Draft Environmental Assessment

for the

CENTRAL WATER PROJECT—
WATER SERVICE AGREEMENT

March 2023

Joint Lead Agencies

Central Utah Water Conservancy District

U.S. Department of the Interior, CUPCA Office

CENTRAL UTAH WATER
CONSERVANCY DISTRICT

Central Water Project – Water Service Agreement

Draft Environmental Assessment

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Central Utah Water Conservancy District

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ABBREVIATIONS AND ACRONYMS

Abbreviation/Acronym	Name
ACHP	Advisory Council on Historic Preservation
AF	acre-feet
AMSL	above mean sea level
APA	Agricultural protection areas
APE	Area of Potential Effects
BMP	Best Management Practice
CAAA	Clean Air Act Amendments
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic feet per second
CUP	Central Utah Project
CUPCA	Central Utah Project Completion Act
CUPCA Office	Central Utah Project Completion Act Office
CUWCD	Central Utah Water Conservancy District
CWP	Central Water Project
DEQ	Utah Division of Water Quality
Distribution Plan	Utah Lake Interim Water Distribution Plan
District	Central Utah Water Conservancy District
DPR	Definite Plan Report
DOI	U.S. Department of the Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
Interior	U.S. Department of the Interior, Central Utah Project Completion Act Office
IPaC	Information for Planning and Consultation
ITAs	Indian Trust Assets
JLAs	Joint Lead Agencies
JSRIP	June Sucker Recovery Implementation Program
M&I	Municipal and Industrial
MBTA	Migratory Bird Treaty Act
MG	million gallons
Mitigation Commission	Utah Reclamation Mitigation and Conservation Commission
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places

Abbreviation/Acronym	Name
PL	Public Law
PRA	Provo River Aqueduct
PRP	Provo River Project
Reclamation	U.S. Bureau of Reclamation
SFHA	Special Flood Hazard Area
SACS	Strawberry Aqueduct and Collection System
SFSP	Spanish Fork – Santaquin Pipeline
SHPO	State Historic Preservation Office
SPC	species of concern
SR	state road
SVP	Strawberry Valley Project
SWPPP	Storm Water Pollution Prevention Plan
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality
UDCC	Utah Data Conservation Center
UDEQ	Utah Department of Environmental Quality
UDOT	Utah Department of Transportation
UDWR	Utah Division of Wildlife Resources
UNHP	Utah Natural Heritage Program
ULS	Utah Lake Drainage Basin Water Delivery System
UPDES	Utah Pollutant Discharge Elimination System
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
ULJEM	Utah Lake Jordanelle Exchange Model
WY	Water Year

CHAPTER 1: PURPOSE AND NEED

1.1 Introduction

The Central Utah Water Conservancy District (District) and the United States Department of the Interior – Central Utah Project Completion Act (CUPCA) Office (Interior), as Joint Lead Agencies (JLAs), are proposing to enter into a water service agreement to utilize up to 6,000 acre feet (AF) annually of available Central Utah Project (CUP) import water for the non-federal Central Water Project (CWP) to offset the CWP's Utah Lake depletions. The JLAs have prepared this Draft Environmental Assessment (Draft EA) to analyze and disclose the effects of the proposed Agreement.

1.1.1 National Environmental Policy Act

This Draft EA presents and evaluates the potential effects of the CWP – Water Service Agreement (Agreement) in order to determine whether it could cause significant impacts to the human or natural environment as defined by the National Environmental Policy Act of 1969 (NEPA, Public Law [PL] 91-190 and 42 USC 4321-4347), the Council on Environmental Quality regulations (CEQ, 40 Code of Federal Regulations [CFR] Parts 1500-1508), and the U.S. Department of the Interior regulations implementing NEPA (43 CFR Part 46).

The JLAs will use the Draft EA process to satisfy disclosure requirements and as a means for public participation mandated by NEPA and the Central Utah Project Completion Act (CUPCA, PL 102-575). The requirements under Section 106 of the National Historic Preservation Act of 1966 (NHPA), Section 7 of the Endangered Species Act of 1973 (ESA), and other state and local regulatory obligations will be satisfied or are not applicable. If the analysis shows no significant impacts associated with implementation of the Agreement, then a Finding of No Significant Impact (FONSI) will be issued by the JLAs. During the Draft EA process, if it is determined that there may be significant impacts, the JLAs would initiate the preparation of an Environmental Impact Statement (EIS) prior to implementing the Agreement.

1.1.2 Joint Lead Agencies

Central Utah Water Conservancy District

The District is a political subdivision of the State of Utah, organized in 1964 under the laws of the State of Utah. The District is the local sponsor of the Central Utah Project (CUP). Under CUPCA legislation, the District acts as a federal agency with respect to environmental requirements (Title II, Section 205(b) of PL 102-575):

> (b) COMPLIANCE WITH ENVIRONMENTAL LAWS AND THE TERMS OF THIS ACT. - Notwithstanding any other provision of this Act, Federal funds authorized under this title may not be provided to the District until the District enters into a binding agreement with the Secretary to be considered a "Federal Agency" for purposes of compliance with all Federal fish, wildlife, recreation, and environmental laws with respect to the use of such funds, and to comply with this Act.

The District entered into such an agreement with the Secretary of the Interior on August 11, 1993.

Central Utah Project Completion Act Office

The CUPCA Office is located in Provo, Utah, and was created in 1993 to oversee completion of the CUP. The CUPCA Office coordinates with the District, the Utah Reclamation Mitigation and Conservation

Commission (Mitigation Commission), the U.S. Bureau of Reclamation (Reclamation), and other key federal and state agencies involved with completion of the CUP.

1.2 Background

1.2.1 Central Utah Project/Central Utah Project Completion Act

The CUP is the State of Utah's largest and most comprehensive federal water resource development project. It moves water from the Colorado River Basin in eastern Utah to the western slopes of the Wasatch Mountain range where population growth and industrial development are occurring rapidly. The CUP also develops and provides water for the Uinta Basin located on the eastern side of the Wasatch Mountains. The CUP provides water for municipal and industrial (M&I) use, irrigation, hydroelectric power, fish and wildlife, conservation, and recreation. Improved flood control and water quality are also among the project benefits. The CUP was authorized as a participating project of the Colorado River Storage Project Act of 1956 to utilize a portion of Utah's allotment and yield of the Colorado River. The CUP was originally divided into six units to facilitate planning and construction: Vernal, Bonneville, Jensen, Upalco (deauthorized), Uinta (deauthorized), and Ute Indian (deauthorized). The Bonneville Unit is currently under construction while Vernal and Jensen units are completed.

The Central Utah Project Completion Act (CUPCA, P.L. 102-575) was enacted on October 30, 1992, and transferred the responsibility for planning and construction activities of the Bonneville Unit of the CUP to the District and placed project oversight with the CUPCA Office of the Department of the Interior. CUPCA also authorized the creation of the Mitigation Commission, which works cooperatively to implement projects to offset environmental impacts caused by the CUP.

Bonneville Unit

The Bonneville Unit collects and diverts water within the Uinta Basin (part of the Colorado River Basin) to the Bonneville and Uinta Basins providing water for Salt Lake, Utah, Wasatch, Juab, and Duchesne Counties, and portions of Summit County, Utah. The Bonneville Unit contains a vast network of reservoirs, aqueducts, tunnels, canals, pipelines, pumping plants, and other conveyance facilities that develop water for irrigation, M&I use, instream flows, and hydropower production (see Figure 1-1). The Bonneville Unit is comprised of six systems: Starvation Collection System, Strawberry Aqueduct & Collection System, Municipal and Industrial System (M&I System), Diamond Fork System, Utah Lake Drainage Basin Water Delivery System (ULS), and Wasatch County Water Efficiency/Daniel Replacement Project. Much of it is completed; the remaining ULS features are currently under construction.

Utah Lake Drainage Basin Water Delivery System

The ULS is the final system of the Bonneville Unit to be constructed. The purposes of the ULS are to convey and deliver a portion of the Bonneville Unit water supply from Strawberry Reservoir to the Wasatch Front Area for M&I, environmental, and temporary agricultural uses. The ULS consists principally of buried pipelines that begin at the terminus of the Diamond Fork System at the mouth of Diamond Fork Canyon. The major components of the ULS include Spanish Fork Canyon Pipeline, Spanish Fork – Provo Reservoir Canal Pipeline, Mapleton – Springville Lateral, Spanish Fork – Santaquin Pipeline (currently under construction), Santaquin – Mona Pipeline (future construction) and, Hydroelectric Powerplants located in Diamond Fork Canyon (future construction).

ULS Environmental Impact Statement

The District, Mitigation Commission, and CUPCA Office completed an EIS in the Fall of 2004 and subsequent Records of Decisions (RODs) were signed by Interior in December 2004 and the Mitigation Commission in January 2005. The ULS EIS analyzed and documented the environmental effects in preparation for the design and construction of the ULS. The ULS EIS describes how exchange water (see discussion in Section 1.4 Exchanges for more information) reaches Utah Lake through transbasin (1) instream flow augmentation, (2) from water conservation projects completed under Section 207 of CUPCA, and (3) Bonneville Unit return flows. Supporting information on each is contained in the ULS EIS and summarized below.

Transbasin Instream flows are described in the ULS EIS for the Sixth Water/Diamond Fork Creeks which reach Utah Lake via the Spanish Fork River.

Water conservation goals established by Section 207 of the CUPCA legislation are outlined in the ULS EIS. Section 1.4.9.4 *Conserved Water* starting on page 1-81 describes how the conserved water from specific projects could be used for instream flows to Hobble Creek and the Provo River.

Return flows are diverted water that returns to the natural system (i.e., surface or ground water) after its intended use. Return flows from the Bonneville Unit are discussed throughout the ULS EIS. On pages 1-33 and 1-78 respectively stating:

> "Return flows to Utah Lake from water delivered under the ULS would total approximately 9,660 acre-feet. These return flows would become part of the ULS water supply by exchange to Jordanelle Reservoir for delivery to M&I users in Salt Lake County."
>
> "Bonneville Unit M&I System water delivered from Jordanelle Reservoir to Salt Lake, Utah and Wasatch counties and Bonneville Unit agricultural water delivered to Wasatch and Summit counties would return flows in the form of municipal wastewater from culinary water, drainage from M&I secondary water used for outdoor irrigation, and drainage from sprinkler and flood irrigation practices. Return flows accruing to the hydrologic system are either credited as Bonneville Unit return flows or are considered natural flows in the system. The distinction is specified by the State Engineer in the administration of various project water rights, whether they involve transbasin water, basin water, or a combination of both. Return flows that are credited as Bonneville Unit return flows are available to the project to be used for downstream deliveries or for Bonneville Unit exchanges."

Once these transbasin flows reach Utah Lake, they can be accounted as part of the Strawberry/Utah Lake/Jordanelle Exchange.

Municipal and Industrial System

The M&I System of the Bonneville Unit consists of Jordanelle Reservoir, Olmsted Diversion and Flowline, Olmsted Hydroelectric Power Plant, Alpine Aqueduct, Jordan Aqueduct, and reconstruction of three reservoirs and the stabilization of the 12 upper lake reservoirs located in the High Uintah Mountains at the headwaters of the Provo River. The M&I System provides an annual water supply of over 90,000 AF to northern Utah, Wasatch, and Salt Lake Counties for municipal and industrial use and to assist in the recovery efforts of threatened June sucker on the Provo River. Additionally, the M&I System provides an annual water supply for irrigation purposes in Summit and Wasatch Counties.

Jordanelle Dam and Reservoir

Construction of the Jordanelle Dam was completed in the spring of 1993 creating the Jordanelle Reservoir. The dam and reservoir are principal features of the M&I System and are located on the Provo River north of Heber City. The reservoir collects, stores, and delivers water for multiple purposes. Jordanelle Reservoir has capacity of 314,006 AF with a surface area of 3,024 acres at the top of active storage at an elevation of 6,166.40 feet above mean sea level (AMSL). The reservoir has an additional 49,348 AF of space for flood storage. Jordanelle Reservoir is owned by the United States and is operated by the District who administers the delivery of water stored in the reservoir to its users, which are comprised of irrigation companies as well as municipal water districts. These deliveries are critical to the water supply for much of the Wasatch Front.

