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Debbie-Anne A. Reese, Acting Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

**Subject:       Stairs Hydroelectric Project (FERC Project No. 597)  
                  Draft Joint Conduit Exemption and License Surrender Application for  
                  Review**

Dear Acting Secretary Reese:

PacifiCorp is preparing to jointly apply to the Federal Energy Regulatory Commission (FERC) for a conduit exemption for the Stairs Hydroelectric Project (Stairs Project or Project) (FERC Project No. 597) from certain provisions of Part I of the Federal Power Act (FPA) and for an administrative surrender of the existing FERC Project license. PacifiCorp is the owner, operator, and licensee of the Project located on Big Cottonwood Creek, east of the city of Cottonwood Heights, in Salt Lake County, Utah. The Project is in Big Cottonwood Canyon, partially on lands administered by the Uinta-Wasatch-Cache National Forest, and partially on PacifiCorp-owned private land. The current FERC Project license was issued on September 30, 1999, with an effective date of July 1, 2000, and expires on June 30, 2030 (88 FERC ¶ 62,300).

Pursuant to 18 CFR 4.38(a)(6)(ii), PacifiCorp formally initiated the first stage of consultation with the filing of an Initial Consultation Document (ICD) on February 16, 2024, and subsequently hosted a Joint Agency and Public Meeting in Salt Lake City, Utah on March 21, 2024. PacifiCorp has received letters of support from the United States Forest Service (USFS), and the Utah Department of Natural Resources for the proposed action. At this time, no comments have been received on PacifiCorp's ICD. Pursuant to 18 CFR 4.30 and 4.90, PacifiCorp is now initiating the second stage of consultation by distributing this Draft Joint Conduit Exemption and License Surrender Application (Joint Application) for a 90-day review and comment period. Given the administrative nature of the Proposed Action, PacifiCorp is not proposing studies nor anticipating study requests, and therefore aims to file a Final Joint Application early this fall, 2024.

The Project operates as a 1.2-megawatt run-of-river facility and generates head by utilizing the natural fall of Big Cottonwood Creek. Big Cottonwood Creek flows are diverted at Storm Mountain Dam and intake through a steel flowline and penstock to the powerhouse and then released into the Project's tailrace canal. The Project's tailrace canal feeds water directly into a non-Project intake and water supply pipeline that conveys flow through PacifiCorp's Granite Hydroelectric Project (Granite Project) (FERC Project No. 14293) — a separate PacifiCorp hydroelectric generating facility regulated by FERC under a conduit exemption — to Salt Lake City's Big Cottonwood Canyon Water Treatment Plant (BCCWTP) at the mouth of Big Cottonwood Canyon, which provides the largest supply of drinking water to Salt Lake City.

Pursuant to 18 Code of Federal Regulations (CFR) 4.30(b)(30), the Stairs Project is used for electric power generation, has an installed capacity of 1.2 MW (less than the 40 MW threshold), is not an integral part of a dam, does not rely on the construction of a dam, is located on a conduit with the primary purpose of municipal water use, and discharges directly to a point of municipal consumption by Salt Lake City's municipal water supply system. The Stairs Project was originally constructed for the generation of hydroelectric power; however, as municipal water projects developed the watershed of Big Cottonwood Creek for the consumptive use of drinking water supply downstream of both the Stairs and Granite Projects, the primary function of both facilities was altered. Construction of the BCCWTP inherently modified the primary purpose of the creek, as well as both the Stairs and Granite Project's flowlines and penstocks, to become integral components of Salt Lake City's primary drinking water supply system for municipal consumption, thus qualifying it under Section 30(a)(2) of the Federal Power Act as a conduit exempt facility.

In accordance with 18 CFR 4.32, all interested parties may obtain a copy of the Draft Joint Application electronically through FERC's eLibrary website at <https://elibrary.ferc.gov/eLibrary/search> by searching the P-597 docket number, or on PacifiCorp's website at <https://www.pacificorp.com/energy/hydro/stairs.html>. Parties on the attached distribution list have been provided with either an electronic or hard copy of this cover letter. This letter and its enclosures have been filed electronically. The security classification of each component in this packet is shown in the enclosure table below. If you have any questions concerning these documents, please contact Eve Davies, Stairs Exemption Project Manager, at 801-220-2245 or [eve.davies@pacificorp.com](mailto:eve.davies@pacificorp.com).

Sincerely,



William C. Shallenberger  
Vice President, Renewable Resources

WCS:ED:EW:AN:DS

<b>Encl:</b>	Cover Letter – Public
	Interested Party Distribution List – Public
	Draft Joint Conduit Exemption and License Surrender Application – Public

<b>eFile:</b>	Debbie-Anne A. Reese, Acting Secretary via eFile at <a href="http://www.ferc.gov">www.ferc.gov</a>
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**DRAFT JOINT CONDUIT EXEMPTION AND  
LICENSE SURRENDER APPLICATION – PUBLIC**

# DRAFT JOINT CONDUIT EXEMPTION AND LICENSE SURRENDER APPLICATION



## STAIRS HYDROELECTRIC PROJECT (FERC PROJECT NO. 597)



*Prepared by:*  
**SWCA**  
ENVIRONMENTAL CONSULTANTS

MAY 2024

**STAIRS HYDROELECTRIC PROJECT  
FERC PROJECT NO. 597****DRAFT JOINT CONDUIT EXEMPTION AND LICENSE SURRENDER APPLICATION****TABLE OF CONTENTS**

EXECUTIVE SUMMARY

INTRODUCTORY STATEMENT

EXHIBIT A: PROJECT DESCRIPTION

EXHIBIT E: ENVIRONMENTAL REPORT

EXHIBIT F: STRUCTURAL DRAWINGS

EXHIBIT G: MAP OF THE PROJECT BOUNDARY

**LIST OF FIGURES**

FIGURE ES-1	STAIRS EXISTING FERC PROJECT BOUNDARY AND PROJECT AREA .....	ES-3
FIGURE ES-2	STAIRS PROJECT SCHEMATIC .....	ES-4
FIGURE ES-3	PROPOSED PROJECT BOUNDARY .....	ES-8
FIGURE E-1	JORDAN RIVER (HUC 16020204) AND GREAT SALT LAKE (HUC 16020310) BASINS.....	E-6
FIGURE E-2	BIG COTTONWOOD CREEK-JORDAN RIVER WATERSHED (HUC 1602020402) .....	E-9
FIGURE E-3	GEOLOGICAL FEATURES IN THE PROJECT AREA.....	E-12
FIGURE E-4	SOIL CLASSIFICATIONS IN THE PROJECT AREA .....	E-14
FIGURE E-5	NATIONAL WETLANDS INVENTORY FEATURES IN THE PROJECT AREA .....	E-27
FIGURE E-6	ELIGIBLE HISTORIC ARCHITECTURAL RESOURCES IN PROJECT AREA (HISTORIC UTAH BUILDINGS DATABASE).....	E-53
FIGURE E-7	ELIGIBLE STAIRS PROJECT HISTORIC ARCHITECTURAL RESOURCES IN PROJECT AREA (STAIRS HISTORIC DISTRICT 1988 NATIONAL REGISTER OF HISTORIC PLACES NOMINATION) .....	E-54
FIGURE E-8	RECREATION OPPORTUNITIES IN THE STAIRS PROJECT AREA .....	E-71
FIGURE E-9	ZONING.....	E-79
FIGURE E-10	NATIONAL LAND COVER DATABASE–MAPPED LAND COVER IN THE PROJECT AREA.....	E-82
FIGURE E-11	CENSUS TRACTS AND BLOCK GROUPS IN THE PROJECT VICINITY.....	E-98

### LIST OF TABLES

TABLE ES-1	SUMMARY OF CONSULTATION EFFORTS .....	ES-9
TABLE E-1	BIG COTTONWOOD CREEK DISCHARGE, UPSTREAM OF STAIRS PROJECT POWERHOUSE, 2008 TO 2023 (CUBIC FEET PER SECOND) .....	E-17
TABLE E-2	BIG COTTONWOOD CREEK DISCHARGE, U.S. GEOLOGICAL SURVEY TAILRACE GAGE NO. 10168300, 1976 TO 2006 (CUBIC FEET PER SECOND) .....	E-17
TABLE E-3	DESIGNATED BENEFICIAL USE CLASSES FOR BIG COTTONWOOD CREEK .....	E-19
TABLE E-4	UPLAND HABITAT TYPES IN THE PROJECT AREA .....	E-26
TABLE E-5	NATIONAL WETLANDS INVENTORY WETLANDS AND WATERS IN THE PROJECT AREA.....	E-26
TABLE E-6	SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT AREA .....	E-29
TABLE E-7	FEDERALLY LISTED SPECIES POTENTIALLY OCCURRING IN THE PROJECT AREA .....	E-33
TABLE E-8	NOXIOUS WEEDS POTENTIALLY OCCURRING IN THE PROJECT AREA.....	E-36
TABLE E-9	U.S. FOREST SERVICE REGION 4 ENDANGERED, THREATENED, AND SENSITIVE SPECIES KNOWN OR LIKELY TO OCCUR IN UINTA-WASATCH- CACHE NATIONAL FOREST .....	E-39
TABLE E-10	PREVIOUSLY CONDUCTED ARCHAEOLOGICAL INVENTORIES IN THE PROJECT AREA .....	E-50
TABLE E-11	PREVIOUSLY RECORDED SITES WITHIN THE PROJECT AREA .....	E-51
TABLE E-12	ARCHITECTURAL RESOURCES IN THE PROJECT BOUNDARY .....	E-52
TABLE E-13	ARCHITECTURAL RESOURCES IN THE PROJECT AREA .....	E-52
TABLE E-14	ARCHITECTURAL RESOURCES IN THE STAIRS STATION HYDROELECTRIC POWER PLANT HISTORIC DISTRICT AS IDENTIFIED IN 1988 .....	E-52
TABLE E-15	ACTIVITY PARTICIPATION RESULTS.....	E-74
TABLE E-16	FOREST-WIDE GOALS AND SUBGOALS FOR RECREATION ON THE UINTA- WASATCH-CACHE NATIONAL FOREST.....	E-76
TABLE E-17	SALT LAKE COUNTY ZONING CLASSIFICATIONS WITHIN THE PROJECT AREA.....	E-80
TABLE E-18	NATIONAL LAND COVER DATABASE–MAPPED LAND COVER IN THE PROJECT AREA.....	E-80
TABLE E-19	RACE AND ETHNICITY IN COTTONWOOD HEIGHTS, SALT LAKE COUNTY, AND UTAH .....	E-91
TABLE E-20	AGE GROUPS IN COTTONWOOD HEIGHTS, SALT LAKE COUNTY, AND UTAH .....	E-92
TABLE E-21	MAJOR INDUSTRIES IN THE PROJECT VICINITY .....	E-94
TABLE E-22	MAJOR OCCUPATIONS IN THE PROJECT VICINITY .....	E-94
TABLE E-23	EDUCATIONAL ATTAINMENT IN THE PROJECT VICINITY .....	E-95
TABLE E-24	ENVIRONMENTAL JUSTICE COMMUNITIES IN THE PROJECT VICINITY .....	E-97
TABLE E-25	PROPOSED PROTECTION, MITIGATION, AND ENHANCEMENT MEASURES (NO STUDIES ARE PROPOSED) .....	E-101
TABLE G-1	LAND OWNERSHIP WITHIN THE CURRENT FEDERAL ENERGY REGULATORY COMMISSION PROJECT BOUNDARY .....	G-2
TABLE G-2	LAND OWNERSHIP IN THE PROPOSED PROJECT BOUNDARY .....	G-3

**LIST OF ATTACHMENTS**

ATTACHMENT A	EVIDENCE OF PACIFICORP OWNERSHIP: ARTICLES OF INCORPORATION, MERGER WITH UTAH POWER AND LIGHT, AND ORIGINAL PROPERTY DEED FOR PROJECT AREA
ATTACHMENT B	STATEMENT OF FEES REQUIRED TO DEVELOP SECTION 30(C) CONDITIONS
ATTACHMENT C	CONSULTATION RECORD
ATTACHMENT D	NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM FOR THE STAIRS HYDROELECTRIC PLANT

### ACRONYMS AND ABBREVIATIONS

#### **A**

AC	alternating current
ADA	Americans with Disabilities Act
amsl	above mean sea level

#### **B**

BCCWTP	Big Cottonwood Canyon Water Treatment Plant
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#### **C**

CEQ	Council for Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic feet per second
CMP	<i>Cottonwood Canyons Scenic Byways Corridor Management Plan</i>

#### **D**

DC	direct current
DUPC	Daughters of the Utah Pioneers of Uintah County

#### **E**

<i>E. coli</i>	<i>Escherichia coli</i>
ECPA	Electric Consumers Protection Act
EDDMapS	Early Detection and Distribution Mapping Systems
EJ	environmental justice
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act

#### **F**

FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
Forest Plan	<i>Revised Forest Plan Wasatch-Cache National Forest</i>

#### **G**

GBIF	Global Biodiversity Information Facility
GIS	geographic information system
Granite Project	Granite Hydroelectric Project

#### **H**

HDPE	high-density polyethylene pipe
HUC	hydrologic unit code

**I**

ICD	Initial Consultation Document
IPaC	Information for Planning and Consultation

**J**

JAPM	joint agency and public meeting
Joint Application	Joint Conduit Exemption and License Surrender Application

**K**

kW	kilowatt
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**L**

LCT	landscape character themes
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**M**

MRLC Consortium	Multi-Resolution Land Characteristics Consortium
MW	megawatt
MWh	megawatt hour

**N**

NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NVUM	National Visitor Use Monitoring

**O**

OHV	off-highway vehicle
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**P**

PME	protection, mitigation, and enhancement
Project, or Stairs Project	Stairs Hydroelectric Project

**R**

RCYBP	radiocarbon years before present
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**S**

SGCN	Species of Greatest Conservation Need
SHPO	State Historic Preservation Office
SIO	Scenic Integrity Objective
Stairs Historic District	Stairs Station Hydroelectric Power Plant Historic District
SUP	special use permit

**T**

T&E	threatened and endangered
TMDL	total maximum daily load

**U**

UAIDA	Utah American Indian Digital Archive
UDEQ	Utah Department of Environmental Quality
UDNR	Utah Department of Natural Resources
UDWR	Utah Division of Wildlife Resources
UNPS	Utah Native Plant Society
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USU	Utah State University
Utah SCORP	<i>Utah's Statewide Comprehensive Outdoor Recreation Plan 2019–2023</i>
UWCNF	Uinta-Wasatch-Cache National Forest

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## EXECUTIVE SUMMARY

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### STAIRS HYDROELECTRIC PROJECT

PacifiCorp is the owner, operator, and licensee of the 1.2-megawatt (MW) run-of-river Stairs Hydroelectric Project (Stairs Project or Project). The Stairs Project is regulated by the Federal Energy Regulatory Commission (FERC) as FERC Project No. 597. The current Stairs Project license was issued by FERC as a Minor Project License (less than 5 MW) on September 30, 1999, with an effective date of July 1, 2000, and an expiration date of June 30, 2030 (FERC 1999).

The Stairs Project is located in Big Cottonwood Canyon along Big Cottonwood Creek, east and outside of the city of Cottonwood Heights in Salt Lake County, Utah. The Project lies within the Uinta-Wasatch-Cache National Forest (UWCNF) approximately two miles east of the mouth of Big Cottonwood Canyon and is located partially on PacifiCorp lands (around the intake and dam) and partially on UWCNF lands (around the powerhouse and tailrace). The current FERC Project Boundary is approximately 13.3 acres and contains the following Project facilities: the Storm Mountain (Stairs) diversion dam, an intake, an approximately 0.5-mile-long flowline and penstock, a concrete and brick powerhouse containing a 1,200-kilowatt (kW) generating unit and adjacent transformer facilities, a tailrace canal, and appurtenant facilities (PacifiCorp 1998).

The Stairs Project operates as a run-of-river facility, using the natural fall of Big Cottonwood Creek to generate head for the Project. Big Cottonwood Creek is one of several creeks that flow from the western slopes of the Wasatch Mountains as part of the Jordan River Watershed, ultimately contributing to Great Salt Lake, a terminal inland sea. Big Cottonwood Creek flows are diverted at the Project's diversion dam (Storm Mountain Dam) and intake through an approximately 0.5-mile-long steel flowline and penstock to the Stairs Project powerhouse (featuring a turbine and associated generating equipment), where flow is released into the Project's tailrace.

The Project's tailrace canal feeds water directly into a non-Project intake and water supply pipeline that conveys flow through PacifiCorp's Granite Hydroelectric Project (FERC Project No. 14293) (Granite Project)—a separate PacifiCorp hydroelectric generating facility regulated

by FERC under a conduit exemption—directly to Salt Lake City’s Big Cottonwood Canyon Water Treatment Plant (BCCWTP), which provides the largest supply of drinking water to Salt Lake City. As discussed in FERC’s March 28, 2012, Order Granting Exemption from Licensing (Conduit) for the Granite Project, Salt Lake City’s municipal water supply system diverts water from Big Cottonwood Creek through the Granite Project powerhouse and into the BCCWTP, thus qualifying it for a conduit exemption. In the same manner, the Stairs Project tailrace provides flow directly to this same diversion and intake for Salt Lake City’s municipal water supply system and, thus, should also qualify for a conduit exemption, as explained in further detail throughout this Draft Joint Conduit Exemption and License Surrender Application (Joint Application).

For purposes of this Joint Application, the Project Area—as discussed in Exhibit E (Environmental Report)—is defined as the current FERC Project Boundary plus a 0.5-mile buffer. The Project Area and existing Project Boundary are shown on Figure ES-1. The Project schematic (Figure ES-2) depicts the interrelationship between the Stairs Project, Granite Project, and BCCWTP.

Additional information and context are included in Attachment A, Evidence of PacifiCorp Ownership: Articles of Incorporation, Merger with Utah Power and Light, and Original Property Deed for Project Area; Attachment B, Statement of Fees Required to Develop Section 30(c) Conditions; Attachment C, Consultation Record; and Attachment D, National Register of Historic Places Registration Form for the Stairs Hydroelectric Plant.

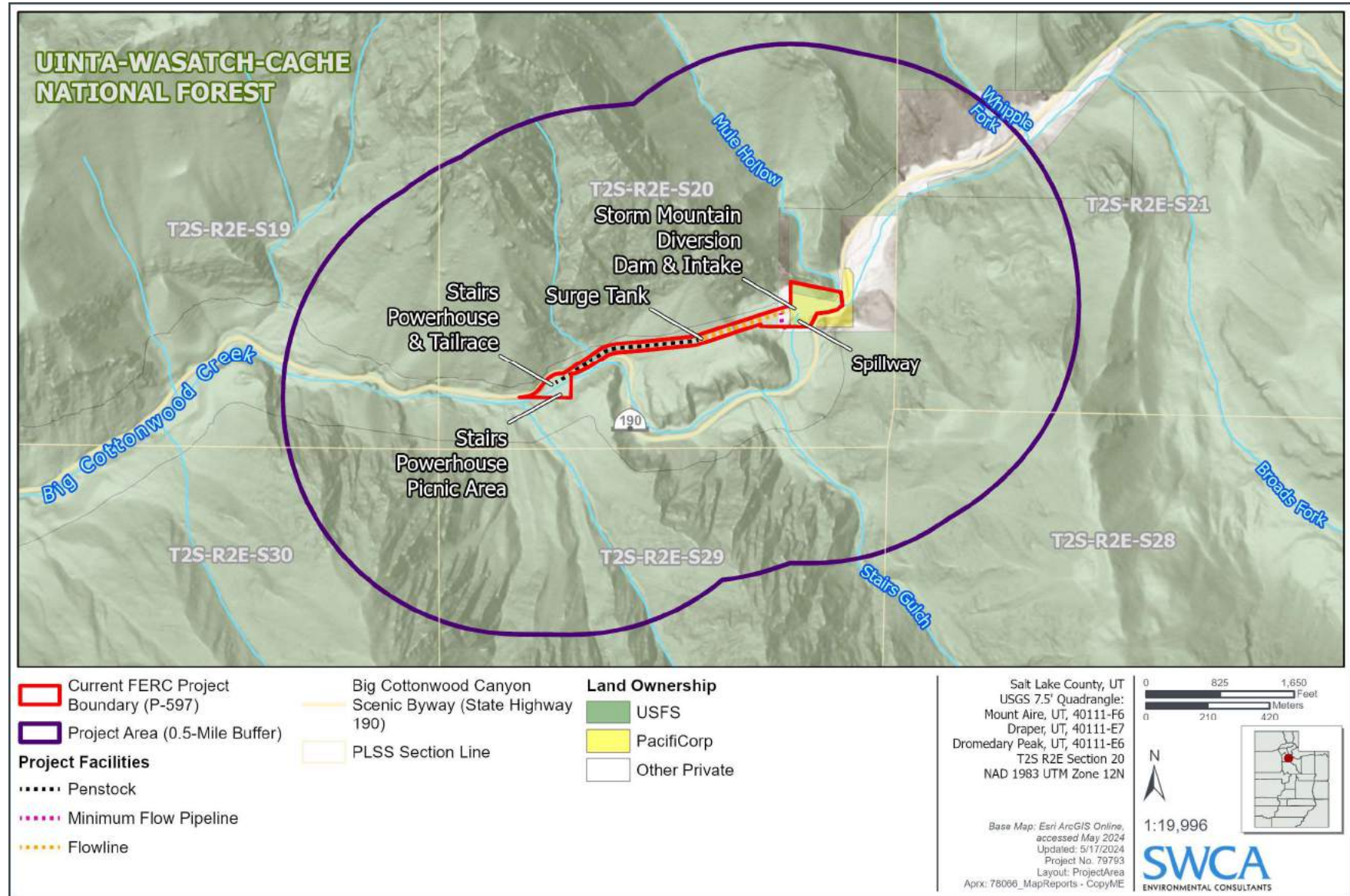


FIGURE ES-1 STAIRS EXISTING FERC PROJECT BOUNDARY AND PROJECT AREA

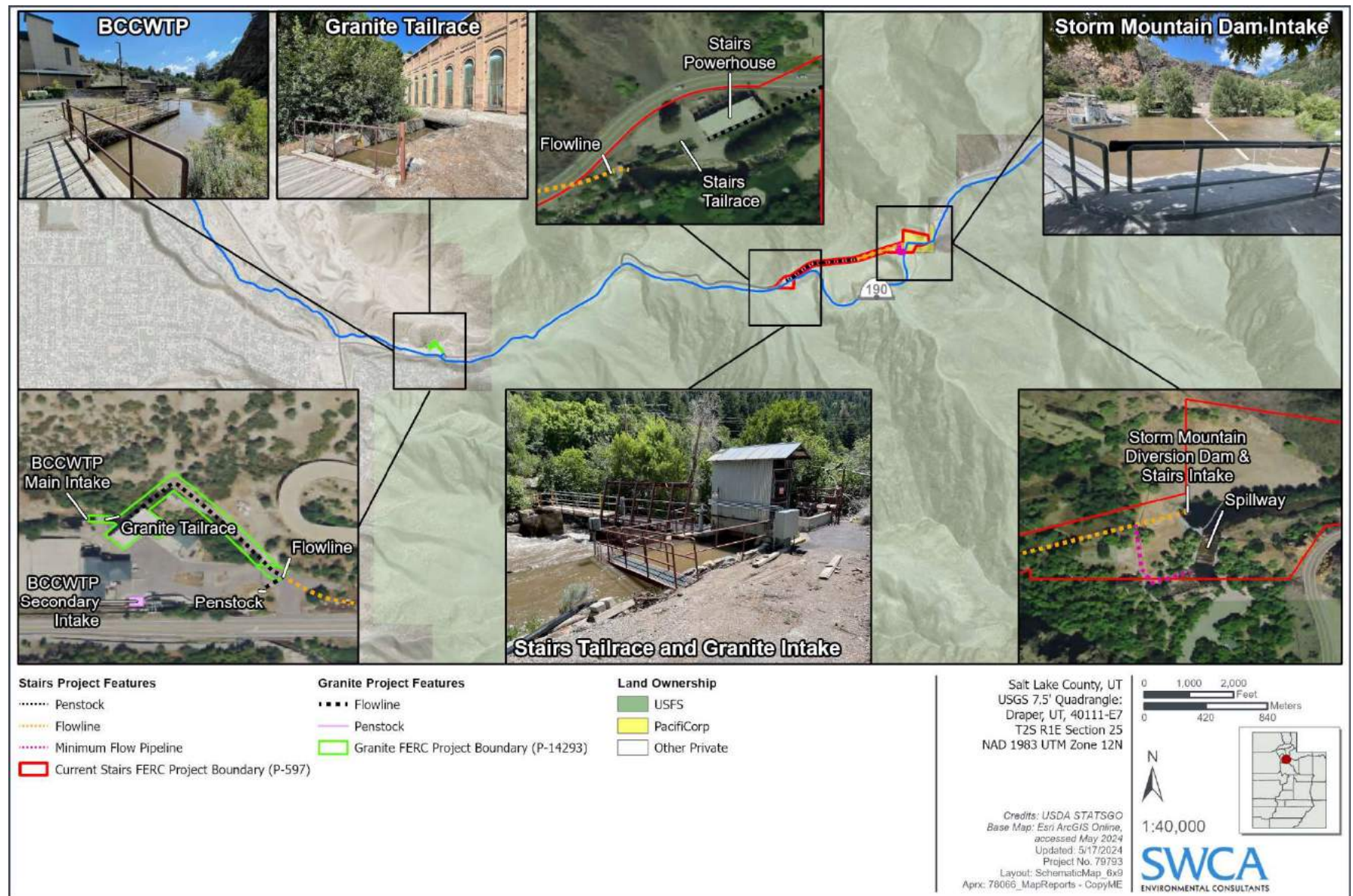


FIGURE ES-2 STAIRS PROJECT SCHEMATIC

## **RELEVANT NON-PROJECT FACILITIES**

### **GRANITE HYDROELECTRIC PROJECT**

The Granite Project is a 1.7-MW hydroelectric facility, constructed between 1896 and 1897. Owned and operated by PacifiCorp, it is located approximately two miles downstream of the Stairs Project on Big Cottonwood Creek (National Park Service 1989). In 2011, PacifiCorp applied to FERC for an exemption for a conduit hydroelectric facility for the Granite Project (PacifiCorp 2011). On March 28, 2012, FERC issued an order granting the Granite Project a conduit exemption from licensing requirements under 18 Code of Federal Regulations (CFR) 4.50 (FERC 2012). Following the conduit exemption order, the Granite Project now consists of a 300-foot-long, 42-inch-diameter intake pipe; a powerhouse containing two horizontal impulse Pelton turbines and one generating unit with an installed capacity of 1,700 kW; a 10-foot-wide, 80-foot-long box channel; and appurtenant facilities.

