWP's existing, older submersible pumping units which have an overall pumping unit efficiency of approximately 60%. With this improvement in efficiency, DWP can save 46,000 kW-hr/year of energy when producing 400 AFY from the new Division No. 9 Well instead of producing water from existing less efficient wells. 46,000kW-hr/year represents about a 9.5% reduction in power usage for the Division Well Field. The Division Well Field provides about 22% of DWP's water supply, so a 9.5% reduction in power usage is significant.

In addition, the current largest producing wells within the DWP water system are located at the East end of the Bear Valley while demand is typically highest on the West end of the Valley. This Project is located on the West end of the Valley so it can directly serve the high demand areas without the energy use required for additional pumping to transfer water across the Valley

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

Yes, the Project will seek to reduce climate pollutions. The reduced grid energy needed to produce and transmit water provided by the Division Well Field Solar System has an associated reduction in greenhouse gas (GHG) emissions and air pollution emitted from power plants. Using the EPA's Pollution Prevention Program GHG Calculator Tool, it is estimated that the energy savings produced by the Project will result in the reduction of 4.7 metric tons of carbon dioxide equivalent.

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

Yes, the proposed project has a water supply management component that will serve to protect DWP's water supplies. During construction of the Division Well No. 9, DWP conducted zone testing of the pilot bore to determine if contaminates existed at various depths within the Pilot Bore Hole. At a depth of 425-Feet below the ground surface, Floride, which slightly exceeded the Department of drinking Water's maximum contaminate level, was measured. Even though the water quantity measured at this depth was promising, DWP has chosen to construct the well so that it only pulled water from the aquifer between the depths of 175-Feet to 400-Feet, thus screening out the aquifer water (at a depth of 425-Feet) with Floride contamination. This modification to the Division Well No. 9 will protect DWP's water supply.

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

No, we are not aware of how the proposed project contributes to climate change resiliency in other ways not described above.

## Sub-Criterion A2.b: Environmental Benefits

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

Yes, the Project seeks to improve the ecological climate change resilience of wildlife and habitats. The Bear Valley is a rare home to the Unarmored Threespine Stickleback fish which has been a "fully protected" species under California law since the 1960's and listed as federally endangered since 1970. The last vestige of this species' habitat is found in a small pool called Shay Pond, located on the east end of the Bear Valley. The Shay Pond is located in a wetlands area that expands in wet years providing streams connecting additional ponds and pools within the wetlands area. The wetlands area is fed by a mountain side watershed of roughly eight square miles. Due to decreased rainfall and municipal well pumping in the area, the pond has come close to drying up completely. DWP, BBARWA, and CSD are responsible for supplementing the pond with potable water during dry periods. Water is supplied by CSD infrastructure. This Project will reduce the amount of water DWP transfers from the east side of Bear Valley to the west side of Bear Valley, which will reduce pumping within the east side of Bear Valley, which reduces the amount of supplemental potable water needed to maintain the Stickleback pond. This Project will strengthen both CSD's and DWP's ability to continue to deliver water into the Shay Pond wetlands to maintain the Unarmored Threespine Stickleback protected habitat.

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

The Unarmored Threespine Stickleback fish is a freshwater fish species. The number of Stickleback fish is difficult to determine. During wet years, the Stickleback fish migrate up and down streams within the Shay Pond Wetlands Area. Over the past several years, hundreds of

Stickleback fish have been observed in the Stickleback watershed habitat. The Shay Pond protected area is approximately half an acre. Historically, 25 - 40 AF of potable water per year is required to protect the Stickleback watershed habitat. These benefits were calculated by measuring the current pond area and visually estimating the number of fish observed during site visits.

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

Yes, the proposed Project improves the species status in the Bear Valley by ensuring that even in long-term drought conditions, there is available water supply to protect the Unarmored Threespine Stickleback watershed habitat.

## Sub-Criterion A2c: Other Benefits

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

No, the Project will not assist States in complying with interstate compacts because the Bear Valley is not connected to the California State Water Project.

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

Yes, the Project will benefit multiple sectors through the equipping of a new alternative source of water supply. Sectors benefitted include municipal, environmental, and outdoor recreation sectors in the Bear Valley.

The Project benefits the municipal and recreation sectors because the new alternative source of water supply increases water supply reliability which is critical to support visitation to the Bear Valley. Visitors come to the Bear Valley for recreational opportunities provided by the ski resorts, the lake, and to hike mountain trails, among other recreation activities its alpine landscape offers. The Visitors stay in lodges, eat at restaurants, and shop in grocery stores and at retailers in the Big Bear Lake Village. Specifically, the municipal sector, including City of Big Bear Lake and the County of San Bernardino, benefit from the tax dollars they receive from visitors spending money in the Bear Valley.

The environmental sector also benefits because of the new alternative source of water supply fire protection in the Bear Valley.

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

Yes, the Project benefits a larger initiative to address sustainability within the Bear Valley Basin because the Project is the equipping of a new alternative source of water supply. The Bear Valley Basin Groundwater Sustainability Agency (BVBGSA) is a joint powers agency tasked with ensuring the sustainability of groundwater in the Bear Valley. This Project specifically furthers their water supply goals and objectives.

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

Yes, the Project will help prevent a water-related crisis or conflict because the Bear Vally Basin is only recharged when there is precipitation in the Bear Valley and the Bear Valley Basin is shared by the DWP and the CSD. This Project proactively increases the water supply reliability in the Bear Valley by 400 AF per year. In long-term drought conditions, when the Bear Valley Basin water supply is negatively impacted, Projects like this will continue to allow DWP and CSD to have flexibility to pump from different sub-basins and avoid tension or litigation over water in the Bear Valley.

## Evaluation Criterion B : Planning and Preparedness

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

DWP's 2020 Urban Water Management Plan (UWMP) meets the requirements of the Urban Water Management Planning Act, and its purpose is to maintain efficient use of urban water supplies, continue to promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a mechanism for response during water drought conditions. Adopted with the 2020 UWMP is a Drought Risk Assessment (DRA) which requires a water supplier to assess water supply reliability over a five-year period from 2021 to 2025 and a Water Shortage Contingency Plan (WSCP) which details actions to be implemented during a reduction in available water supply.

Specifically, Section 3.5.2 of the 2020 UWMP (Appendix A) reflects the results of using the Cal-Adapt Extended Drought Scenario Tools to evaluate the impacts of climate change within DWP's service area. Section 4.6 (Appendix B) discusses Climate Change Considerations and how "extended drought periods are expected to become both more frequent, and more severe, which could lead to reduced surface water flows, reduced snowpack, and less groundwater availability for the BBLDWP." Section 7.1.2 (Appendix C) also discusses Climate Change, stating "redundancy in source of water supply will provide operational flexibility in the event supplies are interrupted by fire, floods, earthquakes, or drought."

  - *Does the drought plan contain drought focused elements (e.g., a system for monitoring drought, drought projections that consider climate change, identification of drought mitigation projects, drought response actions, and an operational and administrative framework)?*

Yes, the drought plan contains drought focused elements including a system for monitoring drought, and drought response actions. Section 3.2 of the DRA (Appendix D) discusses Local Water Supply and Monitoring. The DWP and the CSD perform monthly groundwater monitoring. Twice annually, the Technical Review Team (TRT) reviews and evaluates the status, condition, and availability of the Bear Valley's groundwater supplies and makes recommended drought response actions. Additionally, the DWP is part of the SGMA monitoring program and provides monitoring data to the State of California, Department of Water Resources.

Section 5.0 of the (WSCP) (Appendix E) creates Shortage Response Actions. The water shortage response actions include mandatory water use prohibitions for demand reduction, supply augmentation, and operational changes to address shortage levels. Additional water shortage response actions and/or changes in shortage levels may be recommended by the TRT and approved by the Board of Commissioners, whenever it determines necessary, in accordance with the annual water supply and demand assessment methodologies.

- *Describe how the drought plan includes consideration of climate change impacts water resources or drought?*

The drought planning documents include consideration of climate change impacts to the Bear Valley water resources, as mentioned above, in several areas including: Section 3.5 on Climate Change and Section 3.5.2 Cal-Adapt Extended Drought Scenarios Tools (Appendix A), Section 4.6 Climate Change Considerations (Appendix B), and Section 7.1.2 Climate Change (Appendix C).

- *When was the plan developed and how often is it updated?*

The 2020 UWMP began development in August 2020 which is when the DWP Board awarded an agreement with Carollo Engineers Inc. to assist in the development of the 2020 UWMP. Carollo Engineers has extensive experience in water planning, including having successfully completed both the 2010 and 2015 UWMPs for the DWP. The Urban Water Management Plan Act requires that every urban water supplier providing municipal water service to 3,000 or more customers prepare a UWMP every five years.

- *Was the drought plan developed through a collaborative process?*

Yes, the drought plan was developed through a collaborative process. Carollo Engineers worked with DWP staff to obtain documents and data and develop a drought plan. Input was requested from the County of San Bernardino, the City of Big Bear Lake, local water agencies, and other interested stakeholders. Additionally, input and public comment on the drought plan was solicited through the DWP's social media channels, on DWP's website, in newsletters, press releases, and through announcements and email newsletters from the Big Bear Chamber of Commerce. Moreover, the drought plan was made available for review at our office and could be downloaded, mailed, or emailed upon request.

