



WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Years 2020 and 2021

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Contents

Executive Summary	1
Background Data	2
Water Rights	2
Historic Drought Conditions and Climate Change Impacts	3
Provo ASR Progress and Results	4
Project Location	5
Project Description and Milestones.....	5
Performance Measures.....	8
Evaluation Criteria	8
Drought Planning and Preparedness	12
Severity of Actual or Potential Drought Impacts to Be Addressed.....	13
Project Implementation	14
Nexus to Reclamation	15
Department of Interior and Bureau of Reclamation Priorities.....	16
Department of the Interior Priorities.....	16
Bureau of Reclamation Priorities	16
Project Budget.....	18
Funding Plan	18
Funding Partners	18
Previously Incurred Project Costs	18
Federal Funding Requested/Received	18
Pending Funding Requested.....	18
Budget Proposal	18
Budget Details.....	20
Budget Narrative	21

Materials and Supplies	21
Contractual	21
Environmental Compliance and Regulatory Compliance Costs.....	21
Indirect Costs	21
Total Costs	21
Environmental and Cultural Resources Compliance	22
Required Permits or Approvals	25

List of Tables

Table 1	Multi-year droughts during periods of measured stream flows of Weber River at Oakley	4
Table 2	Project schedule	8
Table 3	Rock Canyon Design and Construction Schedule.....	14
Table 4	Total Project Cost Table.....	19
Table 5	Summary of Non-Federal and Federal Funding Sources	19
Table 6	Rock Canyon Budget Proposal.....	20

List of Attachments

Attachment 1	Figure 1 Rock Canyon Recharge Site
Attachment 2	Provo Water Conservation Plan
Attachment 3	Letter of Support
Attachment 4	Official Resolution

Executive Summary

Date: August 5, 2020

Applicant Name: Provo City

City: Provo

County: Utah

State: Utah

Provo City is a rapidly growing urban center in Utah, and is experiencing an increasing disparity between its population and total water supply. The disparity is especially pronounced in droughts, which Utah has experienced more frequently in recent years. Historically, Provo has used spring sources from the mountains and pumped water from underground aquifers to meet municipal demands augmenting with water purchased from Central Utah Water Conservancy District when needed; lately, using extra groundwater has allowed the city to avoid water shortfalls, but it has contributed to a prolonged downward trend in aquifer water levels and is not a sustainable, long-term solution. If population grows as predicted, the city will need an additional 17,400 acre-feet of water each year to meet demands while maintaining the recommended supply redundancy. Aquifer storage and recovery (ASR) has been identified as a key tool for securing a sustainable water supply for Provo.

The city is partway through a three-phase implementation of multiple ASR projects to meet water-sustainability objectives. Phase One, which is complete, involved reviewing readily available information and using it to develop potential ASR projects and identify the steps needed to vet the likelihood of each one's success. Phase Two, currently underway, entails additional studies and fieldwork needed to permit and pilot the most promising projects identified in Phase One. In the final phase, the city will design and construct the projects most likely to create a sustainable water supply for Provo City. The project that is the subject of this application calls for ASR at a site near the mouth of Rock Canyon, in the eastern part of the city; it involves constructing two pump stations—one along the Provo River, the other near the Timpanogos Canal—and a system to convey the water from the Provo River up to the Rock Canyon site.

Provo City is requesting \$1.5 million from the Bureau of Reclamation's WaterSMART program to offset the cost of constructing the Rock Canyon ASR project (taking the project from design through construction and startup will require two to three years). The project will augment the city's aquifer water supply with an additional 15,000 acre-feet annually, boosting Provo's ability to withstand droughts and accommodate rapid population growth. Design of the project has already begun, and will continue into 2021; construction, which is expected to begin in spring 2021, will be completed within two years. Total project completion is expected by 2023.

Background Data

Provo City, along with much of the Wasatch front, is experiencing rapid population growth. With that comes an increase in water demand and the need to secure a sustainable water supply. The water level in the aquifers beneath Provo, which are a key part of the city's water supply, have been declining for decades. Simultaneously, the state of Utah is readjudicating water rights for the first time in nearly a century, which could result in significant changes to the volume of water many parties have the future right to use. Facing the combination of population growth, increased water demand, declining aquifer levels, and readjudication of water rights, Provo has created a plan with four primary objectives:

- Secure and beneficially use its water rights
- Bolster water levels in its source-water aquifers
- Secure a sustainable water supply for the long term
- Identify and prioritize projects that can be rapidly implemented

Existing city supplies will be adequate for meeting projected demands only if conservation measures are carried out and ASR can be successfully implemented. Historically, this deficiency has been addressed through conservation by residents and pumping wells above the estimated sustainable yield of the aquifer. This current deficit is about 9,900 acre-feet a year. With projected population growth, the city will need an additional 17,400 acre-feet annually to meet demands while preserving the recommended supply redundancy. Aquifer storage and recovery (ASR) has been identified as a key tool for securing a sustainable supply.

Provo's current water-supply system serves 19,607 connections, most of which (17,483) are residential, but also include commercial (1,936), institutional (171), and industrial (17) connections. The system comprises:

- 17 culinary-water wells with a peak pumping capacity of 31,700 gpm
- 10 booster stations
- About 400 miles of transmission and distribution pipe with diameters ranging from 6 to 48 inches
- 37 pressure-reducing stations
- 11 closed metal and concrete water-storage tanks with a combined storage volume of 129 acre-feet (42 million gallons)

Water Rights

Provo's use of its water rights has varied over the years. A significant volume of Provo River water—65 cubic feet per second—has been identified as currently available for use in an ASR project; additional rights may also be available. The city's objective is to pair an existing available

water right with an ASR project to help the Division of Water Rights recognize the beneficial use of that right. To maximize the city's water-rights use, the ASR project will need to account for the time of availability of the various rights. For example, an identified right may be available for use only in the non-irrigation season, which would complicate its use given the cold weather that could affect ASR operations. In addition, each ASR site must be able to accept water during the window in which a right is available. Given the availability of Provo River water and the impending readjudication of water rights, it is in the city's best interest to identify ASR projects that can be implemented rapidly.

Another water-rights consideration is related to years that follow heavy-snowfall winters. In periods of high runoff after winters with heavy snow, the state occasionally grants an excess allotment of water to various users. It would be an advantage for the city to have identified ASR projects that can be operated during times of excess allotment, because it would allow Provo to replenish the aquifer for times of drought. In addition, in years following heavy-snow winters, springs used as a source of culinary water for the city sometimes flow at rates that exceed demands. Right now, when this occurs, Provo must occasionally turn the spring water out into local streams. In years with excess spring flow, it would be advantageous for the city to have identified ASR projects that could be activated to divert the water into the aquifers beneath Provo.