As discussed in the Granite Project's exemption application, Salt Lake City's municipal water supply system diverts water from both Big Cottonwood Creek and the tailrace of the Stairs Project at a diversion and intake located at the end of the Stairs tailrace (PacifiCorp 2011). Approximately two miles downstream of the Stairs tailrace and adjacent to the BCCWTP, additional flows may also be diverted to BCCWTP directly from Big Cottonwood Creek if water is not running through the Granite Project. Flow is diverted from the Stairs Project tailrace through a pipeline to Granite Project facilities, through the Granite Project powerhouse, and discharged through a box channel into the BCCWTP, thus qualifying it for a conduit exemption. In the same manner, the Stairs Project tailrace provides flow directly to this same diversion and intake for Salt Lake City's municipal water supply system and, thus, should also qualify for a conduit exemption, as explained in further detail throughout this Joint Application.

### **BIG COTTONWOOD CANYON WATER TREATMENT PLANT**

The BCCWTP is located at the mouth of Big Cottonwood Canyon in Cottonwood Heights, Utah, and was constructed between 1957 and 1959. The plant is owned and operated by Salt Lake City Department of Public Utilities and is a critical component of the city's drinking water system (BCCWTP 2023). This treatment plant supplies approximately 40 percent of the drinking water in the department's regional service area and processes and delivers 38 million gallons of water

per day to the region. As described throughout this Joint Application, the Stairs Project—as well as the Granite Project—is located along Salt Lake City’s municipal water supply stream system with the primary purpose of providing municipal water supply to Salt Lake City through the BCCWTP.

### **PROPOSED ACTION**

As defined under 18 CFR 4.30(b)(30), a “small conduit hydroelectric facility” is “an existing or proposed hydroelectric facility that is constructed, operated, or maintained for the generation of electric power, and includes all structures, fixtures, equipment, and lands used and useful in the operation or maintenance of the hydroelectric facility, but excludes the conduit on which the hydroelectric facility is located and the transmission lines associated with the hydroelectric facility.” Further, an existing facility must be used for electric power generation, have an installed capacity that does not exceed 40 MW, not be an integral part of a dam, not rely upon construction of a dam (unless constructed for agricultural, municipal, or industrial consumptive purposes), and must discharge the water it uses for power generation either 1) into a conduit; 2) directly to a point of agricultural, municipal, or industrial consumption; or 3) into a natural water body if a quantity of water equal to or greater than the quantity discharged from the hydroelectric facility is withdrawn from that water body downstream into a conduit that is part of the same water supply system as the conduit on which the hydroelectric facility is located.

Pursuant to 18 CFR 4.30(b)(30), the Project is used for electric power generation, has an installed capacity of 1.2 MW (less than the 40 MW threshold), is not an integral part of a dam, does not rely on the construction of a dam, is located on a conduit with the primary purpose of municipal water use, and discharges to a point of municipal consumption by Salt Lake City’s municipal water supply system. The Stairs Project was originally constructed primarily for the generation of hydroelectric power; however, as municipal water projects developed the watershed of Big Cottonwood Creek for the consumptive use of drinking water supply downstream of both the Stairs and Granite Projects, the primary function of both generation facilities was altered. Construction of the BCCWTP inherently modified the primary purpose of the stream itself, as well as both Stairs and Granite Projects’ flowlines and penstocks, to become integral components of Salt Lake City’s primary drinking water supply system for municipal consumption.

Accordingly, PacifiCorp is filing for a Joint Conduit Exemption and License Surrender for the Stairs Project pursuant to 18 CFR 4.90 and 6.2.<sup>1</sup> Under the Proposed Action, there would be no construction of new facilities, no physical changes to current facilities, nor changes to Project operations or maintenance activities. PacifiCorp would continue to maintain the Project in accordance with federal and state dam safety standards and consult with the Utah State Historic Preservation Office (SHPO) regarding the Stairs Station Hydroelectric Power Plant Historic District (Stairs Historic District) and other Project cultural resources. Consistent with the requirements of a conduit exemption, PacifiCorp also proposes to modify the Project Boundary to exclude conduit facilities and encompass only those Project features necessary for the operation and maintenance of, and access to, the Project. These features would include the powerhouse, tailrace, parking areas, and appurtenant facilities. PacifiCorp is also proposing to incorporate the existing grassy area adjacent to the powerhouse, as that area provides the only access to the south side of the downstream diversion structure; further, PacifiCorp is committed to continuing to provide the existing recreation opportunity at the Project. This portion of the Stairs Project is located on U.S. Forest Service (USFS) lands. The proposed Project Boundary changes are shown in Figures ES-3.

Given the administrative nature of the Proposed Action, no adverse environmental impacts are anticipated. PacifiCorp maintains that the Stairs Project meets the Federal Power Act (FPA) definitions of a conduit; therefore, in lieu of initiating relicensing activities pursuant to 18 CFR 4.5 and 5.1, PacifiCorp is filing this Joint Application for exemption pursuant to 18 CFR 4.30 and 6.1, with the license surrender contingent upon granting of the exemption. Should FERC not grant the exemption, PacifiCorp would initiate the three-stage consultation process required pursuant to relicensing regulations at 18 CFR 4.6 and 5.1.

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<sup>1</sup> PacifiCorp is filing both an exemption application and surrender application concurrently due to the intrinsically linked nature of the two applications, with the license surrender contingent upon granting of the exemption. PacifiCorp requests that FERC issue orders approving the applications simultaneously. In the event that the conduit exemption is not granted by FERC, PacifiCorp's intention is to convert the Joint Conduit Exemption and Surrender Application into a Pre-Application Document and relicensing application for the Stairs Project and to rescind their license surrender application.

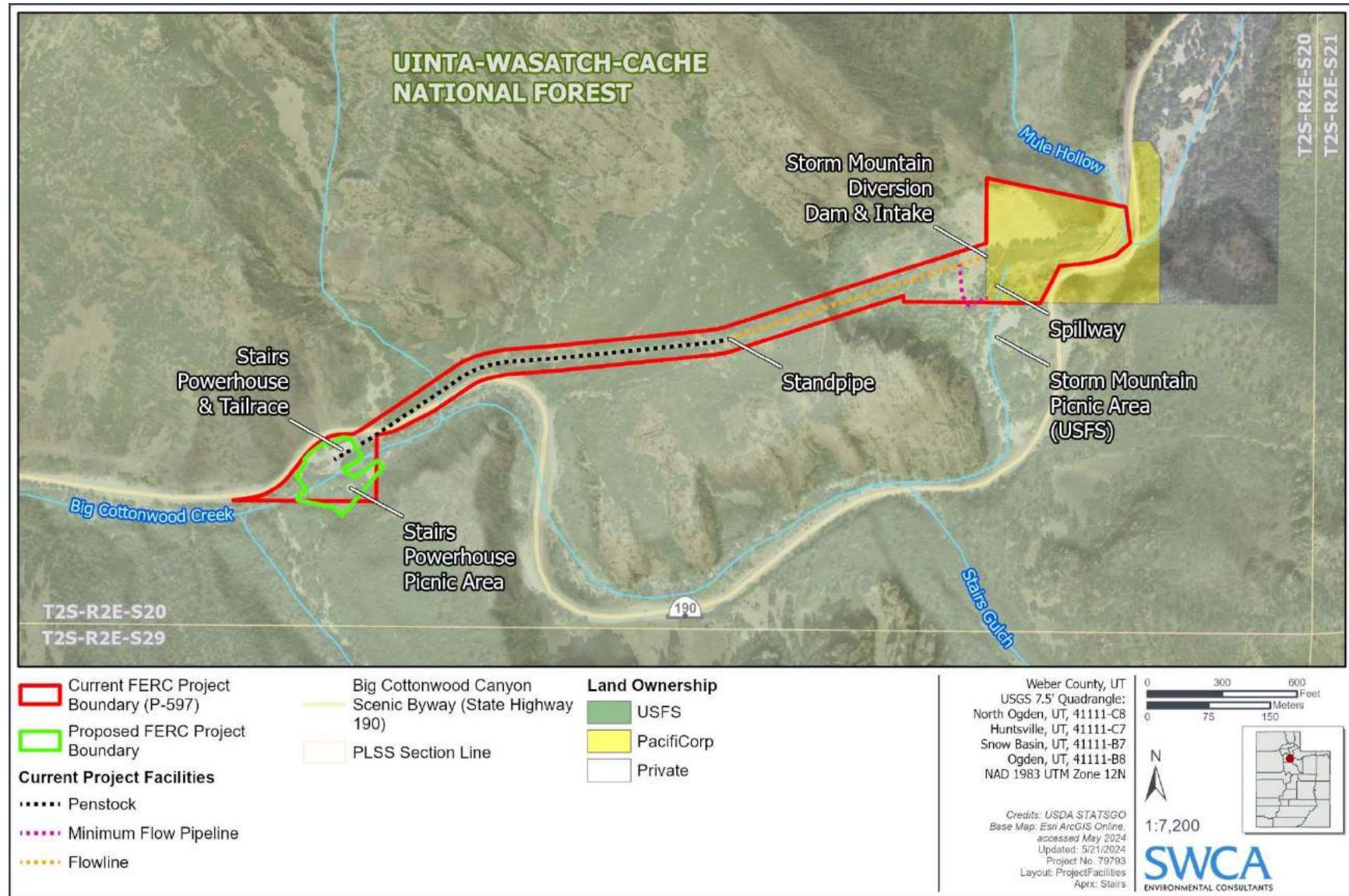


FIGURE ES-3 PROPOSED PROJECT BOUNDARY

## CONSULTATION SUMMARY

To date, PacifiCorp has completed the following consultation activities for the Joint Application process, either in accordance with 18 CFR 4.38, or as additional voluntary efforts to engage with interested parties (Table ES-1).

**TABLE ES-1 SUMMARY OF CONSULTATION EFFORTS**

DATE	CONSULTATION EFFORT
January 31, 2024	Virtual preliminary meeting held for interested parties and Tribes to discuss the Proposed Action, introduce the Initial Consultation Document (ICD), and solicit early feedback.
February 8, 2024	Follow-up email sent to interested parties and Tribes to summarize the preliminary meeting and request continued engagement through the consultation process (received two comments in support of the proposed change to the conduit exemption from the USFS and Utah Department of Natural Resources).
February 16, 2024	Filed ICD with FERC, followed by direct distribution to interested parties and Tribes.
March 5, 2024	Notice of joint agency and public meeting (JAPM) filed with FERC.
March 6, 2024	Newspaper notice of the JAPM circulated in the <i>Salt Lake Tribune</i> .
March 21, 2024	JAPM and site visit held for interested parties and Tribes.
April 2, 2024	Follow-up email sent to interested parties to summarize the JAPM and request comments on the ICD.
May 20, 2024	Public and interested party comment period closed with no comments.

The consultation record can be found in Attachment C, which includes a full record of the voluntary and required forms of engagement conducted with interested parties and Tribes. The consultation record also contains a table describing each consultation action and includes any letters of support gathered from interested parties throughout the consultation process.

## REFERENCES

- Big Cottonwood Canyon Water Treatment Plant (BCCWTP). 2023. Project Overview. Available at: <https://www.keepitpurebigcottonwood.com/>. Accessed April 10, 2024.
- Federal Energy Regulatory Commission (FERC). 1999. *Order Issuing Subsequent License for Stairs Hydroelectric Project FERC Project No. 597-003*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=19991005-0266](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=19991005-0266). Accessed April 10, 2024.
- . 2012. *Order Granting Exemption from Licensing (Conduit)*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=20120328-3020](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=20120328-3020). Accessed April 10, 2024.
- National Park Service. 1989. *National Register of Historic Places registration form for Granite Hydroelectric Power Plant Historic District*. Available at: [https://npgallery.nps.gov/NRHP/GetAsset/NRHP/89000283\\_text](https://npgallery.nps.gov/NRHP/GetAsset/NRHP/89000283_text). Accessed April 10, 2024.
- PacifiCorp. 1998. *License Application for the Stairs Hydroelectric Project, FERC Project No. 597-003*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=19980625-0332](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=19980625-0332). Accessed April 10, 2024.
- . 2011. *Application for Exemption of Small Conduit Hydroelectric Facility: Granite Hydroelectric Project. FERC No. 14293*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_Number=20110927-5060](https://elibrary.ferc.gov/eLibrary/docinfo?accession_Number=20110927-5060). Accessed October 24, 2023.

## **INTRODUCTORY STATEMENT**

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PacifiCorp applies to FERC for an exemption for the Stairs Project (FERC Project No. 597), a small conduit hydroelectric facility that meets the requirements of 18 CFR 4.30(b)(30) of this subpart, from certain provisions of Part I of the FPA.

As defined under 18 CFR 4.30(b)(30), a “small conduit hydroelectric facility” is “an existing or proposed hydroelectric facility that is constructed, operated, or maintained for the generation of electric power, and includes all structures, fixtures, equipment, and lands used and useful in the operation or maintenance of the hydroelectric facility, but excludes the conduit on which the hydroelectric facility is located and the transmission lines associated with the hydroelectric facility.” Further, an existing facility must be used for electric power generation, have an installed capacity that does not exceed 40 MW, not be an integral part of a dam, not rely upon construction of a dam (unless constructed for agricultural, municipal, or industrial consumptive purposes), and must discharge the water it uses for power generation either 1) into a conduit; 2) directly to a point of agricultural, municipal, or industrial consumption; or 3) into a natural water body if a quantity of water equal to or greater than the quantity discharged from the hydroelectric facility is withdrawn from that water body downstream into a conduit that is part of the same water supply system as the conduit on which the hydroelectric facility is located.

Pursuant to 18 CFR 4.30(b)(30), the Project is used for electric power generation, has an installed capacity of 1.2 MW (less than the 40 MW threshold), is not an integral part of a dam, does not rely on the construction of a dam, is located on a conduit with the primary purpose of municipal water use, and discharges directly to a point of municipal consumption by Salt Lake City’s municipal water supply system; thus, exclusion of the intake, diversion dam, spillway, flowline, and penstock as Project facilities would qualify the Project as a conduit hydroelectric facility.

*1. The location of the facility is:*

State: Utah

County: Salt Lake

Nearby Town: Cottonwood Heights, Utah

2. *The exact name and business address of the applicant*

PacifiCorp  
825 NE Multnomah Street, Suite 1800  
Portland, Oregon 97232  
(503) 813-6657

3. *The exact name and business address of each person authorized to act as an agent for the applicant in the application is:*

Todd Olson  
Director of Compliance  
825 NE Multnomah Street, Suite 1800  
Portland, Oregon 97232  
(503) 813-6657

Eve Davies  
Principal Scientist/Licensing Project Manager  
1407 West North Temple  
Salt Lake City, Utah 84116  
(801) 220-2245

4. PacifiCorp is an investor-owned public utility incorporated in the state of Oregon and doing business in Utah, Idaho, Wyoming, Oregon, Washington, California, and Montana. Its principal office is located at 825 NE Multnomah, Portland, Oregon 97232. PacifiCorp provides electric services to residential, commercial, and industrial customers in the states of Oregon, Washington, California, Idaho, Wyoming, and Utah. All outstanding shares of PacifiCorp's common stock are held directly by Berkshire Hathaway Energy (BHE). BHE is, in turn, a direct subsidiary of Berkshire Hathaway, Inc., whose shares are publicly traded on the New York Stock Exchange. None of the intermediary companies holding PacifiCorp's common stock are publicly held.

5. *The Provisions of Part I of the FPA for which the exemption is requested are:*

All provisions of Part I of the FPA.

# **DRAFT JOINT CONDUIT EXEMPTION AND LICENSE SURRENDER APPLICATION**

## **EXHIBIT A PROJECT DESCRIPTION**

### **STAIRS HYDROELECTRIC PROJECT (FERC PROJECT NO. 597)**



*Prepared by:*



MAY 2024

**TABLE OF CONTENTS**

EXHIBIT A: PROJECT DESCRIPTION..... A-3

    1.1    PROJECT FACILITIES..... A-3

        1.1.1    INTAKE AND DIVERSION DAM..... A-3

        1.1.2    FLOWLINE AND PENSTOCK..... A-4

        1.1.3    POWERHOUSE AND TAILRACE..... A-5

        1.1.4    PROPOSED CHANGES TO PROJECT FACILITIES..... A-6

    1.2    PROJECT OPERATIONS..... A-6

        1.2.1    PROPOSED CHANGES IN OPERATIONS ..... A-7

    1.3    REFERENCES ..... A-8

## **EXHIBIT A: PROJECT DESCRIPTION**

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### **1.1 PROJECT FACILITIES**

The Stairs Project currently consists of the following facilities: 1) a 150-foot-long and 35-foot-high earth-fill diversion dam; 2) a reinforced concrete spillway; 3) a reinforced concrete intake structure; 4) a 2,850-foot-long penstock; 5) a 100-foot-wide × 35-foot-long masonry powerhouse; 6) one Francis turbine generator with a rated capacity of 1,200 kW; 7) a 7-foot-wide × 5.3-foot-deep reinforced concrete tailrace; and 8) other appurtenances. Flow into the Project begins at the reinforced concrete intake structure located at the diversion dam at an elevation of approximately 5,800 feet above mean sea level (amsl), where water from Big Cottonwood Creek is diverted into the Project intake, passing through a slide gate, and traveling through a 48-inch-diameter concrete flowline. The flowline transitions to a 48-inch diameter riveted steel pipe that serves as the Project penstock and transports water to the Stairs Project powerhouse at a maximum volume of 80 cubic feet per second (cfs). Flows in the Project tailrace are then either immediately routed to Salt Lake City’s municipal water supply system for the BCCWTP (non-Project)—passing through the Granite Project—or may be spilled back into Big Cottonwood Creek and eventually diverted into BCCWTP’s alternative intake (PacifiCorp 1998; see also additional details above in the Executive Summary (Proposed Action) section of this Joint Application).

#### **1.1.1 INTAKE AND DIVERSION DAM**

Construction of the original Stairs Project wood stave intake structure occurred in 1895 and was located upstream of the present intake. In 1912, construction of the present intake structure, spillway, and diversion dam (Storm Mountain Dam) replaced the original intake facilities, although the forebay was also altered in the 1950s. The diversion dam borders the UWCNF Storm Mountain Picnic Area; the area around the fenced-off and locked dam can be accessed either from a short dirt road behind a locked gate off of Big Cottonwood Canyon Road (Utah State Highway 190) or from the picnic ground via a footpath. The 150-foot-long (as currently constructed) diversion dam is composed of a stone core wall and is compacted by earth fill to a maximum height of 35 feet. The upstream face of the dam is covered with a concrete veneer. The axis of the diversion dam deflects 60 degrees southwest, where the original but now mostly

unused south and west legs are 200 feet and 300 feet long, respectively<sup>2</sup>. The diversion dam impounds an approximately 0.2-acre reservoir that is insufficient for any generation load-following or peaking purposes at the Stairs powerhouse. A reinforced concrete spillway is located on the west end of the south leg (now unused except for the spillway portion) of the diversion dam. Spill flows not diverted through the penstock are discharged back into the natural channel via the spillway.

The intake structure is a reinforced concrete box located 60 feet northwest of the spillway. The intake screen of the intake box is approximately 14 feet above the channel bottom. The intake itself consists of an 8-inch air vent pipe that extends vertically and an electric slide gate actuator that controls the inlet to the flowline (PacifiCorp 1998).

### **1.1.2      FLOWLINE AND PENSTOCK**

Water is conveyed from the Project's diversion dam to the powerhouse by a flowline and penstock, collectively 2,850 feet in length. The flowline and penstock have both exposed and buried segments. Concrete saddles at approximately 50-foot intervals support the penstock in the exposed sections (PacifiCorp 1998).

Beginning at the intake structure, water is conveyed through a 48-inch steel riveted pipe flowline, extending approximately 1,100 to 1,200 feet in length, and ending as it exits from the 400-foot-long mountain tunnel. A standpipe is located at the exit of the tunnel where the flowline transitions to penstock. See Figure ES-1 in the Executive Summary for an overview of Project features including the standpipe, flowline, penstock, and powerhouse. Pursuant to License Article 401, PacifiCorp releases a 4 cfs minimum flow, or inflow to the Project, whichever is less, for protection and enhancement of fish and wildlife resources, aesthetic resources, and water quality in the bypassed reach of Big Cottonwood Creek. Minimum flow is released from the Project flowline via a valve located immediately downstream of the diversion dam and concrete spillway to ensure that 4 cfs is released anytime the flowline is operational.

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<sup>2</sup> The majority of the forebay was filled in in the 1950s, in the same era that the downstream water treatment plant was constructed, in order to improve water quality; the change in forebay size eliminated the need for much of the original impoundment dam/dike structure.

The penstock is approximately 1,700 feet long and extends from the standpipe to the penstock header pipe located on the south side of the powerhouse. The penstock, visible upon exiting the tunnel, continues downhill and then drops 350 feet to a feeder pipe near the powerhouse where it is diverted to a single generating unit. At the time of original construction in 1896, multiple turbine/generator units were installed, however, only a single, larger unit is still in use today, as described further below. The penstock is completely buried between Big Cottonwood Canyon Road and the powerhouse itself. The penstock also has several appurtenant features, including a standpipe, combination air valves, access holes, and a drain valve (PacifiCorp 1998).

### **1.1.3      POWERHOUSE AND TAILRACE**

The Stairs Project powerhouse is listed in the National Register of Historic Places (NRHP) as part of the Stairs Historic District. The powerhouse is a two-story brick building located between Big Cottonwood Creek and Big Cottonwood Canyon Road. Originally constructed in 1895, the powerhouse design allowed for multiple turbines, evidenced by the four 16-inch-diameter intakes branching from the penstock; however, records do not indicate how many turbines were originally installed in the powerhouse. A single 1,119-kW horizontal shaft Francis reaction turbine, referred to as Unit 3, was installed in 1912 at an original turbine location. Construction of Unit 3 facilitated the need for a larger intake that connected with the existing one. A smaller, horizontal shaft 450-kW Pelton turbine, referred to as Unit 1, was installed in 1935 but later taken out of service. Unit 3 remains the only operational turbine in the powerhouse and was upgraded and refitted with a new runner and wicket gates in 1996. The refurbished generating unit has a maximum output of 1,379 kW at an efficiency of 84.5 percent with a discharge of 57 cfs but is limited by the generator's capacity of 1,200 kW. The north side of the powerhouse contains the non-Project fenced transformer and distribution equipment, most recently upgraded in 2023. On the south side of the powerhouse, a 7-foot-wide × 5.3-foot-deep reinforced concrete tailrace continues west past the powerhouse. Upon exiting the powerhouse, flows are diverted from the Project's tailrace into either Salt Lake City's municipal water supply intake for the BCCWTP (non-Project)—passing through the Granite Project—or may be spilled back into Big Cottonwood Creek and eventually diverted into BCCWTP's alternative intake if the Granite Project is not operating (PacifiCorp 1998).

#### **1.1.4      PROPOSED CHANGES TO PROJECT FACILITIES**

There would be no construction of new facilities, physical changes to current facilities, or changes to Project operations or maintenance activities under the Proposed Action. As noted in the Executive Summary of this application, PacifiCorp is proposing to modify the FERC Project Boundary to encompass only the Project powerhouse, tailrace, parking lot, grass access/picnic area, and other appurtenant facilities necessary for continued access to, operation of, and maintenance of the Project. The Proposed Action would not impact ownership, operation, or maintenance of facilities to be removed from the FERC Project Boundary.

### **1.2      PROJECT OPERATIONS**

The Stairs Project is a run-of-river, non-peaking facility with little or no water storage available. The Project is subject to seasonal river and runoff flows and fluctuation in generation ability, generally operating as a small baseload energy source. The 1,250-kW horizontal generating unit at the Stairs Project powerhouse operates under semi-automatic control, because the unit must be manually started and synchronized online.

All Project facilities are operated and maintained by PacifiCorp personnel. The powerhouse is normally staffed daily, with an operator on duty during the day, 7 days a week (PacifiCorp 2007). Personnel who staff the Stairs Project also staff the downstream Granite Project and other nearby facilities, dependent upon changing daily duties. Powerhouse personnel are available during off hours and the local response time to the Project is less than 30 minutes (Baldwin 2024). PacifiCorp operators coordinate outflow of the Stairs Project with the downstream Granite Project and BCCWTP.

Routine maintenance and daily inspections are performed by PacifiCorp personnel. General maintenance and equipment lubrication are applied when necessary. Routine operation at the Stairs Project consists of inspecting equipment in accordance with the station rounds checklist; checking water level at the diversion dam daily; cleaning all debris from trash rack, checking leaf rake for proper operation; recording minimum flow readings and record in station logs; and checking penstock pressure to ensure 150 to 157 pounds per square inch. Penstock and flowline inspections are also conducted on a predetermined schedule (PacifiCorp 2007)

The powerhouse load control computer system adjusts generator output to use all available water and maintains the Stairs Project forebay level within designated limits. When inflow exceeds 52 cfs, the generator is brought to full load and the remaining water is released over the spillway. When inflow is at or less than 52 cfs, a load control computer, located in the powerhouse office, adjusts the load on the turbine to maintain the forebay level between the preset dead band levels. The noted license-required 4 cfs minimum flow, or inflow to the Project, whichever is less, is maintained in the river by a 10-inch high-density polyethylene pipe (HDPE) pipe and valve that connects the flowline downstream of the intake to a discharge structure just downstream of the spillway (PacifiCorp 2007).