- *Describe who was involved in preparing the plan and whether the plan was prepared with input from stakeholders with diverse interests (e.g., water, land, or forest management interests; and agricultural, municipal, Tribal, environmental, and recreational uses)? Describe the process used for interested stakeholders to provide input during the development of the plan.*

Carollo Engineers and DWP staff prepared a draft dought plan and worked diligently to obtain input from stakeholders with diverse interests including local water agencies such as CSD, and municipal interests such as the County of San Bernardino and the City of Big Bear Lake.

- *If the plan was prepared by an entity other than the applicant, describe whether and how the applicant was involved in the development of the plan. If the applicant was not involved in the development, explain why?*

The plan was prepared by Carollo Engineers, a consultant with extensive experience in water planning and the DWP was involved in the development of the plan by gathering documents and data, reviewing the plan and providing feedback, and inviting input from interested stakeholders.

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

The Project is specifically mentioned in the 2020 UWMP in Section 6.8 on Future Water Projects (Appendix F) as providing a more reliable and cost-effective water supply.

- *Does the drought plan identify the proposed Project as a potential mitigation or response action? How is the proposed project prioritized in the drought plan?*

Yes, the drought plan identifies the proposed Project as a potential drought mitigation and response action. In Section 6.8 on Future Water Projects (Appendix F), the Project is specifically mentioned as a Project identified in the 2021 Water Master Plan that includes a 10-year Capital Improvement Plan. The Project is a drought mitigation and response action because the Project increases the water supply reliability in the Bear Valley and is an alternative source of water supply. The proposed Project is highly prioritized as it is the first Project mentioned in the list of future water projects. Also, The DWP Board of Commissioners approved a contract to drill the Division Well No. 9 during the February 2022 Board meeting, which was the second year of the above-mentioned 10-year Capital Improvement Plan.

- *Does the proposed Project implement a goal or need identified in the drought plan? Is the supported goal or need prioritized within the plan?*

Yes, the proposed Project implements a goal identified in the drought plan. According to Section 1.2 Background and Purpose (Appendix G), the purpose of the UWMP is to maintain efficient use of urban water supplies, continue to promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a mechanism for response during water drought conditions. The Project is an alternative source of water supply which provides a mechanism for response during water drought conditions.

Yes, the supported goal of providing a mechanism for response during water drought conditions is prioritized throughout the plan but specifically in Section 4.6 on Climate Change Considerations, Section 7.1.2 on Climate Change, Section 7.1.3 on Potential Alternative Sources, and Section 6.8 on Future Water Projects. Section 4.6 identifies the need for "creating redundancy through backup systems" (Appendix B). Section 7.1.2 states "Redundancy in source of supply will provide operational flexibility in the event supplies are interrupted by fire, floods, earthquakes, or drought." (Appendix C) Section 7.1.3 declares "BBLDWP has identified and evaluated alternative water sources for its service area." (Appendix C) Section 6.8 identifies the Project as a "Future Water Project" to increase water supply reliability. (Appendix F)

- *Attach relevant sections of the plan that are referenced in the application, as an appendix to your application.*

Attached are Appendices A-G which are relevant sections of the plan that are referenced in this application.

## Evaluation Criterion C: Severity of Actual or Potential Drought or Water Scarcity Impacts to be addressed by the Project

**Describe the severity of the impacts that will be addressed by the project:**

- *Describe recent, existing, or potential drought or water scarcity conditions in the Project area.*
  - *Is the project in an area that is currently suffering from a drought, or which has recently suffered from drought or water scarcity? Please describe existing conditions, including when and the period of time that the area has experienced drought or water scarcity conditions. Include information to describe the frequency, duration, and severity of current or recent conditions. You may also provide information relating to historical conditions. Please provide supporting documentation (e.g., Drought Monitor, droughtmonitor.unl.edu).*

Yes, the Project is in an area that has recently suffered from drought conditions. Based on data from U.S. Drought Monitor (Drought.gov) for San Bernardino County (Figure 3 below), while the Bear Valley is not currently suffering from drought conditions, as recent as 2021-2022, the Bear Valley experienced periods of 'exceptional drought' conditions at 20% (dark red portion of bar chart below); extreme drought conditions throughout the following periods and intensity: 2021-2022 – 90%; 2013-2017 – 45%; 2007-2008 – 95%; and 2002-2003 – 95% (red portion of bar chart below); severe drought conditions throughout the following periods and intensity; 2020-2023 – 100%; 2018-2019 – 40%; 2012-2017 – 100%; 2007-2010 – 100% (orange portion of bar chart below). At a high altitude, the Bear Valley has experienced drought conditions more often and to a larger extent than the rest of San Bernardino County.

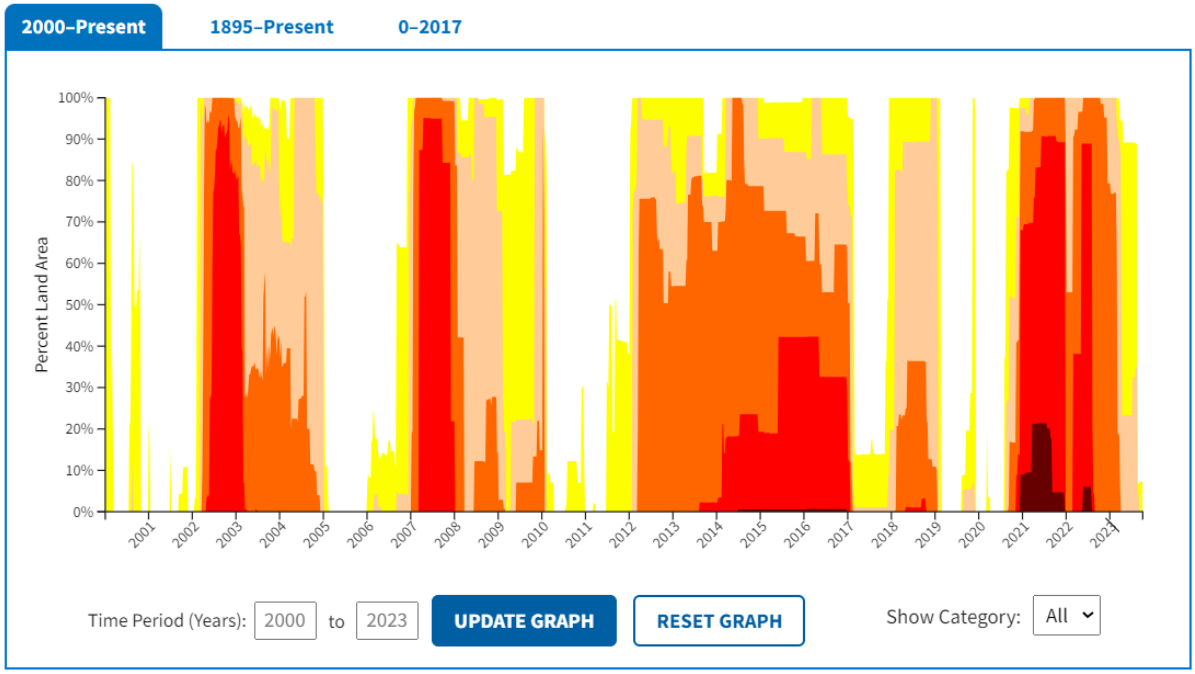


Figure 3 U.S. Drought Monitor San Bernardino County (2000-Present)

For historical purposes, from 2000 to 2002 the DWP experienced three extremely dry years, with average precipitation of only 20.84 inches per year (in comparison to a 130-year average of 35.83 annual inches). In 2002, the DWP declared a Water Shortage Emergency. While conservation regulations existed before this time, that year was a "watershed" moment in DWP conservation. The Water Shortage Emergency lasted more than a decade, resulting in a building moratorium for one of DWP water systems and vastly expanded rules and regulations related to conservation.

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

There are projected increases to the severity and duration of droughts and water scarcity in the Project area that negatively impact water supply availability. Several future conditions include projected temperature increases, projected precipitation decreases, projected snowpack decreases, projected frequency of droughts, and projected changes in groundwater that will mirror changes in precipitation. This list of projected future conditions is based on the Bureau of Reclamation's Water Reliability in the West – 2021 SECURE Water Act Report published in January 2021. Specifically, the Reclamation's 2021 Assessment used multiple approaches to leverage projections and develop a list of potential future conditions.

Additionally, as shown in Figure 4 below, according to the Environmental Protection Agency CREATE Climate Scenarios Projection Map, the Bear Valley is likely to experience a higher average annual temperature and more days over one hundred degrees in the coming years.