Careful planning with Provo's water-rights attorney and coordination with the Division of Water Rights is highly recommended to help ensure that the city retains rights to the maximum amount of water for its ASR projects. In preliminary coordination with Provo's water-rights attorney, specific, fully consumptive rights were identified as being those most beneficial to Provo for use. The majority of those rights were associated with the city's groundwater wells and rights to Provo River flow. The following are Provo's rights: 51-1021; 51-1022; 51-2779; 51-6063; 51-5462; 51-5463; 55-176; 55-762; 55-767; 55-768; 55-806; 55-958; 55-1042; 55-1057; 55-1124; 55-1129; 55-1164; 55-1535; 55-1536; 55-1537; 55-4329; 55-4400; 55-11001; 55-11002; 55-11003; 55-11004; 55-7078; 55-8388.

Historic Drought Conditions and Climate Change Impacts

The longest continual record of a stream flow in the watershed that contributes to the Provo River system (and thus Provo City's water supply) is for the Weber River at Oakley. Analysis of flow at this location provides important insights into the city's projected water supply. Table 1, below, summarizes data from multi-year droughts, when the annual flow did not reach average in any one year for an extended period. Note that in the last 33 years (since 1987), there have been three such periods of extended drought. Before that time (1905–1986, 81 years), only two such stretches occurred.

Table 1 Multi-year droughts during periods of measured stream flows of Weber River at Oakley

Period	Years	Average Flow	% Average Flow
1939–1943	5	123,509	79%
1958–1961	4	104,143	66%
1987–1992	6	103,020	66%
2000–2004	5	104,106	66%
2012–2016	5	110,732	71%

This analysis indicates that water supplies from the Weber and Provo rivers are subject to dry periods of four to six years. During those stretches, the amount of water in the Deer Creek and Jordanelle reservoirs, and recharge of the city’s aquifers is reduced.

Examining the effects of climate change on the water supply and demand within the watershed is also critical. A 2017 local study titled “Preparing for Climate Change—A Management Plan,” was prepared by the Jordan Valley Water Conservancy District, with assistance from the Central Utah Water Conservancy District. The study results showed that demand on Jordan Valley district’s system could increase between 2 and 17.4 percent, due to climate change and the effects of drought. This makes it imperative that drought resiliency techniques such as ASR be implemented to meet future water demands.

Provo ASR Progress and Results

The city is partway through a three-phase implementation of multiple ASR projects to meet water-sustainability objectives. Phase One, which is complete, involved reviewing readily available information and using it to develop potential ASR projects and identify the steps needed to vet the likelihood of each one’s success. Phase Two, currently underway, entails additional studies and fieldwork needed to permit and pilot the most promising projects identified in Phase One. In the final phase, the city will design and construct the projects most likely to create a sustainable water supply for Provo City. The Rock Canyon in-stream ASR site is one of the most promising due to its location and the data already gathered during monitoring of recent year’s snowmelt. In addition, numerous potential sources of water exist just downgradient of the canyon, including the city’s 30-inch aqueduct, the Timpanogos Canal, the Upper East Union Canal, the city’s Mill Race Canal and the Provo River itself.

The city has not previously had a working relationship with Reclamation.

Project Location

The upstream release point of the Rock Canyon in-stream ASR infiltration site lies 0.58 miles east of Rock Canyon Park in Provo, Utah at the latitude and longitude of 40°15'55.3"N and 111°37'15.5"W. The latitude and longitude of the first, intermediate pump station on the Timpanogos Canal are 40°15'44.0"N and 111°38'44.6"W. The second pump station, on the Provo River, will be located at approximately 40°15'49.4"N and 111°39'49.6"W. The city of Provo lies in the central Utah Valley and the Utah Lake watershed, and is about 45 miles south of the state capital, Salt Lake City. Figure 1, at the end of this document, shows the ASR infiltration site and the locations of the pump stations.

Project Description and Milestones

The valley fill aquifer beneath Provo, in which the city's wells are located, is recharged by winter snowpack in the mountains as it melts in the spring and flows down the mountains into the sediments that line the bedrock canyons of the Wasatch Range. Flow in the sediment either infiltrates into the bedrock where it slowly recharges the valley fill aquifer, or flows further down the canyon into the sediments, where it more quickly recharges the valley fill aquifers at the canyon mouths. When there is enough snowpack, as there was in the winter of 2018 to 2019, the ephemeral streams in the canyons actually flow until they reach the canyon mouths, where they spread out and again infiltrate into the ground and quickly recharge the aquifers in the valley fill sediments. The Rock Canyon ASR project is intended to harness that natural process in order to enhance recharge of the aquifers beneath Provo.

The project will include the introduction of Provo River water into an ephemeral stream in Rock Canyon. Water that the City has rights to will be collected at the Official Point of Diversion (Mill Race Canal), and pumped up to Rock Canyon. A second pump station will be situated near the Timpanogos Canal so that the city will have two locations where it can divert water up into the canyon mouth. From these two locations (shown in the attached project figure) the city will pump as much as 20 cfs of water up to the canyon to replicate the rapid recharge that occurs when water flows in the sediments or ephemeral stream to the canyon mouth, quickly filtering down to the valley fill sediments and recharging the aquifer.

In the late winter and spring of 2020, before the natural runoff occurred, Provo piloted the concept by introducing water into the ephemeral stream in the canyon mouth and measuring response in the shallow and deeper aquifers. Water was clearly documented infiltrating into the streambed and flowing into the aquifer. A chemical analysis of aquifer water before and after the pilot was performed to monitor the effects of the project and verify that no undesirable reactions occurred. In addition, the chemical and mineral compositions of the soils through which the water passed were analyzed to further check for any concerns. All tests produced favorable outcomes, and the city now plans to implement an in-stream ASR project at this site.

Early milestones already reached include:

Milestone 1: A desktop study was conducted to validate the Rock Canyon ephemeral stream as a viable ASR candidate site that merited further study and piloting.

Milestone 2: Following the desktop study, permits were obtained from various state and federal agencies to clear the way for pilot-testing the concept.

Milestone 3: Once permits were obtained, desktop results were validated with field data collected during an intensive monitoring-well installation program that preceded the pilot test. During the pilot test, water was introduced into the ephemeral stream and documented infiltrating into the aquifer below Provo City. This proof of concept cleared the way to move toward a full-scale project.

Milestone 4: A project feasibility study was performed to define major design elements. Final siting of the pump stations is in progress, and final pipeline alignments are being developed. Project definition has progressed to a point sufficient to support grant applications, full-scale project permitting, and project financing.

Future project milestones:

Milestone 5: Full-scale project permitting. Permits will be applied for from state regulatory agencies, using information collected during the pilot study in Milestone 3. Permits from the U.S. Forest Service will be applied for with information from Milestones 3 and 4.

Milestone 6: Project financing. The city will secure financing from a number of sources, including, hopefully, this grant. Once adequate financing is in place, the project will proceed to final design and construction.

Milestone 7: Final design. All major features of the project will be designed and included in a set of bidding documents let for public bid.

Milestone 8: Project construction. The successful bidder will construct the project as designed.

Milestone 9: Project startup and commissioning. Once built, the project will be started up and commissioned. Startup will consist of simply ensuring all major project features function as expected. Commissioning will take longer, and proceed until assurance of the project's long-term operation is achieved through modifications to pumping rates, based on infiltration observed in the ephemeral stream over a period of several years.