Jordanelle Reservoir stores Provo River water out of its water right priority. The stored water is subject to use and may be called upon by water right holders in Utah Lake. The stored water becomes available for administration by the District through exchange of other water rights or conversion as permitted in the Utah Lake Interim Water Distribution Plan.

M&I System Environmental Documents

An environmental study was completed in 1979 in preparation for the construction of the M&I System. The M&I System Environmental Statement (M&I System ES) approved in 1979 addresses the need for an exchange between Strawberry Reservoir, Utah Lake, and Jordanelle Reservoir. It states:

> "Strawberry Reservoir would provide the interim source of most of the water supply, and this supply would be exchanged through Utah Lake to Jordanelle Reservoir under the proposed plan … the water withheld at Jordanelle would have to be replaced for its present use at the [Utah] lake. This replacement or exchange would be made by augmenting an existing water import system in which water from Strawberry Reservoir would be released through the existing Strawberry Tunnel and then down the interconnected Sixth Water Creek, Diamond Fork, and the Spanish Fork River to Utah Lake".

A Final Supplement to the M&I System Final Environmental Statement was completed in 1987 to address changes to the M&I System approved in the M&I System ES.

Strawberry Reservoir

Strawberry Reservoir is part of the Strawberry Aqueduct and Collection System (SACS) of the Bonneville Unit. It is a high mountain reservoir located in Wasatch County in the Colorado River Basin, which was originally constructed in 1908 as part of the federal Strawberry Valley Project. The reservoir was enlarged to its current capacity of 1,106,500 AF with the construction of Soldier Creek Dam and is now a CUP feature. Strawberry Reservoir is a popular location for fishing, boating, camping, and other outdoor activities and is fed by many natural creeks and streams as well as the 37-mile collection system. SACS is the largest inflow into the reservoir and diverts water that would otherwise flow to the Colorado River. Strawberry Reservoir is owned by the United States and is operated by the District who administers the delivery of water stored in the reservoir to its users, which are comprised of irrigation companies as well as municipal water districts. These deliveries are critical to the water supply for much of the Wasatch Front and the Uintah Basin. Some of the water stored in Strawberry Reservoir is also released to the Strawberry River for instream flows, but most is stored for delivery to the Bonneville Basin.

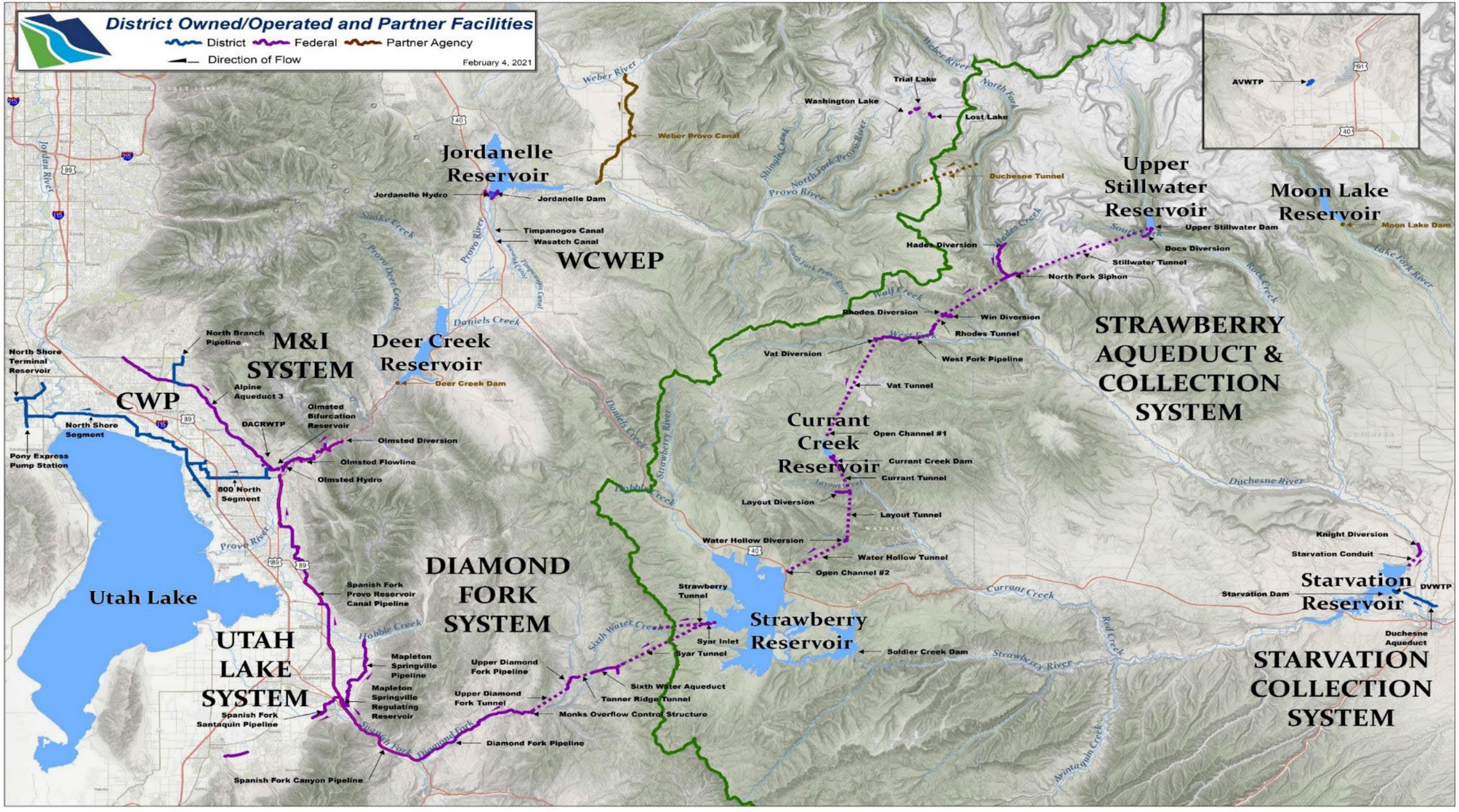

FIGURE 1-1: BONNEVILLE UNIT OF THE CUP AND CWP

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1.2.2 Central Water Project

In 2005, the District initiated a non-federal water development project called the Central Water Project (CWP). The CWP was designed and constructed to help meet the M&I water needs of the growing communities of northern Utah County, including Vineyard, Lehi, Saratoga Springs, and Eagle Mountain and in the Jordan Valley Water Conservancy District (JVWCD) service area. Water for the CWP consists of the District's purchase of the Geneva Steel water rights and other non-federal District owned surface water rights on the Provo River. The CWP water rights are anticipated to yield approximately 53,300 AF annually for delivery to its customers at full buildout. The CWP delivery system is shown in Figure 1-2.

The District enters into contracts with all their CWP entities prior to delivery. Each contract has depletion[1] limitations that require that they return a specific amount of water, after its intended use, back to the natural water system (i.e., Utah Lake). The depletion limitations range between 50-100 percent, depending on the nature of use and location of use. CWP M&I water is typically returned to the natural system after it has been used to meet M&I needs through water treatment facilities.

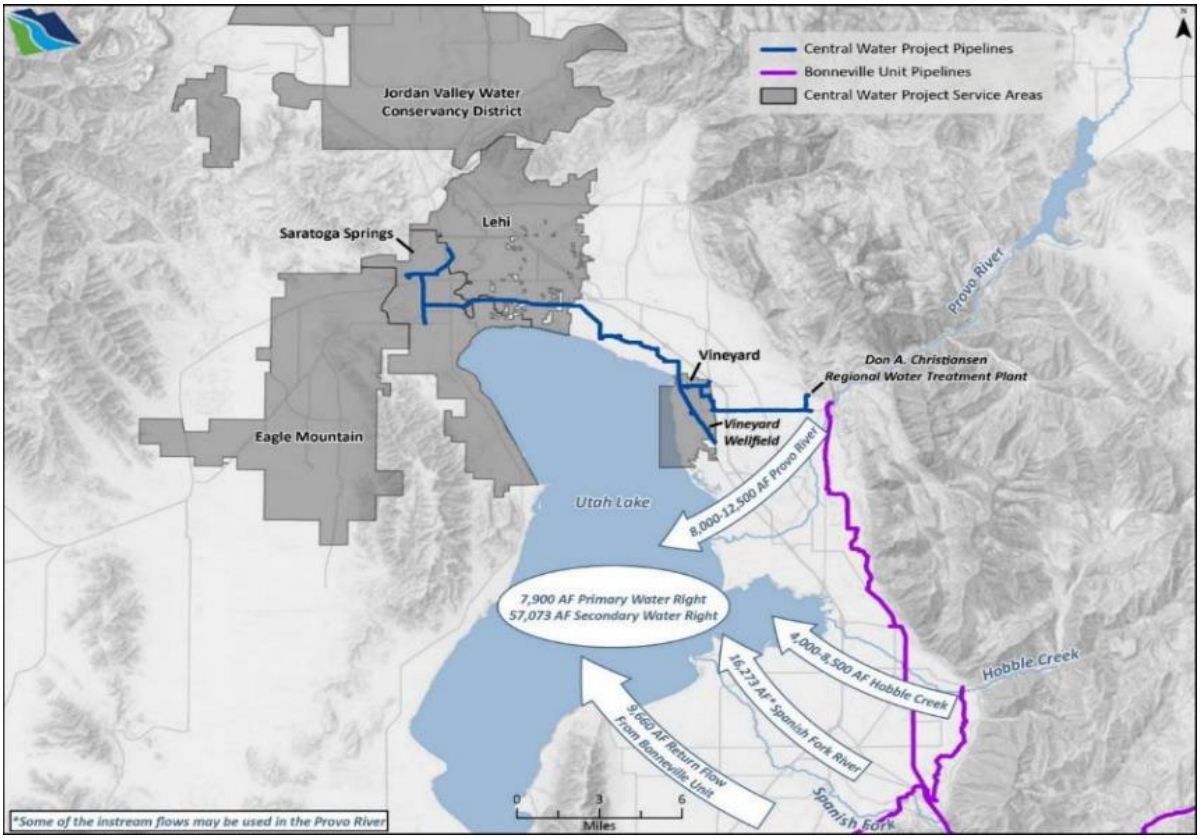

FIGURE 1-2: CWP PIPELINES AND CUP IMPORT WATER VOLUMES

[1] Depletions are a portion of the water withdrawn from a surface or groundwater source that is consumed by particular use(s). This water does not return to a natural water source or another body of water.

1.3 Utah Lake

Utah Lake is the largest freshwater body in the State and is located in the center of Utah Valley. It is approximately 148 square miles and is bound by municipalities and agricultural lands on the north, east, and south shorelines and Lake Mountain to the west. The lake's main tributaries are the Provo River, Spanish Fork River, Hobble Creek, and American Fork River. Naturally occurring springs, groundwater, and treated wastewater from adjacent treatment facilities contribute to the flow entering Utah Lake. The Jordan River is Utah Lake's only natural river outlet and is a tributary to the Great Salt Lake. Evaporation also accounts for a large volume of the lakes' outflow.

1.3.1 Utah Lake Interim Water Distribution Plan

Water rights and distributions of water from Utah Lake are managed under the Utah Lake Interim Water Distribution Plan (Distribution Plan) and are administered by the State Engineer/Utah Division of Water Rights. The purpose of the Distribution Plan, dated November 1992, is to establish a general framework within which the Utah Lake Drainage Basin water rights could be administered including the rights on the Provo River, Spanish Fork River, Jordan River, Utah Lake, among other sources including transbasin deliveries (CUP import water). It was prepared in response to growth along the Wasatch Front and changes to water usage in the area since the Morse and Booth decrees in the early 1900s. The Distribution Plan manages water rights as one system and considers the relationship of storage rights in Utah Lake and upstream reservoirs.