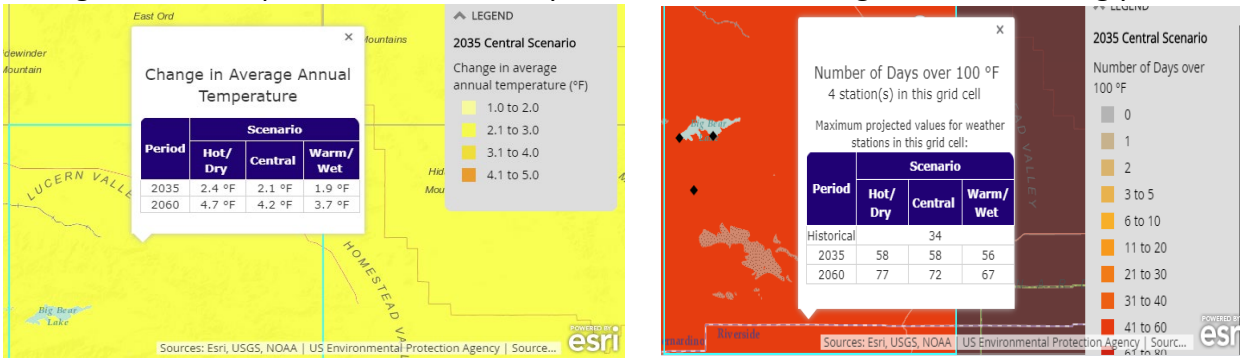


Figure 4 Change in Average Temperature/Increased Number of Days over 100 Degrees

Furthermore, in April of 2020, the Weather Channel reported that meteorologists and climatologists recently conducted an analysis that found "the period 2000-2018 [was] among the driest in 1,200 years for southwestern North America" and "they add, this region could already be in the type of megadrought that can last for decades. We now have enough observations of current drought and tree-ring records of past drought to say that we're on the same trajectory as the worst prehistoric droughts," said lead author Park Williams, a bioclimatologist at Columbia University's Lamont-Doherty Earth Observatory, in an LDEO news release. [1] The team behind the study includes scientists from NOAA, NASA and four universities.

- *What are the ongoing or potential drought or water scarcity impacts to specific sectors in the project area if no action is taken (e.g., impacts to agricultural, environment, hydropower, recreation, tourism, forestry, etc.) and how severe are those impacts? Impacts should be quantified and documented to the extent possible. For example, impacts should include, but limited to:*

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

Yes, there are public health concerns and social concerns associated with potential drought conditions. Specifically, the public health concerns associated with potential drought conditions include potential shortage of drinking water supplies, increased risk of wildfires, increased risk of tree mortality, and water quality concerns in the aftermath of a large wildfires.

Since the DWP's water supply is 100% ground water from the Bear Valley Basin, the community the DWP serves does not have another water source available to them and a connection to the State Water Project or any other external aid is cost prohibitive. Therefore, long-term drought

[1] https://weather.com/news/climate/news/2020-04-16-climate-change-stoking-long-term-megadrought-western-us

conditions negatively impact the DWP's drinking water supplies.

Regarding increased risk of wildfires, as of June 15, 2023, the California Office of the State Fire Marshal currently classifies the Bear Valley as a "Very High" fire hazard severity zone in the State. Prolonged drought conditions conclusively increase risk of wildfires in the Bear Valley.

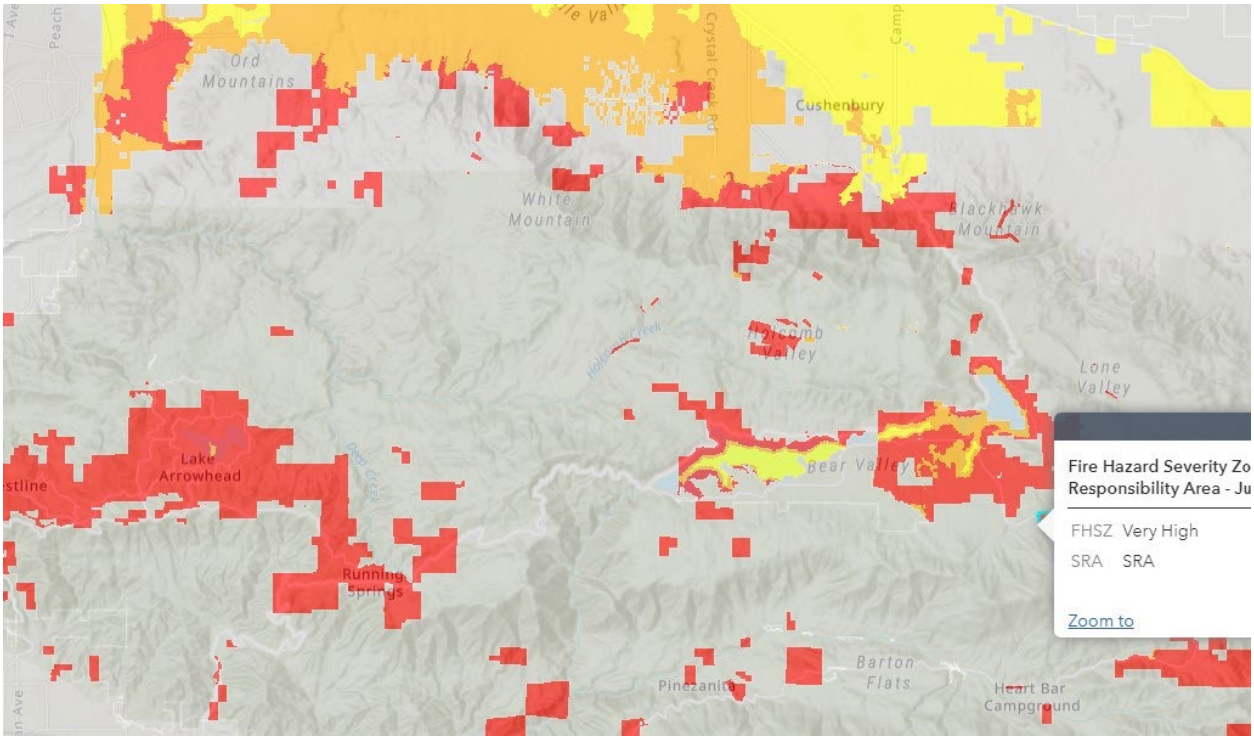


Figure 5 CA Office of State Fire Marshal Fire Hazard Severity Zone for the Bear Valley - June 15, 2023

As for increased risk of tree mortality, the January 2020 local Multi-Jurisdiction Hazard Mitigation Plan lists drought as the number one natural hazard in our area, followed by earthquake. In its description of drought in the Bear Valley, it states: "Seven years of drought (commencing in the 1999/2000 winter season) and exacerbated by the driest and warmest period in recorded history (January 2003) dramatically impacted large stands of trees in and around the City of Big Bear Lake. Drought is the predominant stressor, weakening trees and allowing pathogens such as Bark Beetles, root rot, and mistletoe to kill not only young trees, but old growth trees as well. Additionally, brush and chaparral have lower moisture content, contributing to a higher dead-to-live fuel ratios and mortality… the severity and duration of the conditions in the previous drought has resulted in lingering effects to trees and vegetation, which continues to cause below normal fuel moisture in live fuels from spring through fall, increasing the fire hazard in this area. Approximately 350,000 acres in and around the San Bernardino National Forest have experienced significant mortality in timber and brush.[2]"

In regard to water quality concerns, the EPA has also been exploring the interconnection

[2] https://www.citybigbearlake.com/images/DOWNLOADS/PLANS/2020/2020_MJHMP.pdf

between wildfire and water quality, concluding that "Water supplies can be adversely affected during the active burning of a wildfire and for years afterwards. During active burning, ash and contaminants associated with ash settle on streams, lakes, and water reservoirs. Vegetation that holds soil in place and retains water is burned away. In the aftermath of a large wildfire, rainstorms flush vast quantities of ash, sediment, nutrients and contaminants into streams, rivers, and downstream reservoirs. The absence of vegetation in the watershed can create conditions conducive to erosion and even flooding, and naturally occurring and anthropogenic substances can impact drinking water quality, discolor recreational waters, and may potentially contribute to harmful algal blooms.[3]"

There are also social concerns associated with potential drought conditions occurring in the Bear Valley including negative impacts to recreation and tourism. If drought conditions cause a significant shortage to drinking water supplies, visitors may be discouraged or mandated not to visit the Bear Valley. This in turn will negatively impact the hospitality, retail, and recreation sectors in the community which relies heavily on tourism to stay in business and maintain local employment. In 2015, due to the Lake Fire impacting the Bear Valley, resort managers reported cancelation of reservations of up to 80%.

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

The endangered Unarmored Threespine Stickleback fish population in the Bear Valley is currently being protected with potable water from the Bear Valley water supply. This endangered species is at risk if prolonged droughts impact the quantity of available water supply. Prolonged drought could very well lead to the local extinction of this endangered species if steps are not taken to improve water availability in the Bear Valley.

Furthermore there are ongoing environmental impacts from two of the most recent extreme droughts that occurred between 2000-2007 and 2012-2018. As mentioned above, approximately 350,000 acres in and around the San Bernardino National Forest have experienced significant mortality in timber and brush. Trees suffering from drought have fallen to bark beetle infestations. In 2014, just halfway through the most recent drought, the U.S. Forest Service conducted an aerial tree mortality survey in the national forest that located 4,000 acres of dead trees. While the effects are still being studied, these extreme tree mortality events are having devastating effects on local ecological communities.