Milestone 10: Aquifer recharge. Once the project is commissioned and operating, the long-term success of the project will be measured by documenting its effect on water levels in the target valley fill aquifer near the mouth of Rock Canyon. Water levels will be monitored in existing city wells, as well as in monitoring wells in and near the canyon mouth. Successful outcomes will be either rising water levels in the aquifers during normal or wetter years, or reduced rates of decline in dry or drought years.

Major project features:

The Provo River pump station, which will include an intake off of the Mill Race Canal; a trench-style pump station; three line-shaft-driven vertical turbine pumps; devices to filter out sediment; and a building to house the pumps and electrical gear.

A 24-inch-diameter forcemain that will connect the Provo River pump station to the intermediate pump station, and the intermediate station to the ephemeral stream in Rock Canyon.

The intermediate pump station, which will allow collection of water from the Timpanogos Canal and then pump it up to the ephemeral stream in Rock Canyon. This station will also serve to pump water from the Provo River station the rest of the way into Rock Canyon.

Infiltration features in Rock Canyon will include a point of discharge into the ephemeral stream that will dissipate energy and allow the water to flow in a controlled and continuous manner into the existing ephemeral streambed. The streambed will be modified in several locations to allow water flowing in the stream to pond, giving it additional time to filter down into the aquifer. The ponds will connect back to the stream via small waterfalls that will transfer water down to the next pool.

Sediment control. Water pumped from the Provo River is expected to be clean and free of sediment most of the time when the project is operating. The Provo River intake will be equipped with a turbidity meter to monitor water clarity and sediment content. If sediment is detected, the project will be turned off. The initial discharge point in Rock Canyon will include a basin to allow pumped sediment to settle before the water is discharged to the ephemeral stream.

Table 2 lists the schedule and milestones for the project.

Table 2 Project schedule

Project Milestone	Anticipated Date of Completion
Project Design Authorization (Milestone 7)	9/1/2020
Commence Design (Milestone 7)	9/1/2020
Begin Environmental Review (Milestone 5)	9/1/2020
Complete Design (Milestone 7)	11/30/2020
Receive Division of Drinking Water Plan Approval (Milestone 5)	12/15/2020
Project Financing (Milestone 6)	12/15/2020
Advertise for Construction Bids (Milestone 8)	12/31/2020
Bid Opening (Milestone 8)	1/30/2021
Begin Construction (Milestone 8)	3/1/2021
Complete Construction (Milestone 8)	9/1/2021
Receive Division of Drinking Water Operating Permit (Milestone 5)	10/1/2021
Project Startup (Milestone 9)	9/15/2021
Project Commissioning (Milestone 9)	Fall 2021 to Fall 2023
Aquifer Recharge (Milestone 10)	Fall 2021 into future

Performance Measures

The project benefit and performance measures will be based on metering of the water that is pumped from the river and discharged to the mouth of Rock Canyon. The total amount of pumped water will indicate the additional volume being stored in the aquifer and added to the city's water supply. The project's performance will also be evaluated based on continuous analysis of data from the monitoring-well network at Rock Canyon, where water levels will confirm aquifer storage amounts and the movement of water to the targeted aquifers. Finally, regular water-quality sampling will confirm that no harmful impacts are occurring as a result of the aquifer storage program.

Evaluation Criteria

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

The Provo ASR project will build long-term drought resilience by increasing the city's reliable water supply year-round, including during times of drought. If the city's other water sources are

unusable during drought conditions, water stored via ASR will still be readily available. Provo is expected to rapidly grow in population within the next 50 years; the ASR project will increase the current water supply capacity, helping to ensure that the needs of the city's growing population can be sustained.

Because Provo has made ASR a priority technology for expanding its water-supply system, the project will benefit water users in Provo indefinitely. Although the life expectancy of many individual ASR system components, as designed, is 50 years, when well-maintained the components can last up to 100 years. The city plans to maintain and upgrade the system as necessary to extend its operation well beyond the design-life expectancy.

Will the project provide an additional water supply? If so, what is the estimated quantity of additional supply the project will provide and how was this estimate calculated?

The project is not adding a water source, but rather bolstering the volume of groundwater the city currently uses. The system will pump excess surface water to the ASR site, where it will be infiltrated or injected into the underlying aquifer. Normally, the city would not be able to use excess surface water for its water supply, due to the unpredictable nature of peak-flow occurrences. With the ASR project, however, the city will be able to collect and store water it has rights to, along with the peak flow and additional runoff for use in the future, when surface-water supplies may be lower. The ASR project will add approximately 15,000 acre-feet of water annually to the city's groundwater supply (estimate calculated by combining the results of surface-water and groundwater modeling with data about the city's current water supply and demand). The additional water should increase Provo's current supply by 50 percent (estimated from the city's measured annual water consumption of 24,243 acre-feet).

The ASR project will benefit Provo by expanding its long-term water supply. Facing the combination of population growth, increased water demand, declining aquifer levels, and readjudication of water rights, the city has begun investigating the design and construction of an ASR system to achieve four primary objectives identified in its 40-year planning process:

- Secure and beneficially use its water rights
- Bolster water levels in its source-water aquifers
- Secure a sustainable water supply for the long term to support population growth and carry the city through periods of drought
- Identify and prioritize projects that can be rapidly implemented

Will the project improve the management of water supplies? If so, how will the project increase efficiency or operational flexibility?

Construction of the Rock Canyon ASR system will give Provo additional operational flexibility in managing its water supplies. The system will also improve the city's ability to provide water to its connections during drought by bolstering groundwater levels and storing water in the aquifer itself—creating a more stable supply that is not dependent on precipitation, water rights, etc.

What is the estimated quantity of water that will be better managed as a result of this project? How was this estimate calculated?

The amount of water that will be better managed with this project is approximately 39,000 acre-feet—essentially, all of Provo's drinking water. This is because ASR will not only enable Provo to better manage its entire water-supply system, but to build up reserves for drought conditions. This estimate was calculated using surface-water groundwater modeling.

How will the project increase efficiency or operational flexibility?

The Rock Canyon project will improve efficiency and operational flexibility by increasing the water resources to which Provo has access. This will be accomplished by storing water the city already has rights to, along with excess flows when available, in the aquifer beneath the city, rather than allowing the water to flow through the existing canal network or through the river system back into Utah Lake. With additional source water stored in the aquifer, the city will be able to better serve its residents and preserve resources that were previously used to combat water shortages.

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

ASR will allow Provo to better manage 100 percent of its water supply. This is calculated by determining the total volume used in a given year and estimating that water levels in the aquifers beneath Provo will be augmented with ASR techniques. The city will be able to pump water from the augmented aquifer as needed to meet demands, without relying on other sources. Another way of calculating this is on an annual basis. This sole ASR project will allow the city to store between 30 and 60 percent of its annual water demand in the aquifer by infiltrating water in Rock Canyon in a single given year, while still supplying water to its constituents from its wells and springs (ASR flow rate of 10 to 20 cfs over an entire year, compared to the city's total annual water demand). This is water to which the city has rights; it normally flows through canals or down the Provo River and into Utah Lake after its current specific use. With ASR in place, this flow will be intercepted and stored in the aquifer for future use.