Utah Lake is used as a storage reservoir for irrigation companies in the Salt Lake Valley and for federal water projects. At the time of implementing the Distribution Plan, transbasin diversions from the Colorado River Basin to the Bonneville Basin amounted to over 300,000 AF annually from the federal Provo River Project and CUP. The Distribution Plan dedicates the first 125,000 AF of active storage capacity in Utah Lake for primary storage rights to satisfy the diversion requirement of the primary water rights. The Strawberry/Utah Lake/Jordanelle Exchange (described in Section 1.4 Exchanges) follows requirements of Bonneville Unit water rights and the Utah Lake Interim Water Distribution Plan.

1.3.2 Compromise Elevation

Compromise elevation is the maximum legal storage elevation in Utah Lake. It was first established in 1885 and has since been revised in 1985 to its current elevation of 4489.045 feet AMSL. When the water level in the lake is at and above this elevation the control gates at the mouth of the Jordan River (located where Utah Lake flows into the Jordan River) must be fully opened with the exception that the maximum flows in the river cannot be exceeded. Utah Lake has a total volume of 870,000 AF with an active storage volume of 710,000 AF at the compromise elevation.

1.3.3 Primary Storage

Primary storage is the first 125,000 AF of active storage in Utah Lake, which is set aside to satisfy the diversion requirement of the primary water rights. It is legal storage use associated with a water right and is not subject to call or use by other right(s). Primary storage can be diverted and used in accordance with the right in Utah Lake in years of successive drought.

1.3.4 System Storage

System storage is the total active storage in Utah Lake minus primary storage, including water that can be stored out of priority in upstream reservoirs (i.e., Deer Creek Reservoir, Jordanelle Reservoir). The total maximum volume of system storage is 585,000 AF, but actual storage volume varies throughout the year. The water stored in upstream reservoirs is water that would naturally reach Utah Lake. System storage water that is stored upstream is subject to call and use by the water right holder to satisfy the diversion requirements of primary and secondary Utah Lake storage rights.

1.3.5 Priority Storage

Priority storage is legal storage under a given water right. Such water stored is not subject to call by other right holders and can be diverted and used in accordance with the right.

1.3.6 Conversion Line

The conversion line is the total volume of system storage in Utah Lake, Jordanelle Reservoir, and Deer Creek Reservoir at which system storage may be converted to priority storage. This is a line that corresponds to the annual diversion requirements of the primary and secondary water rights in Utah Lake. Once the conversion line is reached, system storage in the upstream reservoirs can convert to priority storage because there is sufficient water in Utah Lake to meet their diversion requirements.

Lowering the Conversion Line

There is a total of 64,973 AF of primary and secondary water rights in Utah Lake that are held by the JLAs and Interior for CUP uses. These water rights can also be used to lower the conversion line by not releasing them downstream and thus the system storage conversion line is lowered by the volume of those water rights' diversion requirement. The JLAs can communicate to the State Engineer that it intends to hold their primary and secondary water rights in Utah Lake and request that the State Engineer lower the conversion line converting system storage to priority storage.

1.3.7 Water Balance

Utah Lake has experienced both times of drought and floods. In times of drought, the lake has seen a level more than nine feet below the compromise elevation. For flood events, the level of Utah Lake can rise more than five feet above the compromise elevation which floods surrounding lands and impacts areas adjacent to the Jordan River. Utah Lake will always be subject to drought and flooding cycles as seen throughout its history.

Inflows to Utah Lake consist of different sources including natural streamflow, releases from Deer Creek Reservoir and Jordanelle Reservoir, treated effluent from wastewater treatment plants, seeps, drains, and groundwater, and from direct precipitation. Much of the inflow to the lake is not metered or gaged. Surface water accounts for approximately 70 percent of its inflow while groundwater and precipitation each provide 15 percent (ULS Definite Plan Report (DPR) – Water Supply Appendix, Volume 6-Utah Lake and Jordan River, page 3-1).

Utah Lake outflows consist of irrigation and M&I deliveries (i.e., through the Jordan River), spills (when the lake is full and reaches the compromise elevation), and evaporation. Releases from the lake average approximately 370,000 AF and about 340,000 AF evaporates annually (ULS Definite Plan Report (DPR) – Water Supply Appendix, Volume 6-Utah Lake and Jordan River, page 3-1).

1.3.8 Water Surface Elevations

The water surface elevation of Utah Lake fluctuates annually depending on the hydrologic conditions within its watershed, water use and deliveries upstream and downstream of the lake, and evaporation. Figure 1-3 shows the fluctuation in Utah Lake surface elevations from the years 1884 and 2021. The green line is the lake compromise elevation, and the red line is the inactive storage.

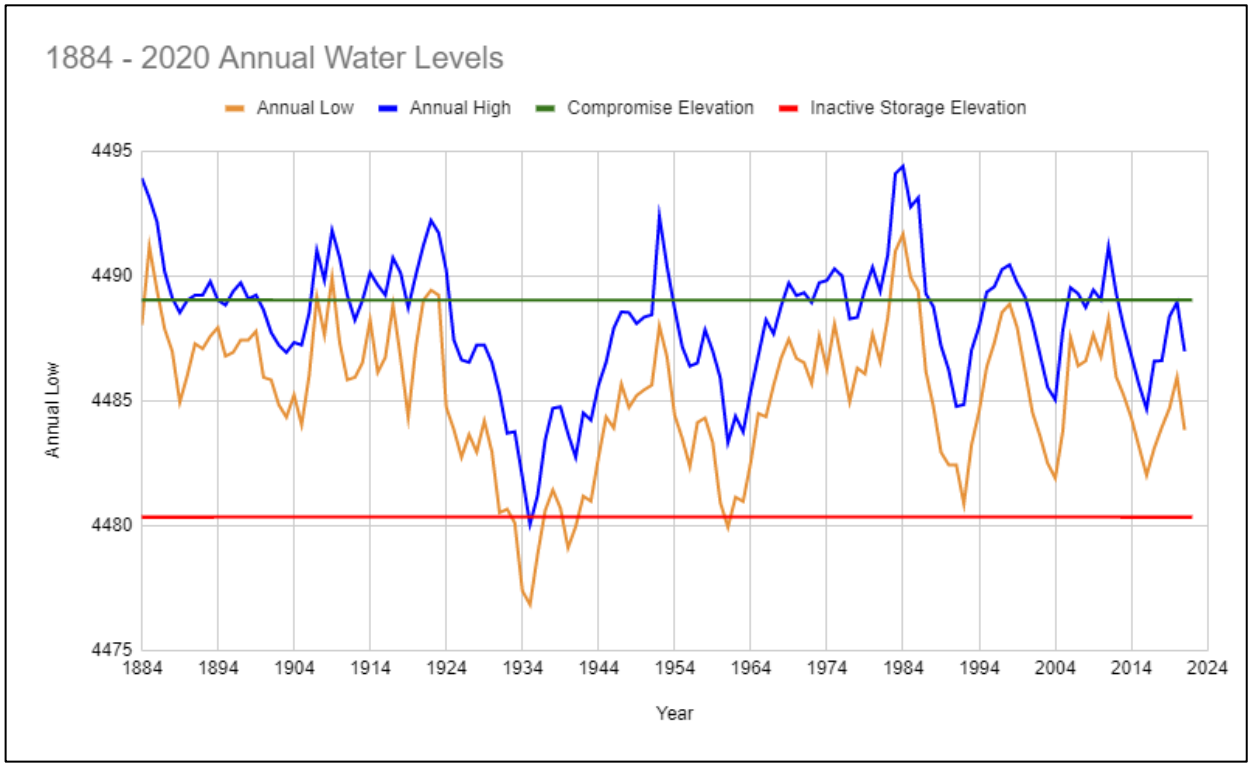

FIGURE 1-3: 1884-2020 ANNUAL WATER SURFACE ELEVATIONS IN UTAH LAKE

1.3.9 Spills to the Jordan River

Once water in Utah Lake reaches the compromise elevation (4489.045 feet AMSL), the lake is considered full. At this level per the 1985 Compromise Agreement, the control gates at the mouth of the Jordan River must be fully opened with the exception that the maximum flows in the river cannot exceed 3,400 cubic feet per second (cfs) at 2100 South in Salt Lake County and cause flooding. Since 1995, about 12% of the time the lake was at or above the compromise elevation.

Figure 1-4 shows the Utah Lake elevations along with the compromise elevation (red line) between the years 1995 and 2019. This figure shows periods of drought (i.e., 2000-2004 and 2012-2018) as well as periods of normal or above normal hydrologic conditions (i.e., 1997-1999 and 2011). Figure 1-4, as well as Figure 1-3, illustrate the variable nature of the hydrologic system and how it effects, along with other factors, Utah Lake's volume, water surface elevation, and spills to the Jordan River.

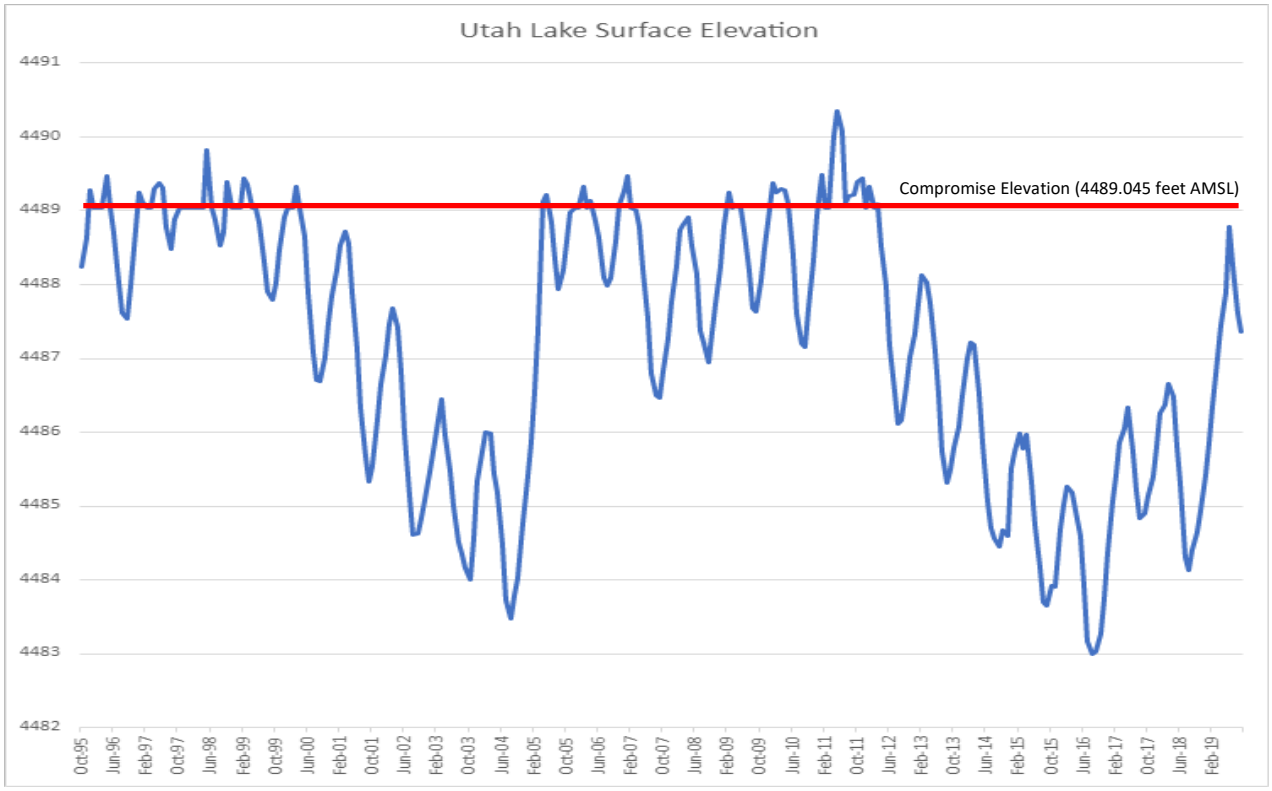

FIGURE 1-4: MONTHLY UTAH LAKE ELEVATIONS BETWEEN 1995 TO 2019

1.3.10 Utah Lake Jordanelle Exchange Model

The Utah Lake Jordanelle Exchange Model (ULJEM) was developed by Precision Water Resources Engineering under contract with the District. The ULJEM is a RiverWare© model using a monthly timestep with the capability to simulate Jordanelle Reservoir, Deer Creek Reservoir, Strawberry Reservoir releases, and Utah Lake operations. The main purpose of the ULJEM was to evaluate Utah Lake and operations of the Bonneville Unit of the CUP including the Strawberry/Utah Lake/Jordanelle and the Utah Lake/Jordanelle Exchanges as described in section 1.4 in this document and the Utah Lake Management Plan.