According to a study by the University of California Riverside and submitted to the USDA Research, Education & Economics Information System, "The conifer forests of the San Bernardino Mountains and San Jacinto Mountains have experienced unprecedented tree mortality from drought and insect attack. More trees perished between 2002-2003 than in the past one hundred years representing one of the great ecological catastrophes since the

[3] https://www.epa.gov/sciencematters/wildfires-how-do-they-affect-our-water-supplies

beginning of European settlement of southern California in the late 18th century.[4]"

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

Yes, there are local and economic losses associated with past and potential future drought conditions. The DWP has recently experienced "D4- exceptional drought conditions", "D3 - extreme drought conditions", and "D2 -severe drought conditions" and has high probability to experience "D4- exceptional drought condition"s again in the future. The DWP's service area is primarily residential. Big Bear Lake is considered southern California's only "Four Season Resort Community." Consequently, recreation is an important economic factor in the Bear Valley and has been for more than a century.

Past droughts have had a significant impact on both the local environment and economy. For example, in May 2022, the lake level was down over fifteen feet from full. Multiple news articles and broadcasts cited the dropping lake level including NBC4, "California's Drought Takes Large Toll on Big Bear Lake[5]"; The San Francisco Times, "Severe Drought Slowly Dries Up California Lake[6]"; the Redlands Daily Facts, "Big Bear Lake levels down fifteen feet; $56 million Project could help[7]"; and the Big Bear Grizzly, "Elements of evaporation Big Bear Lake level continues to drop.[8]" An ARCGIS Story map laments, "Woe to the Trout Fishers of Big Bear Lake![9]" Through history and GIS mapping of lake levels, precipitation, evapotranspiration, and algal blooms, the author lays out the case for why it is so hard to fish in Big Bear Lake anymore. Trip Advisor reviews express a common public sentiment such as: (1) "The boats and dock are sitting in mud. News outlets weren't exaggerating. The drought has really affected the lake."; (2)"Drought has wreaked havoc on poor Big Bear Lake."; and (3) "Be warned before you set out for Big Bear Lake. The water level is extremely low, the first 50 to 100 feet of water that there is full of green algae."

In the winter season, a lack of seasonal snowfall has a negative impact on the local ski resorts Bear Mountain and Snow Summit. This in turn operates an adverse domino effect on restaurants, lodges, and retailers. Tourism at other nearby attractions also affects occupancy rates in the hospitality sector. In the summer season, wildfires also have an impact on mountaintop recreation. One of the most dramatic and recent events was the Lake Fire in June of 2015 that burned 31,284 acres. Reported on a Southern California Public Radio station, "Whether it's due to fear of smoke or flames, the Lake Fire has dealt another blow to a tourism industry already faltering in 2015. The drought left that year's winter slopes parched,

[4] https://reeis.usda.gov/web/crisProjectpages/0199295-pandemic-conifer-forest-mortality-under-extreme-drought-in-the-mountains-of-southern-california-and-baja-california.html
[5] https://www.nbclosangeles.com/news/local/california-drought-big-bear-lake-water/2606597/
[6] https://sftimes.com/severe-drought-slowly-dries-up-california-lake/
[7] https://www.redlandsdailyfacts.com/2021/09/23/big-bear-lake-levels-down-15-feet-56-million-Project-could-help/
[8] https://bigbeargrizzly.net/news/5458/elements-of-evaporation-big-bear-lake-level-continues-to-drop/
[9] https://storymaps.arcgis.com/stories/b64a38c8410344f3850126c1eb2b860a

temperatures often climbed too high even for making snow, and an unseasonable May 2017 storm forced a pro-cycling tour to relocate to Santa Clarita." Resort managers reported an up to 80% loss of reservations due to the Lake Fire.

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

Yes, there is potential that tension over water availability could result in a water-related crisis. The Bear Vally Basin is only recharged when there is precipitation in the Bear Valley and the Bear Valley Basin is shared by the DWP and the CSD. The Bear Valley Basin is not adjudicated, so conflicts over available water during extreme drought is a real concern. This Project proactively increases the water supply reliability in the Bear Valley by 400 AF per year. In long-term drought conditions, the additional available water supply should mitigate potential conflicts.

## Evaluation Criterion D: Presidential and DOI Priorities

### *Disadvantaged or Underserved Communities*

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

The White House Council on Environmental Quality's Interactive Climate and Economic Justice Screening Tool identifies the City of Big Bear Lake, the communities of Big Bear City, Sugarloaf, and Erwin Lake as disadvantage communities. All of these communities benefit from this project as described above.

- *If applicable, describe how the proposed project will serve or benefit a disadvantaged or underserved community, identified using the tool described above. For example, will the project improve public health and safety by addressing water quality, add new water supplies, provide economic growth opportunities, or provide other benefits in a disadvantaged or underserved community?*

The proposed Project will benefit the disadvantaged and underserved community in the four areas listed above because the Project will improve public health and safety by the addition of a new water supply. In addition, if this grant application is successful, the disadvantaged and underserved community benefits from the grant funding which will decrease the cost to equip the Project and enable the DWP to maintain low water rates for their customers. Also, the more efficient proposed pumping plant will reduce power usage to produce water supply, which will enable the DWP to maintain low water rates for these disadvantage communities.

According to the United States Census Bureau American Community Survey (ACS), the California state median household income (MHI) for 2016-2020 was $78,672. Using the California Department of Water Resources (DWR's) Disadvantaged Communities Mapping Tool, a Disadvantaged Community (DAC) is 80% of the statewide MHI and a Severely Disadvantaged

Community (SDAC) is 60% of the statewide MHI. Therefore, a community where the MHI is less than $62,938 meets the DAC threshold and less than $47,203 meets the SDAC threshold. In addition, Section 1015 of the Cooperative Watershed Act (CWA) defines a DAC as a community with an annual MHI that is less than 100% of the statewide annual MHI. Using the criteria noted above, most of the Bear Valley service area qualifies as a DAC and a significant percentage qualifies as a SDAC.

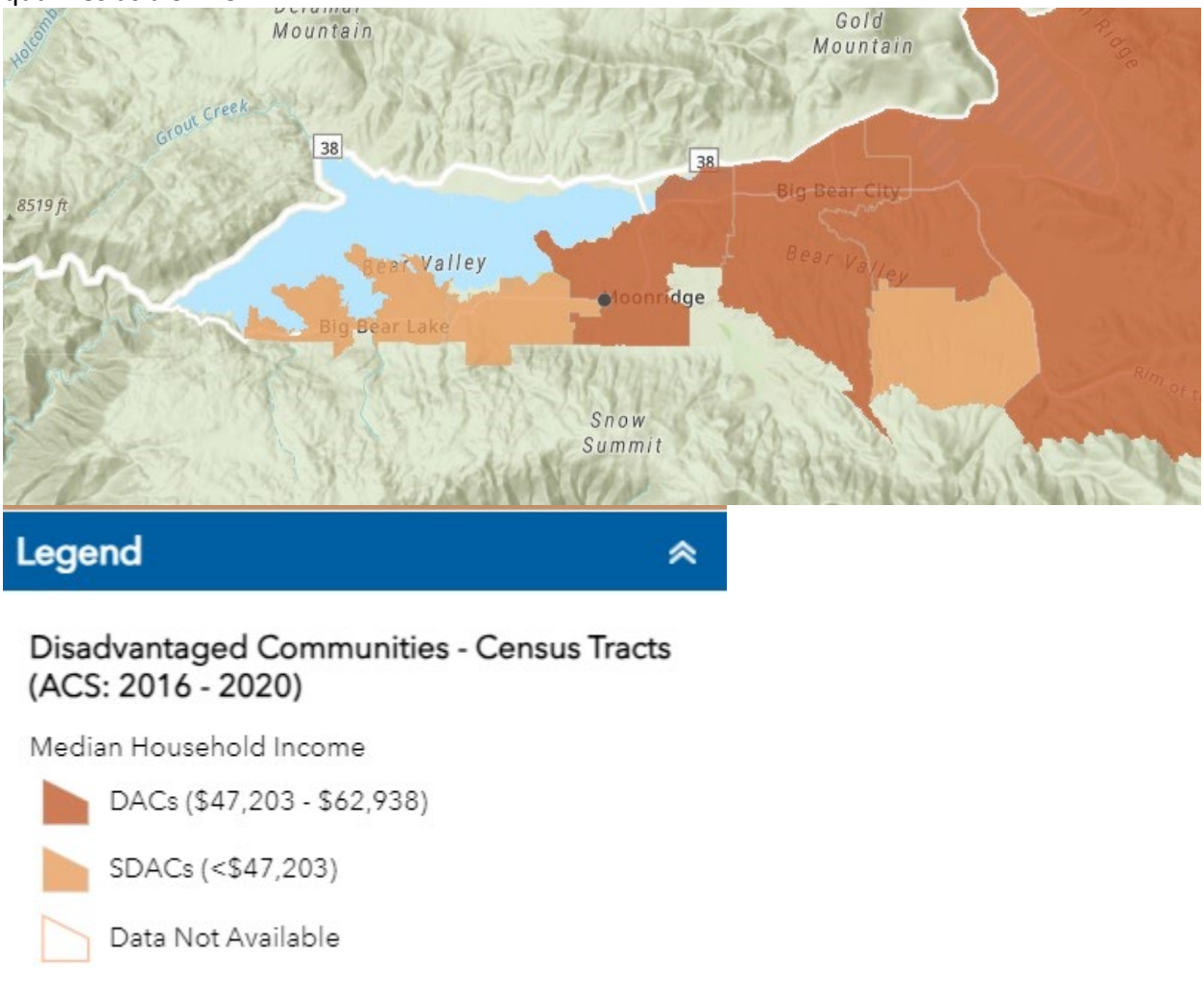


Figure 6 DWR Disadvantaged Communities Map of the Bear Valley

### *Tribal Benefits*

- *Does the proposed Project directly serve or benefit a Tribe? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, economic growth opportunities, or improving water management?*

The proposed Project does not directly benefit a Tribe. However, the DWP regularly consults with and proactively engages Tribal representatives in the region and will continue to do so for this Project. Tribal members provide valuable feedback to eliminate or reduce impacts to cultural resources and Tribal members are fairly compensated for their time spent performing monitoring on DWP Projects. The Project indirectly benefits a Tribe because the increase in

water supply reliability enhances protection against wildfires which could spread to the local tribal community.