The 1,250-kW generator produces up to 2,300 volts, which is stepped up to 12,500 volts in the adjacent non-Project switchyard. The powerhouse service is fed from the 1,250-kW station bus through a three-phase 250 alternating current (AC) step-down transformer, located in the switchyard. A battery provides 125-volt direct current (DC) to the station, and the battery voltage is maintained by a dedicated battery charger. The unit has a hydraulic actuator valve that controls the wicket gates and operating cylinder to synchronize the generator online and for loading up the unit (PacifiCorp 2007).

The turbine, generator, auxiliaries, and switchgear are all relay protected and will shut down automatically if abnormal operating conditions occur. Any unit, auxiliary, or switchgear alarm is received at the station annunciator panel, and a general alarm is received at PacifiCorp's Hydro Control Center at Merwin Dam in Ariel, Washington, which will initiate action to have an operator respond. Additionally, the penstock water provides the fire protection system for the powerhouse in addition to numerous fire extinguishers located within the building. The powerhouse is controlled, protected, and monitored by various electronic systems such as a load controller, leak detector, and protective relays to protect the turbine, generator, and the penstock (PacifiCorp 2007).

### **1.2.1      PROPOSED CHANGES IN OPERATIONS**

No changes to Project operations are proposed under the Proposed Action. PacifiCorp would continue to be the primary responsible entity for operation, inspection and maintenance activities at the penstock, powerhouse, and associated features.

### 1.3 REFERENCES

Baldwin, Connely. 2024. Personal communication, email from Connely Baldwin, PacifiCorp, to Emily Waters, SWCA Environmental Consultants, January 16, 2024.

PacifiCorp. 1998. *License Application for the Stairs Hydroelectric Project, FERC Project No. 597-003*. Available at:  
[https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=19980625-0332](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=19980625-0332). Accessed April 10, 2024.

———. 2007. *Plant Overview System Description, Series 000, PacifiCorp Energy Stairs Hydro Plant*. Available on SWCA Environmental Consultants Salt Lake City Servers.

# **DRAFT JOINT CONDUIT EXEMPTION AND LICENSE SURRENDER APPLICATION**

## **EXHIBIT E ENVIRONMENTAL REPORT**

### **STAIRS HYDROELECTRIC PROJECT (FERC PROJECT NO. 597)**



*Prepared by:*



MAY 2024

## TABLE OF CONTENTS

EXHIBIT E: ENVIRONMENTAL REPORT .....	E-4
1.1    GENERAL DESCRIPTION OF RIVER BASIN.....	E-4
1.1.1    GREAT SALT LAKE BASIN.....	E-5
1.1.2    JORDAN RIVER BASIN .....	E-7
1.1.3    LAND AND WATER USE .....	E-10
1.2    GEOLOGY AND SOILS .....	E-11
1.2.1    REGIONAL GEOLOGICAL SETTING.....	E-11
1.2.2    SOILS .....	E-13
1.2.3    EROSION AND SEDIMENT CONTROL .....	E-15
1.2.4    ENVIRONMENTAL EFFECTS .....	E-15
1.3    WATER RESOURCES .....	E-16
1.3.1    WATER QUANTITY .....	E-16
1.3.2    WATER RIGHTS.....	E-17
1.3.3    WATER USE .....	E-18
1.3.4    WATER QUALITY .....	E-18
1.3.5    ENVIRONMENTAL EFFECTS .....	E-21
1.4    FISHERIES .....	E-22
1.4.1    RESIDENT FISH.....	E-22
1.4.2    ANADROMOUS FISH .....	E-23
1.4.3    SPECIAL STATUS SPECIES .....	E-23
1.4.4    ENVIRONMENTAL EFFECTS .....	E-24
1.5    WILDLIFE RESOURCES .....	E-25
1.5.1    HABITAT .....	E-25
1.5.2    GENERAL WILDLIFE.....	E-28
1.5.3    RARE, SENSITIVE, THREATENED, AND ENDANGERED SPECIES .....	E-29
1.5.4    ENVIRONMENTAL EFFECTS .....	E-33
1.6    BOTANICAL RESOURCES .....	E-34
1.6.1    UPLAND HABITAT .....	E-34
1.6.2    RIPARIAN HABITAT.....	E-35
1.6.3    WETLAND HABITAT .....	E-35
1.6.4    NOXIOUS WEEDS .....	E-35
1.6.5    RARE, THREATENED, AND ENDANGERED SPECIES .....	E-38
1.6.6    ENVIRONMENTAL EFFECTS .....	E-40
1.7    CULTURAL AND HISTORIC RESOURCES.....	E-41
1.7.1    PRECONTACT PERIOD CONTEXT .....	E-41
1.7.2    PREHISTORY OF THE EASTERN GREAT BASIN .....	E-42
1.7.3    HISTORIC PERIOD.....	E-48
1.7.4    PREVIOUSLY CONDUCTED ARCHAEOLOGICAL SURVEYS AND RESOURCES WITHIN THE PROJECT AREA.....	E-50
1.7.5    PREVIOUSLY IDENTIFIED HISTORIC ARCHITECTURAL RESOURCES .....	E-51
1.7.6    TRIBAL RESOURCES IN THE PROJECT AREA .....	E-55
1.7.7    IDENTIFICATION OF RESOURCES .....	E-55
1.7.8    POTENTIAL RESOURCES .....	E-66
1.7.9    ENVIRONMENTAL EFFECTS .....	E-66

1.8	RECREATIONAL RESOURCES .....	E-67
1.8.1	RECREATION OPPORTUNITIES AT THE PROJECT .....	E-67
1.8.2	RECREATION OPPORTUNITIES IN THE PROJECT AREA .....	E-69
1.8.3	RECREATIONAL USE AND NEEDS IN THE PROJECT AREA .....	E-72
1.8.4	ENVIRONMENTAL EFFECTS .....	E-77
1.9	LAND USE AND COVER .....	E-78
1.9.1	LAND USE .....	E-78
1.9.2	LAND COVER .....	E-80
1.9.3	ENVIRONMENTAL EFFECTS .....	E-83
1.10	AESTHETIC AND VISUAL RESOURCES .....	E-84
1.10.1	VISUAL CHARACTER OF PROJECT LANDS .....	E-84
1.10.2	VISUAL CHARACTER OF PROJECT VICINITY .....	E-84
1.10.3	FEDERAL AND LOCAL VISUAL RESOURCES PLANNING OBJECTIVES .....	E-86
1.10.4	ENVIRONMENTAL EFFECTS .....	E-90
1.11	SOCIOECONOMIC RESOURCES AND ENVIRONMENTAL JUSTICE .....	E-91
1.11.1	POPULATION PATTERNS AND DIVERSITY .....	E-91
1.11.2	HOUSEHOLD DISTRIBUTION, INCOME, AND EMPLOYMENT .....	E-93
1.11.3	EDUCATION.....	E-95
1.11.4	PROJECT EMPLOYMENT SOURCES.....	E-95
1.11.5	ENVIRONMENTAL JUSTICE .....	E-96
1.11.6	ENVIRONMENTAL EFFECTS .....	E-99
1.12	PROJECT ALTERNATIVES.....	E-100
1.13	SUMMARY OF IMPACTS AND PROPOSED MEASURES.....	E-101
1.14	REFERENCES .....	E-102

## EXHIBIT E: ENVIRONMENTAL REPORT

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Pursuant to 18 CFR 4.38, this section describes the affected environment and significant resources present in the area around the Stairs Project. All analyses in this section focus on the current FERC Project Boundary and Project Area.<sup>3</sup> Analysis of a larger geographic scope, referred to as the Project Vicinity, is also included where appropriate. The Project Vicinity is uniquely defined for each resource discussed below, where applicable.

As noted in the Executive Summary, the construction of the BCCWTP modified the primary function of the Big Cottonwood Creek and, subsequently, the Stairs Project flowline from electric power generation to consumptive water use. Due to this change, PacifiCorp is applying to simultaneously qualify the Stairs Project as a conduit exemption and surrender the Stairs' current FERC Project license contingent upon granting of the exemption. Additionally, PacifiCorp is proposing to modify the FERC Project Boundary to exclude conduit facilities and only encompass those Project features necessary for the operation and maintenance of, and access to, the Project (see Figure ES-3). The Proposed Action would be an administrative action, in which the existing Project operation and maintenance activities would remain, and no adverse environmental impacts are anticipated. The sections below analyze the potential impacts of the Proposed Action on the surrounding environmental resources.

### 1.4 GENERAL DESCRIPTION OF RIVER BASIN

The Project is located in the Big Cottonwood Creek-Jordan River watershed (hydrologic unit code [HUC] 1602020402). As a tributary to the Jordan River, Big Cottonwood Creek is part of the larger Jordan River Basin HUC 16020204 (PacifiCorp 1999). At the head of the canyon, Big Cottonwood Creek is classified as a first-order stream and transitions to a second- and third-order stream as it flows down the canyon (Schwager and Cowley 2000). Source waters at the top of the canyon flow from Silver Lake, Twin Lakes Reservoir, Lake Mary, Lake Martha, Lake Catherine, and Dog Lake (Schwager and Cowley 2000). At the mouth of the canyon, the stream (consisting only of accretion flows downstream of the Granite Project Dam, located at the terminus of the Stairs tailrace) leaves UWCNF and passes into the BCCWTP (Schwager and Cowley 2000).

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<sup>3</sup> As defined earlier in this Joint Application, the Project Area is the FERC Project Boundary plus a 0.5-mile buffer.

Downstream, the stream (consisting of return flows from the BCCWTP) continues northward before its confluence with the Jordan River, which flows from Utah Lake, through Salt Lake Valley, and eventually empties into Great Salt Lake, part of the Great Salt Lake Basin, further discussed below (Figure E-1) (PacifiCorp 1998).

#### **1.4.1            GREAT SALT LAKE BASIN**

The Great Salt Lake Basin (HUC 16020310) spans approximately 17,047.9 square miles in area and includes the northern part of Utah and portions of eastern Nevada, southeastern Idaho, and southwestern Wyoming (U.S. Geological Survey [USGS] 2023a; Wooley 1924). The Great Salt Lake Basin is located within the larger (200,000 square miles) Great Basin and drains into Great Salt Lake (National Park Service 2021).

Great Salt Lake consists of the remnants of the Pleistocene freshwater Lake Bonneville, which previously extended 20,000 square miles in area, covering most of western Utah, with some significant encroachment into Idaho and Nevada. Approximately 18,000 years ago, Lake Bonneville began to spill out into the Pacific Ocean through the Snake and Columbia Rivers, eventually culminating in what is known as the Bonneville Flood (Utah Department of Natural Resources [UDNR] 2022a). Following the flood, the surface area of Lake Bonneville was greatly reduced. Over time, landslides and bedrock filled the lake's outlet, the region became warmer and drier, and evaporation rates increased, confining Lake Bonneville to a closed basin, now known as Great Salt Lake (UDNR 2022a).

The modern Great Salt Lake is highly variable in water surface elevation. At a surface elevation of 4,192 feet amsl, the lake extends approximately 1,700 square miles. It is a terminal lake with no outlet, and water can only exit through evaporation (Berni et al. 2014; USGS 2024). Most of the water flowing into the Great Salt Lake Basin originates from the Bear, Jordan, and Ogden Rivers; additional water sources involve direct precipitation and internal springs. Climate change, persistent water depletions in the tributaries to Great Salt Lake, and ongoing drought conditions all contributed to the recent 2022 historic low elevation of Great Salt Lake; the lake is currently approaching 4,195 feet amsl.

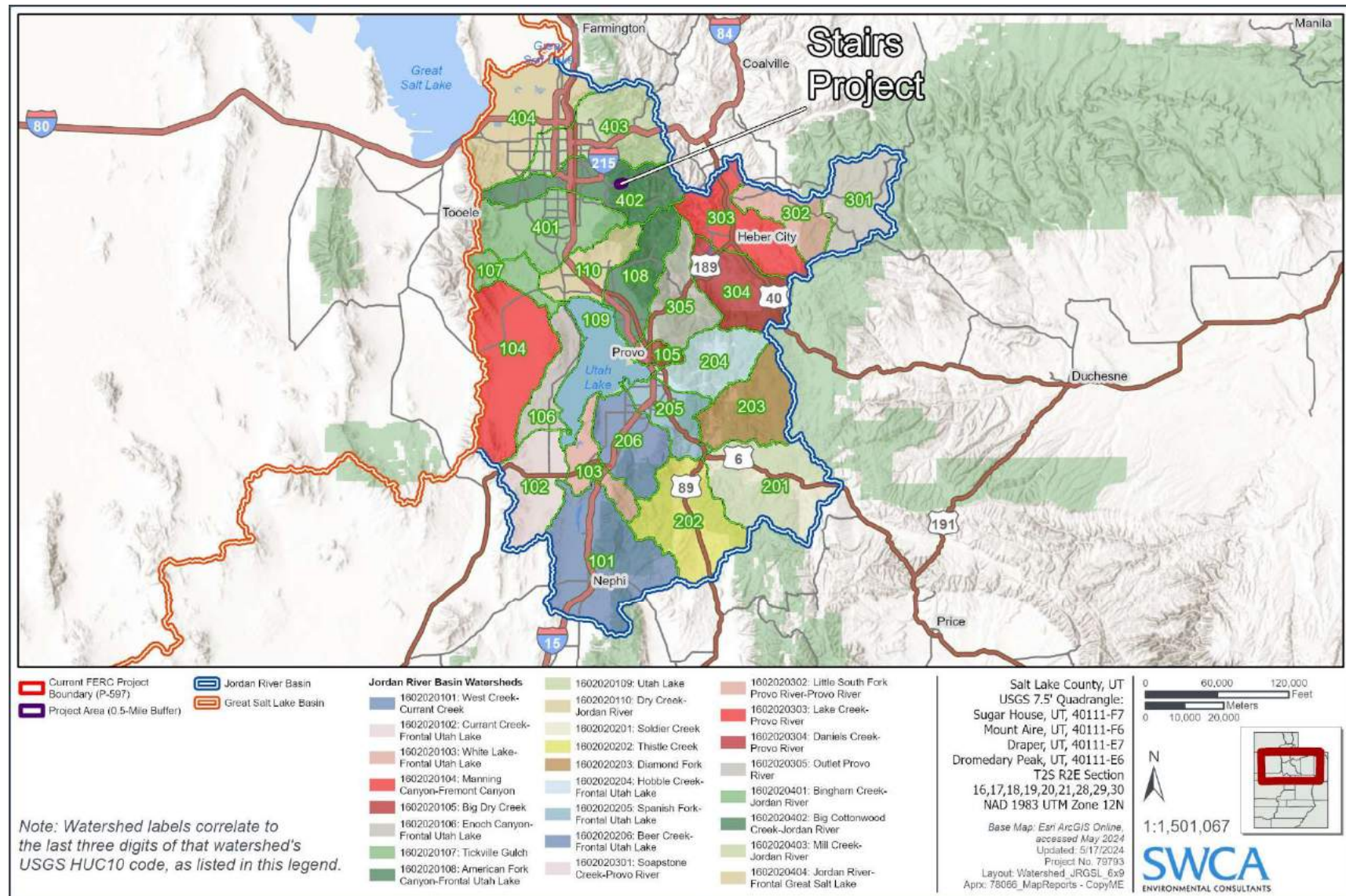


FIGURE E-1 JORDAN RIVER (HUC 16020204) AND GREAT SALT LAKE (HUC 16020310) BASINS

### **1.4.2            JORDAN RIVER BASIN**

The Jordan River Basin (HUC 16020204) is adjacent to the Great Salt Lake Basin and drains an area of approximately 813.9 square miles (see Figure E-1) (USGS 2023a; Utah State University [USU] 2019). The Jordan River flow path extends northward for approximately 51 miles from the outlet of Utah Lake to Great Salt Lake (Berni et al. 2014).

There are seven major tributaries that contribute to the Jordan River system: Little Cottonwood Creek, Big Cottonwood Creek, Mill Creek, Parley’s Creek, Emigration Creek, Red Butte Creek, and City Creek (Berni et al. 2014). Other major water bodies in the area include the American Fork River, Provo River, Hobbie Creek, and Spanish Fork River (USU 2019).

The Jordan River Basin is located between two mountain ranges, the Wasatch Range to the east and the Oquirrh Mountains to west, with elevations ranging from approximately 4,195 feet amsl at Great Salt Lake (at present elevation) to over 11,000 feet amsl in the higher mountains (Berni et al. 2014). Due to the span of elevations, average annual precipitation in the basin varies from 12 inches in the lower valleys to over 50 inches in the mountains (Berni et al. 2014). Much of the precipitation falls as snow, which melts in the spring and contributes to the river systems throughout the basin.

#### **BIG COTTONWOOD CREEK-JORDAN RIVER WATERSHED**

The Big Cottonwood Creek-Jordan River Watershed (HUC 1602020402) drains an area of approximately 176.8 square miles and is highly protected under strict management rules due to its status as the single largest source of Salt Lake City’s drinking water supply (Schwager and Cowley 2000). The average water yield of Big Cottonwood Creek is approximately 52,864 acre-feet, ranking as the highest water yield of any Wasatch Front canyon stream in Salt Lake County (Schwager and Cowley 2000).

The hydrology of the watershed is dominated by the accumulation and melting of annual snowpack as well as melting of rock glaciers and is characterized by high spring, channel-forming flows and low winter baseflows. The Twin Lakes reservoir and Lake Mary, not operated by PacifiCorp, are located at the top of the drainage approximately 13 miles upstream from the Project and help regulate the flows during summer months.

Elevation of the creek varies from approximately 9,600 feet amsl at the headwaters in a basin formed by glacial activity in the Wasatch Range to approximately 4,250 feet amsl at its confluence with the Jordan River (Schwager and Cowley 2000). Big Cottonwood Creek discharges into the Jordan River after descending 24.3 miles through Big Cottonwood Canyon (Berni et al. 2014) (Figure E-2).

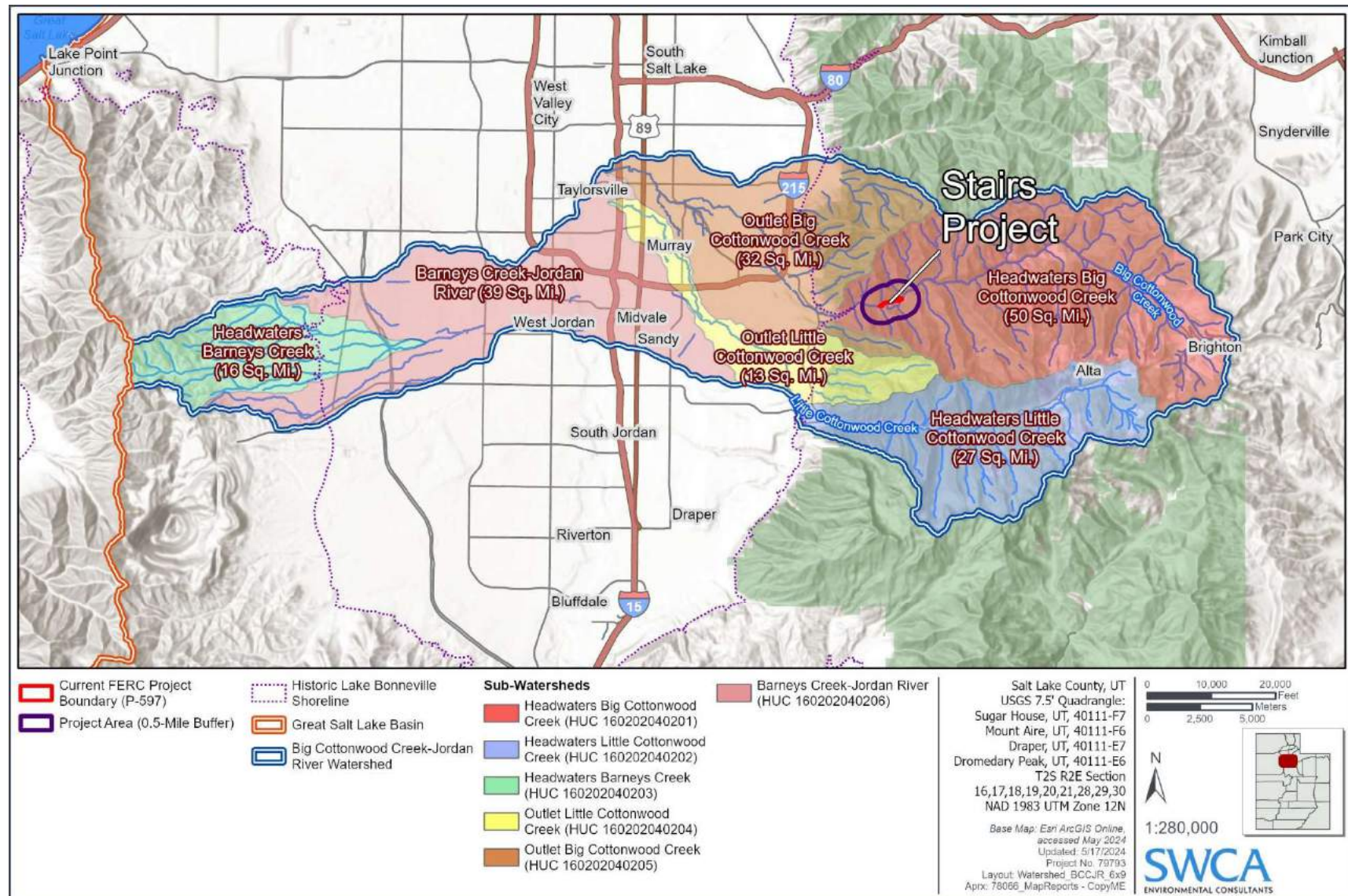


FIGURE E-2 BIG COTTONWOOD CREEK-JORDAN RIVER WATERSHED (HUC 1602020402)

### **1.4.3            LAND AND WATER USE**

From the mid-1800s to early 1900s, Salt Lake City experienced tremendous growth, placing increased demands on the resources within Big Cottonwood Canyon and the surrounding UWCNF, especially from the timber industry's sawmills (Schwager and Cowley 2000). The Land Use and Cover section of this exhibit further summarizes land use in the area. Recreation activities such as fishing, hiking, climbing, wildlife viewing, driving, and skiing in the area are also popular. The Recreational Resources section of this exhibit discusses recreation within the Project and surrounding areas. As noted above, the water in Big Cottonwood Creek is a major drinking water source for Salt Lake City (Schwager and Cowley 2000). Water is also used for irrigation, agriculture, and industry (USU 2019). The Water Resources section of this exhibit provides additional information on water use in and near the Project.

## **1.5 GEOLOGY AND SOILS**

This section provides a general description of the geological features, processes, and soil characteristics within the Project Area and Project Vicinity. The Project Vicinity for geology and soil resources is defined as Big Cottonwood Canyon.

### **1.5.1 REGIONAL GEOLOGICAL SETTING**

Big Cottonwood Canyon is part of the Wasatch Mountain range, which has been shaped by extreme glacial and tidal activity for over 1 billion years. Part of the Middle Rocky Mountains province, the Wasatch Mountain range trends north-south through the Project Vicinity at elevations ranging from 5,000 feet amsl to over 11,000 feet amsl (Utah Geological Survey 2000). Until approximately 8,000 years ago, glaciers extended from the head of Big Cottonwood Canyon for approximately five miles, ending at Reynolds Flat, the terminal moraine deposit of the former glacier (Eldredge 2010). Below Reynolds Flat, the canyon is characterized as a river-carved, or V-shaped canyon; above Reynolds Flat the canyon is characterized as a glacial-carved or U-shaped canyon. Tilted layers of quartzite and shale, in some areas metamorphosed into argillite and slate, dominate the downstream-most six miles of Big Cottonwood Canyon (Eldredge 2010). Further up the canyon, sandstone and limestone formations contain intrusions of granodiorite. The canyon walls are steep and rugged and are split by many tributary gulches that feed into the main canyon. The geological features described above are pictured in Figure E-3. The northern slopes and gulches experienced significantly less glaciation than those on the south side of the canyon, and therefore have a greater development of soil and vegetation (Lund 1980).