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

During times of peak water use that coincide with drought conditions, Provo's water supply system is stressed, and the stress will only increase as the city's population rises. Long-term trends in aquifer water levels are downward, meaning without ASR the water levels will drop to a point where some wells will no longer function as currently designed. Some may even dry up entirely. By adding ASR the aquifers will be recharged with water and kept viable for decades to come. Construction of the ASR system is designed to alleviate stress on the city's water supply system (wells and springs) and help ensure that Provo continues to meet the needs of its residents and water users, even in drought conditions.

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

As part of the project, existing city wells are being outfitted with devices to measure water level to more accurately track and record aquifer water levels in existing wells. In addition, stream monitoring gages were installed and will be maintained to better document water flow in two ephemeral streams (one in Rock Canyon and one in Slate Canyon) and at several points in the Provo River. Finally, a network of groundwater-monitoring wells were added around the city to measure and record water levels now and over the long term at locations other than existing supply wells. This additional data will help water managers better understand the health of their surface waters, aquifers, and water supply. Monitoring aquifer water levels will help document the effects of the ASR project as it is implemented. Declining aquifer water levels will be used as a management trigger to implement more conservation measures or more ASR projects; stable water levels will be a management target; and rising water levels will be a sign of ASR success and storage of water for future use.

Using the collected data, Provo will provide educational information to the public and a wide array of technical audiences, including water managers, describing how ASR works and the benefits it delivers. The information will be shared through a variety of channels such as fact sheets, presentations, and public meetings. Water managers in other communities who learn about ASR technology from Provo may initiate efforts to implement ASR as a way of improving water management in their own jurisdictions.

Will the project have benefits to fish, wildlife, or the environment? If so, please describe those benefits.

The Rock Canyon ASR project will introduce a consistent supply of water to the mouth of the canyon. Local wildlife and ecosystems will have a regular supply of water and be able to thrive, especially during times of drought when water would not be flowing in this particular stream. In addition, this water—some of which would normally evaporate from the surface of Utah Lake and not be available to wildlife or people—will be captured and stored in the ground and

released slowly over longer periods of time, creating longer periods of use and benefits to both people and wildlife. Moreover, the infiltration system in Rock Canyon will create habitat for aquatic and semiaquatic vegetation and wildlife.

Drought 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. Explain whether the drought plan was developed with input from multiple stakeholders. Was the drought plan developed through a collaborative process? Does the drought plan include consideration of climate change impacts to water resources or drought?

One of the primary goals identified in Provo's 2019 Water Conservation Plan (attached to this application) is to increase drought resiliency and water-supply reliability for a growing population. The plan highlights several practices intended to reduce water usage, and therefore shrink the deficit between predicted demand and supply. The conservation practices include aggressive maintenance and operations programs; upgraded SCADA systems; secondary water usage; rain-sensor installation; seasonal rate structures; a citywide economic-development strategic plan; public awareness and education programs; and water conservation ordinances.

The conservation plan states that during drought conditions (dry years), Provo's water supply currently has a deficit of approximately 4,000 acre-feet per year. The deficit is projected to grow in the coming years due to population growth, continued drought conditions, and other external factors, including climate change. By modeling population growth and projecting water demand, Provo determined that conservation practices alone would not solve the water shortage during drought conditions. After studying options for increasing its water reserves, the city selected ASR as the overall best way to address the deficit in its existing water system—particularly during dry years when the deficit is largest.

In addition, ASR is specifically mentioned in the other water-system comprehensive planning documents including the city's 40-year Water-Supply Plan and its Water System Master Plan. Both documents inform water-system management at all times and specifically address projects needed to prepare for times of drought or water scarcity.

Describe how your proposed drought resiliency project is supported by an existing drought plan. Does the drought plan identify the proposed project as a potential mitigation or response action? Does the proposed project implement a goal or need identified in the drought plan? Describe how the proposed project is prioritized in the referenced drought plan?

Provo's water conservation plan and 40-year water-supply plan specifically identify ASR as necessary to overcome deficits in the city's current water supply. While the city can rely on its

existing groundwater sources to sustain water supply for the near term (even in drought conditions), the steadily falling groundwater levels in recent years prompted concern about long-term supplies. ASR would alleviate this concern by harnessing excess surface water to recharge the groundwater.

Severity of Actual or Potential Drought Impacts to Be Addressed

What are the ongoing or potential drought impacts to specific sectors in the project area if no action is taken (e.g., impacts to agriculture, environment, hydropower, recreation and tourism, forestry), and how severe are those impacts? Impacts should be quantified and documented to the extent possible.

The biggest impact of drought for Provo is that it exacerbates the existing gap between the city's water supply and the needs of its residents, businesses, and industries. A growing population and worsening drought conditions are outstripping Provo's capacity to provide its citizens and businesses with a reliable supply of clean drinking water. Unless the city acts quickly, the water deficit will adversely affect many sectors, including residential welfare, emergency response, and economic growth. Capturing currently unused water from snowmelt and rainfall and allowing it to replenish the amount of water stored in aquifers will not only enable the city to reduce its dependency on imported water, lakes, and rivers as water sources in times of supply shortfalls, but also reduce conflicts with surrounding communities and nonprofit organizations over water rights and environmental degradation.

Describe existing or potential drought conditions in the project area. Is the project in an area that is currently suffering from drought or which has recently suffered from drought? Please describe existing or recent drought conditions, including when and the period of time that the area has experienced drought conditions. Describe any projected increases to the severity or duration of drought in the project area resulting from changes to water supply availability. Provide support for your response.

Utah is the second-driest state in the nation and is continually moving in and out of drought conditions. Provo, along with the entire state of Utah, has experienced recent multi-year periods of drought that are projected to worsen as the climate continues to change. The droughts have ranged from moderate to severe, and have harmed crops and pastures and resulted in water shortages and usage restrictions. According to the U.S. Drought Monitor, severe droughts occurred in the early 2000s, and since then the state has experienced moderate drought conditions. This year, 2020, brought the third-driest spring on record; virtually the entire state was classified as experiencing moderate drought. If Provo isn't able to implement ASR projects, the city's water supply will continue to suffer detrimental impacts.

Project Implementation

Provo has already prepared conceptual-level designs of the Rock Canyon ASR system, including a schematic of the layout and an opinion of probable costs, and has begun pilot-testing the site. The city has also applied for funding from the Utah Board of Water Resources and Division of Drinking Water. Table 3, below, presents a breakdown of the proposed project-implementation schedule; the dates of major milestones reflect construction beginning in the spring of 2021.

Table 3 Rock Canyon Design and Construction Schedule

Project Milestone	Anticipated Completion Date
Commence design	September 2020
Begin environmental compliance/permit applications	September 2020
Complete design	December 2020
Advertise for bids	January 2021
Begin construction	March 2021
Complete project	Fall 2023

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

The following permits are required for the Rock Canyon ASR project. Provo's environmental consultant will work with city and agency staff at the beginning of project design to obtain permits.