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

No, the proposed Project does not support Reclamation's tribal trust responsibilities or a Reclamation activity with a Tribe.

## Evaluation Criterion E: Readiness to Proceed and Project Implementation

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

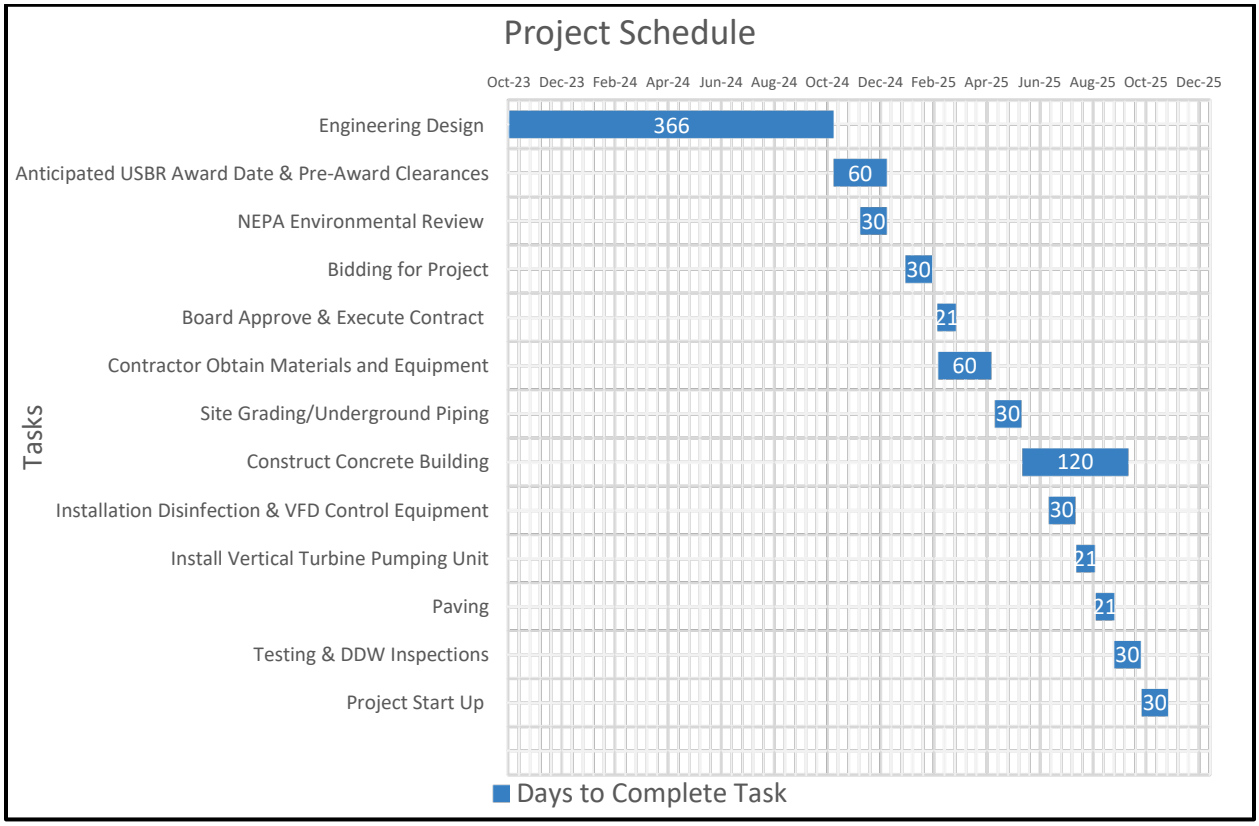


**Table 1 Project Schedule- Days to Complete task**

In August 2021, the DWP hired Water Systems Consulting (WSC) for design and construction management services for Project. The design and construction for the drilling of the Division Well No. 9 will be completed prior to potential award of grant funding. The engineering design for the equipping of the Division Well No. 9 is scheduled to be completed by October 2024. According to the Notice of Funding Opportunity, the anticipated award date for grant funded

selected projects is October 31, 2024 which will be followed by pre-award clearances. If this grant application is successful, DWP staff and their environmental consultant will work with the appropriate Reclamation regional office for the NEPA environmental compliance.

In January of 2025, the DWP will publish a Request for Bids package (Bid Package) for the Project. Near the end of February 2025, the Bid Package will be reviewed and presented to the DWP Board of Commissioners for its approval of a construction contract for the Project. DWP staff will work with the approved contractor to prepare, review, and obtain a fully executed contract for the Project. Due to potential supply chain issues, the Contractor will immediately begin ordering materials and equipment.

Construction is anticipated to begin in May of 2025. The Contractor will initially perform the site grading and install underground piping. It is anticipated that sometime in June of 2025, the Contractor will begin construction of the concrete block pumping plant building. The concrete block building is expected to be completed by October 2025. The Contractor will install the disinfection and VFD control equipment during the summer of 2025, followed by the installation of the vertical turbine pumping unit and final site improvements. Subsequently, testing and Division of Drinking Water (DDW) inspections are scheduled to occur during the Fall of 2025 and the Project is anticipated to be ready to start up and operational by November 30, 2025.

*Describe any permits that will be required (e.g., water rights, water quality, stormwater, or other regulatory clearances). Include information on permits or approvals already obtained. For those permits that need to be obtained, describe the process, including estimated timelines for obtaining such permits and approvals.*

The DWP is required to obtain a permit from the DDW prior to placing the Project into service. The DDW inspection and subsequent permitting process ensures the water is safe and in compliance with California's standards.

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

In August 2021, the DWP hired Water Systems Consulting (WSC) for design and construction management services for the Division Well No. 9 Drilling & Equipping Projects. WSC is expected to complete the design on the equipping of the Division Well No. 9 by October of 2024 and WSC will provide construction management services for the Project.

- *Describe any land purchases that must occur before the project can be implemented.*

There are no land purchases that must occur before the project can be implemented.

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

In September 2023, the DWP Board of Commissioners approved this grant application and the use of DWP funds for the Project. The DWP Board of Commissioners will approve an award to the lowest responsible contractor to construct the Project. No additional policies are required.

## Evaluation Criterion F: Nexus to Reclamation

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

No, the DWP does not have a water service, repayment, or O&M contract with Reclamation.

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

No, the DWP is not a Reclamation contractor, does not receive Reclamation water through a Reclamation contractor nor by any other contractual means.

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

No, the proposed work will not benefit a Reclamation Project area or activity.

- *Is the applicant a Tribe?*

No, the DWP is not a Tribe.

## Evaluation Criterion G: Stakeholder Support for Proposed Project

- *Describe the level of stakeholder support for the proposed project. Are letters of support from stakeholders provided? Are any stakeholders providing support for the project through cost-share contributions or through other types of contributions to the project?*

Yes, letters of support from stakeholders are provided. No, stakeholders are not providing support for the Project through cost-share contributions or through other types of contributions to the Project.

- *Explain whether the project is supported by a diverse set of stakeholders, as appropriate, give the types of interested stakeholders within the project area and the scale, type, and complexity of the proposed project. For example, is the project supported by entities representing agricultural, municipal, Tribal, environmental, or recreation uses?*

The Project is supported by a diverse set of stakeholders including entities who support local businesses and community members, several United States and California government officials, local water agencies, the City of Big Bear Lake, the County of San Bernardino, and the local fire department. The stakeholders willingly supported this Project because of its long-term benefit to the Bear Valley.

# PROJECT BUDGET

## Section 1. Funding Plan and Letters of Commitment

The DWP will be funding any costs for the Project beyond the amount funded by the federal government with revenue from water rates and/or capital improvement reserves.