A sensitivity analysis was conducted prior to using the ULJEM for evaluating the use of excess CUP import water for offsetting depletions for the CWP. Seven different operational and hydrology parameters (e.g., use of primary Utah Lake water rights, hydrology, instream flow requirement in Sixth Water and Diamond Fork, increased groundwater depletions near Utah Lake, CUP water use in South Utah County, CUP import water use for other purposes, Provo City storage in Jordanelle) within the Utah Lake Basin were used for the ULJEM sensitivity analysis to determine if the ULJEM was responding appropriately. Based on the sensitivity analysis, it was determined that the ULJEM reasonably simulates operations in Utah Lake and the resiliency of the Strawberry/Utah Lake/Jordanelle Exchange.

The ULJEM was then run to study and analyze the use of a portion of the excess CUP Import water for the Proposed Action and how Utah Lake responds to this use. The ULJEM produced data associated with the Proposed Action and detailed how the Proposed Action would affect Utah Lake. Specifically, the ULJEM showed the following affects to Utah Lake:

- Volume and water surface elevation

- Length and volume of spills to the Jordan River
- Volume of evaporation of the CUP import water
- System Storage volume
- CUP import water volume and amounts used for the Strawberry/Utah Lake/Jordanelle exchange
- Primary and Secondary water rights Utah Lake

The primary purpose of the CUP import water is for the Strawberry/Utah Lake/Jordanelle Exchange. The ULJEM was designed and developed to safeguard the availability of sufficient CUP import water for the Strawberry/Utah Lake/Jordanelle Exchange. The ULJEM showed that 6,000 AF of excess import water can be used for the Proposed Action without affecting the CUP import water primary purpose which is the Strawberry/Utah Lake/Jordanelle exchange. Any additional projects or agreements that would utilize any of the excess CUP import water, beyond its intended and primary purposes as described, would require that the use have no effect to the Strawberry/Utah Lake/Jordanelle exchange. Additional NEPA documentation and approvals would be required, as well as entering into a contract or agreement with Interior for its use and payment, and adherence to the requirements of Utah water right law.

1.3.11 CUP Import Water Delivered to Utah Lake

CUP import water is a transbasin diversion redirected from Colorado River Basin tributaries and delivered into the Bonneville Basin. The CUP import water is delivered from Strawberry Reservoir to Utah Lake and can be used to replace the Bonneville Unit M&I System water stored in Jordanelle Reservoir that would naturally flow to the lake. Up to 42,433 AF of CUP import water is delivered to Utah Lake each year. The degree to which the CUP import water that is not used to replace or exchange the Bonneville Unit M&I System contributes to Utah Lake's water surface elevation depends on the lake's volume and the volume of unused CUP import water being stored in the lake (see Section 1.4.2 Strawberry/Utah Lake/Jordanelle Exchange for detailed discussion of CUP import water deliveries to Utah Lake).

Principal Purpose of CUP Import Water

Once the CUP import water reaches Utah Lake, its primary purpose is to be used for the Strawberry/Utah Lake/Jordanelle Exchange as described. The Strawberry/Utah Lake/Jordanelle Exchange was developed as part of the Bonneville Unit M&I System and its impacts were evaluated in the M&I System EA (see page A-2).

> "Jordanelle Dam would be constructed on the Provo River about 38 miles upstream from Utah Lake and would store flows of the river for project use. Since all but flood flows in high runoff years are already appropriated by downstream users, including those users of storage from Utah Lake, the water withheld at Jordanelle would have to be replaced for its present use at the lake. This replacement or exchange would be made by augmenting an existing water import system in which water from Strawberry Reservoir and then down the interconnected Sixth Water Creek, Diamond Fork, and the Spanish Fork River to Utah Lake."

The primary purpose of the CUP import water for exchange was further solidified along with its importance to the CUP water supply in the ULS EIS. On page 1-77 it states:

> "Approximately 84,510 acre-feet would be required in Utah Lake to complete the exchange to Jordanelle Reservoir. This includes: 40,310 acre-feet that would be released from Strawberry Reservoir as described above; 9,660 acre-feet of Bonneville Unit water return flows to Utah Lake; and DOI acquiring the District's secondary water rights in Utah Lake to yield a firm average annual of at least 34,540 acre-feet. The

exchanged water would be stored in Jordanelle Reservoir for M&I delivery to Salt Lake County and northern Utah County under existing contracts."

Secondary Benefits

The CUP import water provides instream flows in the Provo River, Hobble Creek, Sixth Water/Diamond Fork Creeks as it makes its way to Utah Lake to be stored. Once it reaches the lake it also provides secondary environmental benefits to Utah Lake. The import water is additional water to Utah Lake that would otherwise not be in the lake. This benefits the aquatic wildlife, water quality, and other resources found in the lake, including the threatened June sucker.

Natural Losses of CUP Import Water

Natural losses of CUP import water once in Utah Lake occur from evaporation and spills to the Jordan River.

Evaporation

Utah Lake losses about 340,000 AF annually from evaporation. The CUP import water is subject to incremental evaporation losses in the lake. Table 1-1 shows the evaporation losses of the CUP import water for Water Years[2] (WY) 2016 through 2021. The calculated evaporation losses would be greater without the implementation of the Distribution Plan and applying incremental evaporation as defined within this plan.

TABLE 1-1: CUP IMPORT WATER EVAPORATION LOSSES IN UTAH LAKE (AF)

WY2016	WY2017	WY2018	WY2019	WY2020	WY2021	Total Evaporation Loss (2016-2021)
14,566	11,580	13,850	12,226	12,492	19,186	**83,900 (AF)**

Spills to the Jordan River

The CUP import water is stored on a space available basis in Utah Lake. Once the lake level reaches the compromise elevation, it is considered full, and the Jordan River gates are fully opened releasing lake water to the river. The CUP import water is the first water to spill from Utah Lake and is thereafter lost for its intended purpose.

1.4 Exchanges

Utah Lake is a key component for the operation of the M&I System of the CUP. Jordanelle Reservoir is located on the Provo River about 38 miles upstream of the lake. The reservoir stores and delivers Provo River water (along with water diverted from the Duchesne and Weber River Basins) that would otherwise naturally flow into Utah Lake. In order for water to be stored in Jordanelle Reservoir and delivered to northern Utah and Salt Lake Counties, an exchange of water transaction is required, and Utah Lake is the centerpiece of this exchange. Utah water law defines an exchange as a release of water into a stream, reservoir, or other body of water in exchange or replacement for a like quantity withdrawn at another point. For Utah Lake, an exchange is needed for water stored in the reservoirs above because the lake water rights are senior to the Jordanelle Reservoir storage rights.

[2] The Water Year begins on November 1st and runs through October 31st.

Over 107,000 AF of exchange water is available annually in Utah Lake. The exchange can be made from two transactions.

- Use of primary and secondary Utah Lake water rights owned by the District and Interior (known as the Utah Lake/Jordanelle Reservoir Exchange)
- Use of CUP import water delivered from Strawberry Reservoir to Utah lake (known as the Strawberry/Utah Lake/Jordanelle Exchange)

Both exchange methods are described below.

1.4.1 Utah Lake/Jordanelle Reservoir Exchange

The JLAs hold 64,973 AF of primary and secondary water rights in Utah Lake, and both are available annually. These water rights can be used for an exchange of storage water from Utah Lake to Jordanelle Reservoir independently of the CUP import water delivered from Strawberry Reservoir. This is called the Utah Lake/Jordanelle Reservoir Exchange. Interior holds a primary water right of 7,900 AF in Utah Lake which is not subject to shortages and the District holds 57,073 AF of secondary water rights[3] in the lake. Both the primary and secondary (secondary water rights are subject to shortages as determined by the State Engineer) water rights can be used for the Utah Lake/Jordanelle Reservoir Exchange. They can also be used to lower the Utah Lake conversion line. Often, the primary and secondary Utah Lake water rights are applied towards the exchange prior to the CUP import water because, unlike the CUP import water, the water rights do not accumulate and are not lost when Utah Lake spills to the Jordan River or due to evaporation.

1.4.2 Strawberry/Utah Lake/Jordanelle Exchange

The JLAs deliver CUP import water from Strawberry Reservoir to Utah Lake which can be used to replace the Provo River system water stored in Jordanelle Reservoir. The CUP import water is a transbasin delivery from the Colorado River Basin into the Bonneville Basin and can be fully consumptive (water that is consumed or used up and does not return to a natural water source). This water, once in Utah Lake, is subject to evaporation losses and spills to the Jordan River when the lake reaches the compromise elevation (see discussion Compromise Elevation). Unused CUP import water accumulates in Utah Lake on a space available basis. The JLAs convey approximately 42,433 AF annually of CUP import water by way of three different deliveries – augmented instream flows, conserved water from projects authorized under Section 207 of CUPCA, and Bonneville Unit return flows.

Instream Flows

Approximately, 16,273 AF of CUP import water consists of instream flows delivered from Strawberry Reservoir to Sixth Water and Diamond Fork Creeks during the non-irrigation season. This water is delivered through the Strawberry Tunnel and the Sixth Water Flow Control Structure which is part of the Diamond Fork System. Sixth Water and Diamond Fork Creek instream flow rates are mandated by CUPCA legislation but were recently adjusted downward as part of the Diamond Fork Environmental Update Project (2022). Sixth Water Creek flows into Diamond Fork Creek, which discharges into the Spanish Fork River and flows into Utah Lake. The instream flow volume (about

[3] The District will deed these water rights over to the Interior upon them being fully developed and certificated by the State Engineer.

16,273 AF) varies from year to year depending on the hydrologic conditions in the Diamond Fork drainage basin.

The JLAs, along with the Mitigation Commission, have entered into an agreement to redistribute the difference between the higher CUPCA mandated volumes (60 cfs) and the newly reduced instream volume (40 cfs) in Diamond Fork Creek for use in the Provo River. These flows are known as the Redistributed Instream Flows. The Redistributed Instream Flow volume is anticipated to range between 5,300 AF and 6,500 AF and can be delivered from either Jordanelle or Strawberry Reservoirs. When the Redistributed Instream Flows are delivered from Strawberry Reservoir to the Provo River (through the Diamond Fork System and ULS), the Redistributed Instream Flows are considered import water and can be used for the Strawberry/Utah Lake/Jordanelle Exchange. If the Redistributed Instream Flows are delivered from Jordanelle Reservoir, they are not considered CUP import water.

Conserved Water from Section 207 of CUPCA

Some of the conserved water that can be used for the exchange is a result of projects authorized under Section 207 of CUPCA as described below.

Provo River Aqueduct Enclosure

8,000 AF of conserved water has been obtained by Interior for the Provo River from the Provo River Aqueduct (PRA) Enclosure Project. This CUP import water can be delivered from Strawberry Reservoir and discharged into the Provo River near the mouth of Provo Canyon. When delivered from Strawberry Reservoir, the water is carried through the Diamond Fork System and ULS pipelines and features. The PRA (historically called the Provo Reservoir Canal and Murdock Canal) was a canal system that experienced large water losses until it was enclosed within a pipeline. This water assists the recovery efforts for the threatened June sucker.