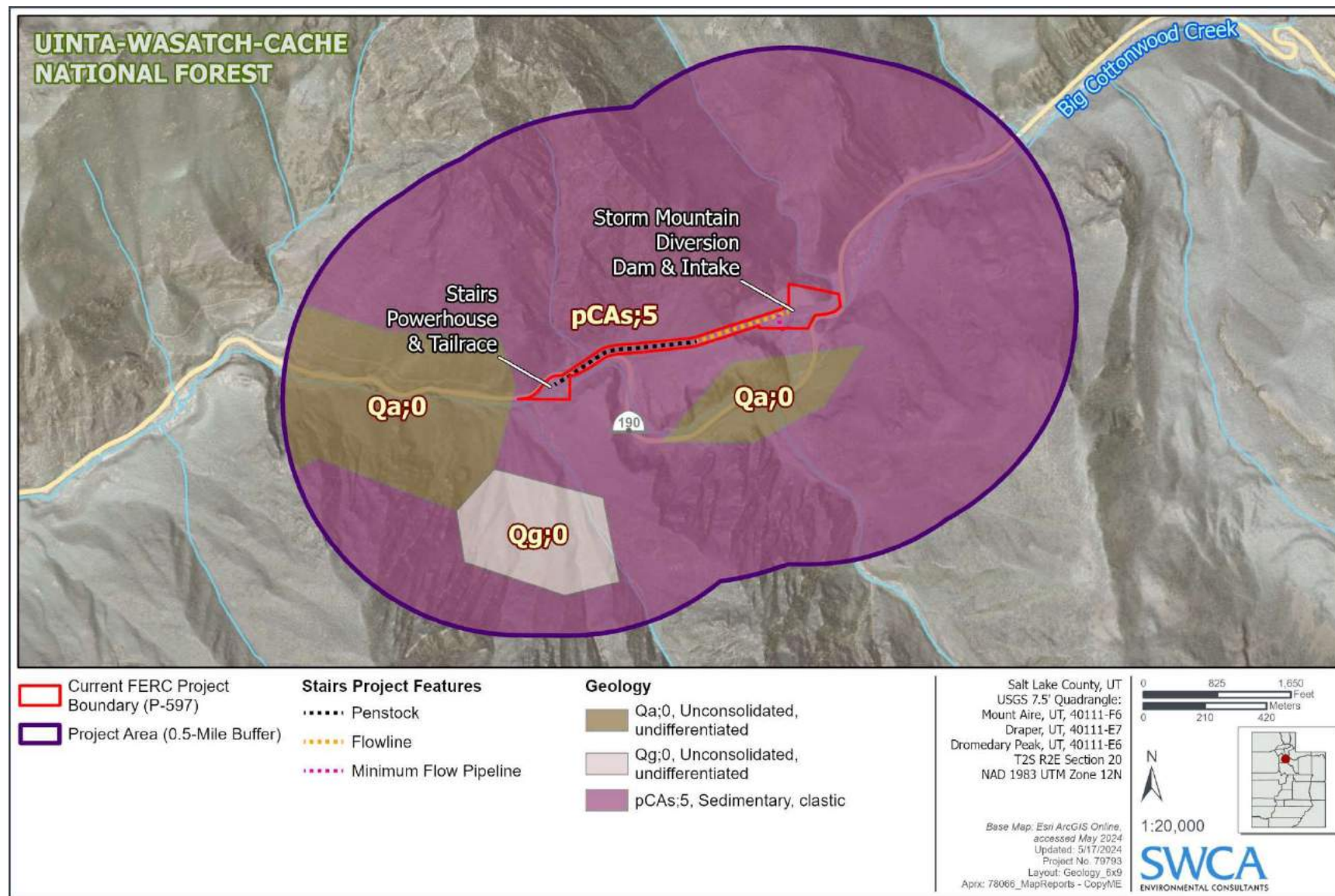


FIGURE E-3 GEOLOGICAL FEATURES IN THE PROJECT AREA

### 1.5.2 SOILS

There are a variety of soils and soil associations found in the Project Vicinity and the Project Area, including alluvium from sandstone and shale in the canyon bottoms and rocky outcrops along the canyon walls. These soil associations can be found in the sediment map below (Figure E-4). The upper portion of the Project Area is primarily covered by rock outcrop that has less than 6 inches of soil material in addition to deep Wanship-Kovich loams, which are somewhat poorly draining and derived from sandstone and conglomerate alluvium. Lower in the Project Area, the Hades-Agassiz-Rock outcrop soil association is dominant. This soil association consists of shallow to deep, moderately permeable, well-draining soils on slopes between 30 and 70 percent. The lowest portion of the Project Area is a mix of stony terrace escarpments, which are deep and well drained, and sandy loam to clay loam that has a high hazard for erosion due to its medium to rapid runoff (PacifiCorp 2011).

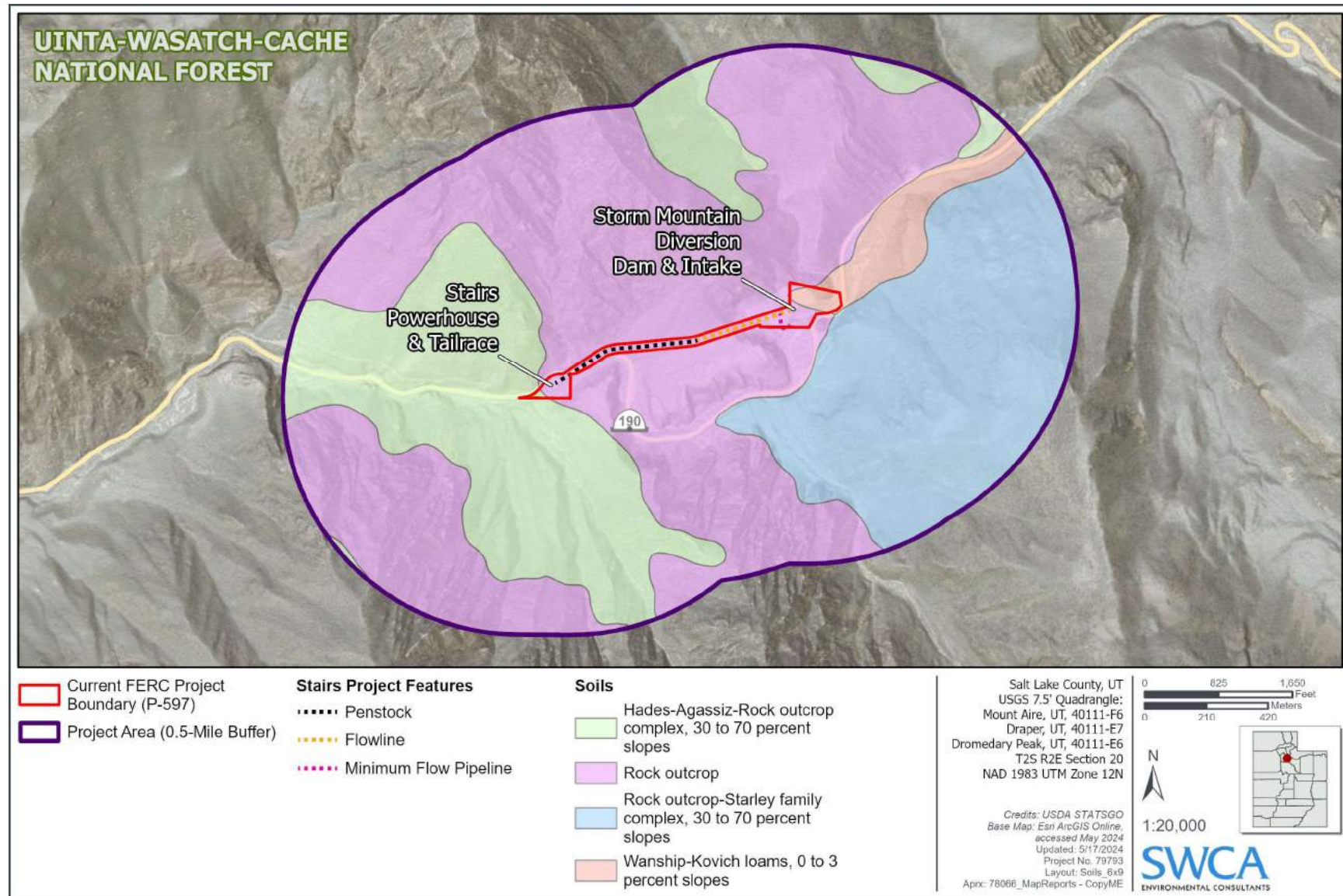


FIGURE E-4 SOIL CLASSIFICATIONS IN THE PROJECT AREA

### **1.5.3 EROSION AND SEDIMENT CONTROL**

Steep canyon walls and high annual snowfall within Big Cottonwood Canyon contribute to natural erosive forces that shape the canyon. Both developed and dispersed recreation and transportation in the area can also contribute to erosion. Urban and drinking water supply development of the lower portion of Big Cottonwood Creek has reduced the natural historical floodplain where entrained sediments would be deposited (Salt Lake County 2003). The creek, now constricted from this development, has gradually scoured down the creek bottom in some areas while depositing sediment in other areas (Salt Lake County 2003). The dominant geological hazards found in the Project Area are landslides, rockslides, rockfall, flooding, avalanches, and seismic shaking (Lund 1980). Erosion susceptibility varies throughout the Project Area based on the dominant soil association and geological conditions (depth to bedrock, slope, etc.). Previous work on the diversion dam has included erosion control in the form of riprap installation on either side of the spillway prior to high water in the spring of 2013 and dredging of the impoundment after years of high snowpack and snowmelt (PacifiCorp 2013).

### **1.5.4 ENVIRONMENTAL EFFECTS**

Under the Proposed Action, there would be no construction, deconstruction, or excavation at Project facilities. The administrative nature of the Proposed Action requires no changes to Project features or operations and negates the risk of new erosion, soil and bedrock damage, or excessive sediment loading. Maintenance of the Stairs Project and associated access points is expected to continue as it has during the current license period. No environmental effects on geology and soils are expected under the Proposed Action, and as a result, no protection, mitigation, or enhancement (PME) measures or studies are proposed for this resource.

## 1.6 WATER RESOURCES

This section addresses water quantity, water use (including water rights), and water quality conditions in Big Cottonwood Creek, and how those water resource elements would be affected by the Proposed Action. The Project Vicinity for this resource is Big Cottonwood Creek-Jordan River watershed (HUC 1602020402).

### 1.6.1 WATER QUANTITY

License Article 401 of the current FERC license requires a minimum flow of 4 cfs, or inflow to the Project, whichever is less, for protection and enhancement of fish and wildlife resources, aesthetic resources, and water quality in the bypassed reach of Big Cottonwood Creek. The 4 cfs minimum flow requirement ends at the Stairs Project powerhouse; the downstream Granite Project has no minimum flow requirement because the entire creek is diverted into the BCCWTP; 7 cfs enters the creek from a natural groundwater spring/seep just downstream of the Stairs Project (Davies 2024a).

In accordance with the same 4-cfs minimum streamflow requirement from the previous license Article 401, PacifiCorp installed a 2-foot standard rectangular weir at the top of the diversion dam spillway to measure compliance with minimum streamflow releases. The weir includes a staff gage for plant personnel to take readings of the minimum stream flow prior to being passed over the spillway at the Storm Mountain (Stairs) diversion dam (PacifiCorp 2000). However, after several instances of minimum streamflow variances, to improve minimum flow system reliability, this system was revised in 2008 to instead provide the minimum stream flow through a tap on the Project flowline just west of the intake, into a buried pipe that extends around the toe of the diversion dam, back to the west side at the bottom of the spillway, to a steel weir attached to a reinforced concrete bypass structure located underneath the west viewing platform adjacent to the dam spillway (PacifiCorp 2008).

PacifiCorp has measured daily streamflow directly upstream of the Stairs Project powerhouse since 2008 (Baldwin 2024). Monthly minimum, mean, and maximum flows for the most recent 15-year record (2008–2023) are presented in Table E-1. Over this period, mean monthly flows peak in May and June when snowmelt is most active, and are lowest from December through

February during winter baseflow conditions, especially when the system is affected by winter ice, and input to the system is low.

**TABLE E-1 BIG COTTONWOOD CREEK DISCHARGE, UPSTREAM OF STAIRS PROJECT POWERHOUSE, 2008 TO 2023 (CUBIC FEET PER SECOND)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Minimum	0.0	4.8	0.0	7.7	17.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean	12.4	12.7	17.7	38.1	52.9	52.0	39.5	27.8	29.2	21.0	16.9	14.4
Maximum	31.4	21.0	46.3	58.3	61.5	60.6	58.3	58.6	59.2	55.3	33.0	28.1

Source: Baldwin (2024).

A now-retired USGS gage (Tailrace Gage Station No. 10168300), located approximately 600 feet upstream of the Stairs Project powerhouse, provides some historical data on flows that enter the Project Area. The USGS measured daily streamflow at this site from 1927 until 2006. Monthly minimum, mean, and maximum flows covering the 30-year record (1976–2006) at the Tailrace gage is presented in Table E-2. Note that these data represent an average of 900 datapoints or approximately 30 daily discharge statistics across 30 years. The data show that, historically (and similar to what was measured by PacifiCorp in Table E-1), mean monthly flows peak in May and June and are lowest from December through February.

**TABLE E-2 BIG COTTONWOOD CREEK DISCHARGE, U.S. GEOLOGICAL SURVEY TAILRACE GAGE NO. 10168300, 1976 TO 2006 (CUBIC FEET PER SECOND)**

	JAN	Feb	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Minimum	0.0	0.0	0.0	1.57	0.34	0.21	5	13.7	12.8	0.0	0.0	0.0
Mean	13.7	14.1	20.6	34.5	43.4	44.1	35.3	32.1	27.4	19.4	17.8	15.2
Maximum	21.8	21.7	32.5	49.4	53.8	53.8	53	48.4	48.5	39.4	28.8	23.9

## 1.6.2 WATER RIGHTS

In 1914, the Third Judicial District Court of Salt Lake County established water use limits, amounts, and priorities allowing water users to divert water from Big Cottonwood Creek and its associated canals and ditches (PacifiCorp 1998). Under this decree, Utah Light and Railway Company, a predecessor company to PacifiCorp, had diversion rights for non-consumptive purposes, which are still in effect today. PacifiCorp has one non-consumptive water right (57-10292) to divert a maximum of 86 cfs from Big Cottonwood Creek for the purposes of power

generation. The Granite Project, which receives flows from the Stairs Project tailrace, also uses this water right (FERC 2008; PacifiCorp 1998; Utah Division of Water Rights 2024).

### **1.6.3 WATER USE**

Flows from Big Cottonwood Creek are relied upon for municipal water, irrigation, hydroelectric power production, recreation, and maintaining game fisheries (upstream of the diversion dam). As previously mentioned, and pursuant to Article 401, PacifiCorp is required to release a minimum flow of 4 cfs, or inflow to the Project, whichever is less, at the Storm Mountain (Stairs) diversion dam to maintain some flow in the creek through this reach. In spring and summer months, when water levels exceed the amount needed for the BCCWTP, water is diverted and used for irrigating alfalfa, pasture, corn, orchards, and turf fields. The headwaters of Big Cottonwood Creek are maintained as a cold-water fishery, popular for offering small trout (see the Fisheries section of this exhibit).

Downstream of the Project, flows in Big Cottonwood Creek are fully appropriated by the BCCWTP. The BCCWTP is one of three water treatment facilities providing drinking water to Salt Lake City. The plant was renovated in the 1980s to treat 42 million gallons of water per day. The BCCWTP diversion seasonally dewateres four miles between the canyon mouth and Cottonwood Lane (usually during the months of November through March, and also during summer months).

### **1.6.4 WATER QUALITY**

Big Cottonwood Creek consists of two reaches. The first reach begins just upstream of Brighton, Utah, and extends 13.9 miles downstream to the BCCWTP at the base of the canyon. The second reach extends from the base of the canyon 10 miles across the Salt Lake Valley to where it discharges into the Jordan River. In accordance with Utah water quality standards developed to conform with the Clean Water Act, the Utah Department of Environmental Quality (UDEQ) has designated the beneficial use classes for the first reach of Big Cottonwood Creek as Class 1C: Domestic/Drinking Water Source; Class 2B: Infrequent Primary Contact Recreation (e.g., wading, fishing); and Class 3A: Cold Water Fishery/Aquatic Life (UDEQ 2024a). Table E-3 lists these designated beneficial uses and their relevant water quality standards.

**TABLE E-3 DESIGNATED BENEFICIAL USE CLASSES FOR BIG COTTONWOOD CREEK**

WATER QUALITY PARAMETER	STANDARD FOR DESIGNATED BENEFICIAL USE		
	1C	2B	3A
Temperature (maximum)	—	—	20 degrees Celsius
Dissolved oxygen (minimum)	—	—	30-day average <ul style="list-style-type: none"> <li>• 6.5 mg/L (all life stages)</li> </ul> 7-day average <ul style="list-style-type: none"> <li>• 9.5 mg/L (early life stages)</li> <li>• 5.0 mg/L (all life stages)</li> </ul> Minimum <ul style="list-style-type: none"> <li>• 8.0 mg/L (early life stages)</li> <li>• 4.0 mg/L (all life stages)</li> </ul>
pH (range)	6.5–9.0	6.5–9.0	6.5–9.0
Total suspended solids	No beneficial use narrative standard: numeric standard is 70 mg/L		
Turbidity (NTE)		10 NTU	10 NTU
Total coliform	30-day geometric mean: 206 no./100mL Maximum: 668 no./100mL	30-day geometric mean: 206 no./100mL Maximum: 668 no./100mL	
Metals (dissolved, maximum mg/L)	Arsenic: 0.01 Barium: 1.0 Beryllium: <0.004 Cadmium: 0.01 Chromium: 0.05 Lead: 0.015 Mercury: 0.002 Selenium: 0.05 Silver: 0.05	—	Arsenic: 0.1 Cadmium: 0.01 Chromium: 0.1 Copper: 0.2 Lead: 0.1 Selenium: 0.05
Total Kjeldahl nitrogen (TKN)	No beneficial use standard		
Nitrate, total (maximum)	4 mg/L	—	4 mg/L
Total phosphorous	0.05 mg/L	—	0.05 mg/L
Orthophosphate (dissolved)	No beneficial use standard		

WATER QUALITY PARAMETER	STANDARD FOR DESIGNATED BENEFICIAL USE		
	1C	2B	3A
Narrative standard	“It shall be unlawful, and a violation of these rules, for any person to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste; or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by bioassay or other tests performed in accordance with standard procedures; or determined by biological assessments in Subsection R317-2-7.3” (Utah Administrative Code R317-2).		

Source: Utah Administrative Code Rule R317-2, Standards of Quality for Waters.

Notes: mg/L = milligrams per liter; mL = milliliter; no. = number of individuals; NTE = not to exceed background level; NTU = nephelometric turbidity units.

Water quality data are collected from several locations along Big Cottonwood Creek (UDEQ 2024b). Dissolved oxygen, pH, water temperature, total dissolved solids, nitrate, and phosphate are within Utah’s water quality standards for designated use classes in Big Cottonwood Creek; however, the second reach of Big Cottonwood Creek (downstream of the BCCWTP) is listed as impaired for all three classes of use as listed above.

Clean Water Act Section 303(d) requires impaired water bodies to be added to the state’s list of impaired and threatened waters. States are required to submit their list for U.S. Environmental Protection Agency (EPA) approval every 2 years. The EPA requires development of a total maximum daily load (TMDL) for all 303(d)-listed water bodies. TMDLs describe the amount of an identified pollutant that a specific stream, lake, river, or other water body can contain while preserving its beneficial uses and maintaining state water quality standards. This is developed by using existing data to calculate the maximum allowable load of a pollutant from permitted discharge sources and non-point sources of pollution discharge (EPA 2022a). There are eight classification types, ranging from Class 1 (all beneficial uses meet applicable water quality standards) to Class 5 (the concentration of a pollutant or several pollutants exceeds numeric water quality criteria), with some classes containing subclassifications based on whether a TMDL has been developed. Big Cottonwood Creek is classified as 5 for 303(d) TMDL assessment for exceeding concentrations of *Escherichia coli* (*E. coli*), cadmium, and copper

(UDEQ 2024a). The EPA and UDEQ have not specified plans to restore water quality and have listed Big Cottonwood Creek as a low priority TMDL.

#### **1.6.5 ENVIRONMENTAL EFFECTS**

Under the Proposed Action, there would be no changes to Project operations, water rights, water use, or flow requirements. PacifiCorp intends to continue to maintain the current license requirement for the License Article 401 4-cfs minimum flow. No environmental effects on water resources are anticipated as a result of the Proposed Action, and therefore, no studies or additional PMEs are proposed.

## 1.7 FISHERIES

This section provides a summary of the fisheries resources known or likely to occur within the Stairs Project Area. Big Cottonwood Creek is a perennial, cold-water, high gradient stream dominated by boulder and cobble substrate, with a few areas of silt and gravel substrate (FERC 1999). Big Cottonwood Creek is part of the Big Cottonwood Creek-Jordan River Watershed within the Jordan River subbasin. The Utah Division of Wildlife Resources (UDWR) has identified the portion of Big Cottonwood Creek upstream of the diversion dam to be an important fishery resource due to its capacity to provide a trout fishery close to a metropolitan area (Schwager and Cowley 2000); this classification does not extend downstream of the diversion dam. Fish species present in Big Cottonwood Creek include several species of cold-water sport fish, such as Bonneville cutthroat trout (*Oncorhynchus clarki Utah*), rainbow trout (*Salmo gairdneri*), brown trout (*Salmo trutta*), and brook trout (*Salvelinus fontinalis*) (Slater 2024).

### 1.7.1 RESIDENT FISH

Upstream of the Storm Mountain (Stairs) diversion dam, Big Cottonwood Creek supports a robust wild brown trout population (PacifiCorp 1998). UDWR also stocks a few higher elevation lakes (including Lake Blanche, Twin Lakes Reservoir, and Silver Lake) with rainbow trout, brook trout, and native Bonneville cutthroat trout (UDWR 2024a, 2024b). Rainbow, brown, and brook trout have been sampled consistently in reaches upstream of the Project Area since 1997 (Schwager and Cowley 2000). The most recent fish survey conducted in 2011 found brook trout, rainbow trout, and mountain sucker (*Catostomus platyrhynchus*) present approximately 11 miles upstream of Silver Lake (Cowley 2023).

Much of the Project bypass reach (the approximately 0.75-mile section between the Storm Mountain diversion dam intake and the Stairs Project powerhouse) is characterized by steep slopes (the “stairs” that are the namesake of the Project) and low flows that limit the development of significant fish habitat (PacifiCorp 1998). At the time the Project was last licensed in 2000, surveys conducted by UDWR and PacifiCorp indicated brown trout, brook trout, and rainbow trout were present in the bypassed reach in small numbers, likely moving into the reach during the high spring flows and becoming isolated in pools as flows decrease in late

summer (PacifiCorp 1998). Correspondence with UDWR in 2011, however, indicated that there are negligible fish present in the creek from the Granite Project upstream to the Stairs Project diversion due to the elimination of stocking downstream of the diversion and seasonal reduced flows (PacifiCorp 2011). Although the steep gradients in the creek limit fish spawning and rearing habitat, pursuant to License Article 401, PacifiCorp releases a minimum flow of 4 cfs, or inflow to the Project, whichever is less, to enhance aesthetic resources, for protection and enhancement of fish and wildlife resources, and to enhance water quality in the bypassed reach of Big Cottonwood Creek. Flow evaluations conducted in consultation with UDWR and the USFS determined that this level of flow was necessary to maintain aesthetic resources and improve aquatic habitats (PacifiCorp 1998).

There is no required minimum streamflow release downstream of the Stairs Project. Natural groundwater recharge contributes approximately 7 cfs of water back into Big Cottonwood Creek just downstream of the Granite Project intake. Downstream of the BCCWTP, more urban sections of the creek support populations of brown trout, rainbow trout, mountain sucker, and speckled dace (*Rhinichthys osculus*) (Giddings et al. 2006).

### **1.7.2 ANADROMOUS FISH**

The National Oceanic and Atmospheric Administration defines anadromous fish as species that spend most of their life in saltwater (National Oceanic and Atmospheric Administration 2022). There are no anadromous fish present within the Project Area.

### **1.7.3 SPECIAL STATUS SPECIES**

Special-status fish include any state-listed sensitive species in need of conservation and any species listed as threatened or endangered under the Endangered Species Act (ESA). The following resources were analyzed to determine whether special-status fish occur in the Project Area:

- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database query for threatened and endangered (T&E) species (USFWS 2024a)
- Utah Species of Greatest Conservation Need (SGCN) (UDWR 2021)
- USFS Region 4 sensitive species list (USFS 2016)

- Utah Natural Heritage Program (UDWR 2024c)

There are no federally listed fish species or associated critical habitats in the Project Area (USFWS 2024a). Only one species listed as a Utah SGCN, the least chub (*Iotichthys phlegethontis*), may exist within the Project Area. The Utah Natural Heritage Database indicates the species was last observed in 1953 within a two-mile radius (downstream) of the Project Area, and it has not been recorded on subsequent surveys in Big Cottonwood Creek (UDWR 2021, 2024c). The only fish classified as sensitive by the USFS that has known distributions of species and/or habitat within the Project Area is Bonneville cutthroat trout (Slater 2024; UDWR 2021, 2024c; USFS 2016). No Bonneville cutthroat trout were sampled in reaches downstream of the Project Area surveyed in 2006 (Giddings et al. 2006), within the bypassed reach surveyed in 2000 (Schwager and Cowley 2000), nor upstream of the Project Area in reaches surveyed in 2000 and 2011, indicating that populations may be limited (Cowley 2023; Schwager and Cowley 2000). In 2023, UDWR sampled three Bonneville cutthroat trout approximately 0.8 mile upstream of the Stairs Project at Cardiff Flat (Slater 2024).

#### 1.7.4 ENVIRONMENTAL EFFECTS

Under the Proposed Action, no construction of new facilities, physical changes to current facilities, or changes to Project operations or maintenance activities are proposed that could result in impacts to fisheries resources in Big Cottonwood Creek. Upon receiving an exemption and subsequent surrender order from FERC, PacifiCorp would continue to release the minimum flow of 4 cfs, or inflow to the Project, whichever is less, for protection and enhancement of fish and wildlife resources, aesthetic resources, and water quality in the bypassed reach of Big Cottonwood Creek. No environmental effects on water resources are anticipated as a result of the Proposed Action, therefore, no studies or PMEs are proposed.

## 1.8 WILDLIFE RESOURCES

This section provides information on terrestrial and semi-aquatic wildlife known or likely to occur within the Project Area, including birds, mammals, reptiles, terrestrial mollusks, and amphibians. Vegetation and plants are presented in detail in the Botanical Resources section of this Exhibit but are summarized here to give context to the Project Area. ESA-listed T&E species (USFWS 2024a), proposed and candidate species for ESA listing, Utah SGCN (UDWR 2021), and USFS Region 4 sensitive species (USFS 2016) are discussed in the Special-Status Species and Threatened and Endangered Species sections below. The General Wildlife section provides a general summary for each major taxonomic group of common wildlife found in the Project Area.

### 1.8.1 HABITAT

The vegetation in the Project Area is variable due to the range of topography and aspect; vegetation is sparse in rocky outcrop areas or on talus/debris flows on steep canyon sides, whereas south-facing hillsides are dominated by Gambel oak (*Quercus gambelii*) brush communities, interspersed with bigtooth maple (*Acer grandidentatum*) in more mesic areas. The north-facing slopes are dominated by Douglas fir (*Pseudotsuga menziesii*), interspersed with patches of quaking aspen (*Populus tremuloides*). The steep canyon walls result in a confined, high-gradient stream channel that carries high stream flows, which result in an abrupt change from arid upland habitats to riparian habitats along Big Cottonwood Creek with little or no floodplain. The riparian vegetation along the creek is narrow and is dominated by narrowleaf cottonwood (*Populus angustifolia*), box elder (*Acer negundo*), and white fir (*Abies concolor*) (PacifiCorp 1998).