# Section 2. Budget Proposal

Table No. 2 Summary of Non-Federal and Federal Funding Sources

| FUNDING SOURCES | AMOUNT |
|---|---|
| **Non-Federal Entities** | |
| DWP | **$529,000** |
| **Non-Federal Subtotal** | **$529,000** |
| **REQUESTED RECLAMATION FUNDING** | **$500,000** |

Table No. 3 Budget Proposal

| BUDGET ITEM DESCRIPTION | COMPUTATION | | Quantity Type | TOTAL COST |
|---|---|---|---|---|
| | $/Unit | Quantity | | |
| **Contractual/Construction** | | | | |
| Construction Contract Equipping Pumping Plant | **$1,024,000** | **1** | | **$1,024,000** |
| **Construction Subtotal** | | | | **$1,024,000** |
| **Environmental and Regulatory Compliance Cost** | **$5,000** | **1** | | **$5,000** |
| **TOTAL DIRECT COSTS** | | | | **$1,029,000** |
| **Indirect cost** | | | | **-** |
| **TOTAL ESTIMATED PROJECT COSTS** | | | | **$1,029,000** |

# Section 3. Budget Narrative

*Salaries and Wages*

The DWP is not including salaries or wages in the budget proposal.

*Fringe Benefits*

The DWP is not including fringe benefits in the budget proposal.

*Travel*

DWP is not requesting reimbursement for travel costs for this Project.

*Equipment*

Equipment will be included in the construction cost of the Project.

*Materials and Supplies*

Materials and supplies will be included in the construction cost of the Project.

*Contractual/Construction*

DWP will hire a licensed contractor to construct and equip the Division Well No. 9 pumping

October 30, 2023

Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project

Dear Ms. Shubert,

On behalf of the Big Bear Chamber of Commerce, it is my pleasure to write this letter in support of the City of Big Bear Lake, Department of Water and Power (DWP) Equipping Division Well No. 9 Project (Project).

The grant funding will be used to equip a new well pumping plant at the Division Well No. 9 site. The Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The Project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, as well as minor site work.

The Project will be located in the Town Zone, which is the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than a 100,000 people on holiday weekends. Moreover, the Project is beneficial for long-term drought resilience for the entire Bear Valley community as the Big Bear City Community Servies District, the other local water provider in the Bear Valley, can readily receive water during drought conditions through the interconnections that exist between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability and serves as an effective long-term drought mitigation measure because it results in the construction of a new water supply facility which will enable the DWP to deliver and share water from alternative sources during drought

conditions. Extended drought conditions are expected to become both more frequent and more severe, which could lead to reduced snowpack, and consequently, less groundwater availability for the Bear Valley. This anticipated long-term reduction in groundwater supply availability will increase pressure on the DWP to meet water demands, especially given that is has no economically feasible access to the State Water Project.

The Chamber fully supports the efforts of the DWP in seeking Bureau of Reclamation funding for the Equipping Division Well No. 9 Project.

Sincerely,

Ellen Clarke
Executive Director
Big Bear Chamber of Commerce
630 Bartlett Road, POB 2860
Big Bear Lake, CA 92315

execdir@bigbearchamber.com
(909) 866-4607

**Big Bear Moose Lodge #2085**
**39247 North Shore Drive**
**P.O. Box 308**
**Fawnskin, California 92333**
**909-878-0750**

October 2, 2023

Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project

Dear Ms. Shubert,

It is my pleasure to write this letter in support of the City of Big Bear Lake, Department of Water and Power (DWP) Equipping Division Well No. 9 Project (Project).

The grant funding will be used to equip a new well pumping plant at the Division Well No. 9 site. The Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The Project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, as well as minor site work.

The Project will be located in the Town Zone, which is the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than a 100,000 people on holiday weekends. Moreover, the Project is beneficial for long-term drought resilience for the entire Bear Valley community as the Big Bear City Community Servies District, the other local water provider in the Bear Valley, can readily receive water during drought conditions through the interconnections that exist between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability and serves as an effective long-term drought mitigation measure because it results in the construction of a new water supply facility which will enable the DWP to deliver and share water from alternative sources during drought conditions. Extended drought conditions are expected to become both more frequent and more severe, which could lead to reduced snowpack, and consequently, less groundwater availability for the Bear Valley. This anticipated long-term reduction in groundwater supply availability will increase pressure on the DWP to meet water demands, especially given that is has no economically feasible access to the State Water Project.

I fully support the efforts of the DWP in seeking Bureau of Reclamation funding for the Equipping Division Well No. 9 Project.

Sincerely,

**Dave Emig**
**Administrator**

**JAY OBERNOLTE**
TWENTY THIRD DISTRICT, CALIFORNIA

**COMMITTEE ON ENERGY AND COMMERCE**
COMMUNICATIONS AND TECHNOLOGY
ENVIRONMENT, MANUFACTURING, AND CRITICAL MINERALS
HEALTH

**COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY**
INVESTIGATIONS AND OVERSIGHT, CHAIRMAN

# Congress of the United States
## House of Representatives
### Washington, DC

WASHINGTON, D.C. OFFICE:
1029 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
TELEPHONE: (202) 225-5861

DISTRICT OFFICE:
9700 SEVENTH AVE., SUITE 201
HESPERIA, CA 92345
TELEPHONE: (760) 247-1815

E-MAIL VIA WEBSITE:
http://obernolte.house.gov

10/27/23

Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 180
Salt Lake City, UT 84138-1147

RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project

Dear Ms. Shubert,

The City of Big Bear Lake's Department of Water and Power (DWP) Equipping Division No. 9 recently applied for funding for the Well Pumping Plant Project from the United States Bureau of Reclamation (USBR) WaterSMART program, specifically through the Drought Response Program's Drought Resiliency Projects for Fiscal Year 2024 Funding Opportunity.

The grant funds will be used to construct a new pumping plant at the newly drilled Division Well No. 9 site. Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, and minor site work.

The project will be in the Town Zone, the main zone within the mountain community of Big Bear Lake, a four-season resort town that attracts more than 100,000 people on holiday weekends. The Big Bear Valley is a tourist destination dependent on Big Bear Lake for much of its water consumption and economic activity and is renowned throughout Southern California as a premier hiking, watersports, and general recreation center.

When completed, the project will be capable of providing water to the Big Bear City Community Services District (CSD) in an emergency response to drought conditions. DWP and the CSD have interconnects between their water systems which allows for easy water transfers, as needed. Moreover, the project serves as an effective long-term drought mitigation measure because it will enable the DWP to distribute and share water from alternative sources during drought conditions.

While droughts continue to pose significant challenges to our water infrastructure, our water systems are also deficient. I support this project and believe that it will be essential in bolstering water supply reliability, ensuring that the Big Bear Valley remains a recreational and economic cornerstone of the San Bernardino Mountains and Southern California.

Consistent with all rules and regulations, I ask you to give full and fair consideration to the DWP's application to the Bureau of Reclamation WaterSMART program. If you have any questions, please contact my office at (202) 225-5861.

Sincerely,

Jay Obernolte
Member of Congress

CAPITOL OFFICE
1021 O STREET
SUITE 7220
SACRAMENTO, CA 95814
(916) 651-4023

DISTRICT OFFICE
1758 ORANGE TREE LANE
SUITE B
REDLANDS, CA 92374
(909) 335-0271

SENATOR.OCHOABOGH@SENATE.CA.GOV

WWW.SENATE.CA.GOV/OCHOABOGH

California State Senate

SENATOR
ROSILICIE OCHOA BOGH
TWENTY-THIRD SENATE DISTRICT

COMMITTEES
BUDGET
EDUCATION
VICE CHAIR
GOVERNMENTAL ORGANIZATION
HOUSING
VICE CHAIR
HUMAN SERVICES
VICE CHAIR
PUBLIC SAFETY
VICE CHAIR
RULES

October 10, 2023

Bureau of Reclamation - Upper Colorado Regional Office
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

**RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project**

Dear Ms. Shubert,

I write this letter in support of the City of Big Bear Lake, Department of Water and Power (DWP) Equipping Division Well No. 9 Project (Project).

The Project will be located in the Town Zone, the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than a 100,000 people on holiday weekends. Moreover, the Project benefits long-term drought resilience for the entire Bear Valley community. The Big Bear City Community Services District, the other local water provider in the Bear Valley, can readily receive water during drought conditions through the interconnections between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability and serves as an effective long-term drought mitigation measure because it results in the construction of a new water supply facility that will enable the DWP to deliver and share water from alternative sources during drought conditions.

For these reasons, I support the City of Big Bear Lake, Department of Water and Power, Equipping Division Well No. 9 Project. Please contact my District Office at (909) 335-0271 if you have any questions.

Sincerely,

ROSILICIE OCHOA BOGH
Senator, 23rd District

**BIG BEAR AREA**
**REGIONAL WASTEWATER AGENCY**
P.O. Box 517, 121 Palomino Drive, Big Bear City, CA 92314-0517
(909) 584-4018 • FAX (909) 585-4340

September 29, 2023

Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project

Dear Ms. Shubert,

It is my pleasure to write this letter in support of the City of Big Bear Lake, Department of Water and Power (DWP) Equipping Division Well No. 9 Project (Project).

The grant funding will be used to equip a new well pumping plant at the Division Well No. 9 site. The Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The Project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, as well as minor site work.