Federal

- U.S. Forest Service: Categorical exclusion (CatEx) approval

State

- Utah Division of Water Rights: aquifer storage recharge permit
- Utah Division of Water Quality: groundwater discharge permit and general construction (stormwater) permit
- Utah Drinking Water Division: drinking-water permit

Local

- Provo Public Works Department: construction permit

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

A Phase 1 study was conducted to identify several candidate ASR locations around Provo. The Rock Canyon site emerged as the preferred site because of its location; its infiltration and recharge potential; and the comprehensive monitoring data already gathered on previous snowmelt in the canyon. In addition, numerous potential sources of water exist just downgradient of the canyon, including the city's own 30-inch aqueduct, the Timpanogos Canal, the Central Utah Water Conservancy District supply, the Upper East Union Canal, and the city's Mill Race Canal.

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

No new policies or administrative actions are required to implement the project. Provo's city council has approved an official resolution to construct the Rock Canyon ASR project.

Describe how the environmental compliance estimate was developed. Have the compliance costs been discussed with the local Reclamation office?

The environmental compliance estimate was developed based on the City's consultant's experience on projects with similar scope and scale. Costs were extrapolated for this specific region. The compliance costs have not been discussed with the local Reclamation office. However, the City and its consultant have had multiple conversations with the U.S. Forest Service about the project and associated environmental regulations.

Nexus to Reclamation

How is the proposed project connected to a Reclamation project or activity?

The project is not connected to a Reclamation project or activity.

Will the project benefit any tribe(s)?

The project will not provide specific benefit to any tribal entities.

Does the applicant receive Reclamation project water?

Provo City currently receives water from Reclamation's Provo River Project (Deer Creek Dam/Reservoir construction).

Is the project on Reclamation project lands or involving Reclamation facilities?

The project is not on Reclamation project lands and does not involve Reclamation facilities.

Is the project in the same basin as a Reclamation project or activity?

Yes, the project is located in the Provo River basin, which also houses Reclamation's Provo River Project.

Will the proposed work contribute water to a basin where a Reclamation project is located?

Yes, the project will contribute to aquifer water supply within the Provo River basin.

Department of Interior and Bureau of Reclamation Priorities

Department of the Interior Priorities

The Department of the Interior (DOI) conserves and manages the natural resources and cultural heritage of the United States for the benefit and enjoyment of the American people. It does so by creating a conservation stewardship legacy, utilizing natural resources, fostering community trust, reducing regulatory burden imposed on industries and the public, and modernizing infrastructure. Provo's plan for implementing ASR, and specifically the Rock Canyon project, supports many of the DOI's priorities.

The Rock Canyon project will use best practices for water resources technology to maximize protection of Provo's water supply against drought, population growth, and water-rights competition. In addition to expanding the city's water storage system, the project will bolster aquifer levels, helping to sustain a vital natural resource for the region as well as for Provo. In addition, because part of the ASR project will cross public lands, the relationship between Provo and the U.S. Forest Service should become stronger. This project will also enhance the relationship between Provo and its citizens by ensuring their water demand needs are met under all future conditions.

Using the relatively new technology of ASR to enhance groundwater supply will modernize Provo's water system and helps the city develop drought resiliency. The project will also reduce the need to implement technologies that require expensive system upgrades and maintenance such as dams and surface-water reservoirs.

Bureau of Reclamation Priorities

The Bureau of Reclamation's mission is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public. This mission manifests itself in several ways, including increasing water supplies, storage, and reliability, addressing drought, and streamlining regulatory processes. The Provo ASR project aligns with several of the Bureau of Reclamation's priorities.

The ASR project will increase Provo's water supply by capturing and storing snowmelt and rainwater in aquifers for later use. Much of the captured water would either evaporate from the

surface of Utah Lake or flow downstream, ultimately making it to the Great Salt Lake and being lost for local use. The technology provides needed reliability and drought resiliency for the city. Provo expects project funding to come from multiple authorities including Reclamation, the Utah Board of Water Resources, and the state's Division of Drinking Water. Through the funding application process, each authority can voice support for or concern about the project, which enhances collaborative project development. The Rock Canyon project is being fast-tracked for construction because augmenting water supply is a high priority for Provo.

This project uses the modern technology of ASR to increase Provo's water supply reliability. By recharging aquifers with excess surface water, this project would increase the capacity of the city's water supply system to sustain its current community and future growth. This method is much more efficient and less expensive than surface-water impoundments such as dams or concrete or steel reservoirs.

The ASR project would address ongoing drought by providing a reliable and drought-resistant water supply via groundwater. By providing a drought-resistant water supply, this project would alleviate impacts of drought to Provo's residents, businesses, and other industries.

Project Budget

Funding Plan

ASR has been identified as a priority technology for the city to adopt in its drought and water-supply planning. Provo has budgeted for ASR construction in its annual capital improvement plan (CIP). More than \$12 million was reserved for CIP water projects for fiscal year 2019. The city is also applying for external ASR funding from the Utah's Division of Drinking Water and Board of Water Resources.

Funding Partners

The city has applied for additional funding from Utah's Board of Water Resources and Division of Drinking Water. The two agencies are working together to determine the appropriate split of the funding amount that Provo has requested. The funds will be allocated in autumn 2020.

Previously Incurred Project Costs

The city has already incurred over \$1 million in costs for the ASR project, and has paid for it with its own funds. The city does not intend to seek reimbursement for these previously incurred costs.

Federal Funding Requested/Received

The city has applied for funds from the Utah Division of Drinking Water, which allocates state and federal dollars for water infrastructure improvements, but to date has not received an award.

Pending Funding Requested

The city of Provo has applied for funding from Utah's Division of Drinking Water and Water Resources Board. Both applications are pending. It is unlikely that funding will be denied since allocated funds from these entities are primarily low-interest loans. If funding is denied, however, Provo plans to dedicate a higher proportion of city budgetary funds to complete the work outlined in the project description.

Budget Proposal

Table 4 and Table 5 outline the total project cost, and contributions from both non-federal, federal, and the applicant. Table 6 provides a detailed breakdown of the project costs including materials, labor, design, and environmental review costs.

Table 4 Total Project Cost Table

Funding Sources	Amount
Costs to be reimbursed with requested federal funding	\$1,500,000
Costs to be paid by the applicant and other non-federal funding sources	\$16,460,000
Value of third-party contributions	\$0
Total Project Costs	\$17,960,000

Table 5 Summary of Non-Federal and Federal Funding Sources

Funding Sources	Amount
<i>Non-Federal Entities</i>	
Utah Division of Water Resources	\$6,939,500 ¹
Utah Division of Drinking Water	\$6,939,500 ¹
Costs to be paid by applicant	\$2,581,000
Non-Federal Subtotal	\$16,460,000
Costs to be reimbursed with requested federal funding	\$1,500,000
Total Project Costs	\$17,960,000

- [1] The Utah Division of Water Resources and Division of Drinking Water are still determining the contribution amount. Both agencies are working together to appropriately distribute the cost sharing, and funds will be available in the fall of 2020.