Upland habitat<sup>4</sup> provides key habitat elements for many wildlife species, including areas for foraging, hunting, cover, breeding, and migrating (UDNR 2022b). According to NatureServe (2009), uplands make up 893.65 acres of vegetated habitats within the Project Area (Table E-4).

Wetlands within the Project Area are very limited, with most waters in the Project Area classified as riverine or freshwater pond (Table E-5, Figure E-5). When present, the combination

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<sup>4</sup> Upland habitats are defined as areas lying above the elevation where flooding generally occurs and beyond the riparian zone (National Park Service 2024).

of marsh and open water habitat in wetlands provides cover for waterfowl and other avian and wildlife species, habitat for several freshwater fish, and other food sources for terrestrial wildlife.

Littoral and open water habitats are types of wetland and waters habitat. In the Project Area, littoral habitat is limited to locations along the margins of the reservoir upstream of the Project's Storm Mountain diversion structure where water is shallow. The littoral zone receives and accumulates sediment and nutrients that can support a wide variety of plants and animals. It provides important habitat for fish and wildlife, including providing foraging habitat for many bird species during the breeding and non-breeding season. Waterfowl feed on a variety of submerged aquatic vegetation often found within the littoral zone.

**TABLE E-4 UPLAND HABITAT TYPES IN THE PROJECT AREA**

HABITAT TYPE	DESCRIPTION	APPROXIMATE ACREAGE IN PROJECT AREA
Desert and semi-desert	Dominated by xeromorphic growth forms and open to sparse cover	14.19
Forest and woodland	Characterized by mesomorphic trees with at least 10% cover	431.03
Open rock vegetation	Dominated by lichen and bryophytes living on rocky substrates	133.21
Shrub and herb vegetation	Mesomorphic shrub and herb growth forms with <10% tree cover	315.22
Total		893.65

Source: NatureServe (2009).

**TABLE E-5 NATIONAL WETLANDS INVENTORY WETLANDS AND WATERS IN THE PROJECT AREA**

WETLAND AND WATER TYPE	CODE	ACRES
Freshwater pond	PABFh <sup>a</sup>	1.31
Riverine	R4SBC <sup>b</sup>	11.24
Total		12.55

Source: USGS (2023b).

<sup>a</sup> PABFh: Palustrine, Aquatic Bed, Semipermanent Flooded, Diked/Impounded.

<sup>b</sup> R4SBC: Riverine, Intermittent, Streambed, Seasonally Flooded.

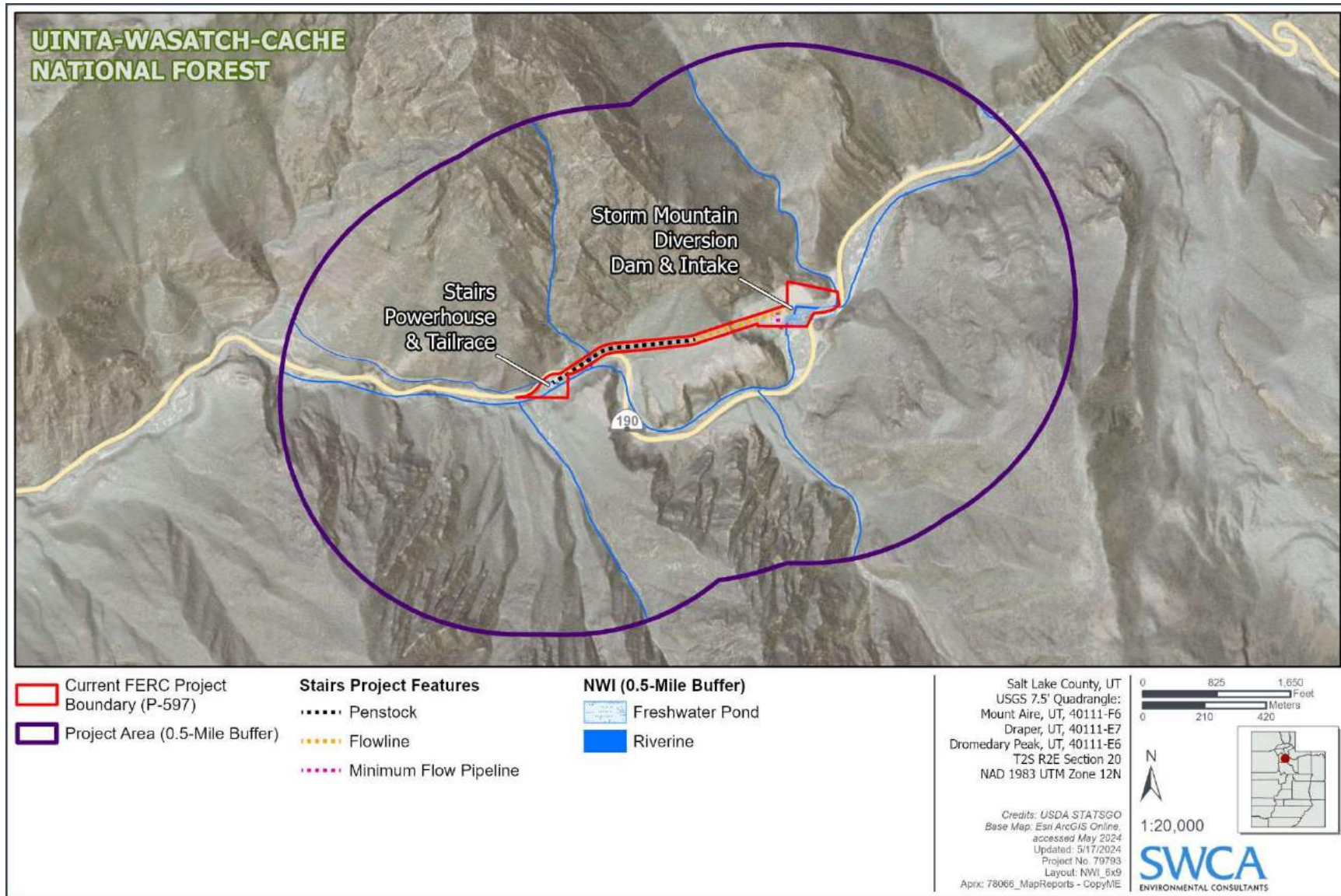


FIGURE E-5 NATIONAL WETLANDS INVENTORY FEATURES IN THE PROJECT AREA

### 1.8.2 GENERAL WILDLIFE

This section provides information on the terrestrial wildlife that are likely to exist within the Project Area that are not listed as threatened, endangered, or sensitive by the USFWS or the Utah SGCN list—those species are covered below in the Rare, Sensitive, Threatened, and Endangered Species subsection (Section 1.8.3).

Common mammals within the Project Area include striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), porcupine (*Erethizon dorsatum*), Uinta and Townsend chipmunks (*Neotamias umbrinus* and *N. townsendii*), chickaree (*Tamiasciurus douglasii*), several species of mice (including the deer mouse [*Peromyscus maniculatus*]), thirteen-lined ground squirrel (*Citellus tridecemlineatus*), rock squirrel (*Otospermophilus variegatus*), and Uinta ground squirrel (*Urocitellus armatus*). Mule deer (*Odocoileus hemionus*) and Rocky Mountain elk (*Cervus elaphus nelsoni*) travel through the Project Area regularly, and moose (*Alces alces*) are occasionally seen as well (Global Biodiversity Information Facility [GBIF] 2023). Several bats, including the Mexican freetail bat (*Tadarida brasiliensis*), small-footed myotis (*Myotis ciliolabrum*), spotted bat (*Euderma maculatum*), and little brown myotis (*Myotis lucifugus*), may be found in the area. Large predators such as coyote (*Canis latrans*), mountain lion (*Felis concolor*), and bobcat (*Lynx rufus*) live in the area but are seldom seen (PacifiCorp 1999).

There are many species of birds found in the Project Area. Common passerine, or perching birds, include members of the wren (Troglodytidae), chickadee (Paridae), thrasher (Mimidae), kinglet and thrush (Muscicapidae), waxwing (Bombycillidae), vireo (Vireonidae), wood-warbler (Parulidae), gnatcatcher (Polioptilidae), and junco and sparrow (Emberizidae) families. The semi-aquatic passerine American dipper (*Cinclus mexicanus*) is also present in the area. Birds of prey occurring in the area include the golden eagle (*Aquila chrysaetos*), red-tailed hawk (*Buteo jamaicensis*), northern goshawk (*Accipiter gentilis*), sharp-shinned hawk (*Accipiter striatus*), and Cooper's hawk (*Accipiter cooperii*), although other raptors, including the prairie falcon (*Falco mexicanus*) and other falcons and eagles also use and/or migrate through the Project Area (Davies 2024a; PacifiCorp 1999)

The Project Area is also home to several types of snakes such as the Great Basin rattlesnake (*Crotalus oreganus lutosus*), rubber boa (*Charina bottae*) and Great Basin gopher snake

(*Pituophis catenifer deserticola*). Lizards such as the western fence (*Sceloporus occidentalis*) and side-blotch lizard (*Uta stansburiana*) are common in the sparsely vegetated upland habitats. Amphibians found in the Project Area include the tiger salamander (*Ambystoma tigrinum*) and boreal chorus frog (*Pseudacris triseriata*) (PacifiCorp 1999).

### 1.8.3 RARE, SENSITIVE, THREATENED, AND ENDANGERED SPECIES

The USFS Region 4 sensitive species list (USFS 2016) and Utah SGCN list (UDWR 2021) were evaluated to determine which special-status species have the potential to occur and/or have been documented in the Project Area. Species that are also T&E species are also discussed below in this section. This analysis found 12 special-status species with potential habitat in the Project Area (Table E-6).

**TABLE E-6 SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT AREA**

COMMON NAME	SCIENTIFIC NAME	STATUS	SUITABLE HABITAT	DESIGNATION		LIKELY TO OCCUR IN PROJECT AREA
				SGCN	USFS	
Northern leopard frog	<i>Lithobates pipiens</i>	G5, S3	Riparian corridors, wetlands, and wetland upland mosaics.	Yes	—	No
Rustic ambersnail	<i>Succinea rusticana</i>	G4, SH	Riparian areas near rivers, streams, lake shores, and bogs, in and under vegetation.	Yes	—	No
Olive-sided flycatcher	<i>Contopus cooperi</i>	G4, S3	Breed in various forest and woodland habitats including subalpine coniferous forest and mixed coniferous-deciduous forest. Nest in standing dead trees.	Yes	—	Yes

COMMON NAME	SCIENTIFIC NAME	STATUS	SUITABLE HABITAT	DESIGNATION		LIKELY TO OCCUR IN PROJECT AREA
				SGCN	USFS	
Black swift	<i>Cypseloides niger</i>	G4, S2	Forage over forests and open areas, nest behind or next to waterfalls and wet cliffs.	Yes	–	Yes
Peregrine falcon	<i>Falco peregrinus</i>	G4, S3	Cosmopolitan bird occupying mountain, open forests, and human population centers. Rely on cliffs and inaccessible areas for nesting.	Yes	–	Yes
Bald eagle	<i>Haliaeetus leucocephalus</i>	G5, S2B, S4N	Occur near aquatic habitats that have open water for foraging.	Yes	–	Yes
Lewis' woodpecker	<i>Melanerpes lewis</i>	G4, S3	Breed in open forest and woodland, including oak and coniferous forest and riparian woodlands. Require an open tree canopy, a brushy understory with ground cover, and dead trees for nest cavities.	Yes	–	Yes
Western bumble bee	<i>Bombus occidentalis</i>	G3, S1	Found in a range of habitats, including mixed woodlands, farmlands, urban areas, roadsides, montane meadows, and prairie grasslands.	Yes	–	Yes

COMMON NAME	SCIENTIFIC NAME	STATUS	SUITABLE HABITAT	DESIGNATION		LIKELY TO OCCUR IN PROJECT AREA
				SGCN	USFS	
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	G4, S3	Mesic habitats characterized by coniferous and deciduous forests. Nests in rock outcrops and caves.	Yes	–	Yes
Long-legged myotis	<i>Myotis volans</i>	G4, S3	Mountainous areas wooded with coniferous trees and occasionally riparian and desert habitats. Daytime roosts in tree hollows or under loose bark, hibernacula are in caves and mines.	Yes	–	Yes
Long-eared myotis	<i>Myotis evotis</i>	G5, S3	Lowland, montane, and subalpine woodlands, forests, shrublands and meadows.	Yes	–	Yes

Source: NatureServe (2024a–I); UDWR (2021); USFS (2016).

Note: G3 = global, vulnerable; G4 = global, apparently secure; G5 = global, secure; S1 = subnational, critically imperiled; S2 = subnational, imperiled; S2B = breeding population imperiled; S3 = subnational, vulnerable; S4 = subnational, apparently secure; S4N = nonbreeding population apparently secure; SH = subnational, possibly extirpated; SX = subnational, presumed extirpated.

Three special-status bat species have the potential to occur in the Project Area during the summer months: Townsend's big-eared bat (*Corynorhinus townsendii*), long-legged myotis (*Myotis volans*), and long-eared myotis (*Myotis evotis*). These species roost in tree hollows, rock crevices, or under loose bark. Roosting habitat is available in the Project Area, but no surveys have been completed to identify potential or actual roosting areas. These bats may winter in Utah, finding shelter in caves and mines (NatureServe 2024a, 2024b).

Five special-status bird species have potential to occur in the Project Area (see Table E-6). Bald eagles (*Haliaeetus leucocephalus*) have suitable habitat in the Project Area, and individuals have been seen in surrounding areas, but there are no recorded observations of bald eagles in the

Project Area (GBIF 2023; PacifiCorp 1999). Peregrine falcons (*Falco peregrinus*) and black swifts (*Cypseloides niger*) may use the Project Area for foraging or dispersal routes, but no suitable nesting habitat exists in the Project Area. Lewis' woodpeckers (*Melanerpes lewis*) and olive-sided flycatchers (*Contopus cooperi*) may use the Project Area for breeding and foraging.

One special-status insect, the western bumble bee (*Bombus occidentalis*), has potential to occur within the Project Area because suitable habitat is present.

The northern leopard frog (*Lithobates pipiens*) is the only special-status amphibian species with potential to occur in the Project Area but has no known occurrence in Big Cottonwood Creek.

One special-status mollusk, the rustic ambersnail (*Succinea rusticana*), was identified as having potential habitat in the Project Area; however, this species is presumed to be extirpated from Utah, and all knowledge regarding its habitat is from historical observations.

A review of the USFWS IPaC tool (USFWS 2024a) for the Project Area identified two T&E species that could potentially occur in the Project Area: the Canada lynx (*Lynx canadensis*), which is listed as threatened under the ESA, and the monarch butterfly (*Danaus plexippus*), a candidate for listing under the ESA (Table E-7). There is no suitable habitat within the Project Area for the Canada lynx, nor is there any designated critical habitat. Suitable habitat is present for the monarch butterfly, but critical habitat is not designated or proposed for candidates for listing such as the monarch butterfly. Although no records near the Project Area are publicly available (GBIF 2023), monarch butterflies migrate across much of North America and individuals may pass over nearly any location.

Gray wolves (*Canis lupus*) are listed as endangered in the contiguous 48 states and Mexico, except for the Northern Rocky Mountain population, which spans Idaho, Montana, Wyoming, and portions of Oregon, Washington, and Utah (USFWS 2024b). The Project Area is located just south of the region in north-central Utah where gray wolves have been delisted (USFWS 2024b). The USFWS did not identify gray wolves or gray wolf critical habitat within 80 square miles of the Project Area (USFWS 2024b). Gray wolves can occupy a wide variety of habitat but require large undisturbed areas with abundant prey to hunt and den (USFWS 2006). Because the IPaC tool does not identify gray wolves as a species that may be impacted in the Project Area, and

because the high prevalence of human-disturbed habitat makes it very unlikely that gray wolves would be found in the Project Area, they are not discussed further in this section.

**TABLE E-7     FEDERALLY LISTED SPECIES POTENTIALLY OCCURRING IN THE PROJECT AREA**

COMMON NAME	SCIENTIFIC NAME	STATUS	SUITABLE HABITAT	SUITABLE HABITAT/ DOCUMENTED IN PROJECT BOUNDARY
Canada lynx	<i>Lynx canadensis</i>	Threatened	Coniferous or mixed forests, with thick undergrowth for hunting, old growth with deadfall for denning and resting. Extirpated from Utah.	No/No
Monarch butterfly	<i>Danaus plexippus</i>	Candidate	Relies on milkweed (Family Asclepiadaceae) for breeding, which grows in open fields, meadows, and along roadsides.	Yes/No
Gray wolf	<i>Canis lupus</i>	Endangered	Can inhabit a wide range of habitat, including temperate forests mountains, grasslands, and deserts.	No/No

Source: USFWS (2022, 2024a, 2024b, 2024c).

### 1.8.4            ENVIRONMENTAL EFFECTS

The Proposed Action would not result in construction of new facilities, physical changes to current facilities, or changes to Project operations, maintenance activities, or ownership. No environmental effects on wildlife resources are expected under the Proposed Action, and no studies or PME measures are proposed.

## 1.9 BOTANICAL RESOURCES

This section discusses botanical resources and habitat types within the Project Area and how those resources would be affected by the Proposed Action. Botanical resources within the Project Area varies by topography and aspect as it changes from the higher elevation of the diversion dam to the lower elevation of the powerhouse and tailrace. The steep canyon walls along the creek provide an abrupt change from riparian to arid habitat types (PacifiCorp 1998). There are rare and/or sensitive plant species that have the potential to occur the Project Area, although none have ever been documented there (see the Rare, Threatened, and Endangered Species section below). Noxious weeds are monitored and addressed as required through permitting regulations.

### 1.9.1 UPLAND HABITAT

There are four main classifications of upland habitat types in the Project Area: desert and semi-desert, forest and woodland, open rock vegetation, and shrub and herb vegetation. Vegetation in the upland areas is often lacking due to the presence of rockslides, talus slopes, and steep canyon sides (PacifiCorp 1998); however, the upland shrubs of the valley and foothills typically include shadscale (*Atriplex confertifolia*), winterfat (*Krascheninnikovia lanata*), rubber rabbitbrush (*Chrysothamnus nauseosa*), and big sage (*Artemisia tridentata*), as well as various annual and perennial grasses, both native and introduced. Above Big Cottonwood Creek, on the dry hillsides and slopes, and along the penstock route, vegetation generally consists of Gambel oak brush with a mix of big sage, bigtooth maple, bitterbrush (*Purshia glandulosa*), sumac (*Rhus trilobata*), and rubber rabbitbrush (PacifiCorp 1998; Salt Lake County 2003). As elevation increases, softwoods such as white fir, Douglas fir, blue spruce (*Picea pungens*), and limber pine (*Pinus flexilis*) become more evident. Common hardwood species found above the creek consist of aspen, serviceberry (*Amelanchier utahensis*), and mountain ash (*Sorbus americana*). Snowberry (*Symphoricarpos oreophilus*), subalpine fir (*Abies lasiocarpa*), Engelmann spruce (*Picea engelmannii*), and willow (*Salix* sp.) are usually found in the subalpine and alpine areas (Salt Lake County 2003).

### 1.9.2 RIPARIAN HABITAT

Riparian habitat generally refers to areas dominated by plants and trees along stream banks, lakes, or ponds. Vegetative species within riparian habitats are often hydrophytic and are submerged in water for part of the growing season. Common riparian tree species include cottonwood (*Populus* sp.), willow, and water birch (*Betula nigra*). Typical riparian shrubs in this habitat include red-osier dogwood (*Cornus sericea*), currant (*Ribes* spp.), willow, and Wood's rose (*Rosa woodsia*) (Salt Lake County 2003). Riparian habitat within the Project Area includes most of the corridor along Big Cottonwood Creek and tends to be very narrow. Big Cottonwood Creek is a confined, high-gradient stream channel that carries high stream flows with little or no floodplain; therefore, riparian vegetation along the creek is not well developed and is dominated by narrowleaf cottonwood, box elder, and white fir (PacifiCorp 1998).

### 1.9.3 WETLAND HABITAT

According to USFWS National Wetlands Inventory mapping, few aquatic resources were identified within the Project Area. Aquatic resources mostly included riverine systems and freshwater ponds (USFWS 2024d) (see Figure E-5). According to the National Wetlands Inventory mapping tool, Big Cottonwood Creek is classified as a R4SBC riverine system, with subsystem channels that may be intermittent; however, the channel of Big Cottonwood Creek that passes through the Project Boundary is never dry but can experience seasonal flooding. The reservoir behind the Project's diversion dam was classified as an impounded, palustrine, semi-permanently flooded aquatic bed (PacifiCorp 1998). Wetland vegetative cover in proximity to reaches of Big Cottonwood Creek downstream of the Project Area in urban areas is generally composed of cattails (*Typha* sp.), bulrushes (*Scirpus* sp.), and various types of sedges (*Carex* sp.); there is very little vegetated wetland habitat within the Project Area, and it mostly consists of narrow riparian bands of willow and dogwood overstory with a sedge understory (Salt Lake County 2003).

### 1.9.4 NOXIOUS WEEDS

Salt Lake County designates noxious weeds according to the State of Utah Noxious Weed List in which each weed is categorized into classes based on status and state presence (Salt Lake County 2020a; Utah Department of Agriculture and Food 2022) (Table E-8). In total, there are 54

noxious weeds listed as potentially occurring in the Project Area. Class 1A species are not known to exist in Utah but have a significant risk of invasion. Because Class 1A species do not occur in Utah, they are not included in this analysis. Class 1B species are listed as Early Detection Rapid Response species and are known only from limited distribution throughout the state. They pose a serious threat to the state and are considered high priority for control. Class 2 species occur throughout the state but at a level where eradication may be possible. Therefore, Class 2 species also receive high priority for control. Class 3 species occur throughout the state in populations where eradication would be difficult. Control efforts are focused on eliminating new or expanding populations. Class 4 species are prohibited from sale in the retail industry and, therefore, are not included in this analysis.

Although they are not listed as noxious weeds, the following species are considered invasive in Salt Lake County: cereal rye (*Secale cereale*), cheatgrass (*Bromus tectorum*), and sulfur cinquefoil (*Potentilla recta*). The Salt Lake County's weed program tool, Early Detection and Distribution Mapping Systems (EDDMapS) confirmed that the above-listed invasive species were documented within the county; however, this does not mean that they are located within the Project Area. Very few state noxious weeds are known to occur in the Project Area, and mostly consist of Class 3 thistles, bindweed (*Convolvulus* spp.), houndstongue (*Cynoglossum officinale*), and puncture vine (*Tribulus terrestris*).

**TABLE E-8 NOXIOUS WEEDS POTENTIALLY OCCURRING IN THE PROJECT AREA**

SCIENTIFIC NAME	COMMON NAME	STATE OF UTAH NOXIOUS WEED LIST
<i>Acroptilon repens</i>	Russian knapweed	Class 3
<i>Aegilops cylindrica</i>	Jointed goatgrass	Class 3
<i>Alhagi maurorum</i>	Camelthorn	Class 1B
<i>Alliaria petiolata</i>	Garlic mustard	Class 1B
<i>Arundo donax</i>	Giant reed	Class 1B
<i>Brassica elongata</i>	Elongated mustard	Class 1B
<i>Brassica tournefortii</i>	African mustard	Class 1B
<i>Cardaria</i> spp.	Hoary cress (whitetop)	Class 3
<i>Carduus nutans</i>	Musk thistle	Class 3
<i>Centaurea calcitrapa</i>	Purple star-thistle	Class 1B

SCIENTIFIC NAME	COMMON NAME	STATE OF UTAH NOXIOUS WEED LIST
<i>Centaurea diffusa</i>	Diffuse knapweed	Class 2
<i>Centaurea solstitialis</i>	Yellow star-thistle	Class 2
<i>Centaurea stoebe</i>	Spotted knapweed	Class 2
<i>Centaurea virgata</i>	Squarrose knapweed	Class 2
<i>Chondrilla juncea</i>	Rush skeletonweed	Class 2
<i>Cirsium arvense</i>	Canada thistle	Class 3
<i>Conium maculatum</i>	Poison hemlock	Class 3
<i>Convolvulus</i> spp.	Field bindweed (wild morning glory)	Class 3
<i>Cynodon dactylon</i>	Bermudagrass	Class 3
<i>Cynoglossum officinale</i>	Houndstongue	Class 3
<i>Echium vulgare</i>	Blueweed (viper's bugloss)	Class 1B
<i>Elymus repens</i>	Quackgrass	Class 3
<i>Euphorbia esula</i>	Leafy spurge	Class 2
<i>Galega officinalis</i>	Goat's rue	Class 1B
<i>Hyoscyamus niger</i>	Black henbane	Class 2
<i>Hypericum perforatum</i>	Common St. Johnswort	Class 1B
<i>Isatis tinctoria</i>	Dyer's woad	Class 2
<i>Lepidium latifolium</i>	Perennial pepperweed (tall whitetop)	Class 3
<i>Leucanthemum vulgare</i>	Oxeye daisy	Class 1B
<i>Linaria dalmatica</i>	Dalmatian toadflax	Class 2
<i>Linaria vulgaris</i>	Yellow toadflax	Class 2
<i>Lythrum salicaria</i>	Purple loosestrife	Class 2
<i>Onopordum acanthium</i>	Scotch thistle (cotton thistle)	Class 3
<i>Phragmites australis</i> ssp.	Phragmites (common reed)	Class 3
<i>Polygonum cuspidatum</i>	Japanese knotweed	Class 1B
<i>Scorzonera laciniata</i>	Cutleaf vipergrass	Class 1B
<i>Sorghum halepense</i> and <i>Sorghum almum</i>	Perennial sorghum	Class 3
<i>Taeniatherum caput-medusae</i>	Medusahead	Class 2
<i>Tamarix ramosissima</i>	Tamarisk (saltcedar)	Class 3
<i>Tribulus terrestris</i>	Puncturevine (goathead)	Class 3
<i>Ventenata dubia</i>	Ventenata	Class 1B

Source: Salt Lake County (2020); Utah Department of Agriculture and Food (2022).