The Project will be located in the Town Zone, which is the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than a 100,000 people on holiday weekends. Moreover, the Project is beneficial for long-term drought resilience for the entire Bear Valley community as the Big Bear City Community Servies District, the other local water provider in the Bear Valley, can readily receive water during drought conditions through the interconnections that exist between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability and serves as an effective long-term drought mitigation measure because it results in the construction of a new water supply facility which will enable the DWP to deliver and share water from alternative sources during drought conditions. Extended drought conditions are expected to become both more frequent and more severe, which could lead to reduced snowpack, and consequently, less groundwater availability for the Bear Valley. This anticipated long-term reduction in groundwater supply availability will increase pressure on the DWP to meet water demands, especially given that is has no economically feasible access to the State Water Project.

I fully support the efforts of the DWP in seeking Bureau of Reclamation funding for the Equipping Division Well No. 9 Project.

Sincerely,

David Lawrence, P.E.
General Manager
dlawrence@bbarwa.org

BIG BEAR CITY
Community Services District

Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project

Dear Ms. Shubert,

It is my pleasure to write this letter in support of the City of Big Bear Lake, Department of Water and Power (DWP) Equipping Division Well No. 9 Project (Project).

The grant funding will be used to equip a new well pumping plant at the Division Well No. 9 site. The Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The Project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, as well as minor site work.

The Project will be located in the Town Zone, which is the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than 100,000 people on holiday weekends. Moreover, the Project is beneficial for long-term drought resilience for the entire Bear Valley community as the Big Bear City Community Servies District, the other local water provider in the Bear Valley, can readily receive water during drought conditions through the interconnections that exist between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability and serves as an effective long-term drought mitigation measure because it results in the construction of a new water supply facility which will enable the DWP to deliver and share water from alternative sources during drought conditions. Extended drought conditions are expected to become both more frequent and more severe, which could lead to reduced snowpack, and consequently, less groundwater availability for the Bear Valley. This anticipated long-term reduction in groundwater supply availability will increase pressure on the DWP to meet water demands, especially given that is has no economically feasible access to the State Water Project.

I fully support the efforts of the DWP in seeking Bureau of Reclamation funding for the Equipping Division Well No. 9 Project.

Sincerely,

Glenn Jacklin
General Manager

Dawn ROWE
THIRD DISTRICT SUPERVISOR

sbcounty.gov/bosD3

County of San Bernardino

October 18, 2023

Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project

Dear Ms. Shubert,

As the Third District Supervisor of the County of San Bernardino, I write this letter in support of the City of Big Bear Lake, Department of Water and Power's (DWP) grant application to support thier Equipping Division Well No. 9 Project (Project).

The grant funding will be used to equip a new well pumping plant at the Division Well No. 9 site. The Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The Project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, as well as minor site work.

The Project will be located in the Town Zone, which is the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than a 100,000 people on holiday weekends. Moreover, the Project is beneficial for long-term drought resilience for the entire Bear Valley community as the Big Bear City Community Servies District, the other local water provider in the Bear Valley, can readily receive water during drought conditions through the interconnections that exist between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability and serves as an effective long-term drought mitigation measure because it results in the construction of a new water supply facility which will enable the DWP to deliver and share water from alternative sources during drought conditions. Extended drought conditions are expected to become both more frequent and more severe, which could lead to reduced snowpack, and consequently, less groundwater availability for the Bear Valley. This anticipated long-term reduction in groundwater supply availability will increase pressure on the DWP to meet water demands, especially given that it has no economically feasible access to the State Water Project.

I fully support the efforts of the DWP in seeking Bureau of Reclamation funding for the Equipping Division Well No. 9 Project. If you have any additional questions, please feel free to contact me at (909) 387-4855 or at Supervisor.Rowe@bos.sbcounty.gov.

Sincerely,

Dawn Rowe

Dawn Rowe
Third District Supervisor
San Bernardino County

CITY OF
BIG BEAR LAKE California

Mayor Randall Putz • Mayor Pro Tem Perri Melnick • Councilmember Rick Herrick
Councilmember Bynette Mote • Councilmember Kendi Segovia • City Manager Erik Sund

October 18, 2023

Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project

Dear Ms. Shubert,

It is my pleasure to write this letter in support of the City of Big Bear Lake, Department of Water and Power (DWP) Equipping Division Well No. 9 Project (Project).

The grant funding will be used to equip a new well pumping plant at the Division Well No. 9 site. The Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The Project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, as well as minor site work. The Project will be located in the Town Zone, which is the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than a 100,000 people on holiday weekends. Moreover, the Project is beneficial for long-term drought resilience for the entire Bear Valley community as the Big Bear City Community Services District, the other local water provider in the Bear Valley, can readily receive water during drought conditions through the interconnections that exist between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability and serves as an effective long-term drought mitigation measure because it results in the construction of a new water supply facility which will enable the DWP to deliver and share water from alternative sources during drought conditions. Extended drought conditions are expected to become both more frequent and more severe, which could lead to reduced snowpack, and consequently, less groundwater availability for the Bear Valley. This anticipated long-term reduction in groundwater supply availability will increase pressure on the DWP to meet water demands, especially given that is has no economically feasible access to the State Water Project.

I fully support the efforts of the DWP in seeking Bureau of Reclamation funding for the Equipping Division Well No. 9 Project.

Sincerely,

Randall Putz
Mayor, City of Big Bear Lake

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0034
(916) 319-2034
FAX (916) 319-2134

DISTRICT OFFICE
41301 12TH STREET WEST, SUITE F
(661) 267-7636
FAX (661) 267-7736

Assembly
California Legislature

TOM LACKEY
ASSEMBLYMAN, THIRTY-FOURTH DISTRICT

COMMITTEES
VICE CHAIR: ELECTIONS
VICE CHAIR: GOVERNMENTAL ORGANIZATION
VICE CHAIR: PUBLIC EMPLOYMENT AND RETIREMENT
ARTS, ENTERTAINMENT, SPORTS, AND TOURISM
BUDGET
PUBLIC SAFETY
SPECIAL COMMITTEE ON LEGISLATIVE ETHICS

October 24th, 2023

Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

**RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, DWP – Equipping Division Well No. 9 Project**

Dear Ms. Shubert,

I'm writing to express my strong support for the City of Big Bear Lake, Department of Water and Power (DWP) Equipping Division Well No. 9 Project (Project).

The grant funding will be used to equip a new well pumping plant at the Division Well No. 9 site. The Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The Project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, as well as minor site work.

The Project will be located in the Town Zone, which is the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than a 100,000 people on holiday weekends. Moreover, the Project is beneficial for long-term drought resilience for the entire Bear Valley community as the Big Bear City Community Servies District, the other local water provider in the Bear Valley, can readily receive water during drought conditions through the interconnections that exist between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability and serves as an effective long-term drought mitigation measure because it results in the construction of a new water supply facility which will enable the DWP to deliver and share water from alternative sources during drought conditions. Anticipated long-term reduction in groundwater supply availability will increase pressure on the DWP to meet water demands, especially given that is has no economically feasible access to the State Water Project.

I fully support the efforts of the DWP in seeking Bureau of Reclamation funding for the Equipping Division Well No. 9 Project.

Sincerely,

Thomas Lackey

**Tom Lackey**
Assemblyman, 34th District

# Big Bear Municipal Water District

**Lake Management**

**Board of Directors**
Steve Ludecke – Division 1
Bob Rehfuss – Division 2
Craig Brewster – Division 3
Mark Lee – Division 4
Tom Bradford – Division 5


Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project

Dear Ms. Shubert,

It is my pleasure to write this letter in support of the City of Big Bear Lake, Department of Water and Power (DWP) Equipping Division Well No. 9 Project (Project).

The grant funding will be used to equip a new well pumping plant at the Division Well No. 9 site. The Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The Project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, as well as minor site work.

The Project will be located in the Town Zone, which is the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than a 100,000 people on holiday weekends. Moreover, the Project is beneficial for long-term drought resilience for the entire Bear Valley community as the Big Bear City Community Servies District, the other local water provider in the Bear Valley, can readily receive water during drought conditions through the interconnections that exist between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability and serves as an effective long-term drought mitigation measure because it results in the construction of a new water supply facility which will enable the DWP to deliver and share water from alternative sources during drought conditions. Extended drought conditions are expected to become both more frequent and more severe, which could lead to reduced snowpack, and consequently, less groundwater availability for the Bear Valley. This anticipated long-term reduction in groundwater supply availability will increase pressure on the DWP to meet water demands, especially given that is has no economically feasible access to the State Water Project.

# Big Bear Municipal Water District

## Lake Management



I fully support the efforts of the DWP in seeking Bureau of Reclamation funding for the Equipping Division Well No. 9 Project.