South Utah County Projects

CUP import water has been obtained from the completion of seven conservation projects in Southern Utah County. A total of 8,500 AF of conserved water has been returned to Interior to assist with the recovery efforts for the threatened June sucker. Of the 8,500 AF, a minimum of 4,000 AF annually is to be delivered to Hobble Creek and a maximum of 4,500 AF can be delivered to the Provo River. This water is delivered to Hobble Creek and the Provo River from Strawberry Reservoir through the Diamond Fork System and ULS.

Bonneville Unit Return Flows

Up to 9,660 AF of return flow is estimated as CUP import water in Utah Lake. The Bonneville Unit return flows come from the use of up to 27,590 AF of CUP M&I water delivered from Strawberry Reservoir and used in Southern Utah County in the future[4]. After its intended use, approximately 35% (as determined by the State Engineer) of the 27,590 AF returns to Utah Lake and can be used for the Strawberry/Utah Lake/Jordanelle Exchange. The delivery of the full volume used to calculate

[4] Currently, some of this water is temporarily being used in Southern Utah County as agricultural water.

the Bonneville Unit Return Flows has not yet occurred because the pipeline that will deliver this water is currently under construction.

Summary of CUP Import Water Between 2016-2021

Up to 42,433 AF of CUP import water can be delivered to Utah Lake annually through augmented instream flows and return flows. After being imported to the lake, this water may be used for the Strawberry/Utah Lake/Jordanelle Exchange and for other current or future project purposes. Table 1-2 provides a summary of CUP import water delivered to Utah Lake, evaporation losses, spills to the Jordan River, the volume used for the exchange, and the available exchange water.

TABLE 1-2: CUP IMPORT WATER DELIVERED TO UTAH LAKE AND USED FOR THE EXCHANGE (AF)

	WY2016	WY2017	WY2018	WY2019	WY2020	WY2021
Accumulated and Unused CUP Import Water Stored from Previous Year(s)	71,979	72,898	81,719	93,423	126,563	114,483
Instream Flows delivered from Strawberry Reservoir	26,929	15,207	20,090	40,164	21,658	27,074
Bonneville Unit Return Flows	5,082	5,194	5,464	5,202	5,137	6,425
Evaporation Losses	(14,566)	(11,580)	(13,850)	(12,226)	(12,492)	(19,186)
Spills to the Jordan River	0	0	0	0	(26,383)	0
Total Available for Exchange	89,424	81,719	93,423	126,563	114,483	128,796
Total Used for Exchange	(16,526)	0	0	0	0	0
Total Available CUP Import Water in Utah Lake	72,898	81,719	93,423	126,563	114,483	128,796

Available CUP Import Water

On October 31, 2022 (end of WY 2022), Utah Lake's volume was approximately 325,000 AF which, at that time, was only about 37% full. In addition, the lake's level was over six feet below the compromise elevation. Also at that same time, there was approximately 125,000 AF of CUP import water being stored in the Utah Lake. This calculates to about 38% of Utah Lake's volume on October 31, 2022. Extended and severe drought in the western United States has affected Utah Lake and other water bodies. There are several factors that contribute to this large volume of CUP import water in Utah Lake:

- The Utah Lake/Jordanelle Reservoir Exchange has been fulfilled by using the primary and secondary Utah Lake water rights held by the District and Interior (see discussion on Priority Use of CUP Import Water). These water rights[5] are applied first to the exchange prior to the use of the CUP import water. If these water rights are not sufficient, then the CUP import water is applied as was the case in 2016. In this instance, the exchange volume used was less than 17,000 AF.

[5] The primary and secondary Utah Lake water rights can also be used to lower the conversion line.

- Unlike the primary and secondary water rights in Utah Lake that reset after each water year, the unused CUP import water accumulates over time and from year to year. The CUP import water is the first water to spill out of the lake once it is filled to its compromise elevation. It has not spilled since the spring of 2020 (see Table 1-1) and this water has been accruing since then.

Since 2016, the CUP import water has been used once for the exchange because the secondary water rights were cut by the State Engineer. In 2016, the State Engineer suspended use of Utah Lake secondary water rights in mid-August. Since the primary and secondary water rights could not fulfill the Utah Lake/Jordanelle Reservoir Exchange, the JLAs used 16,526 AF of the CUP import water that year. However, in the years 2017 through 2021, no CUP import water was used for the exchange.

Priority Use of CUP Import Water

Once the CUP import water reaches Utah Lake, its main purpose and priority is to complete the Strawberry/Utah Lake/Jordanelle Exchange. As discussed, the exchange can be made with either the Utah Lake primary and secondary water rights and/or with the CUP import water. When the exchange is needed from Jordanelle to Utah Lake, the JLA's first apply the primary and secondary Utah Lake storage rights. If these water rights are not sufficient, then the CUP import water is applied.

1.5 Proposed Action

The Proposed Action involves the District entering into a water service agreement with Interior to utilize up to 6,000 AF annually of available CUP import water to offset CWP Utah Lake depletions.

1.5.1 CWP Utah Lake Depletions

The District currently delivers and provides CWP water, under contract, to Vineyard City, Lehi City, Saratoga Springs, Eagle Mountain, JVWCD, and PacifiCorp. The CWP water rights delivered to these entities originate from either the Provo River or groundwater that is pumped at the Vineyard Wellfield. CWP water sources have a connection to Utah Lake. CWP water rights have a depletion limitation to Utah Lake that must be offset since less water would return to the lake when CWP contracts are under full demand. The contracts provide an amount of water each entity is allowed to use. The Proposed Action would offset these depletions by utilizing up to 6,000 AF annually from the available CUP import water.

1.6 Purpose and Need

1.6.1 Need of the Proposed Agreement

The need for the Agreement is to execute a water service agreement in response to the District's proposal to offset water right depletions to Utah Lake as a result of operation of the CWP through use of available CUP import water.

1.6.2 Purposes of the Proposed Action

The purposes of the Proposed Action, under the authority of the Reclamation Project Act of 1939[6] as amended and supplemented by CUPCA, include the following:

- Beneficially and efficiently use CUP import water to support the continued operation of the CWP, while maintaining sufficient CUP import water for potential exchange to Jordanelle Reservoir.
- Maintain sufficient CUP import water stored in Utah Lake for potential exchange to Jordanelle Reservoir
- Provide for continued operation of the CWP
- Provide for CUP import water to be delivered to the Great Salt Lake when conditions allow

1.7 Permits, Contracts, and Authorizations

The Proposed Action would comply with all federal, state, and local regulations. The proposed use of available CUP import water for CWP Utah Lake depletions is compliant with Utah State water rights and covered under presently approved water right exchange applications and change applications.

In order for the District to use the available CUP import water, a water service agreement would be executed between the District and Interior under the authority of the Reclamation Act of 1902. This negotiated water service agreement would describe the term of service and cost of the water to be paid to Interior.

1.8 Related Projects and Documents

The Proposed Action has been developed with consideration given to the related planning and environmental documents listed below:

- Final Environmental Statement, Bonneville Unit of the CUP (1972)
- Final Environmental Statement for the Municipal and Industrial System (1979)
- Final Supplemental to the Final Environmental Statement for the Municipal and Industrial System (1987)
- Supplement to the Bonneville Unit Definite Plan Report (2004)
- Final Environmental Impact Statement and Records of Decisions, Utah Lake Drainage Basin Water Delivery System (2004 and 2005)
- Diamond Fork System Environmental Update Project (2022)

[6] The purpose of this act is to provide a feasible and comprehensive plan for the variable payment of construction charges on United States reclamation projects, to protect the investment of the United States in such projects, and for other purposes.

CHAPTER 2: ALTERNATIVES

NEPA requires federal agencies to evaluate an alternative(s) that meets the project need while addressing environmental effects or conflicts. Reasonable alternatives are defined by the CEQ's regulations implementing NEPA as those that are technically and economically feasible and that meet the purpose and need of the Proposed Action (40 CFR § 1508.1(z)). NEPA also requires that a No Action Alternative be evaluated as a baseline for comparing the proposed action.

2.1 No Action Alternative

Under the No Action Alternative, the District would not enter into a water service agreement with Interior to utilize up to 6,000 AF annually of available CUP import water in Utah Lake to offset CWP depletions. Currently, the District is purchasing, when available, irrigation shares and other water rights in Utah Lake to help cover CWP depletion requirements. Absent the water service agreement, the District could continue to purchase water rights when or if they become available to offset Utah Lake depletions by the CWP.

The District anticipates that if insufficient irrigation company shares in Utah Lake and/or the Provo River cannot be not acquired or there are insufficient unused CUP import water to offset the CWP Utah Lake depletions, the CWP water rights would most likely experience a cut or reduction in deliveries as determined by the State Engineer.

2.2 Proposed Action Alternative

The Proposed Action involves the District entering into a water service agreement with Interior to utilize up to 6,000 AF annually of available CUP import water to offset the CWP Utah Lake depletions. Based on previous experience and the comprehensive water and storage ULJEM that the District developed, the JLAs have determined there is CUP import water available in Utah Lake.

The CWP water rights delivered to the entities discussed in Section 1.2 Background in Chapter 1 originate from either the Provo River or groundwater that is pumped at the Vineyard Wellfield. CWP water sources have a connection to Utah Lake. CWP water rights have a depletion limitation to Utah Lake that must be offset since less water would return to the lake when full contract deliveries are made. The contracts provide an amount of water each entity is allowed to use. The Proposed Action would offset these depletions by using up to 6,000 AF annually of the available CUP import water. Currently, there is over 125,000 AF of CUP import water stored in Utah Lake (see Section 1.4.2 Available CUP Import Water in Chapter 1).

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CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This Draft EA was prepared in accordance with NEPA, as amended, and CEQ's regulations implementing NEPA (40 CFR §§1500-1508), to examine the potential environmental impacts of the CWP – Water Service Agreement. In accordance with CEQ regulations in 40 CFR §1501.5, this chapter discusses the existing environmental conditions that may be impacted by the Proposed Action, as described in Chapters 1 and 2, and its environmental consequences.

3.1.1 Affected Environment

The affected environment was identified based on prior experience and knowledge of the surrounding area along with coordination with federal, state, and local agencies. In addition, information was used from the M&I System ES, Supplement to the Bonneville Unit Definite Plan Report, and the Final ULS EIS to help define and outline the affected environment (see Section 1.8 Related Projects and Documents).

3.1.2 Environmental Consequences

The environmental consequences section describes the potential effects, both negative and beneficial, that a project (or in this case an agreement) may have on the environment. NEPA requires consideration of direct, indirect, and cumulative impacts, plus identification of measures to avoid, minimize, and offset impacts (if any). The description of impacts are as follows:

- Direct impacts are those caused by the action and occur at the same time and place as the action (40 CFR §1508.1(g)(1)). Those resources with the potential to be impacted are discussed in this chapter.
- Indirect impacts are those caused by the action and occur later in time or are farther removed in distance, but are still reasonably foreseeable (40 CFR §1508.1(g)(2)). Indirect impacts are discussed in Section 3.9.
- Cumulative impacts are those impacts to the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (40 CFR §1508.1(g)(3)). Cumulative impacts to Utah Lake are discussed in Section 3.10.

3.1.3 Resources Considered but Dismissed from Further Analysis

The Proposed Action involves the District entering into a water service agreement with Interior to utilize up to 6,000 AF annually of available CUP import water to offset CWP Utah Lake depletions. The Proposed Action does not involve construction or any ground disturbing activities. The JLAs considered the natural and human resources and the potential impacts to each connected with the Proposed Action. The JLAs also used the ULJEM to evaluate how utilizing 6,000 AF annually of the CUP import water would impact natural resources. Resources that were not found within or near Utah Lake or did not require detailed analysis were eliminated from further discussion and are listed below:

Air Quality – There would be no impact to air quality because the Proposed Action does not require any construction and would not discharge any emissions.

Transportation – There would be no impact to the transportation system because the Proposed Action does not require any construction.

Prime, Unique, and Statewide Important Farmland – There would be no impacts to Prime, Unique, and Statewide Important Farmland because the Proposed Action does not require the conversion or use of any agricultural properties.