Budget Details

Table 6 Rock Canyon Budget Proposal

No.	Item	Qty	Unit	Unit Price	Extension
1	Modifications to mill-race dam and intake for pump station ¹	1	LS	\$600,000	\$600,000
2	Provo River pump station ¹	1	LS	\$2,054,116	\$2,100,000
3	Provo River pump station water-hammer mitigation	1	LS	\$200,000	\$200,000
4	Intermediate pump station ¹	1	LS	\$2,178,017	\$2,200,000
5	Intermediate pump station water-hammer mitigation	1	LS	\$200,000	\$200,000
6	Land purchase for intermediate pump station	1	LS	\$600,000	\$600,000
7	Electrical service upgrades to serve intermediate pump station	1	LS	\$800,000	\$800,000
8	Winterization of structures	1	LS	\$82,601	\$90,000
9	Conveyance (installation under bituminous roadway) ¹	10,345	LF	\$528	\$5,470,000
10	Conveyance (via trenchless installation) ¹	125	LF	\$1,268	\$160,000
11	Conveyance (installation under semi-paved open area) ¹	3,032	LF	\$262	\$800,000
12	Traffic control	1	LS	\$20,000	\$20,000
13	SCADA and control	1	LS	\$80,000	\$80,000
14	Environmental assessment and other project permitting ²	1	LS	\$137,500	\$140,000
Estimated Construction Cost					\$13,460,000
Contingency				15%	\$2,020,000
Subtotal					\$15,480,000
Engineering Costs				16%	\$2,480,000
Total					\$17,960,000

[1] Includes mobilization/demobilization, excavation, installation/construction, and materials.

[2] National Environmental Policy Act (NEPA) and environmental site assessment (EA). Study potential construction and water infiltration impacts on Forest Service land.

Budget Narrative

Materials and Supplies

Materials and supplies will be furnished and installed under construction contracts.

Contractual

1) Design and Utah Division of Water Quality document preparation. This task requires the procurement of a qualified design consultant to prepare final design plans and construction documents according to the Utah Division of Water Quality requirements. The design firm will be required to remain on the project team through construction and provide quality control, answer design questions, and provide other support. The estimated cost is \$2.48 million, which is roughly 16 percent of the construction line item plus a 15 percent cost estimate contingency (16 percent x \$15.48 million).

2) Construction of pump stations and conveyance infrastructure. Provo will hire a qualified contractor to complete the construction phase of the project. This line item covers construction of all pump-station elements and conveyance structures, including mobilization, excavation, materials, SCADA systems, bituminous replacement, and testing. The total estimated cost is \$13.32 million.

Environmental Compliance and Regulatory Compliance Costs

This line item includes costs for environmental and regulatory compliance (NEPA crossover, required mitigation, SWPPP, and environmental assessment [EA]). This estimated cost includes \$140,000 for qualified Reclamation and/or consultant staff to help Provo comply with NEPA regulations and perform an environmental assessment of groundwater recharge in Rock Canyon. Funds are also budgeted for any required mitigation as a result of NEPA compliance (if needed), and for permitting fees. The estimated total cost is \$140,000.

Indirect Costs

Not applicable.

Total Costs

The total project cost is estimated to be \$17.96 million; the grant request is for: \$1.5 million, or 8.4 percent of total project cost.

Environmental and Cultural Resources Compliance

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

The project will include installing two pump stations and piping from the Provo River up to the mouth of Rock Canyon. Construction will result in temporary disturbance consistent with this type of construction, and will be mitigated with conventional dust-control and erosion-protection techniques. In the natural area in the canyon mouth, pipe will be installed on either side of the existing access roadway to Rock Canyon. This area has already been disturbed by roadway construction. All resulting impacts from construction are anticipated to be temporary (lasting only for the duration of construction). Best management practices will be used to minimize potential for dust and erosion. In addition, construction equipment will be fitted with suitable mufflers to minimize emission impacts. All areas of disturbance will be revegetated in kind, as applicable, after construction is complete.

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?

Based on review of the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) online system, the following federally listed species may be present in the project vicinity: Canada lynx (*Lynx canadensis*; threatened), June sucker (*Chasmistes liorus*; endangered), and Ute ladies'-tresses (*Spiranthes diluvialis*; threatened). No designated critical habitat has been identified in the project area.

Canada lynx typically avoid areas of frequent human disturbance and are not likely to be present in the project vicinity. This species is anticipated to avoid the project area during construction of the release locations, though similar habitat is prevalent in adjacent areas. It is expected that the species will return to the project area following completion of construction activities, and may be attracted to the more reliable surface-water availability that the project will bring. Due to the absence of perennial flow in Rock Canyon, the June sucker is not expected to be present in the project area or impacted by the project. The Ute ladies'-tresses orchid is typically found in wet meadow areas and in seep areas near freshwater lakes and springs. The orchid is not expected to be present in the project area due to the absence of wet meadows, freshwater lakes, and springs and seeps.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under Clean Water Act (CWA) jurisdiction as “Waters of the United States?” If so, please describe and estimate any impacts the proposed project may have.

Based on review of the U.S. Fish and Wildlife Services’ National Wetland Inventory, the only mapped “water of the United States” is the channel that traverses the bottom of Rock Canyon, which is the targeted recipient of the ASR project. The uppermost portion of the channel within the project boundary is classified as a palustrine scrub-shrub, seasonally flooded (PSSC) water body, while the lower ~75 percent of the channel within the project boundary is classified as an intermittent riverine streambed system that is seasonally flooded (R4SBC). The ASR project will release downstream sources of water into the Rock Canyon stream channel, as noted above. This is anticipated to result in a stream channel and riparian area that experience wetter than historically normal conditions.

It is anticipated a new water-transfer pipe will be constructed above the ordinary high-water mark of the Rock Canyon stream channel to avoid the need for placing fill in the channel. Either the existing outfalls or a new outfall will be used to convey water from the pipe into the stream channel. Appropriately sized riprap will be placed at the selected outfall location to dissipate energy and minimize erosion potential. In addition, a stilling basin may be constructed to further limit sediment discharge to the stream channel.

When was the water delivery system constructed?

The water delivery system has not yet been constructed; it is proposed to be built as part of the ASR project.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., head gates, 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.

The Rock Canyon project is not anticipated to result in modification of or effects to individual features of irrigation systems, with the exception of intakes off of the Mill Race Canal and Timpanogos Canal. The intakes will be constructed along a piped section of each canal, and will not affect either system’s operational headgates or diversion structures.

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.

There are no known eligible buildings, structures, or features in the project boundary; however, it is expected that this would be evaluated further by the U.S. Forest Service through its CatEx development process.

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

There are no known archaeological sites within the boundaries of the ASR project; however, it is expected that the Forest Service will verify that through its CatEx development process.

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

The Rock Canyon project is not anticipated to create disproportionately high, adverse effects on low-income or minority populations. The project is positioned in an existing canyon streambed and will benefit all sectors of the population, including low-income and minority members, by more reliably supplying water to the city.

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

This project is not anticipated to limit access to or ceremonial use of Indian sacred sites or otherwise affect tribal lands. Because the city requires daily access along the roadway adjacent to the project site, at least one travel lane will need to be open during construction. It is expected that people needing to cross the area to access potential sacred sites will be able to do so via that same travel lane. On project completion, the existing roadway will be returned to pre-construction or better condition and will once again be fully available for vehicular traffic.