Sincerely,

Mike Stephenson
General Manager

P.O. 2863 · Big Bear Lake, CA 92315-2863 · (909) 866-5796 · FAX (909) 866-6485 · E-mail: bbmwd@bbmwd.net

**BIG BEAR FIRE DEPARTMENT**
***Jeff Willis, Fire Chief***

Administration – P. O. Box 2830, 41090 Big Bear Boulevard
Big Bear Lake, CA 92315-2830
Business 909/866-7566 • Fax 909/866-8288

September 28, 2023

Bureau of Reclamation
Upper Colorado Regional Office
Attn: Karen Shubert
125 South State Street, Room 8100
Salt Lake City, UT 84138-1147

RE: WaterSMART, Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, City of Big Bear Lake, Department of Water and Power – Equipping Division Well No. 9 Project

Dear Ms. Shubert,

I write this letter in support of the City of Big Bear Lake, Department of Water and Power (DWP) Equipping Division Well No. 9 Project (Project).

The grant funding will be used to equip a new well pumping plant at the Division Well No. 9 site. The Division Well No. 9 is currently being drilled and has a designed production rate of 300 GPM. The Project includes the equipping of Division Well No. 9, a concrete block building, control equipment, connection piping, as well as minor site work.

The Project will be located in the Town Zone, which is the main water supply zone within the mountain community of Big Bear Lake, a small four-season resort town that attracts more than a 100,000 people on holiday weekends. Moreover, the Project is beneficial for long-term drought resilience for the entire Bear Valley community as the Big Bear City Community Servies District, the other local water provider in the Bear Valley, can readily receive water during large wildfire incidents, that challenge our wildland interface areas, through the interconnections that exist between the two Bear Valley water systems.

Furthermore, the Division Well No. 9 pumping plant will be integrated into the Division Well Field Solar System. Therefore, the Project will primarily use solar energy and produce water without adding a significant additional electrical load to the Bear Valley electrical grid.

The Project increases water supply reliability by constructing a new water supply facility which will enable the DWP to deliver and share water from alternative sources during times of emergent need.

I fully support the efforts of the DWP in seeking Bureau of Reclamation funding for the Equipping Division Well No. 9 Project.

Sincerely,

Jeff Willis
Fire Chief

# RESOLUTION NO. DWP 2023-13

## A RESOLUTION OF THE BOARD OF WATER AND POWER COMMISSIONERS OF THE CITY OF BIG BEAR LAKE, DEPARTMENT OF WATER AND POWER, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, REGARDING PARTICIPATION IN FUNDING FOR THE BUREAU OF RECLAMATION WaterSMART DROUGHT RESPONSE PROGRAM FUNDING OPPORTUNITY ANNOUNCEMENT NO. R24AS00007

WHEREAS, the City of Big Bear Lake was incorporated on November 28, 1980, and

WHEREAS, the electors of the City of Big Bear Lake did in 1985 adopt an Amendment to the City of Big Bear Lake Charter which created a Department of Water and Power; and

WHEREAS, the United States Department of Interior, Bureau of Reclamation, under its WaterSMART Grant Program, has made available to qualifying applicants grant funding on a matching fund basis, funds for Drought Resiliency Projects for Fiscal Year 2024; and

WHEREAS, the City of Big Bear Lake, Department of Water and Power has identified a project that exemplify the objectives of the WaterSMART Drought Response Program in its Division No. 9 Well Pump Equipping Project;

NOW, THEREFORE, BE IT RESOLVED that the Board of Water and Power Commissioners of the City of Big Bear Lake, Department of Water and Power does hereby adopt Resolution No. DWP 2023-XX confirming the following:

1. The Board of Water and Power Commissioners of the City of Big Bear Lake, Department of Water and Power verify that the General Manager, Reginald A. Lamson has legal authority to enter into an agreement with Bureau of Reclamation.
2. The Board of Water and Power Commissioners of the City of Big Bear Lake, Department of Water and Power support the grant application.
3. The City of Big Bear Lake, Department of Water and Power is capable of providing the amount of funding and/or in-kind contributions specified in the funding plan.
4. That if selected for a WaterSMART Grant under the Bureau of Reclamation's Drought Response Program for Fiscal Year 2024, the City of Big Bear Lake, Department of Water and Power will negotiate and execute a Cooperative Agreement with the Bureau of Reclamation on/or prior to the established deadline, to fund a minimum of 50% of the project costs and will provide documentation showing the 50% matching funds are not funded by a Federal Agency.

PASSED, APPROVED, and ADOPTED this 26th day of September 2023.

AYES: Cylwik, Hjorth, Smith, Tarras, Willey
NOES:
ABSTAIN:
ABSENT:

Robert Tarras, Chairman
DWP Board of Commissioners

ATTEST:
Leeanne Eagleson

Leeanne Eagleson, Secretary
DWP Board of Commissioners

plant. The contractor will be expected to purchase materials and equipment, install the vertical turbine pumping unit, perform site grading, construct a concrete block building enclosing the pumping unit, install disinfection equipment, install VFD control equipment, and perform site paving. The estimated construction cost is based on the contract price of a similar project completed by the DWP in 2019 (Sawmill Well Pumping Plant) for a total amount of $771,970. Using the U.S. Inflation Calculator in 2023, a similar pumping plant is expected to cost $929,385.37. Using an average inflation rate of 4%, the project cost in 2025 will be approximately $1,004,000. Moreover, this Project includes the installation of a vertical turbine pumping unit rather than a submersible pumping unit like the one installed in the Sawmill Well Pumping Plant. The vertical turbine pumping unit has up to three times the average life expectancy of the submersible pumping unit, but the cost difference is approximately $20,000. As such the total estimated cost to construct and equip the Division Well No. 9 pumping plant is $1,024,000. The contract will be awarded using competitive bid procedures and the award will be made to the lowest qualified responsible bidder.

Additionally, the DWP has budgeted $5,000 for NEPA environmental review with the USBR. The estimate is based on information obtained from DWP's on-call environmental specialist, who has worked on several USBR funded projects.

### *Other Direct Costs*

No other expenses are anticipated for this Project.

### *Indirect Costs*

No indirect cost reimbursement is being requested for this Project.

### *Total Costs*

The total estimated Project cost is $1,029,000. The requested Federal share is $500,000; the total non-Federal share is $529,000.

## ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

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

According to DWP's environmental consultant, the equipping of the Division No. 9 Well has been determined to have no potential to cause significant adverse effects on the environment.

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

The DWP is not aware of any species listed or proposed to be listed as a Federal threatened or

endangered species or designated critical habitat in the Project area.

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

No, there are no wetlands or other surface waters inside the Project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States".

- *When was the water delivery system constructed?*

The majority of the DWP's water delivery system was constructed during the 1940s through the 1960s. The City of Big Bear Lake acquired the water system from Southern California Water Company in 1989 and has made more than $70,000,000 in improvements since that time.

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

No, the proposed Project does not result in any modification of or effects to individual features of an irrigation system.

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

No, there are no buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places.

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

No, there are no known archeological sites in the proposed Project area.

- *Will the proposed Project have a disproportionately high and adverse effect on low income or minority populations?*

No, the proposed Project will not have a disproportionately high or adverse effect on low income or minority populations.

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

No, the proposed Project will not limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands.

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

No, the proposed Project does not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area.

# REQUIRED PERMITS OR APPROVALS

California Division of Drinking Water will inspect the new pumping plant to ensure it is in compliance with California state standards. An operating permit will be issued to allow the equipment to be utilized in DWP's water system.

# RELEVANT SECTIONS OF THE DROUGHT PLAN

See Appendices A through G.

# LETTERS OF PROJECT SUPPORT

See Appendix H.

# OFFICIAL RESOLUTION

See Appendix I.

# UNIQUE ENTITY IDENTIFIER AND SYSTEM FOR AWARD MANAGEMENT

The DWP is registered with SAM, ASAP and Grants.gov. The DWP unique entity identifier has been provided in the SF-424. SAM registration will be maintained throughout the grant period.

# APPENDICES

## Appendix A. Section 3.5.2 of the DWP 2020 UWMP

## Appendix B. Section 4.6 of the DWP 2020 UWMP

## Appendix C. Sections 7.1.2 and 7.1.3 of the DWP 2020 UWMP

## Appendix D. Section 3.2 of the DWP 2020 DRA

## Appendix E. Section 5.0 of the DWP 2020 WSCP

## Appendix F. Section 6.8 of the DWP 2020 UWMP

## Appendix G. Section 1.2 of the DWP 2020 UWMP

## Appendix H. Letters of Support

The DWP received letters of support for the Project from the following interested parties:

- Ellen Clark, Executive Director, Big Bear Chamber of Commerce
- Dave Emig, Administrator, Big Bear Moose Lodge #2085
- Jay Obernolte, US. Congressional District (CA 8th)

- Rosilicie Ocho Bogh, Senator, 23rd State Senate District
- David Lawrence, General Manager, Big Bear Area Regional Wastewater Agency
- Glenn Jacklin, General Manager, Big Bear City Community Services District
- Dawn Rowe, Third District Supervisor, San Bernardino County
- Erik Sund, City Manager, City of Big Bear Lake
- Tom Lackey, Assemblymember, Thirty-Third District, California Legislature
- Michael Stephenson, General Manager, Big Bear Municipal Water District
- Jeff Willis, Fire Chief, Big Bear Fire Department

## Appendix I. Official Resolution

The DWP Board of Commissioners approved Resolution No. DWP 2023-13 at the September 26, 2023 Regular Board meeting.