Soils – There would be no impact to soils because the Proposed Action does not require any ground disturbing or construction activities. The Proposed Action is not expected to have a significant impact on the level of Utah Lake. The lake's water surface elevation fluctuates (see Figures 1-3, 1-4, and 3-1) depending on the hydrologic cycle in its drainage basin, upstream and downstream diversions and water uses, and evaporation.

Vegetation and Habitat – There would be no impacts to vegetation and habitat because the Proposed Action would not require any construction activities. The Proposed Action would not impact vegetation and habitat around the perimeter of Utah Lake. Utah Lake's water surface elevation fluctuates from year to year (see Figures 1-3, 1-4, and 3-1) depending on the hydrologic cycle in its drainage basin, upstream and downstream diversions and water uses, and evaporation.

Invasive Species – There would be no impacts, increases, or the potential to introduce or spread invasive species because the Proposed Action does not require any construction activities.

Cultural Resources – There would be no impact to cultural resources because the Proposed Action does not require any ground disturbing activities.

Groundwater – There would be no impact to groundwater because the Proposed Action does not involve additional groundwater pumping or new wells.

Wetlands and Waters of the U.S. – There would be no impacts to wetlands and waters of the U.S. around and near the perimeter of Utah Lake because the Proposed Action does not require any construction. Utah Lake's water surface elevation fluctuates from year to year (see Figures 1-3, 1-4, and 3-1) depending on the hydrologic cycle in its drainage basin, upstream and downstream diversions and water uses, and evaporation.

Water Quality – There would be no impacts to Utah Lake water quality resulting from the Proposed Action. Utah Lake's volume fluctuates from year to year (see Figures 1-3, 1-4, and 3-1) depending on the hydrologic cycle in its drainage basin, upstream and downstream diversions and water uses, and evaporation.

Floodplains – There would be no impact to floodplains associated with Utah Lake because the Proposed Action does not require any construction activities. Utah Lake's water surface elevation fluctuates from year to year (see Figures 1-3, 1-4, and 3-1) depending on the hydrologic cycle in its drainage basin, upstream and downstream diversions and water uses, and lake evaporation.

Wildlife – There would be no impact to wildlife or their habitat around or near Utah Lake because the Proposed Action does not require any construction activities. Utah Lake's water surface elevation fluctuates from year to year (see Figures 1-3, 1-4, 3-1) depending on the hydrologic cycle in its drainage basin, upstream and downstream diversions and water uses, and evaporation.

Fisheries – There would be no impacts to fisheries or their habitat in Utah Lake because the Proposed Action does not require any construction activities. Utah Lake's water surface elevation fluctuates from year to year (see Figures 1-3, 1-4, and 3-1) depending on the hydrologic cycle in its drainage basin, upstream and downstream diversions and water uses, and evaporation.

Wild and Scenic Rivers – There are no wild and scenic rivers in Utah County.

Land Use Plans and Policies – The Proposed Action would not change or require a change of land use plans and policies.

Recreation – There would be no impacts to recreation in or around Utah Lake. Utah Lake's water surface elevation fluctuates from year to year (see Figures 1-3, 1-4, and 3-1) depending on the hydrologic cycle in its drainage basin, upstream and downstream diversions and water uses, and evaporation.

Visual Resources – There would be no impacts to visual resources because the Proposed Action would not alter or change the viewshed at Utah Lake. Utah Lake's water surface elevation fluctuates from year to year (see Figures 1-3, 1-4, and 3-1) depending on the hydrologic cycle in its drainage basin, upstream and downstream diversions and water uses, and evaporation.

Wilderness – There are no federally designated wilderness areas near Utah Lake.

Socioeconomics – There would be no impact to socioeconomics in Utah and Salt Lake valleys.

Public Health and Safety – There would be no impact to public health and safety because the Proposed Action does not require any construction related activities.

Hazardous Waste – There would be no additional hazardous waste generated as a result of the Proposed Action because it does not require any construction.

3.1.4 Resources and Issues Evaluated Further

The following resources and issues have been analyzed further and addressed in more detail in this chapter:

- Utah Lake
- Rivers
- Water Rights
- Threatened and Endangered Species
- Environmental Justice
- Indian Trust Assets
- Climate Change

3.2 Utah Lake

3.2.1 Affected Environment

The affected environment for Utah Lake is described in Section 1.3 Utah Lake found.

3.2.2 Environmental Consequences

No Action Alternative

The No Action Alternative would have no effect to Utah Lake. The District would continue to acquire available water rights in Utah Lake to offset CWP depletions. However, the unused CUP import water would continue to accumulate in Utah Lake and is subject to evaporation and spill losses. When this happens, this water would have no beneficial use to the JLAs.

Proposed Action Alternative

This section outlines the effects of the Proposed Action on Utah Lake specifically storage rights, water surface elevation, and spills to the Jordan River. The effects of the Strawberry/Utah Lake/Jordanelle Exchange were evaluated in the M&I System ES and ULS EIS (see Section 1.8 Related Projects and Documents in Chapter 1). The District has developed a comprehensive water and storage model, or the ULJEM, of Utah Lake in part to evaluate the Strawberry/Utah Lake/Jordanelle Exchange and the effects of different operational and hydrologic parameters including climate change (see Section 1.3.10 Utah Lake Jordanelle Exchange Model in Chapter 1). The ULJEM incorporates tools that allow the District to evaluate the environmental effects from using 6,000 AF of the CUP import water for CWP depletions.

Storage Rights

The Proposed Action would have no effect on Utah Lake storage rights. The CUP import water is not associated with any primary and secondary Utah Lake water rights. It is transbasin, import water that is fully depletable and is subject to Utah Lake spills and evaporation. The primary reason and use for the CUP import water is for the Strawberry/Utah Lake/Jordanelle Exchange which can be completed under water right exchange numbers E398 and E399.

There would be no impact to Utah Lake storage rights from the Proposed Action because the primary and secondary water rights have priority. The CUP import water is stored on a conditional basis subject to loss or volume reductions from Utah Lake reaching the compromise elevation and/or spilling to the Jordan River and evaporation losses. Utah Lake storage rights are not subject to these potential losses.

Water Surface Elevation

The Proposed Action would have a negligible effect on the water surface elevation of Utah Lake. The unused CUP import water contributes to Utah Lake's water surface elevation (depending on the lake's volume and the volume of unused CUP import water being stored in the lake). Utah Lake's water surface elevation fluctuations range annually between one foot and by more than 4 1/2 feet each year. The Lake's volume and water surface elevation changes depending on the hydrologic conditions in the drainage basin, upstream and downstream demands, and evaporation.

Figure 3-1 shows the modeled effect of the Proposed Action and No Action alternatives on Utah Lake water surface elevations for the years from October 1995 to October 2018 (see Section 1.3.10 Utah Lake Jordanelle Exchange Model in Chapter 1). The blue line is the lake's water surface elevation for the No Action Alternative which consist of actual measured levels by the State Engineer and the orange line is the Proposed Action which includes the use of 6,000 AF annually for CWP Utah Lake depletions. The red line is the lake's compromise elevation of 4489.045 feet AMSL.

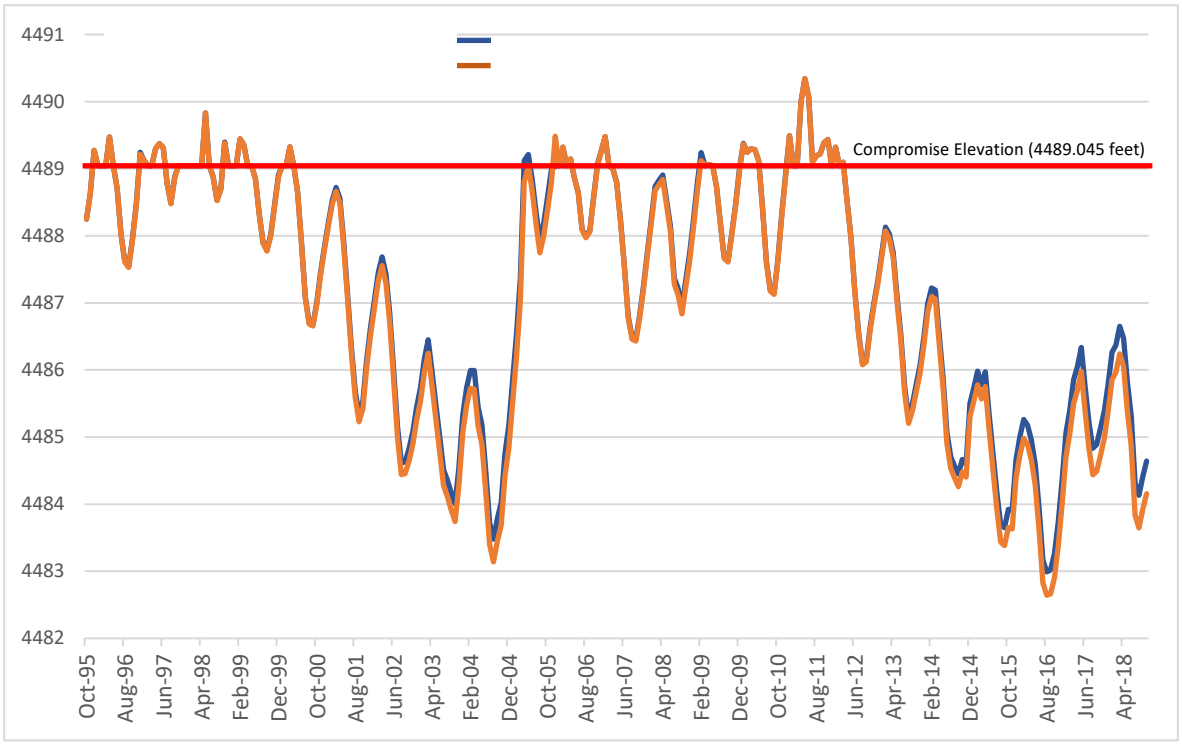

FIGURE 3-1: UTAH LAKE WATER SURFACE ELEVATIONS – NO ACTION AND PROPOSED ACTION ALTERNATIVES

To determine the Agreement's effect on Utah Lake's water surface elevation, the Proposed Action Alternative lake level fluctuations were compared to the No Action Alternative fluctuations for the same period between 1995 and 2018 (model period). For both alternatives, the maximum and minimum water surface elevations were used to measure the lake's fluctuations for each water year during the model period. For the No Action Alternative, the lake elevations are the actual measured and recorded levels by the State Engineer. For the Proposed Action Alternative, Utah Lake maximum and minimum elevations were calculated using the ULJEM which included utilizing 6,000 AF of unused CUP import water annually to offset CWP depletions. The difference between the maximum and minimum lake elevation for each water year was calculated for both alternatives which show how much Utah Lake's water surface fluctuates. Then for each water year the difference between the No Action and the Proposed Action fluctuations was calculated and used to determine the range of effect the Proposed Action Alternative would have on Utah Lake water surface elevations.

Table 3-1 shows the water surface elevation changes for both the No Action and the Proposed Action alternatives and the effect the Proposed Action Alternative would have on lake fluctuations.