### 1.9.5 RARE, THREATENED, AND ENDANGERED SPECIES

The following resources were evaluated to determine which threatened, endangered, sensitive, or rare plants have the potential to be present in or near the Project Area based on known distributions and habitat characteristics:

- USFWS IPaC database query for T&E species (USFWS 2024a)
- USFS Intermountain Region 4 threatened, endangered proposed, and sensitive species list (USFS 2016)
- Utah Rare Plant Guide (Utah Native Plant Society [UNPS] 2023)
- Utah's SGCN (UDWR 2021)

The USFWS IPaC query indicated that no T&E plant species are located within the Project Area; however, other resources such as the USFS list, noted above, identified the potential for sensitive plant species to occur within the Project Area.

The USFS organizes its threatened, endangered, proposed, and sensitive species list by forest. In this case, the analysis focused on species identified within the UWCNF. In total, one endangered, three threatened, and 23 sensitive plant species have known distributions and/or habitat within the UWCNF. Table E-9 presents all the endangered, threatened, and sensitive species identified as being known to occur or likely to occur in the UWCNF based on distribution of species or habitat. The UWCNF encompasses 2.2 million acres and extends well beyond the Project Area (USFS 2016). Inclusion on the USFS Region 4 list does not indicate presence in the Project Area.

To further determine the likelihood of species to occur within the Project Area (based on habitat), each species in Table E-9 was analyzed by searching the Utah Rare Plant Guide and other similar resources, which narrowed down specific habitat characteristics and requirements such as elevation, soil type, and surrounding vegetation (UNPS 2023). The results of the search are shown in the last column of Table E-9.

**TABLE E-9 U.S. FOREST SERVICE REGION 4 ENDANGERED, THREATENED, AND SENSITIVE SPECIES KNOWN OR LIKELY TO OCCUR IN UINTA-WASATCH-CACHE NATIONAL FOREST**

SPECIES NAME	COMMON NAME	USFS STATUS	LIKELY TO OCCUR IN PROJECT AREA (BASED ON HABITAT)
<i>Angelica wheeleri</i>	Wheeler’s angelica	S <sup>a</sup>	No
<i>Astragalus desereticus</i>	Deseret milkvetch	T <sup>b</sup>	No
<i>Botrychium crenulatum</i>	Dainty moonwort	S <sup>a</sup>	No
<i>Botrychium lineare</i>	Slender moonwort	S <sup>b</sup>	No
<i>Corydalis caseana</i> ssp. <i>brachycarpa</i>	Sierra fumewort or Wasatch fitweed	S <sup>a</sup>	No
<i>Cypripedium fasciculatum</i>	Brownie lady’s slipper	S <sup>a</sup>	No
<i>Cypripedium parviflorum</i>	Lesser yellow lady’s slipper	S <sup>a</sup>	No
<i>Dodecatheon utahense</i>	Wasatch shooting star	S <sup>a</sup>	No
<i>Draba brachystylis</i>	Wasatch draba	S <sup>a</sup>	Yes
<i>Draba burkei</i>	Burke’s draba	S <sup>b</sup>	Yes
<i>Draba globosa</i>	Rockcress draba	S <sup>a</sup>	No
<i>Draba maguirei</i>	Maguire draba	S <sup>a</sup>	No
<i>Erigeron cronquistii</i>	Cronquist daisy	S <sup>a</sup>	No
<i>Erigeron garrettii</i>	Garrett’s fleabane	S <sup>a</sup>	No
<i>Eriogonum loganum</i>	Logan buckwheat	S <sup>a</sup>	No
<i>Ivesia utahensis</i>	Utah ivesia	S <sup>a</sup>	No
<i>Jamesia americana</i> var. <i>macrocalyx</i>	Wasatch jamesia	S <sup>a</sup>	No
<i>Lepidium montanum</i> var. <i>alpinum</i>	Wasatch pepperwort	S <sup>b</sup>	Yes
<i>Lesquerella garrettii</i>	Garrett bladderpod	S <sup>a</sup>	No
<i>Primula maguirei</i>	Maguire’s primrose	T <sup>a</sup>	No
<i>Papaver radiculatum</i> var. <i>pygmaeum</i>	Artic poppy	S <sup>a</sup>	No
<i>Penstemon compactus</i>	Cache beardtongue	S <sup>a</sup>	No
<i>Phacelia argillacea</i>	Clay phacelia	E <sup>a</sup>	No
<i>Potentilla cottamii</i>	Cottam cinquefoil	S <sup>a</sup>	No
<i>Spiranthes diluvialis</i>	Ute ladies’-tresses orchid	T <sup>b</sup>	No
<i>Thelesperma pubescens</i>	Uinta green thread	S <sup>a</sup>	No
<i>Viola franksmithii</i>	Smith violet	S <sup>a</sup>	No

Source: Little and McKinney (1992); UDWR (2021); UNPS (2023); USFS (2016).

Note: E = endangered; S = sensitive; T = threatened.

<sup>a</sup> Known species/habitat within UWCNF.

<sup>b</sup> Likely/potential habitat within UWCNF.

Four plant species from the USFS Region 4 list also appeared in Utah's SGCN list: Deseret milkvetch (*Astragalus desereticus*), Maguire's primrose (*Primula maguirei*), clay phacelia (*Phacelia argillacea*), and Ute ladies'-tresses orchid (*Spiranthes diluvialis*); however, it is not likely that these species occur in the Project Area, given their specialized habitat requirements and not having ever been observed in either the Project Area, or in the wider Big Cottonwood Canyon.

### 1.9.6 ENVIRONMENTAL EFFECTS

There is no disturbance associated with the Proposed Action that would impact upland, riparian, or wetland habitats or special-status species. No ground-disturbing activities are proposed that would result in the spread or establishment of noxious weeds. No environmental effects on botanical resources are expected under the Proposed Action. Accordingly, no studies or PME measures are proposed.

## **1.10 CULTURAL AND HISTORIC RESOURCES**

This section provides a brief discussion of the cultural history of the Wasatch Front; a description of the known cultural and historic resources within the Project Area; a description of Indigenous Tribes, lands, and interests in the vicinity of the Project; and a statement regarding environmental effects potentially resulting from the Proposed Action.

Cultural resources may include the built environment, archaeological resources, historic resources, places associated with cultural practices and beliefs, and cultural landscapes. Built environment resources include buildings, structures, objects, and districts. Archaeological resources may include pre- and post-contact archaeological sites associated with Indigenous Tribes or historic-era sites (50 years or older) associated with activities that are directly or indirectly documented in the historic record, may be linear or non-linear in nature, and may also be grouped into districts. Historic resources may also include resources such as National Historic Landmarks and National Historic Trails. This section specifically focuses on the potential environmental effects on historic properties, which are defined in the National Historic Preservation Act (NHPA) as historic properties that are listed in or are eligible for listing in the NRHP (36 CFR 60). Section 106 of the NHPA directs federal agencies to take into account the effect of any undertaking (that is, any project with a federal nexus) on historic properties (36 CFR 800).

### **1.10.1 PRECONTACT PERIOD CONTEXT**

The Project is located within the Eastern Great Basin culture area, which has been the subject of extensive research over the last century (Aikens and Madsen 1986; D'Azevedo 1986; Jennings 1978). Evidence of precontact human occupation in the Great Salt Lake Basin and nearby areas appears in the archaeological record after the Terminal Pleistocene and continues into the period when Euro-American explorers and settlers began providing a written history of the region. Detailed discussions used as key sources for this summary are found in Madsen et al. (2005), Madsen and Schmitt (2005), Janetski and Smith (2007), as well as sources for the overall Great Basin region (Beck and Jones 1997; Grayson 1993; Kelly 1997; Madsen and Simms 1998). These sources provide greater detail on the broader region's generalized prehistory.

### **1.10.2 PREHISTORY OF THE EASTERN GREAT BASIN**

Following the general time frames used by Madsen et al. (2005) and Madsen and Schmitt (2005), the region's prehistory is divided into four broad precontact time periods: the Paleoarchaic (>11,000–8,000 radiocarbon years before present [RCYBP]), the Archaic (8,000–2,500 RCYBP), the Fremont (150 B.C.–A.D. 1450), and the Late Prehistoric (A.D. 1450–1847). The Late Prehistoric period ended when Euro-American explorers and settlers arrived in the region. It is important to emphasize the suggestion by Madsen et al. (2005) that there was considerable adaptive variability, and perhaps also ethnic diversity, within the region during any of these periods. Additionally, early documents describe groups venturing into the Salt Lake Valley area but rarely staying long or living there permanently. In later prehistory, this area served as a buffer zone for Indigenous Tribes living to the north and south of the Salt Lake Valley (Keller 2001).

#### **PALEOARCHAIC (>11,000–8,000 RCYBP)**

The Paleoarchaic period, owing to the depth of time, has the least amount of thoroughly understood diagnostic sites. Radiocarbon dates from Danger Cave in western Utah provide an approximate onset for the period of 11,000 RCYBP to approximately 13,000 calendar years ago and are generally accepted as the earliest evidence for precontact occupation in the region (Beck and Jones 1997; Graf and Schmidt 2007; Jennings 1957). A systematic investigation of sites from this period has not been possible, and the period is mostly known from the distribution of diagnostic projectile point types and inferences from nearby regions. Occupation during this period in the Great Basin is primarily known from surface artifacts rather than excavated contexts (Jones and Beck 1999:83). Diagnostic projectile points include lanceolate and fluted lanceolate types such as Clovis and Folsom and the more recent Great Basin Stemmed points. There are few examples of such points that have been dated, and their relationships are not clearly understood because excavated sites in Utah during this period are extremely rare. Surface sites with stemmed points are more common in Utah but do not provide the depth of data required for a more robust understanding of precontact lifeways during the period (Copeland and Fike 1988).

It is generally accepted that the primary adaptation used during this period was a shift away from megafauna to focusing on lacustrine and marsh resources created during the regression of Lake

Bonneville following the end of the Pleistocene (Schmitt and Madsen 2005; Schroedl 1991). Exploitation may have been relatively generalized, including aquatic resources like mollusks, fish, and waterfowl as well as small mammals (Jones and Beck 1999:89), forming an almost “Archaic”-like pattern (Schroedl 1991:7); however, any understanding of subsistence during this period is inferential, based primarily on the location of projectile points found in disparate, non-integrated surveys, and a few, very limited excavations (Schroedl 1991; Seddon 2005). To date, only sites with Paleoarchaic components have been excavated and are relatively well reported in Utah, including Danger Cave (Jennings 1957), Hogup Cave (Aikens 1970), the Lime Ridge site (Davis 1989), the Montgomery site (Davis 1985), the Silverhorn site (Gunnerson 1956), and 42MD300 (Simms and Lindsay 1989) (see Schroedl 1991:12). Further investigation is needed to better delineate the Paleoarchaic period settlement and subsistence strategies in Utah.

#### **ARCHAIC (8,000–2,500 RCYBP)**

The close of the Pleistocene and the onset of the Holocene are defined in North America by a warming and drying trend that resulted in the retreat of the glaciers and a series of changes in flora and fauna (Antevs 1948; Bell and Walker 1992; Grayson 1993). The Archaic Period, as defined by hunting and gathering adaptations, is a long period in the Great Basin, and can arguably be extended to the period of Euro-American contact. In various areas of the region, the period has been subdivided into early, middle, and late periods or into sub-phases (see Aikens and Madsen 1986; Fowler and Madsen 1986). Diagnostic artifacts and other attributes of material culture are associated with these subdivisions of the Archaic Period with greater and lesser degrees of success in applicability. A major problem for the definition of the Archaic Period in the Project Area is that this period is primarily defined on the basis of sites along the margins or edges of Utah’s West Desert. Little research has been conducted in the immediate Project Area with the goal of refining the Archaic Period chronology. Although the terms “Early,” “Middle,” and “Late,” or the Aikens and Madsen (1986) phase designations (Wendover, Black Rock), have been applied to the Archaic Period in this area, at present there are no controlled and/or stratified excavations or large-scale projects that define changes in material culture associated with distinct temporal periods. Consequently, it is difficult to subdivide the overall Archaic Period with a high degree of confidence.

Human populations underwent changes related to these transitions and shifts in adaptive strategies and these changes are visible in the material record of the early and middle Holocene. These changes have been characterized continent-wide through use of the term “Archaic” for a pre-horticultural period of hunting and gathering that focused on the new environments of the Holocene (Willey and Phillips 1958). Human occupation continued in low-elevation locations where lakeshore and other wetland habitats remained. In the Bonneville Basin, this is documented at sites such as Danger Cave, Hogup Cave, and Bonneville Estates Shelter (Madsen et al. 2005); however, such habitats were becoming increasingly scarce, and higher-elevation upland areas were also frequently occupied (Madsen et al. 2005).

Major shifts in material culture include a reliance on smaller projectile points such as Humboldt, Pinto, Gatecliff, and Elko points. These points were mounted as a dart points and delivered with spear and atlatl (Hester 1973; Holmer 1978). The Archaic Period is also characterized by an increase in the frequency and type of grinding and milling stones, such as manos and metates, used for seed processing (Grayson 1993:244–246), which indicates an expansion of diet breadth. Basketry and netting were also important for lacustrine resources and likely also used for hunting small vertebrates (such as rabbits) (Aikens 1970; Broughton et al. 2008; Byers and Broughton 2004).

Archaic Period sites in the region are typified by open-air lithic artifact scatters of various sizes and complexity, consisting mostly of reduction and limited activity sites. These are typically surface sites noted in a wide variety of contexts, although rock shelters are known from surrounding mountain areas (e.g., Lindsay and Sargent 1979). Three rock shelters in the Oquirrh Mountains west of the Project Area have been investigated (Enger 1942; Madsen 1983; Steward 1937). Most sites lack evidence of habitation features and storage structures that might imply long-term single use episodes. Most also exhibit extensive evidence of reoccupation, often into much later periods (e.g., Hull 1994), which adds to the difficulty of identifying the nature of Archaic Period occupations.

Overall, the Archaic Period in the Project Area is relatively well known yet remains defined in a general manner. The general tendency of sites in the region to be reoccupied, resulting in multicomponent occupations, makes further delineation difficult. Thus, there is no large sample

of dated, single component Archaic Period occupations that could be used to define changes in activities and settlement patterns. Furthermore, preservation of organic materials is poor in the open-air sites that typify Archaic Period occupations in the region. This reduces the ability to fully define activities at sites and leads to inferences that most sites represent lithic reduction locales. Thus, the types of data that might be used to define subdivisions of the period beyond the very general “early, middle, late” characterization, or beyond the types of changes defined for regions around the Project Area, are currently lacking. This is not to say that the period is unknown in the region. Rather, any further refinements to an understanding of subsistence and settlement patterns over the multi-thousand-year span of the period depend on further research.

### **FREMONT (150 B.C.–A.D. 1450)**

The Fremont period corresponds to the latter portion of the first millennium A.D. where populations developed horticulture and shifted to more sedentary lifeways. The distribution of Fremont ceramics covers an area even larger than that in which agriculture was practiced, ranging from what is now central Nevada into southern Idaho and southwestern Wyoming (e.g., Hockett and Morgenstein 2003). The date range that Madsen and Schmitt (2005) use for this period is 2,100 to 500 RCYBP, which calibrates to approximately 150 B.C. to A.D. 1450 (see also Massimino and Metcalfe 1999); calibrated B.C. and A.D. dates will be used from this point forward.

The use of varied adaptations during precontact occupation of the Eastern Great Basin continued during the Fremont period. Although initially characterized as a “culture” with several “variants,” the Fremont have recently been reconceived as a “complex” that adopted a wide variety of subsistence, mobility, and habitation strategies (Barlow 2002; Coltrain and Leavitt 2002; Madsen and Simms 1998). The Fremont, therefore, are difficult to conceive of as a coherent and identifiable culture in the sense of an ethnic group. Rather, aspects that characterize various groups identified as Fremont appear to suggest that what archaeologists define as “Fremont” is more of a complex of traits and activities (such as agriculture and sedentism), that varied over the entire region. Given this, the Fremont can be considered to encompass “full-time sedentary farmers, full-time mobile foragers, sedentary foragers, seasonal farmer/foragers, and people who could have been all of these at one time or another in their lives” (Madsen and Simms 1998:323).

Numerous Fremont sites or sites with Fremont components have been reported from the eastern Great Basin and surrounding areas (see overview in Madsen and Schmitt 2005:16–18). Major sites appear to be primarily situated along the deltas of the Bear, Ogden/Weber, and Jordan Rivers, built on natural levees above the surrounding wetlands (Madsen 1986). Fremont materials appear in the western Bonneville Basin at sites such as Danger and Hogup Caves, and others, showing ongoing use of those sites. Fremont complex sites range from large, settled villages to more ephemeral camps that suggest a high degree of mobility, whereas caves also continued to be used (e.g., Aikens 1970; Bryan 1977). Local variations on subsistence practices are common but generally wild plant and animal resources that were harvested in the region are used alongside domesticates (Madsen et al. 2005:42–43). Variability in subsistence strategies from hunting and gathering to intensive farming allowed for nuance and is a defining characteristic of the Fremont complex.

Material culture associated with the Fremont complex consist of several types of grayware pottery, an art style consisting of trapezoidal figurines depicted in rock art and on clay figurines, and “Utah-type” metates characterized by a small secondary grinding surface. Elko series dart points continued to be used until ca. A.D. 200 when the bow and arrow began to be used; this is evidenced by the appearance of the Rosegate point type. Desert side-notched and Cottonwood triangular points appear near the end of the Fremont period and may reflect the replacement of the unbacked bow by sinew-backed, recurved bows (Madsen et al. 2005). A number of artifact types, including ground stone pestles, carved stone tablets, and slate knives, are also unique to this region (Marwitt 1986:168). Organic materials, such as one-rod-and-bundle basketry and deer- or sheep-hide moccasins, are less common in the archaeological record due to their less permanent nature; examples mostly come from cave sites but are another distinctive indicator for the Fremont. Maize and evidence of intentional farming appears in the archaeological record of the southern Wasatch Plateau at approximately 150 B.C. (see discussions in Barlow 2002; Madsen and Simms 1998).

Residential structures vary considerably. Villages in the vicinity of the Wasatch Plateau include multi-room adobe pueblos after ca. A.D. 800; these were preceded by pit structures with adjacent aboveground granaries and even earlier, before A.D. 500 or so, by ephemeral structures with subterranean storage pits. Known Fremont Complex multi-household occupations along the

margins of Great Salt Lake are also characterized by a general lack of stone masonry architecture, with shallow pit structures most common. Substantial structures become uncommon as one moves west from the Wasatch Plateau. Maize and associated technology such as pottery, basin-shaped metates, and subterranean storage pits then spread throughout much of the rest of the Fremont area by ca. A.D. 500. Based on features and artifacts present, occupations in rock shelters appear to represent seasonal occupations (Marwitt 1986:169).

Overall, the Formative Period in the region appears to have been characterized by a variety of occupations. Beginning ca. A.D. 1000, Fremont sites and material culture gradually become less common in the archaeological record; they then decline steeply in frequency at ca. A.D. 1300 and are gone altogether by ca. A.D. 1450 (Massimino and Metcalfe 1999). The result of this is highly contested, but one possibility is the replacement of the Fremont population by incoming Numic-speaking groups.

#### **LATE PREHISTORIC (A.D. 1450–1850)**

The Late Prehistoric period in the eastern Great Basin begins with a shift away from agriculture and Fremont material culture and lasts until the Historic period. The sudden appearance of smaller triangular arrow points and a distinctive brownware ceramic is seen as evidence of an expansion of Numic-speaking peoples into the region from the Mojave Desert area (Madsen 1975; Bettinger and Baumhoff 1982; Grayson 1993; Kelly 1997; Madsen and Rhode 1994). Originally based on linguistic data (Lamb 1958), the hypothesis is that Numic speakers spread across the Great Basin from a homeland in what is now southeastern California beginning sometime before A.D. 1000 (Bettinger 1991; Bettinger and Baumhoff 1982, 1983; Carlyle et al. 2000; Kaestle and Smith 2001; Young and Bettinger 1992).

Whether the changes noted in the material culture (e.g., the appearance of new projectile point types and pottery) represent replacement of local populations, absorption into new linguistic and cultural groups, or simply cultural change by Indigenous populations remains an open debate (see Aikens and Witherspoon 1986; Lyneis 1982).

Perhaps the most significant difference between occupations of the Formative and Late Prehistoric Periods is the shift away from maize agriculture and the return to a predominately hunting and gathering lifeway reflective of a highly mobile population, as argued by Madsen and

Schmitt (2005). Known Late Prehistoric sites in the Eastern Great Basin are most common in riparian or lakeside wetland habitats (e.g., Janetski and Smith 2007; Simms and Heath 1990), though caves and upland areas were also used (e.g., Aikens 1970; Janetski 1985; Janetski and Smith 2007; Simms and Lindsay 1989). Thus, the most intensive archaeological investigations of this period have focused on sites along the margins of Utah Lake, to the southwest of the Project Area (Janetski 1994:176). Exploitation of wetland and aquatic resources appears to have been the focus of occupation at these sites (Janetski 1994:176), but resources from a variety of other settings also continued to be used. Other notable changes in occupation include a reduction in the number of occupations, a tendency for Late Prehistoric Period occupations to be located at lower elevations than during previous periods, and an increase in site size as a probable consequence of continual reoccupation of the same locale (Janetski 1994:159–161).

Material culture changed significantly as well, with the one-rod-and-bundle basketry of the Fremont period being replaced by other types, and the use of smaller arrow points such as Desert Side-notched and Cottonwood Triangular points. Pottery shifted from Fremont grayware to Intermountain Brownware or Shoshonean Ware types. Chipped stone assemblages, basketry, and ceramics have all been used as archaeological evidence of the Numic expansion (e.g., Madsen and Rhode 1994).

Late Prehistoric occupations have also been investigated in the Salt Lake Valley. Investigations at the Salt Lake Airport site (Allison 1998; Allison et al. 1997) and at 42DV2 (Colman and Colman 1998) have revealed substantial Late Prehistoric period occupations along the margins of Great Salt Lake. Janetski and Smith (2007) provides a thorough overview of Late Prehistoric residential sites located in wetland settings to the east along the Wasatch Front. Late Prehistoric occupations have mostly consisted of small components of larger, multi-component sites, and appear to represent short-term occupations (Spaulding 1994). By the period of contact with Euro-American cultures in the late 1700s, the present ethnographically known groups inhabited the region: the Ute, the Shoshone, and the Paiute; all of which speak Numic languages.

### **1.10.3 HISTORIC PERIOD**

In 1847, pioneers from The Church of Jesus Christ of Latter-day Saints (the LDS Church) settled in the Salt Lake Valley and established it as their home. Within 4 months, 1,700 people lived in

the valley, and by the next year, the population was nearly 5,000 individuals (Sillitoe 1996). With all natural resources being declared common property by officials of the LDS Church, the early settlers of Salt Lake County focused on cattle and pursuing subsistence agriculture, settling near the waterways in the valley and diverting water for irrigating their fields. It became apparent that the mountain streams, including Big Cottonwood Canyon, would be extremely important for the subsistence strategies of the new and fast-growing population of settlers, which all received land and water rights from the LDS Church (Sillitoe 1996:31). Euro-American settlement in Big Cottonwood Canyon and the surrounding areas began early in the history of the Salt Lake Valley. In 1848, only 1 year after the first Latter-day Saint pioneers settled in Utah, some moved into the area that would become Cottonwood Heights, near the mouth of Big Cottonwood Canyon (Sillitoe 1996:35). The following year, the Brighton family established a homestead at the top of Big Cottonwood Canyon (Sillitoe 1996:36).

The 1860s saw the establishment of the mining and timber industries in Big and Little Cottonwood Canyons (Peterson and Speth 1980:7–8). By the 1890s, timber depletion in the canyons was dramatically evident “and overgrazing had disturbed the balance by which nature-maintained mountain watersheds in the region” (Peterson and Speth 1980:40). Water availability and irrigation became a major issue after the first national irrigation congress, which took place in Salt Lake City in 1891 (Peterson and Speth 1980:41).

Hydroelectric power became a key source of commercial power generation. Unlike the densely packed cities in the eastern United States, western residents were often much more widely dispersed. In more arid areas like Utah, southern Idaho, and Colorado, the locations of water sources where hydroelectricity could be generated were sometimes a significant distance from towns and cities. Despite these differences, electric power was still in high demand from western consumers. This demand for electric power was stimulated by two major forces: community demand for domestic and urban infrastructure, and demand for power to drive industrial operations (TAG Historical Research and Consulting 2016:12–14).

Lucien L. Nunn constructed the Ames Power Station in Telluride, Colorado, in 1891 to drive his mining operations (TAG Historical Research and Consulting 2016:19). The Ames plant was the first hydroelectric facility in the region to generate and transmit AC electricity over a

transmission line for industrial purposes (the Oregon City Falls generator, Oregon City, Oregon, accomplished the same feat in 1889, making it the world’s first for single-phase electrical transmission) (Hydro Review 2013). AC power, developed by George Westinghouse, allows transmission of electricity at much higher voltages and for longer distances than the DC favored by Edison. Nunn recognized that AC power was well suited to his needs, particularly the long-distance transmission of electricity from the power-generating station to a mine several miles away, and the success of the operation proved its efficacy (Hydro Review 2013).

#### 1.10.4 PREVIOUSLY CONDUCTED ARCHAEOLOGICAL SURVEYS AND RESOURCES WITHIN THE PROJECT AREA

A file search of previously conducted archaeological inventories and recorded archaeological sites located within the Project Area using the Utah SHPO Sego online database was conducted on November 3, 2023. The file search identified five previous inventories conducted within the Project Area, two of which intersect the current Project Area (Table E-10). Those inventories identified six historic-age (i.e., since Euro-American settlement) archaeological sites, three of which are within the Project Area (Table E-11). Site 42SL965 is the Stairs Station Hydroelectric Power Plant, which has been recommended as eligible for the NRHP under Criteria A and C with SHPO concurrence and has been listed in the NRHP since 1988. Site 42SL967 is a historic structure (powerline) that is recommended not eligible for the NRHP. Site 42SL981 is a historic structure (Granite Dam) that has been determined to be not eligible for the NRHP.