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?

The ASR project is not anticipated to introduce or spread noxious weeds or non-native species into the project area. Construction equipment accessing the area will be required to be cleaned prior to entering, to reduce the potential for species transfer. In addition, vegetation disturbed by construction will be replaced in kind with a certified weed-free seed mix.

Required Permits or Approvals

The following federal, state, and local permits and approvals will be obtained prior to construction of the Rock Canyon ASR project.

Federal

- U.S. Forest Service: Categorical exclusion (CatEx) approval

State

- Utah Division of Water Rights: aquifer storage recharge permit
- Utah Division of Water Quality: groundwater discharge permit and general construction (stormwater) permit
- Utah Drinking Water Division: drinking-water permit

Local

- Provo Public Works Department: construction permit

Existing Drought Contingency Plan

See attached water conservation plan.

Letters of Support

See attached letter of support.

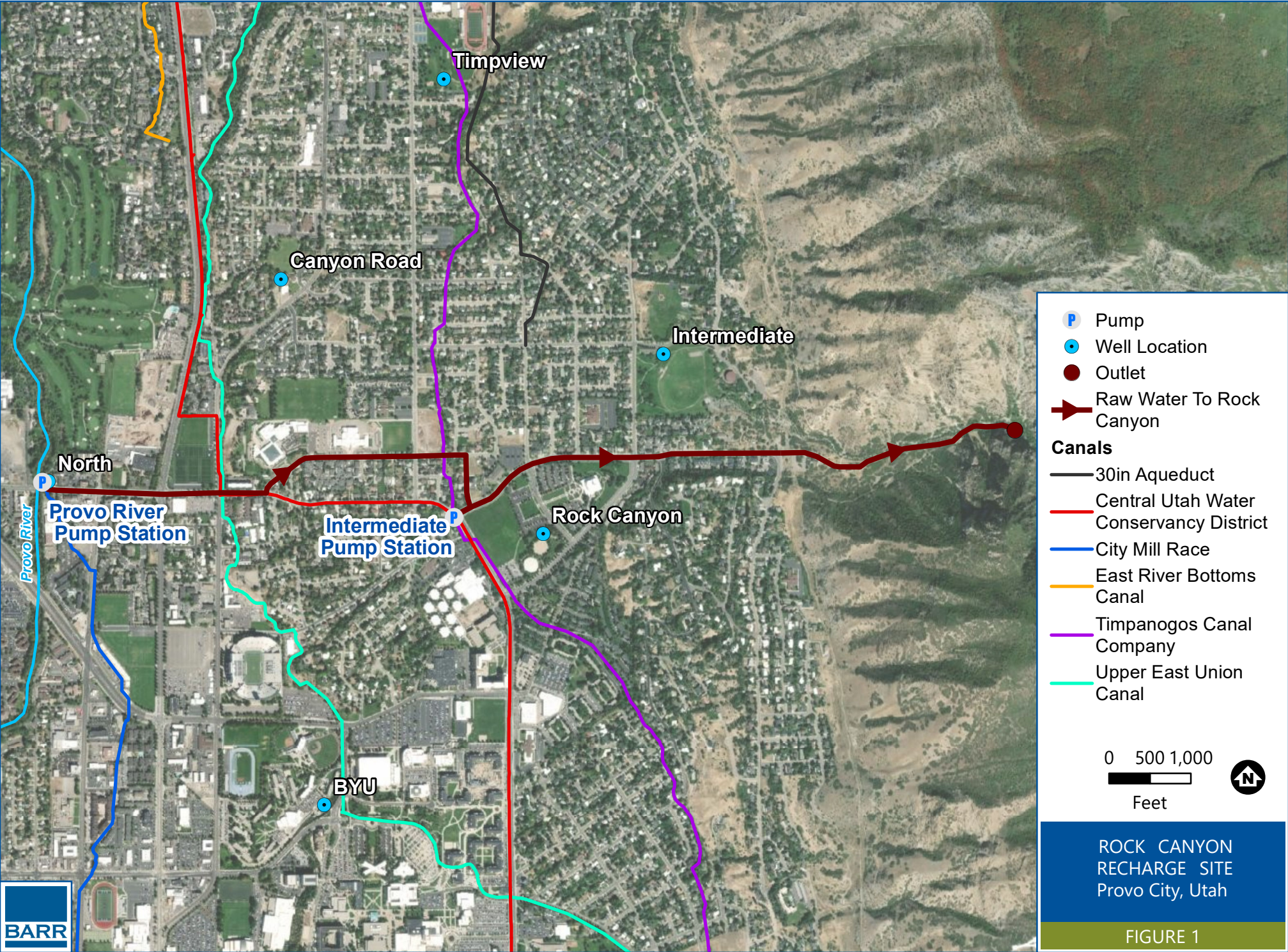
Official Resolution

The official resolution will be submitted to Reclamation within 30 days of the application date.

Attachments

Attachment 1

Figure 1 Rock Canyon Recharge Site



Attachment 3

Letters of Support



TEL (801) 852-6600
320 W 500 N
PROVO, UT 84601

August 3, 2020

Subject: Provo City Parks and Recreation Support for the Provo City Drought Resiliency Grant Proposal for Aquifer Storage and Recovery Project

Dear Mr. Mayhorn and Mr. Reichert,

With this letter I write express support of an effort by Provo City to construct its first Aquifer Storage and Recovery Project in order to secure a sustainable and drought resilient water supply. Provo City is applying for the Drought Resiliency Grant Program funding to help offset the construction cost for its Rock Canyon Aquifer Storage and Recovery project.

Rock Canyon is a treasured site in Provo, Utah and the combination of natural and water resource values will be a unique and dynamic project. Support and active cooperation with this project is a core belief of our Parks and Recreation Department.

The City of Provo, along with much of the Wasatch Front, is experiencing rapid population growth. With population growth comes an increase in water demand and need to secure a long-term, sustainable water supply. However, the aquifers beneath Provo, which are a key part of water supply, have been in decline for decades. At the same time, the State of Utah is in the process of re-adjudicating water for the first time in nearly a century, which could result in significant changes to the volume of water many entities have the right to use in the future. Aquifer storage and recovery has been identified as a key tool in securing a long term sustainable supply through the City's planning efforts and in statewide groundwater resources. ASR will also allow the City to beneficially utilize most, if not all, of its existing water rights.

I fully support the Provo City WaterSMART Drought Response Program application, and thank you in advance for your careful consideration of this project. Should you have any questions or comments, please contact me at 801-369-0267.

Sincerely,

Scott Henderson, Director
Provo Parks and Recreation



METROPOLITAN WATER DISTRICT OF PROVO
1377 South 350 East
Provo UT 84606

**Subject: Metropolitan Water District of Provo Support for the Provo City
Drought Resiliency Grant Proposal for
Aquifer Storage and Recovery Project**

Dear Mr. Mayhorn and Mr. Reichert,

I write today in support of an effort by Provo City to construct its first Aquifer Storage and Recovery Project in order to secure a sustainable and drought resilient water supply. Provo City is applying for the Drought Resiliency Grant Program funding to help offset the construction cost for its Rock Canyon Aquifer Storage and Recovery project.