TABLE 3-1: UTAH LAKE WATER SURFACE FLUCTUATIONS FOR THE NO ACTION AND PROPOSED ACTION

Water Year	No Action feet (inches)	Proposed Action feet (inches)	Difference between No Action and Proposed Action feet (inches)
1996	1.93 (23.19)	1.95 (23.39)	0.02 (0.20)
1997	0.89 (10.65)	0.91 (10.97)	0.02 (0.32)
1998	1.30 (15.63)	1.31 (15.69)	0.01 (0.06)
1999	1.66 (19.90)	1.67 (20.09)	0.01 (0.20)
2000	2.64 (31.74)	2.67 (32.08)	0.03 (0.34)
2001	3.39 (40.72)	3.44 (41.23)	0.05 (0.50)
2002	3.07 (36.85)	3.11 (37.38)	0.04 (0.53)
2003	2.45 (29.36)	2.51 (30.12)	0.06 (0.76)
2004	2.52 (30.21)	2.58 (31.01)	0.06 (0.80)
2005	4.45 (53.45)	4.62 (55.47)	0.17 (2.02)
2006	1.34 (16.02)	1.52 (18.18)	0.18 (2.16)
2007	3.01 (36.16)	3.05 (36.57)	0.04 (0.41)
2008	1.97 (23.62)	2.00 (24.01)	0.03 (0.39)
2009	1.61 (19.37)	1.51 (18.11)	Proposed Action has less Utah Lake fluctuation compared to the No Action
2010	2.23 (26.80)	2.25 (26.94)	0.02 (0.15)
2011	2.02 (24.20)	2.05 (24.59)	0.03 (0.39)
2012	3.33 (39.91)	3.36 (40.26)	0.03 (0.35)
2013	2.82 (33.89	2.87 (34.39)	0.05 (0.49)
2014	2.78 (33.31)	2.83 (33.98)	0.05 (0.67)
2015	2.33 (27.95)	2.39 (28.72)	0.06 (0.77)
2016	2.27 (27.23)	2.34 (28.04)	0.07 (0.81)
2017	2.60 (31.22)	2.60 (31.21)	0.00 (0.01)
2018	2.52 (30.23)	2.59 (31.09)	0.07 (0.86)

The model results show, as summarized in Table 3-1, that the Proposed Action would have very little change to Utah Lake's water surface elevations when compared to the No Action Alternative. The largest change would be a little more than a two-inch difference in the lake fluctuations (see WYs 2005 and 2006 in Table 3-1) which is about eight percent of the model period. Only three model water years show that the Proposed Action Alternative would have more than one inch difference in the fluctuation of Utah Lake's water surface levels. It should be noted that the maximum water surface elevation change would not extend below the lake's historic low levels for the Proposed Action Alternative.

The JLAs have determined that the Proposed Action would not have significant impacts to the water surface elevations of Utah Lake from implementation of the Proposed Action because the maximum calculated fluctuation of about two inches would have no effect to the lake. Utah Lake

water surface elevations can fluctuate up to 4 ½ feet in a water year depending on the hydrologic cycle in its watershed, upstream and downstream water diversions, and evaporation.

Spills to the Jordan River

On average, Utah Lake spills to the Jordan River about once every ten years when it reaches the compromise elevation. The Proposed Action Alternative would have a negligible and insignificant impact to the number and magnitude of the Utah Lake spills. The ULJEM calculated that the lake would continue to spill at the same frequency with the implementation of the Proposed Action Alternative. However, some if the spill events would be shorter in duration because of the Proposed Action Alternative depending on the hydrologic conditions in the drainage basin.

The Proposed Action Alternative would have an insignificant impact on the spills from Utah Lake to the Jordan River because the lake would continue to spill about once every ten years.

Based on the above analysis, the JLAs concluded that the Proposed Action would have no significant effects on Utah Lake because the storage rights would not be impacted, the lake's water surface elevation would not fluctuate more than two inches, about eight percent of the model period (as determined by the ULJEM), and would not fluctuate more than it has historically, and the lake would continue to spill approximately once every ten years.

3.3 Rivers

This section discusses the Agreement's effect to the major river systems that are connected to Utah Lake – Spanish Fork River, Hobble Creek, Provo River, and Jordan River.

3.3.1 Affected Environment

Spanish Fork River

The Spanish Fork River is approximately 20 miles long and discharges into Utah Lake. The river flows through Spanish Fork City and other small agricultural communities near Utah Lake. It is supplied by the mountains in southeastern Utah County and has a drainage basin of approximately 675 square miles. There are a number of irrigation diversions on the Spanish Fork River that supply agricultural water in Southern Utah County. Diamond Fork Creek is a major tributary to the Spanish Fork River.

Hobble Creek

Hobble Creek begins in the mountains east of Springville, Utah and meanders through the city. Much of the creek has been channelized and straightened once it leaves Hobble Creek Canyon. There are several irrigation diversions that provide an agricultural supply of water to Mapleton and Springville cities. Hobble Creek enters Utah Lake on its eastern shore in Provo Bay.

Provo River

The Provo River is approximately 71 miles in length and originates in the Uintah Mountains and terminates at Utah Lake. The Provo River is a major source of drinking water for residents along the Wasatch Front in Wasatch, Utah, and Salt Lake Counties serving about 50 percent of Utah's population. The river is also used for agricultural irrigation purposes and is a popular location for recreational uses. The section of the Provo River between Deer Creek Reservoir and Olmsted Diversion is known nationally as a blue-ribbon trout fishery. Also, the section of the Provo River between Jordanelle and Deer Creek

Reservoirs is heavily used for fishing, and habitat restoration projects have been completed for mitigation by the JLAs and the Mitigation Commission.

Jordan River

The Jordan River is approximately 50 miles long beginning at the northwest end of Utah Lake in Utah County. The river flows northward through the center of Salt Lake Valley. There are a number of diversions on the Jordan River mainly in the Jordan Narrows segment near the Utah/Salt Lake County line. These diversions are used to supply irrigation and secondary water supplies to the Salt Lake Valley. The Jordan River's major tributaries are Little Cottonwood, Big Cottonwood, Red Butte, Mill, Parley's, and City Creeks. Several recreational opportunities exist along the Jordan River including a 40-mile bicycle and pedestrian trail system, fishing, wildlife viewing, natural areas and open space, botanical gardens, and golf courses.

3.3.2 Environmental Consequences

No Action Alternative

There would be no impacts to the Spanish Fork River, Hobble Creek, Provo River, or the Jordan River from the No Action Alternative. The District would continue to acquire available water rights in Utah Lake to offset CWP depletions. However, the unused CUP import water would continue to accumulate in Utah Lake and is subject to evaporation and spill losses. When this happens, the water would have no beneficial use to the JLAs.

Proposed Action Alternative

The Proposed Action would have no effect to the Spanish Fork River, Hobble Creek, and the Provo River since these are tributaries to Utah Lake. As discussed in Section 3.2, the only time the CUP import water reaches the Jordan River is when the lake spills and the import water is the first water to spill to the river. The Proposed Action would have a negligible effect to the number and magnitude of the spills from Utah Lake to the Jordan River.

3.4 Water Rights

3.4.1 Affected Environment

Utah Lake Water Rights

Water rights held in Utah Lake are managed by the Distribution Plan under the direction of the State Engineer. The CUP import water is stored in Utah Lake on a space available basis and is the first water to spill once the lake reaches the compromise elevation and can no longer be used for its primary purpose – to help make the Strawberry/Utah Lake/Jordanelle Exchange.

The District and Interior hold a total of 64,973 AF of primary and secondary Utah Lake water rights that can be used for the Utah Lake/Jordanelle Reservoir Exchange. Interior holds a primary water right of 7,900 AF in the lake and this water is not subject to shortages. The District holds 57,073 AF of secondary water rights in the lake and will deed these over to the Interior upon them being fully developed and certificated by the State Engineer. The secondary water rights are subject to shortages as determined by the State Engineer depending on the level of Utah Lake. The primary and secondary Utah Lake water rights can be applied to fulfill the exchange prior to use of the CUP import water.

The JLAs executed two different approved exchange rights in order to replace water stored in Jordanelle with Utah Lake import water. When needed, water right exchange numbers E398 and E399 are used for the exchange.

CWP Water Rights

The non-federal CWP water rights are a combination of groundwater rights purchased by the District from the former Geneva Steel site in Vineyard and water rights in the Provo River. The CWP water rights are expected to yield about 53,300 AF annually and are held by the District as part of the CWP. As determined by the State Engineer, the CWP water rights have a hydrological connection with Utah Lake with a depletion requirement for their use. Depletions range between 50-100 percent of the water used. Generally, the CWP water is used for M&I purposes and the water would return to Utah Lake through wastewater treatment plants after its use. The exceptions to this include PacifiCorp which uses the water for power generation and JVWCD that uses the CWP water mainly in Salt Lake Valley with return flows reaching the Jordan River and the Great Salt Lake. The entities that use CWP water each have a depletion limitation per their contracts. The contracts provide an amount of water each entity is allowed to use and deplete. The Proposed Action would apply up to 6,000 AF annually of the available CUP import water to offset CWP Utah Lake depletions.

The District is also purchasing water rights or irrigation shares in Utah Lake and the Provo River to help with the CWP depletions. The District will continue to purchase available water rights and shares and apply them to CWP depletions.

3.4.2 Environmental Consequences

No Action Alternative

The No Action Alternative would have no effect on water rights held in Utah Lake, because no federal water rights would be involved.

Proposed Action Alternative

The CUP import water is held in Utah Lake without any effect on water rights. Implementation of the Proposed Action would not affect any water rights (see discussion in Section 1.4.2 Available CUP Import Water Chapter 1).

3.5 Threatened and Endangered Species

Section 7 of the Endangered Species Act (ESA) of 1973 (7 United States Code [USC] §136, 16 USC §1531 et seq.), as amended, requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) if listed species or designated Critical Habitat may be affected by the Proposed Action. If adverse impacts would occur as a result of the Proposed Action, the ESA requires federal agencies to evaluate the likely effects and ensure that it neither jeopardizes the continued existence of federally listed ESA species nor results in the destruction or adverse modification of designated Critical Habitat.

3.5.1 Affected Environment

The USFWS's Information for Planning and Consultation (IPaC) was accessed on October 18, 2022 to identify threatened and endangered species within or near Utah Lake. Three species were identified which are listed in Table 3-2.

TABLE 3-2: THREATENED AND ENDANGERED SPECIES LIST

Species	Status	Occurrence Near Utah Lake
Yellow-billed cuckoo (Coccyzus americanus)	Threatened	Found in mixed native and non-native riparian woodlands. Patches vary in size and shape but must be ≥12-acres and 100-meters wide or more in at least one location. Quality habitat is structurally diverse with a multi-layered overstory and dense understory. There may be suitable habitat, consisting of multi-layered riparian vegetation, for yellow-billed cuckoo along the fringe area of Utah Lake.
June sucker (Chasmistes liorus)	Threatened	Endemic to Utah Lake and the Provo River. Designated critical habitat for the June sucker is in the lower 4.9 miles of the Provo River, measured from its confluence with Utah Lake.
Monarch Butterfly (Danaus plexippus)	Candidate	A milkweed obligate species. There are many species of milkweed that grow in a variety of habitat types, including those around Utah Lake.

3.5.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no impacts to listed species or critical habitat because the District would continue to acquire available water rights in Utah Lake to offset CWP depletions. The unused CUP import water would continue to accumulate in Utah Lake and is subject to evaporation and spill losses. When this happens, the water would have no beneficial use to the JLAs.

Proposed Action Alternative

Yellow-billed cuckoo

Suitable habitat for yellow-billed cuckoo may occur along the banks of Utah Lake. However, the Proposed Action would have no effect on vegetation or habitat along the perimeter of Utah Lake (see discussion on Vegetation and Habitat under Resources Considered but Dismissed from Further Analysis in this chapter). Therefore, the Proposed Action Alternative would have no effect on the Yellow-billed cuckoo.

June sucker

The Proposed Action would have no effect to the critical habitat for the June sucker. As discussed in Section 3.2 Utah Lake in this chapter, the Proposed Action would have insignificant changes to Utah Lake. Therefore, the Proposed Action would have no effect on the June sucker or its critical habitat.

Monarch Butterfly

There is potentially suitable habitat for monarch butterfly along the banks of Utah Lake in which milkweed can occur. As discussed in Section 3.2 Utah Lake, the Proposed Action would have insignificant changes to Utah Lake and would have no effect on vegetation or habitat along its perimeter (see discussion on Vegetation and Habitat under Resources Considered but Dismissed from Further Analysis in this chapter). Therefore, the Proposed Action Alternative would have no effect on the monarch butterfly.

3.6 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by the President on February 11, 1994, directs federal agencies to take appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent possible and permitted by law. Executive Order 12898 established Environmental Justice as a federal agency priority to ensure that minority and low-income groups are not disproportionately affected by federal actions.

3.6.1 Affected Environment

The affected environment for the Proposed Action is the CWP contract entities.