**TABLE E-10 PREVIOUSLY CONDUCTED ARCHAEOLOGICAL INVENTORIES IN THE PROJECT AREA**

PROJECT NUMBER	TITLE
U84FS1052	Big Cottonwood Canyon Sewer Line Survey
U85FS0112	Big Cottonwood Canyon Hydroelectric Project
U02FS0282	Salt Lake Campground Projects
U21TD0668 <sup>a</sup>	A Cultural Resource Survey for Rocky Mountain Power’s Brighton Line 12 Powerline Replacement Project, Salt Lake County, Utah
U22ST0573 <sup>a</sup>	Stairs Hydroelectric Project (FERC Project No. 597) Section 106 Review for Fiscal Year 2022-2023 Proposed Improvements to Stairs Station Hydroelectric Power Plant and Granite Dam Spillway Upgrades

Note: Titles have been taken directly from the Utah SHPO’s Sego database and have not been edited.

<sup>a</sup> Project intersects the Project Area.

**TABLE E-11 PREVIOUSLY RECORDED SITES WITHIN THE PROJECT AREA**

SITE NUMBER	CLASS	TYPE	ELIGIBILITY
42SL236	Historic	Industry – Granite Flume	Not eligible
42SL237	Historic	Ledgemere Picnic Area CCC Bridges	Eligible (Criterion C)
42SL238	Historic	Birches Picnic Area CCC Bridge	Eligible (Criteria A, C)
42SL965 <sup>a</sup>	Historic	Industry – Stairs Station Hydroelectric Power Plant	Eligible (Criteria A, C)
42SL967 <sup>a</sup>	Historic	Infrastructure – Powerline	Not eligible
42SL981 <sup>a</sup>	Historic	Industry – Granite Dam	Not eligible

<sup>a</sup> Site/structure intersects or is within the Project Area.

Additionally, General Land Office plat maps and other historical topographical information and geographic information system (GIS) layers were reviewed for possible archaeological resources within the Project Area such as historic trails and historic districts. Based on a review of these resources, no additional resources to those noted above were identified.

### **1.10.5 PREVIOUSLY IDENTIFIED HISTORIC ARCHITECTURAL RESOURCES**

Using the Historic Utah Buildings Database, three previously documented architectural resources were identified within the Project Boundary (Table E-12), and two additional resources were identified within the Project Area (Table E-13). The Stairs Historic District lies within the Project Boundary and was documented in 1988 as part of an NRHP nomination. The Stairs Historic District comprises eight resources; of these, four are contributing, three are non-contributing, and one has been demolished since the 1988 recording (see Table E-14; Figure E-7) (Fiege and Ore 1988). A second previously documented resource partially within the Project Boundary is the Storm Mountain Amphitheater (Property Record No. 71959), which is an eligible contributing building to the greater statewide context but not to that of the Stairs Historic District, nor is it considered a Project facility. Although Big Cottonwood Creek Bridge/Maxfield Bridge D-258 (Property Record No. 58061) was previously recorded within the Project Boundary, it was demolished and replaced in 2012. Its status has not yet been updated in the Utah SHPO database, and it was originally plotted in the wrong location in that database.

**TABLE E-12 ARCHITECTURAL RESOURCES IN THE PROJECT BOUNDARY**

PROPERTY RECORD NO.	NAME	YEAR BUILT	NRHP ELIGIBILITY
58061	Big Cottonwood Creek Bridge (Maxfield Bridge D-258)	1934	Demolished/Replaced with modern structure
72270	Stairs Station Hydroelectric Plant Historic District	1896	Eligible/Contributing, individually listed
71959	Storm Mountain Amphitheater	1937	Eligible/Contributing

Source: Historic Utah Buildings (2024).

**TABLE E-13 ARCHITECTURAL RESOURCES IN THE PROJECT AREA**

PROPERTY RECORD NO.	NAME	YEAR BUILT	NRHP ELIGIBILITY
71143	Maxfield Lodge	1965	Non-contributing, out of period
119317	LDS Church Sawmill Site	1850	Undetermined

Source: Historic Utah Buildings (2023).

**TABLE E-14 ARCHITECTURAL RESOURCES IN THE STAIRS STATION HYDROELECTRIC POWER PLANT HISTORIC DISTRICT AS IDENTIFIED IN 1988**

DISTRICT BUILDING NUMBER	NAME	YEAR BUILT	NRHP DISTRICT ELIGIBILITY
1	Powerhouse	1896	Eligible/Contributing
2	Switchyard (modern)	ca. 1980	Non-contributing
3	Storm Mountain Dam	1921	Eligible/Contributing
4	Conduit	1921	Eligible/Contributing
5	Penstock	1896	Eligible/Contributing
6	Standpipe	1939	Non-contributing
7	Oil shed (collapsed)	ca. 1900	Demolished
8	Bridge over Big Cottonwood Creek (modern)	ca. 1980	Non-contributing

Source: Fiege and Ore (1988).

Note: All resources in this table are within the Stairs Project Boundary.

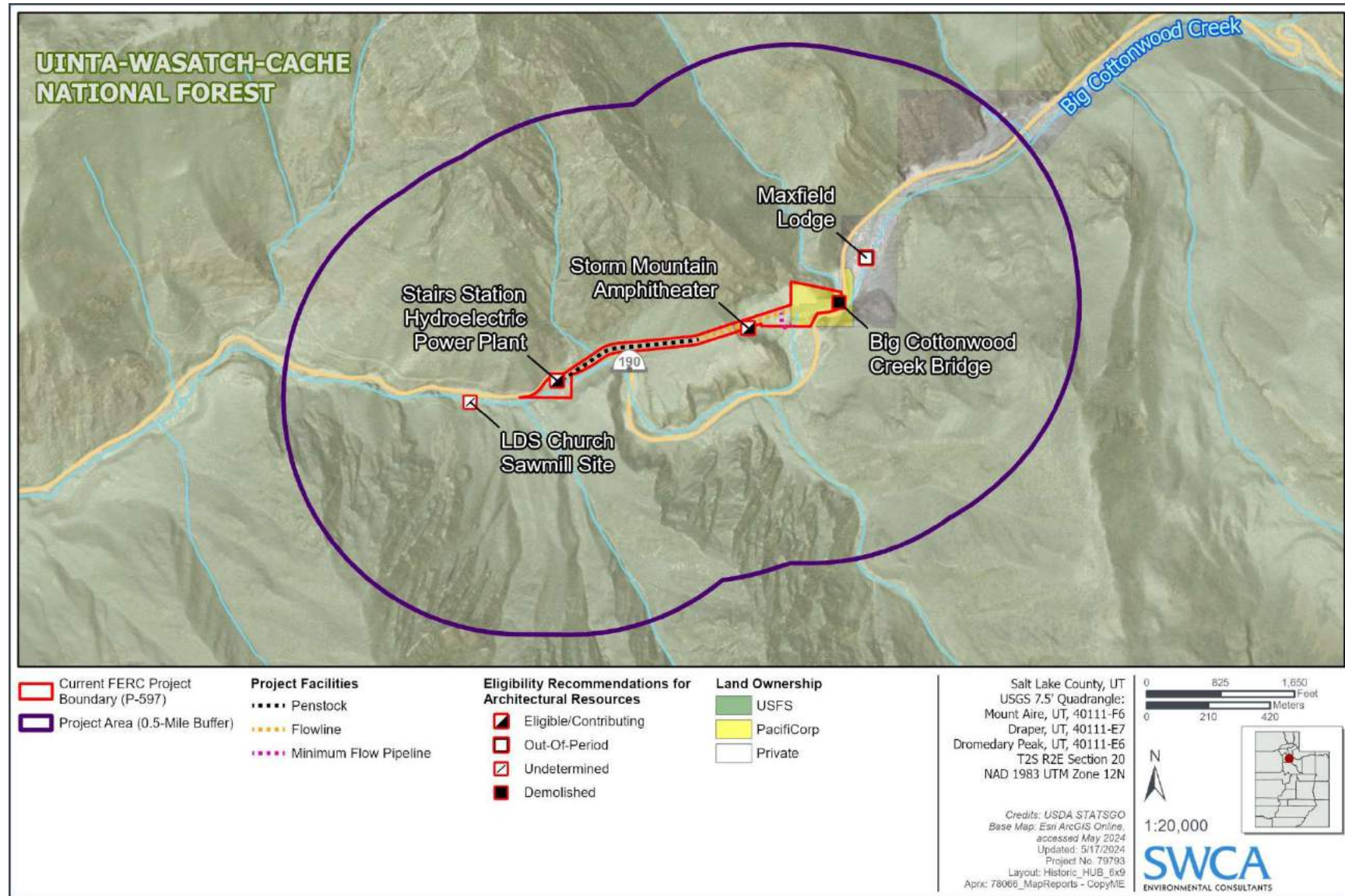
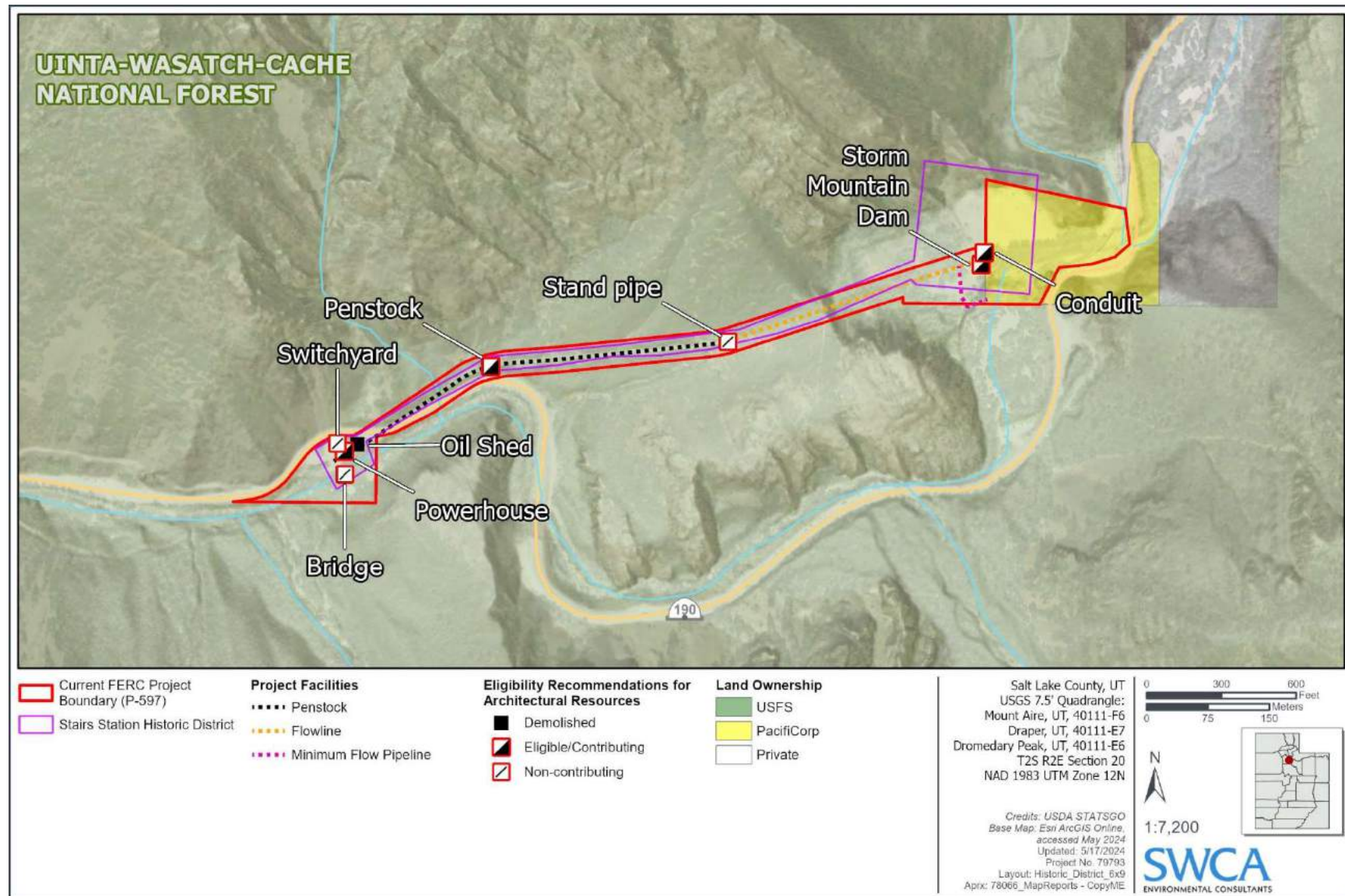


FIGURE E-6 ELIGIBLE HISTORIC ARCHITECTURAL RESOURCES IN PROJECT AREA (HISTORIC UTAH BUILDINGS DATABASE)



**FIGURE E-7 ELIGIBLE STAIRS PROJECT HISTORIC ARCHITECTURAL RESOURCES IN PROJECT AREA (STAIRS HISTORIC DISTRICT 1988 NATIONAL REGISTER OF HISTORIC PLACES NOMINATION)**

### **1.10.6 TRIBAL RESOURCES IN THE PROJECT AREA**

Under Section 106 of the NHPA, FERC must seek out any federally recognized Tribe that can demonstrate traditional cultural or religious connection to land under its jurisdiction and involve them in the conduit exemption and subsequent license surrender process.

The Project boundary does not encompass any federally recognized Tribal reservation lands; however, some federally recognized Tribes within the state of Utah and surrounding states may have an interest in the Project:

- Ute Indian Tribe of the Uintah and Ouray Reservation, Utah
- Confederated Tribes of the Goshute Reservation, Nevada and Utah
- Skull Valley Band of Goshute Indians of Utah
- Paiute Indian Tribe of Utah (Cedar Band of Paiutes, Kanosh Band of Paiutes, Koosharem Band of Paiutes, Indian Peaks Band of Paiutes, and Shivwits Band of Paiutes)
- Northwestern Band of the Shoshone Nation
- Shoshone-Bannock Tribes of the Fort Hall Reservation

### **1.10.7 IDENTIFICATION OF RESOURCES**

Prior to Euro-American settlement in modern-day Utah, the Salt Lake Valley acted as a neutral territory between the Utes in Utah Valley, the Goshutes to the west, and the Shoshones to the north (Duncan 2003:187). The Project Area in Big Cottonwood Canyon is within the traditional Ute and Eastern Shoshone Tribal territory; however, the Utes, Shoshone, Goshutes, and Paiutes are all federally recognized Tribes that may potentially have a traditional cultural or religious connection to the lands in the Project Area or vicinity of the Project.

#### **SHOSHONE TRIBES**

Historically, Shoshoni-speaking bands lived in the part of the northern Great Basin that includes several river basins: the upper Snake and Salmon Rivers in Idaho, and the Green and Bear Rivers in Utah and Wyoming. With the introduction of horses in the early 1700s, bands of Shoshone began traveling over large areas beyond their ancestral homelands. Within 50 years this expansion was halted in the Plains area by other groups who had also acquired horses and guns

from European settlers. The Shoshone returned to their earlier territories within the western river valleys: the Lemhi Shoshones and Flathead Salish along the Salmon River, the Northern Shoshones and Bannocks along the Snake River, and the Eastern Shoshones along the Green and Bear Rivers. Throughout the nineteenth century these groups continued to participate in annual bison hunts to the east (Jackson Hole Historical Society 2022; Murphy and Murphy 1986; Steward 1937). Many of these bands later organized into federally recognized Tribes, including the Northwest Band of Shoshone Nation and the Shoshone-Bannock Tribes of the Fort Hall Reservation.

The Shoshone rotated their villages seasonally to gather resources over a vast area, including Wyoming, northern Utah and into the Salt Lake Valley, southern Idaho, and eastern Nevada. In the spring, groups would fish for salmon below Shoshone Falls, then travel west to Camas Prairie to gather during the summer months. In the fall they traveled to Wyoming for annual bison hunts and through Utah and Nevada to gather pine nuts and would then typically return to winter camps in the Snake River bottoms (Murphy and Murphy 1986; Shoshone-Bannock Tribes 2021; Steward 1937). They continued this into the nineteenth century. Steward (1937) reported on one band that generally wintered near Fort Hall. This band comprised two integrated but culturally and linguistically distinct groups: the Bannocks, a Northern Paiute group that moved into the area in the seventeenth century, and the Northern Shoshones (Murphy and Murphy 1986; Shoshone-Bannock Tribes 2021; Steward 1937).

Identification of groups was fluid based on their residential location and social identity (Murphy and Murphy 1986:286–287; Steward 1997:172). The people known today as the Northwestern Band of Shoshone traveled seasonally and largely on foot. They were known as “So-so-goi,” which means “those who travel on foot” (Northwestern Band of the Shoshone Nation 2024). The Northwestern Shoshone wintered along the Bear River in Cache Valle and were led by Bear Hunter, whom members of the LDS Church described as a war chief (Northwestern Band of the Shoshone Nation 2024).

By the 1840s, bison herds west of the Continental Divide had been exterminated (Murphy and Murphy 1986). Emigration along the Oregon Trail brought more Euro-American settlers through the region, and settlement by members of the LDS Church began in the 1860s (Murphy and

Murphy 1986). By the late 1860s, it is estimated that over 300,000 people traveled along the Oregon and Overland Trails. This influx of settlers disrupted and, in some cases, depleted the resources used by the Shoshone-Bannock peoples (including their traditional hunting, foraging, and seasonal dwelling areas) by bringing permanent settlements, livestock, and other changes to traditionally occupied lands. The last great bison hunt by the Northern Shoshones and Bannocks took place in 1864 (Shoshone-Bannock Tribes 2021). The traditional cultural practices of the Shoshone-Bannock clashed with those of the new settlers, giving rise to increased tensions.

In 1860, tensions between Indigenous people and settlers increased with the LDS Church establishment of Franklin, the first permanent Euro-American settlement in Idaho (Schwantes 1991). On January 29, 1863, the U.S. Army under the command of Colonel Patrick Connor attacked the Shoshone winter village of Boa Ogoi (Wuda Ogwa), near present day Preston, Idaho. The 300 soldiers traveled north from Camp Douglas in Salt Lake City and instigated a dawn attack that killed over 250 Shoshones, primarily women and children. Colonel Connor's troops looted weapons, took prisoners, burned lodges and the dead, and took approximately 175 ponies (Reid et al. 2017). Most surviving children were taken and adopted by members of the LDS Church in Cache Valley (Miller 2008). This event, the Bear River Massacre, is one of the deadliest massacres perpetrated by the U.S. military in U.S. history. It resulted in a significant shift in relations between the two groups, in that settlers no longer feared retaliation as the Indigenous peoples were decimated.

In 1863 and 1868, the Tribes entered into peace treaties with the U.S. government leading to establishment of the Fort Hall Reservation in 1867. Although the peace treaties had established reservation land for the Shoshone-Bannock, settlers and increased land development soon began encroaching onto Shoshone-Bannock reservation lands in the late nineteenth century. A series of land cessions and renegotiation of reservation boundaries resulted in a dramatic decrease in reservation size by 1900 (Murphy and Murphy 1986:303). Despite the reservation size decrease, effects of altered subsistence strategies, and government neglect, the Shoshone continued to adapt (Heaton 2005:88–89). Other Shoshone groups were relocated to the Fort Hall Reservation as well, after being forced off their original reservation in both 1905 and 1907 (American Indian Relief Council 2022; Murphy and Murphy 1986). The Northwestern Band of the Shoshone Nation received federal recognition in 1987 (Utah Division of Indian Affairs 2024a). In 2018, the

Tribe purchased 550 acres of land associated with the Bear River massacre with plans to build a cultural interpretive center at the site.

By the 1860s, the Eastern Shoshone were primarily living in the Wind River Valley in Wyoming, spending the summer months in the Fort Bridger area. Chief Washakie became a prominent leader in the 1850s, and in 1852, he was the sole Shoshone representative to negotiate the Latter-day Saint settlement with Brigham Young in Salt Lake City (Jackson Hole Historical Society 2022; Shimkin 1986). In 1863, Chief Washakie negotiated the first treaty of Fort Bridger, which set rough boundaries for a Shoshone Reservation that included parts of Utah, Idaho, Montana, Wyoming, and Colorado and gave federal recognition to the Tribe; however, the second treaty of Fort Bridger in 1868 limited the boundaries to an area in west-central Wyoming but afforded the Tribe legal recognition (Eastern Shoshone 2022). In 1877, Chief Washakie and other Shoshone leaders agreed to allow the Arapaho Tribe (another Plains Tribe) to move onto the Wind River Reservation as well (Jackson Hole Historical Society 2022). The Arapaho were given fertile, irrigable lands on the east side of the reservation by the government (Shimkin 1986). In 1939, lands north of the Big Wind River were restored to the Shoshone, along with a monetary settlement from the federal government after the Tribe won a legal suit, which the Shoshone Tribal council put toward economic development of the Tribe (Shimkin 1986). Although both Tribes still live on the Wind River Reservation, they operate as two separate Tribal governments. The Northwestern Band of the Shoshone Nation, based out of Brigham City, Utah, and the Shoshone-Bannock Tribe of the Fort Hall Reservation, based out of Fort Hall, Idaho, are federally recognized Tribes.

## **UTE TRIBES**

Traditionally, the Utes were a nomadic mountain people, organized into local groups (bands), whose territory extended from modern-day southwestern Wyoming; across most of Utah and Colorado, eastern Nevada, the southwest half of Kansas; and into northern Arizona, New Mexico, Texas, and the Oklahoma panhandle. They were foragers who followed a seasonal round within their traditional lands and lived in brush wickiups or tipis in the Plains Indian style (Duncan 2003:169; Goff 2024). During the winter they typically moved to villages in the deserts and valleys and to the foothills and mountains during the spring and summer. They gathered for communal hunts in the fall, including for buffalo (Duncan 2003:169–170).

The Spanish have the earliest written reference to the Ute people in reports from the 1626 Oñate expedition. At the time, the Spaniards noted at least 10 bands of Utes living in modern-day Utah and Colorado (Duncan 2003:175–176). The Spanish imported domesticated horses in the 1600s, which significantly altered many Indigenous groups' lifeways. Not all Ute bands kept horses, and those who did, such as the northern bands, acquired them in the late seventeenth or early eighteenth century; however, the bands who did adopt horses learned to hunt more efficiently, allowing for further travel and the ability to take part in buffalo hunts on the eastern and southern plains. This increased travel, however, put them into contact with other Plains Tribes, such as the Apache and Comanche, and resulted in a greater threat to Spanish settlements (Duncan 2003:180–182).

In 1776, the first European expedition, led by Spanish friars Francisco Atanasio Domínguez and Silvestre Vélez de Escalante, visited what is today Utah (May 1987:24). They encountered Indigenous people, likely Uintah Utes, who foraged for wild plants and game, cultivated squash and corn, and made ceramics (Daughters of the Utah Pioneers of Uintah County [DUPUC] 1947; Native Ministries International 2022a; Warner 1995:70–73). The expedition revealed hostilities between the Ute and Shoshone Tribes, both of which occupied the Uinta Basin (Barton 1998:19).

The earliest sustained Euro-American presence in the Uinta Basin region is attributed to fur trappers and traders. Establishment of numerous trading posts and rendezvous locales across the entire Great Basin facilitated trading or sale of pelts for money or goods. General William Ashley traveled into Uinta Valley (later named Ashley Valley by Euro-American trappers/settlers)<sup>5</sup> in 1825 with Andrew Henry, founder of the Rocky Mountain Fur Company, and Jim Bridger, a well-known trapper (DUPUC 1947). Ashley noted that the Uinta-at Utes (later called Tavaputs) living in the valley had Spanish horses, British guns, and wore pearl and shell ornaments, demonstrating the extent of their trade networks (Burton 1996:5, 58; Duncan 2003:191). The first Uintah County trading post established at Whiterocks in 1828 was purchased in 1832 by French-American trader Antoine Robidoux (Burton 1996:6).

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<sup>5</sup> At the time the Europeans entered this area, Ashley Valley was referred to as Uinta Valley by the band of Utes who were occupying it at the time. Uinta Valley (now known as Ashley Valley) is located within the greater Uinta Basin.

Members of the LDS Church, led by Brigham Young, arrived in Salt Lake Valley in 1847, outside the Ute's active territory (Duncan 2003:187); however, within a decade the Latter-day Saints established 16 cities and towns within Tribal territories, and in 6 years they outnumbered the local Ute population (Cuch 2003:21; Duncan 2003:188). In response to the depletion of their lands' resources, the Utes began taking Latter-day Saint livestock, such as at Fort Utah in 1850 (Duncan 2003:187). The settlers responded by raising militias and attacking the Utes, killing their men, and capturing women and children (O'Neil and Mackay 1979:5). These conflicts escalated into the Walker War, led by Ute leader Wakara from 1853 to 1854, with most clashes taking place in central Utah territory (Burton 1996:23; Duncan 2003:188; O'Neil and MacKay 1979:5). In May 1854, Brigham Young and Wakara met and arranged a peace treaty; Wakara died less than 1 year later, and his brother Arapeen succeeded him as a leader (Burton 1996:23).

In 1861, Young sent an expeditionary group to the Uinta Basin to assess the region's potential for settlement (Burton 1996:82–83). The 1861 expedition confirmed the Uinta Basin was a suitable place to relocate the Ute Indians, and at Young's suggestion President Abraham Lincoln created the Uintah Valley Indian Reservation that same year (Barton 1998:49; Spangler 1995:700).