Metropolitan Water District of Provo's purpose is to assist in helping Provo have access to and use of adequate water supplies.

The City of Provo, along with much of the Wasatch Front, is experiencing rapid population growth. With population growth comes an increase in water demand and need to secure a long-term, sustainable water supply. However, the aquifers beneath Provo, which are a key part of water supply, have been in decline for decades. At the same time, the State of Utah is in the process of re-adjudicating water for the first time in nearly a century, which could result in significant changes to the volume of water many entities have the right to use in the future. Aquifer storage and recovery has been identified as a key tool in securing a long term sustainable supply through the City's planning efforts and in statewide groundwater resources. ASR will also allow the City to beneficially utilize most, if not all, of its existing water rights.

I fully support the Provo City WaterSMART Drought Response Program application, and thank you in advance for your careful consideration of this project. Should you have any questions or comments, please contact me at 801-319-1622.

Sincerely,

E. Daniel Johnson, Manager

Metropolitan Water District, Provo



United States Forest
Department of Service
Agriculture

Uinta-Wasatch-Cache National
Forest
Pleasant Grove Ranger District

390 North 100 East
Pleasant Grove, UT 84062
801-785-3563
Fax: 801-785-6932

File Code: 1580
Date: July 31, 2020

Dear Mr. Mayhorn and Mr. Reichert

I write today in support of an effort by Provo City to construct its first Aquifer Storage and Recovery Project in order to secure a sustainable and drought resilient water supply. Provo City is applying for the Drought Resiliency Grant Program funding to help offset the construction cost for its Rock Canyon Aquifer Storage and Recovery project.

The City of Provo, along with much of the Wasatch Front, is experiencing rapid population growth. With population growth comes an increase in water demand and need to secure a long-term, sustainable water supply. However, the aquifers beneath Provo, which are a key part of water supply, have been in decline for decades. At the same time, the State of Utah is in the process of re-adjudicating water for the first time in nearly a century, which could result in significant changes to the volume of water many entities have the right to use in the future. Aquifer storage and recovery has been identified as a key tool in securing a long term sustainable supply through the City's planning efforts and in statewide groundwater resources. ASR will also allow the City to beneficially utilize most, if not all, of its existing water rights.

I fully support the Provo City Water SMART Drought Response Program application, and thank you in advance for your careful consideration of this project. Should you have any questions or comments, please contact me at 801-796-4881 or Russell.hansonjr@usda.gov.

Sincerely,

RUSSELL L. HANSON
District Ranger





Subject: Rock Canyon Preservation Alliance's Support for the Provo City Drought Resiliency Grant Proposal for Aquifer Storage and Recovery Project

Dear Mr. Mayhorn and Mr. Reichert,

I write today in support of an effort by Provo City to construct its first Aquifer Storage and Recovery Project in order to secure a sustainable and drought resilient water supply. Provo City is applying for the Drought Resiliency Grant Program funding to help offset the construction cost for its Rock Canyon Aquifer Storage and Recovery project.

Rock Canyon Preservation Alliance has a 47-year history of working with Provo City to protect this valuable asset for the community. Our 501c3 foundation organization is led by five Officers, eleven General Board members with the support of a twelve-member Advisory Committee. The larger membership includes 3000+ citizens. We have maintained mutually beneficial relationships with Provo City since the 1970s, working directly with five mayors, various department heads, and city council members. A Provo City representative serves on our Advisory Committee.

Due to the strong working relationship between RCPA and Provo City, RCPA has been granted a conservation easement in the Rock Canyon basin. During the negotiation of the easement, a clause was inserted to include the potential of a future aquifer project. Our board was unanimous in support of this project since we are committed to preserving the watershed for Provo City.

The City of Provo, along with much of the Wasatch Front, is experiencing rapid population growth. With population growth comes an increase in water demand and need to secure a long-term, sustainable water supply. However, the aquifers beneath Provo, which are a key part of water supply, have been in decline for decades. At the same time, the State of Utah is in the process of re-adjudicating water for the first time in nearly a century, which could result in significant changes to the volume of water many entities have the right to use in the future. Aquifer storage and recovery has been identified as a key tool in securing a long term sustainable supply through the City's planning efforts and in statewide groundwater resources. ASR will also allow the City to beneficially utilize most, if not all, of its existing water rights.

Rock Canyon Preservation Alliance fully supports the Provo City WaterSMART Drought Response Program application, and thank you in advance for your careful consideration of this project. Should you have any questions or comments, please contact me at 801-372-3545

Sincerely,

Ginger Woolley

Chair

Rock Canyon Preservation Alliance

Attachment 4

Official Resolution

The official resolution will be submitted to Reclamation within 30 days of the application date

1 RESOLUTION 2020-.

2
3 A RESOLUTION APPROVING THE APPLICATION FOR GRANTS FROM
4 THE BUREAU OF RECLAMATION'S WATERSMART DROUGHT
5 RESPONSE PROGRAM FOR FISCAL YEAR 2021 FOR THE PROVO
6 AQUIFER STORAGE AND RECOVERY PROJECT (20-105)
7

8 WHEREAS, the City of Provo (Applicant) has prepared an application to apply for
9 federal funding from the United States Department of the Interior, Bureau of Reclamation
10 (Bureau) to assist in the funding of the Provo Aquifer Storage and Recovery Project; and
11

12 WHEREAS, the funding opportunity provided by the Bureau is through their Grant
13 Program entitled "WaterSMART Drought Response Program: Drought Resiliency Projects for
14 Fiscal Years 2020 and 2021" and the Funding Opportunity Announcement No. is BOR-DO-20-
15 F002; and
16

17 WHEREAS, the Applicant, if selected will enter into an agreement with the Bureau to
18 carry out the project.
19

20 NOW, THEREFORE, be it resolved by the Municipal Council of Provo City, Utah, as
21 follows:
22

23 PART I:
24

- 25 1. The Council approves the filing of an application for a WaterSMART grant to
26 aid in the implementation of the Provo Aquifer Storage and Recovery Project;
27 and
- 28 2. The Mayor is authorized to certify that the City understands, as an Applicant,
29 that it will work with the Bureau to meet established deadlines for entering
30 into a grant cooperative agreement; and
- 31 3. The Mayor is authorized to certify that the City understands the assurances
32 and certification in the application; and
- 33 4. The Mayor is authorized to certify that the City is capable of providing the
34 amount of funding specified in the application; and
- 35 5. The Mayor is authorized to appoint the City Administrative Officer, or
36 designee, as agent to conduct all negotiations, execute and submit all
37 documents including, but not limited to applications, agreements, payment
38 requests and so on, which may be necessary for the completion of the
39 aforementioned project; and
- 40 6. The Mayor, or presiding officer, is hereby authorized to affix her signature to
41 this Resolution signifying its adoption by the City Council of the City of
42 Provo and the City Recorder, or their duly appointed assistant, is directed to
43 attest thereto.
44

45 PART II:

46 This resolution shall take effect immediately.