3.6.2 Environmental Consequences

No Action Alternative

The No Action Alternative would have no effect to Environmental Justice communities or populations.

Proposed Action Alternative

Implementation of the Proposed Action would not disproportionately or unequally affect any low-income or minority communities or populations. It would not involve any population relocation, health hazards, hazardous waste, or substantial economic impacts. The Proposed Action would therefore have no adverse human health or environmental effects on minority and low-income populations.

3.7 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property held in trust by the United States for federally recognized Indian tribes or individuals. Assets can be real property, physical assets, or intangible property rights, such as lands, minerals, hunting and fishing rights, and water rights. The U.S. Department of the Interior's policy is to recognize and fulfill its legal obligations to identify, protect and conserve the trust resources of federally recognized Indian tribes and tribal members, and to consult with the tribes on a government-to-government basis whenever plans or actions affect tribal trust resources, trust assets, or tribal safety. Under this policy, the federal government is committed to carrying out its activities in a manner that avoids adverse impacts to ITAs when possible, and to mitigate or compensate for such impacts when it cannot. All impacts to ITAs, even those considered insignificant, must be discussed in the trust analyses in NEPA compliance documents and appropriate compensation or mitigation must be implemented. The implementation of any of the project alignment alternatives would have no foreseeable impacts on Indian Trust Assets.

3.7.1 Affected Environment

The CUPCA Office sent letters to all Indian Tribes that may have an interest in the CWP – Water Service Agreement requesting information regarding ITAs within the project study area. The Ute Indian Tribe responded during the scoping process and identified their interests in the Uintah Basin (see Chapter 4 for more information).

3.7.2 Environmental Consequences

There are no known ITAs in the project study area.

No Action Alternative

Since no ITA's have been identified, the No Action Alternative would have no effect.

Proposed Action Alternative

Since no ITA's have been identified, the Proposed Action Alternative would have no effect.

3.8 Climate Change

Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance (as amended by Executive Order 13693, Planning for Federal Sustainability in the Next Decade) established an integrated strategy towards sustainability in the Federal Government and made the reduction of greenhouse gas emissions a priority for federal agencies. Greenhouse gas emissions caused by human activities represent the largest driver of climate change and are chemical compounds found in the earth's atmosphere that absorb and trap infrared radiation or heat in the lower part of the atmosphere. Carbon dioxide (CO_2) makes up the largest component of greenhouse gas emissions.

3.8.1 Affected Environment

The EPA defines climate change as any substantial change in measures of climate lasting for an extended period of time. The principal greenhouse gases emitted into the atmosphere through human activities are CO_2, methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. Of these four gases, CO_2 is the major greenhouse gas emitted.

3.8.2 Environmental Consequences

The Proposed Action would not cause an increase in CO_2 or other greenhouse gas emissions. Implementation of the Proposed Action would be consistent with Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance.

No Action Alternative

The No Action Alternative would have no effect on climate change, nor would it create vulnerability to climate change impacts.

Proposed Action Alternative

The Proposed Action Alternative would have no effect on climate change, nor would it create vulnerability to climate change impacts. The CUP and the development of Utah's water supply to address current and future water needs is in direct response to climate change. The Proposed Action Alternative is consistent with federal and local climate change regulations and policies.

3.9 Indirect Impacts

Indirect impacts are those caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable (40 CFR §1508.1(g)(2)). Indirect effects are generally less quantifiable but can be reasonably predicted to occur. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

No Action Alternative

The No Action Alternative would have no indirect impacts.

Proposed Action Alternative

The Proposed Action Alternative would have no indirect impacts. The nature of entering into a water service agreement between the District and Interior would not result in an increase in the rate of population growth within the CWP service area and no land use changes would be required.

3.10 Cumulative Impacts

In addition to Project-specific impacts discussed in this chapter, the Interior and the District analyzed the potential for significant cumulative impacts to resources affected by the Proposed Action and by other past, present, and reasonably foreseeable actions that may affect Utah Lake. Cumulative impacts are the incremental impacts to the environment of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (40 CFR §1508.7). Cumulative impact analysis is focused on the sustainability of the environmental resource in light of all the forces acting upon it and can result from individually minor but collectively significant actions taking place over time. The regulation focuses on whether the Proposed Action, considered together with any known or reasonably foreseeable actions by the JLAs, other federal or state agencies, or some other entity, combined to cause an effect.

The Proposed Action would not require any construction within or near Utah Lake and it is not anticipated to increase the potential for land developments. The Proposed Action may have negligible and insignificant impacts to several aspects of Utah Lake which are discussed below.

3.10.1 Past Undertakings that have Affected Utah Lake

History

Utah Lake is the largest freshwater lake in the United States west of the Mississippi River covering an area of approximately 148 square miles. The lake is a remnant of the pre-historic Lake Bonneville which occupied nearly one-half of the area of Utah. Native American tribes have occupied and used the area around Utah Lake where they have relied upon fishing, hunting, and crops. By the 1800's, the lake was used by three Native American tribes: the Paiutes who mainly used the west side; the Utes who used the lake and its streams throughout the year; and the Shoshone who periodically entered Utah Valley from the north. The first known non-tribe discovery of the lake was the Dominguez and Escalante expedition of 1776. Fur trappers also discovered Utah Lake in the 1820s and by explorer John C. Fremont in 1844.

Settlement

Mormon pioneers were sent south in 1849 and settled what is now Provo. The pioneers used the fish from Utah Lake as a main food supply. Soon other communities such as American Fork, Alpine, and Springville began to appear along creeks and rivers that fed the lake. The area started to become more populated as roads and the railroad connected it to the larger communities to the north (Salt Lake and Ogden). The valley continued to grow in population and used the lake for recreation, fishing as part of their food supply, water for crops, and a place to discharge wastewater.

Water Development

The Utah Lake water supplies farmlands in both Utah and Salt Lake Counties. The pioneers early on constructed diversions and canals that redirected water from the creeks that supply Utah Lake. Some of

Utah's oldest water rights are held in Utah Lake. As the area's population has grown, so has its need for water. Much of the water needs have been supplied through groundwater development while some has come from surface water from the Provo River. This water is treated at the Don A. Christiansen Regional Water Treatment Plant located in Orem. The District's Central Water Project (see discussion on the Central Water Project in Chapter 1) provides a needed M&I supply to north Utah County.

Federal water development projects also affected Utah Lake's water supply. The Strawberry Valley Project (SVP), the first large-scale diversion from the Colorado River Basin to the Bonneville Basin, was constructed and completed in 1913 by Reclamation. The SVP began diverting transbasin water from Strawberry Reservoir through the Strawberry Tunnel to the agricultural and orchard fields in Southern Utah County. The SVP included the construction the Strawberry Dam (inundated upon the enlargement of Strawberry Reservoir and construction of Soldier Creek Dam) Strawberry Tunnel, High Line Canal, Springville-Mapleton Lateral, and two hydroelectric powerplants. Return flows from the Strawberry Valley Project end up in Utah Lake.

Construction for the Provo River Project (PRP) began in 1938 but was delayed during World War II. After the war, construction resumed and the PRP was completed in 1951. The project includes Deer Creek Dam and Reservoir and hydroelectric powerplant at the dam, the 42-mile Salt Lake Aqueduct, the Weber-Provo Diversion Canal, Duchesne Tunnel, Murdock Diversion Dam, and improvements to the Murdock Canal (now called the Provo River Aqueduct which has been enclosed). The PRP develops water on the Provo River as well as transbasin water delivered from the Colorado River Basin through the Duchesne Tunnel and water diverted from the Weber River through the Weber-Provo Diversion Canal. It provides a water supply for farmlands in Utah, Salt Lake, and Wasatch Counties, as well as a M&I supply for Salt Lake Valley and north Utah County.

The largest federal water development project in the State of Utah is the Central Utah Project (see Background in Chapter 1). The Bonneville Unit of the CUP diverts water from the Colorado River Basin for use in the Bonneville Basin. As discussed, return flows, the Strawberry/Utah Lake/Jordanelle Exchange, and conservation projects are key to the development of the Bonneville Unit water supply. In addition, augmented instream flows in the Provo River and Hobble Creek provide water for the threatened June sucker.

3.10.2 Present and Future Development

Presently, the areas surrounding Utah Lake are experiencing rapid growth. These communities are growing at a fast pace resulting in large residential, commercial, and industrial areas along with associated infrastructures. Agricultural lands are being converted to commercial and residential uses in response to the rapid growth of the area. This trend is expected to continue for the foreseeable future. As farmlands are developed for other uses, it is anticipated that water used to irrigate these areas could be converted to M&I uses.

3.10.3 Utah Lake Cumulative Impacts

Previous NEPA documents anticipated and analyzed that the CUP import water would be exchanged out of Utah Lake for the operation of the Bonneville Unit M&I System. The CUP import water is needed in Utah Lake to replace priority water rights being diverted and stored in upstream reservoirs under junior storage water rights. In other words, the priority Utah Lake water is intended to be delivered, as needed and called

on by the water right holder, from the lake and used by water users in Salt Lake Valley and areas adjacent to the lake but is being stored above the lake out of priority.

Utah Lake Water Surface Elevations

As illustrated in Figure 3-1, the cumulative effects of the Proposed Action on Utah Lake water surface elevations are negligible and insignificant (model run from October 1995 to October 2018 on a monthly time stamp). The water surface elevations resulting from implementation of the Proposed Action are within the natural and reoccurring fluctuations of Utah Lake. There would be no adverse cumulative effects from the Proposed Action.

Spills to the Jordan River

On average, Utah Lake spills to the Jordan River about once every ten years when it reaches the compromise elevation. The Proposed Action Alternative would have negligible and insignificant impact to the number and magnitude of the Utah Lake spills. The ULJEM calculated that the lake would continue to spill at this frequency with the implementation of the Proposed Action Alternative. However, the spill events would be shorter in duration as a result of the Proposed Action Alternative. The Proposed Action Alternative would have an insignificant impact on the spills from Utah Lake to the Jordan River because the lake would continue to spill about once every ten years.

3.10.4 Conclusion

Based on the review of the Proposed Action, the Interior and District have determined that the CWP – Water Service Agreement would have a negligible and insignificant effect, including cumulative impacts, on resources within the Project Study Area.

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CHAPTER 4: COORDINATION

4.1 Public and Agency Scoping Process

As part of the Draft EA process, the JLAs conducted public and agency scoping in October 2022. Scoping is a process where project proponents present the Proposed Action, provide contact information, and solicit comments from the public and resource and regulatory agencies. The scoping process occurs during the initial phase of the Draft EA process and comments received are then addressed and used to assist in the preparation of the Draft EA.

The scoping period extended from Friday, September 23rd through Friday, October 21st, 2022, in which the public and agencies were invited to review project information and to submit comments. Information disseminated through scoping consisted of:

- Listing project proponents – Central Utah Water Conservancy District and the Department of the Interior – CUPCA Office
- Background
- Stating that the NEPA process had been initiated
- Describing the Proposed Action to be evaluated
- Soliciting comments and concerns and how to submit them
- Providing contact information including telephone numbers, email, and web site address

The JLAs used the following to notify the public and agencies about the Proposed Agreement and to solicit comments:

- Mailed a scoping document to interested parties and to local, state, and federal agencies
- Development of a project webpage with the scoping newsletter, project contact information, and a means to provide comments on the proposed project
- Legal notice with project information
- Native American Consultation Letters with an attached scoping newsletter (sent by Interior)

4.1.1 Scoping Comments

Two comment letters were received – one from the Ute Indian Tribe and the other from the Mitigation Commission. The applicable issues and concerns raised regarding the Agreement are addressed in this Draft EA. The District has met with the Mitigation Commission to discuss their concerns with the Agreement.

The Ute Indian Tribe letter identified several concerns regarding their reserved water rights and other interests in the Uinta Basin. The Agreement would not change or alter the Bonneville Unit water supply and would have no effect on the Ute Indian Tribe reserved water rights and other interests.

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CHAPTER 5: LIST OF PREPARERS

Name	Title and Project Role	Agency
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