In 1863, violence erupted as some Utes, led by Black Hawk, initiated raids on southern Utah Euro-American settlements. The number of participants in the Black Hawk War increased after Black Hawk gathered recruits from neighboring bands of Utes in Colorado and eastern Utah and some Navajos after smallpox and starvation took many Ute people's lives in the winter of 1864 to 1865 (O'Neil and MacKay 1979:7). Several Latter-day Saint settlements were temporarily abandoned as people moved to centralized forts for protection (Burton 1996:24; Duncan 2003:190). In June 1865, Young helped negotiate the Spanish Fork Treaty with a council of Ute leaders, resulting in the Utes moving to the reservation in Uinta Basin in exchange for use of their traditional lands (Larson 1974:364). The Utes moved believing the treaty was a completed negotiation; however, Congress later refused to ratify the treaty, and instead simply ordered the Utes to move to the reservation without compensation. This increased the number of Utes fighting alongside Black Hawk, and clashes between the Utes and Latter-day Saints continued until 1868, resulting in the deaths of 50 Latter-day Saints and more than 300 Utes. Eventually starvation, lack of supplies, and the overwhelming militia numbers ended the war. Tabby-ko-

Kwanah led the remaining Utes in Utah as they relocated to the reservation in 1869 (Burton 1996:24–25; DUPUC 1947:186; O’Neil and MacKay 1979:7–8). These included peoples from bands that included the Uinta-ats (later called Tavaputs), Pahvants, Tumpanawaches, San Pitches, and some Cumumbas and Sheberetchs of Utah, who became known collectively as the Uintah Utes (Burton 1996:18–19).

During the latter half of the nineteenth century, the Colorado Yamparka and Parianuc Ute Bands, following adoption of the Ute Treaty of 1868, moved to the White River Reservation in White River, Colorado, and the Taviwach Ute Band moved to the Uncompahgre Reservation in Los Pinos, Colorado (Burton 1996:27; Lewis 1994; O’Neil and MacKay 1979:11). The White River Indian Agent, Nathan Meeker, had no sympathy for the White River Utes and his deliberate antagonism and subsequent request for federal troops led to an ambush and Meeker’s death in 1879, known as the Meeker Incident (Burton 1996:27; O’Neil 1971). The Meeker Incident resulted in removal of the Utes from Colorado and the former reservation land was opened to mining. In 1881, the White River Utes were sent to the Uintah Reservation (without the permission of the Uintah Utes). Concurrently, the Uncompahgre Utes were forcibly relocated to the Uinta Basin at the Ouray Reservation, just south of the Uintah Reservation, covering the White, Green, and Duchesne River valleys (Duncan 2003:195–196).

By 1905, passage of the Indian General Allotment Act, also known as the Dawes Severalty Act, opened much of the Uintah Reservation to white settlement (May 1987:106–109; Poll et al. 1989:367–368). The remaining reservation lands were checkerboarded by being split into smaller, separate parcels, and the two reservations were combined and renamed the Uintah and Ouray Reservation. All the Ute Band members were renamed the Uintah-Ouray Ute Tribe (Duncan 2003:205).

In 1937, the Tribe wrote a constitution, established a Tribal Council, and all bands were enrolled in the Ute Indian Tribe of the Uintah and Ouray Reservation (Duncan 2003:209). That year, the Tribe also established the Uintah and Ouray Ute Business Committee under the Indian Reorganization Act (Duncan 2003:209). In 1948, legislation extended the reservation boundaries, returning lands previously designated as the Uncompahgre Grazing Reserve to the Tribe. An additional 3 million acres were returned to the Tribes in 1986 (Duncan 2003:211; Goff

2024; Lewis 1994). In 2020, the Tribes had more than 3,000 enrolled members, over half of whom were living on what is the second-largest reservation in the United States at 4.5 million acres. The Tribes also own multiple businesses, including cattle ranching and oil and natural gas extraction (Utah Division of Indian Affairs 2024b; Ute Indian Tribe Political Action Committee 2020). The Ute Indian Tribe of the Uintah and Ouray Reservation is a federally recognized Tribe.

## **GOSHUTE TRIBES**

There are two bands of Goshute Tribes: the Confederated Tribes of the Goshute Reservation, Nevada and Utah, and the Skull Valley Band of Goshute Indians of Utah. The Goshutes are associated with the Western Shoshones whose traditional lands encompassed Utah's West Desert south of Great Salt Lake, extending from the Oquirrh Mountains on the east to the Steptoe Mountains in eastern Nevada. Within Utah, Skull Valley and Tooele Valley were two areas of greatest Tribal population (AAA Native Arts 2024). The Goshute people adapted to the desert environment and occupied some of the most arid land in North America (Utah American Indian Digital Archive [UAIDA] 2008a). They were highly efficient foragers, living in mobile family groups and using and maintaining the resources, including more than 100 species of wild plants; large game such as pronghorn, bear, deer, bighorn sheep, and elk; as well as small mammals, birds, reptiles, and insects such as crickets and grasshoppers (AAA Native Arts 2024). Winter camps brought larger groups together, as did periodic communal hunts (AAA Native Arts 2024; UAIDA 2008a).

During Spanish colonization of the Southwest, the slave trade was a profitable business, and Goshutes were frequently captured and sold, by both the Spanish and members of other local Tribes. Although Euro-American trappers and emigrants encountered the Goshutes occasionally prior to the 1850s, their contact remained sparse until the Latter-day Saints settled in the Salt Lake Valley and began expanding. By 1854 Latter-day Saint settlements around Utah Lake forced the Goshute from their lands; the Goshute responded by raiding livestock from the new settlements. The LDS Church established a farm southwest of Skull Valley at Deep Creek, near the Utah-Nevada border and the town of Ibapah, to act as a reservation for members of the Tribe (UAIDA 2008a). The Pony Express was established along a route that ran through Goshute territory, and the federal government established a treaty with the Goshutes in 1863 that allowed

for peaceful travel through their lands without ceding their rights to it. The Goshutes also agreed to allow military posts, stage lines, telegraph lines, and railways to be built, and for mining, milling, ranching, and logging to take place on their lands in return for annual payments (AAA Native Arts 2024; UAIDA 2008a). This treaty, negotiated with Goshute leaders Tints-pa-gin and Harry-nap, did specify an eventual move to reservations, but did not establish a timeline or where the reservation would be located (AAA Native Arts 2024; Crum 1987).

Starting in the 1860s, the government tried to convince the Goshutes to move to the Ute reservation in the Uinta Basin; the Shoshone Reservation at Fort Hall, Idaho; and later the Paiutes' Kaibab Reservation in northwestern Arizona but were unsuccessful. In 1883, Latter-day Saints helped Tints-pa-gin and another Skull Valley Goshute man named Shiprus file homestead patents on 320 acres along Hickman Creek in Rush Valley; however, a Goshute reservation was not established until the early twentieth century (Crum 1987).

The Skull Creek Reservation was established in 1912 to house the Skull Valley band of Goshutes, it expanded in 1917 to 17,920 acres (Utah Division of Indian Affairs 2024c). The Bureau of Indian Affairs ceased support to the reservation in 1921, but the Skull Valley Goshutes remained, and in 1935 funding returned following passage of the Indian Reorganization Act. Further attempts to move the Skull Valley Goshute to the larger Deep Creek reservation also failed (Crum 1987). In 1914, the Deep Creek Reservation formed south of Ibapah, Utah, and southwest of the Skull Creek Reservation. Members of the Goshute, Paiute, and Bannock Tribes share the 113,000-acre Deep Creek Reservation, which straddles the Nevada-Utah state border (AAA Native Arts 2024; Native Ministries International 2022b). The original reservation boundaries expanded in 1939 with the purchase of three local livestock ranches (AAA Native Arts 2024).

The federal government promoted agriculture as a means for the Goshute bands to be self-sustaining, as it did with all Indigenous people in the twentieth century; however, geographic and environmental limitations prevented this from becoming a reality on all reservations (Utah Division of Indian Affairs 2024c). Today, the Confederated Tribes of the Goshute Reservation consists of approximately 400 members and relies on profits from permits to hunt an elk herd they manage (Utah Division of Indian Affairs 2019). The Skull Valley Band includes 130

members and they own a rocket motor testing facility leased to Hercules, Inc. (Utah Division of Indian Affairs 2024c). Both the Skull Valley Band of Goshute Indians of Utah and the Confederated Tribes of the Goshute Reservation are federally recognized Tribes.

### **PAIUTE TRIBES**

The Southern Paiutes' traditional lands extend from southern California across southern Nevada, south-central Utah, and northern Arizona (UAIDA 2008b). They were divided into regional bands, including the Cedar, Indian Peaks, Kanosh, Koosharem, and Shivwits Bands, although independent groups of three to five families typically traveled together (Utah Division of Indian Affairs 2024d). They were mobile foragers whose population centers were located along the Virgin and Muddy Rivers, although some bands adapted to the arid portions of their territory by accessing natural springs. They also raised crops such as corn, squash, melons, and sunflowers along the Virgin, Santa Clara, and Muddy Rivers, which provided basic irrigation (Holt 1994). Fall gatherings were an opportunity for individual groups to reconnect, perform dances, and participate in communal activities such as the pine nut harvest or fish spawning at Fish Lake (Holt 1994; UAIDA 2008b).

The Paiutes did not adopt domesticated horses once they became available in North America, and as a result were frequently targeted by raids that supplied the slave trade established during the Spanish colonization of the American Southwest. The Spanish Trail, a trade route that connected New Mexico to the Pacific Ocean, was closely tied to the slave trade (UAIDA 2008b).

Although the Paiute Bands in Utah met explorers, trappers, and traders during the early nineteenth century, it was not until the Latter-day Saints began to expand their settlements south from the Salt Lake Valley in 1851 that the Paiutes began to be displaced (UAIDA 2008b). The Paiutes allied themselves with the Latter-day Saints early on, as protection against slave raids by Utes, Navajos, and Mexicans, but the settlers passed infectious diseases to the Paiutes and their livestock consumed both native plants and crops on which the Paiutes relied (Holt 1994; UAIDA 2008b). By 1859, 11 Latter-day Saint communities claimed rights to Paiute land (UAIDA 2008b).

In 1857, the Paiutes were named as participants in the Mountain Meadows Massacre near Cedar City, Utah, where more than 100 emigrants traveling by wagon train to California were

ambushed by a small group of people dressed as Paiutes, although the most recent evidence does not support that claim. The emigrants fought under siege for 5 days before they were approached by the Latter-day Saint militia under a flag of truce, then led away and massacred (UAIDA 2008b). The massacre occurred during a period of extreme political tension between the Latter-day Saints and the U.S. government (King 2012). Although accounts of the extent of Paiute participation and possible incitement by militia members have varied, Paiute oral tradition strongly maintains that the Paiute people were not involved (UAIDA 2008b).

The Utah Paiute Bands were co-signers to the 1865 Spanish Fork Treaty that established the Uintah Valley Reservation, but that treaty was not ratified by Congress, and the Paiutes were not moved onto the reservation with the Utah Ute Bands in 1868 (Burton 1996; Holt 1994; Shivwits Band of Paiutes 2024). Separate reservations were established for the Shivwits Band in 1891, the Indian Peaks Band in 1915, the Koosharem Band in 1928, and the Kanosh Band in 1929; the Cedar City Band was not granted a reservation at that time and lived on lands owned by the LDS Church (Holt 1994; Shivwits Band of Paiutes 2024).

In 1954, the federal government terminated each of the Paiute Bands at the recommendation of the hostile Senate representative from Utah (Holt 1994). They were the only federally recognized Utah Tribe that was terminated under the Termination Act (UAIDA 2008b). As a result, the Paiute Bands lost federal tax protection, health and education benefits, agricultural assistance, and 15,000 acres of former reservation lands (Holt 1994; UAIDA 2008b; Utah Division of Indian Affairs 2024d). Between 1954 and 1980 an estimated half of all Tribal members died largely due to the lack of basic health care resources (UAIDA 2008b).

In 1980, the five previous Utah Paiute Bands were restored to their former status as separate federally recognized Tribes. In 1981, the five restored bands adopted a joint-governance constitution, delegating some authority to the Paiute Indian Tribe of Utah and a joint Tribal Council with one representative from each band, while maintaining individual band councils (Shivwits Band of Paiutes 2024). In 1984, 4,470 acres of Bureau of Land Management–administered lands were granted to the bands, far less than their original reservations lands; this acreage is divided into 10 separate land parcels that are divided into individual reservations for the Cedar and Indian Peaks Bands in Iron County, the Kanosh Band in Millard County, the

Koosharem Band in Sevier County, and the Shivwits Band in Washington County, as well as one small parcel in Iron County designated for the Paiute Indian Tribe as a whole. Tribal membership across the five bands is currently over 900 individuals (Paiute Indian Tribe of Utah 2023). The Paiute Indian Tribe of Utah, comprising the Cedar Band of Paiute Indians, the Indian Peaks Band of Paiute Indians, the Kanosh Band of Paiute Indians, the Koosharem Band of Paiute Indians, and the Shivwits Band of Paiute Indians, is a federally recognized Tribe.

#### **1.10.8 POTENTIAL RESOURCES**

Given the history of these Tribes in Utah, it is possible that the Ute Indian Tribe of the Uintah and Ouray Reservation, the Confederated Tribes of the Goshute Reservation, the Skull Valley Band of Goshute Indians, the Northwestern Band of the Shoshone Nation, the Shoshone-Bannock Tribes, the Shoshone Tribes of the Wind River Reservation, the Cedar Band of Paiute Indians, the Indian Peaks Band of Paiute Indians, the Kanosh Band of Paiute Indians, the Koosharem Band of Paiute Indians, and the Shivwits Band of Paiute Indians may hold cultural or religious significance to land or resources within the vicinity of the Project.

#### **1.10.9 ENVIRONMENTAL EFFECTS**

There are 15 known historic properties within the Project Area (two archaeological sites, 12 buildings and structures, and one historic district [PacifiCorp's Stairs Historic District]); however, based on current known and future planned activities, there would be no adverse effect associated with the conduit exemption and corresponding license surrender process. No environmental effects on cultural and historic resources are expected under the Proposed Action within the Project Area or the Project Vicinity; however, as a responsible steward of the Stairs Project and its historic features, PacifiCorp proposes to develop and implement a historic properties management plan to maintain and protect the historic properties and sites within the Project Boundary into the future.

## 1.11 RECREATIONAL RESOURCES

This section discusses the recreational resources at the Project, in the Project Area, and the potential effects of the Proposed Action. The Stairs Project is located within and adjacent to the UWCNF. The UWCNF attracts visitors seeking a variety of recreation opportunities. The current Project Boundary is located partially on USFS-administered lands and partially on lands owned by PacifiCorp (approximately 8.7 acres of federal land and 4.6 acres of land owned by PacifiCorp) (FERC 1999). For additional regional context, recreational opportunities accessible along Big Cottonwood Canyon Scenic Byway and recreation use and visitation in the UWCNF are also briefly described.

### 1.11.1 RECREATION OPPORTUNITIES AT THE PROJECT

In the prior FERC relicensing proceeding, PacifiCorp completed a recreational resources technical report (PacifiCorp 1998) that evaluated additional recreational uses and opportunities at the Project, including an opportunities and constraints analysis. The study analyzed the following Project features: the intake structure, flowline and penstock, powerhouse, tailrace, and bypass reach of Big Cottonwood Creek. Suitability assessment results showed that although seven recreation opportunities were potentially feasible in the study area, none were found to be suitable.

Development of day use, fishing, or Americans with Disabilities Act (ADA) access at the intake area was found to be unsuitable due to safety concerns and conflicts with Project operations and maintenance; further, there are day use, fishing and ADA accessible recreation locations already available for public use without the concerns for public safety and operational security, at the adjacent USFS Storm Mountain Picnic Area, located next to, and in portions minorly overlapping, the current Stairs FERC Project Boundary (see additional details regarding the Storm Mountain Recreation Site below). The powerhouse area was found to have no suitability for expansion of existing facilities due to inadequate space for parking and restricted visibility for safe public ingress and egress onto Highway 190 from the site. The bypass reach was found to be unsuitable for fishing and trail access due to the extremely steep, narrow, and rocky nature of the stream corridor and adjacent canyon<sup>6</sup> as well as its proximity to Big Cottonwood Canyon

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<sup>6</sup> The bypass reach is the location of the site and Project's namesake: the Stairs Cascade.

Road, adjacent avalanche paths and scree slopes, and the existing USFS Storm Mountain Picnic Area, which occupies the only part of the canyon in the Project Area wide enough for such a development. As noted above, the USFS's Storm Mountain Picnic Area already provides fishing access (including ADA accessibility), and the report concluded that, even if feasible, additional development would disperse the use rather than concentrating it in Storm Mountain Picnic Area where there is safe, accessible parking, additional day use opportunities, and restrooms to support recreation use in an area where water quality and the prevention of stream degradation are paramount to the water supply of Salt Lake City.

The study concluded that a wide variety of recreational opportunities exist in the surrounding UWCNF, specifically within Big Cottonwood Canyon, and that the narrow and bending nature of the canyon within the Project Area restricts additional development. Therefore, no recreational measures or facilities were considered feasible for the Project, and none were either recommended or required under the current license for the Stairs Project (FERC 1999; PacifiCorp 1998).

Although not required by the current license, PacifiCorp has developed and maintains a group picnic area (Stairs Powerhouse Picnic Area) just to the south of and across the creek from the Stairs Project powerhouse, accessible via a pedestrian bridge that crosses the creek. This land formerly held the Stairs powerhouse workers' cottages and gardens, is partially within the Project Boundary, and is managed by PacifiCorp as a single-party, reservation-only recreation site (PacifiCorp 1998). The Stairs Powerhouse Picnic Area is ADA accessible, can accommodate up to 150 people, and is available to the public through reservation only, from May 1 through September 30 (PacifiCorp 1998). This picnic area offers 11 picnic tables; two large grills; a fire pit; horseshoe pits; a volleyball court; a restroom; a large, treed lawn area; and limited parking for six to 10 vehicles, although there is also a park and ride lot located less than two miles away that facilitates carpooling to the site (PacifiCorp 1998).

Additionally, there is one USFS-owned and managed recreational facility that intersects the Project Boundary (the aforementioned Storm Mountain Picnic Area) and is located immediately downstream of the intake diversion dam (PacifiCorp 1998). This picnic area also contains the Storm Mountain Amphitheater, a 200-person capacity outdoor venue that must be reserved for

use and is also considered a historic archaeological resource (see the Previously Identified Historic Architectural Resources section of this exhibit above) (USFS 2024a). The USFS's Storm Mountain Picnic Area is intertwined with PacifiCorp's diversion dam and intake because portions of the USFS recreation site were inadvertently constructed on PacifiCorp property around the dam and intake structure. Inadvertently constructed features include streamside observation decks and platforms, a picnic site, sidewalks, a trail accessing the upper rock climbing and upstream fishing areas around the Project forebay, and a path to the Storm Mountain Amphitheater, which extends west along the Project flowline and is partially within and adjacent to the Project Boundary. In fact, several Storm Mountain Picnic Area paved paths were constructed over the Stairs Project minimum flow pipeline.

Dispersed recreation opportunities such as fishing, rock climbing, photography, and nature-watching may also be found at the Project (FERC 1999). There are a number of traditional and sport climbing routes near the flowline and intake with access routes intersecting the Project Boundary (Mountain Project 2024). Additionally, there are fishing opportunities in the reach of Big Cottonwood Creek upstream of the forebay created by the diversion dam; the forebay itself is also used for dispersed fishing (PacifiCorp 1998). See the Resident Fish section of this exhibit for information about Big Cottonwood Creek resident fish species. Given the sizable, flat area able to accommodate multiple large vehicles and crews adjacent to the diversion dam and forebay, Salt Lake County Search and Rescue and the USFS fire response teams have used the PacifiCorp-owned portion of the site for both practice drills and to stage fire response and a heli-tac firefighting water supply site.

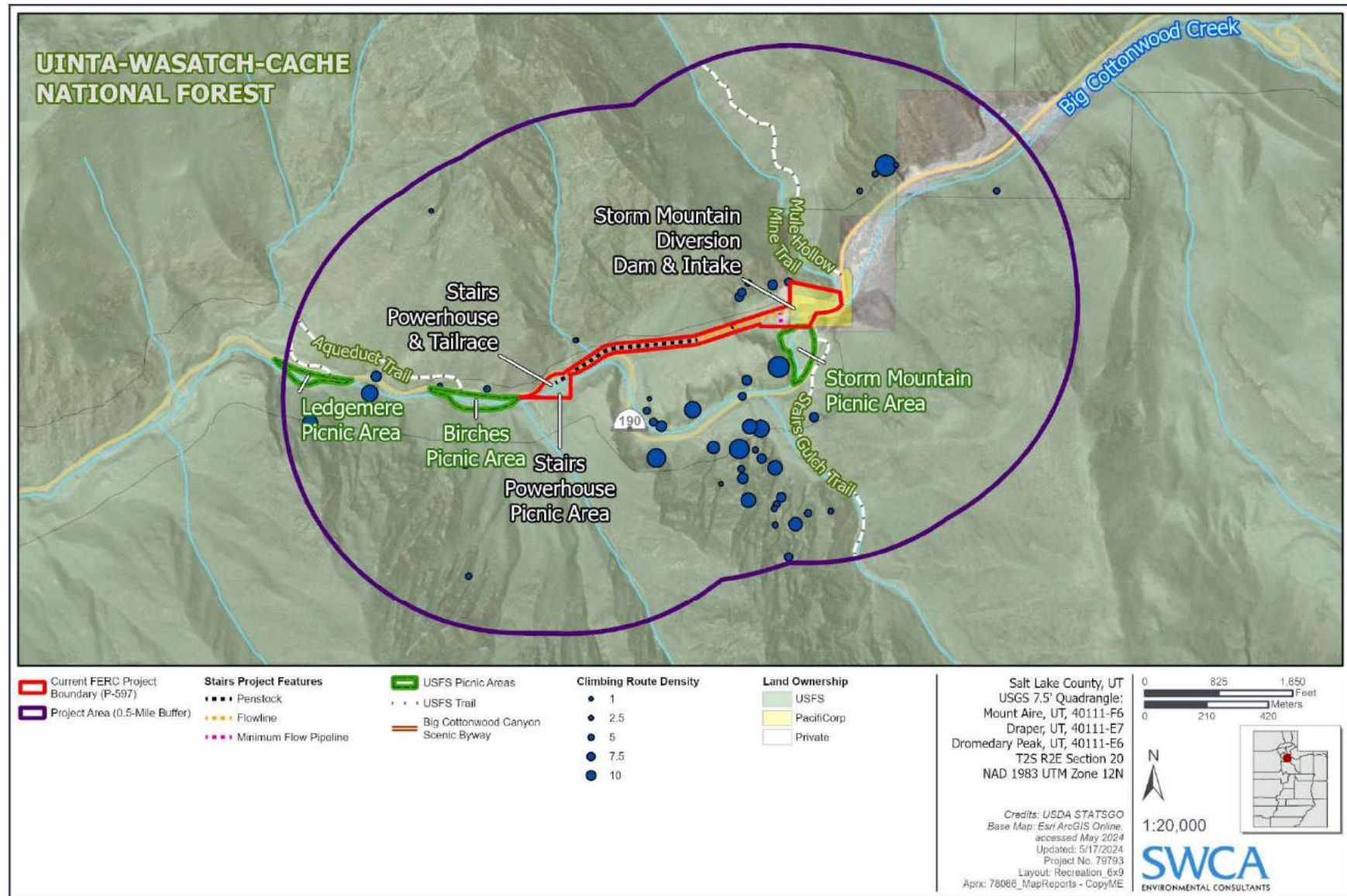
### **1.11.2 RECREATION OPPORTUNITIES IN THE PROJECT AREA**

There are various additional non-Project recreational opportunities available in the Project Area, which—excluding PacifiCorp's Stairs Powerhouse Picnic Area—are managed by the USFS and located within the surrounding UWCNF. The Stairs Gulch Trail, a 1.6-mile trail in the Stairs Gulch, begins just to the south of the Project Boundary and is largely contained within the Project Area (All Trails 2023). Other trails in the Project Area consist of the 1.2-mile Mule Hollow Mine Trail located on steep terrain in Mule Hollow, just east of PacifiCorp's private land adjacent to the north side of the diversion dam and forebay; the Aqueduct Trail, which parallels Big Cottonwood Creek for 0.9 mile; and a portion of the 0.7-mile Granite Flume Trail (All Trails

2023). The Granite Flume Trail follows the original alignment of the historic Granite Flume that has since been replaced with a steel flowline and mostly rerouted under Big Cottonwood Canyon Road. The new flowline extends from immediately downstream of the Stairs Project tailrace downcanyon to the Granite Project powerhouse (PacifiCorp 2011).

In addition to PacifiCorp's Stairs Project Powerhouse Picnic Area and the USFS Storm Mountain Picnic Area, there are two additional picnic areas in the Project Area: Ledgemere Picnic Area and Birches Picnic Area (USFS 2024b); both are located along the south side of both the creek and highway. Pullouts for access, including picnic area and fishing access to Big Cottonwood Creek also exist in the Project Area. There are dozens of climbing routes available in the Project Area, including opportunities for traditional climbing, sport climbing, ice climbing, and bouldering (Mountain Project 2024). Figure E-8 shows recreation opportunities in the Project Area.

Although only partially located within the Project Area, the surrounding Big Cottonwood Canyon provides regionally significant opportunities for recreation. Recreational opportunities in Big Cottonwood Canyon outside the Project Area include trails for hiking, backpacking, trail-running, mountain and road biking, and horseback riding; numerous rock climbing and ice climbing routes; backcountry skiing and snowboarding; picnic grounds; and campgrounds (All Trails 2023; Mountain Project 2024; USFS 2024b). Additionally, Brighton Resort and Solitude Mountain Resort are located in Big Cottonwood Canyon. These resorts offer both downhill skiing and snowboarding and cross-country skiing in the winter, and hiking, trail-running, and mountain biking opportunities in the summer (Powder 2024; Solitude Mountain Resort 2024). Big Cottonwood Canyon is a popular destination, with 2013 Utah Department of Transportation data estimating visitation of 1,773,786 people per year, comprising 1,200,801 non-resort visitors and 572,985 resort visitors (Lamborn and Burr 2016). This recreational use and corresponding canyon visitation is expected to continue to grow in the future. The location of the UWCNF, adjacent to the large and actively growing urban and suburban Salt Lake County and Wasatch Front population centers and containing world-renowned summer and winter-sport destinations, results in the UWCNF having one of the highest visitation rates of any national forest in the United States (Envision Utah 2010; USFS 2003).

**FIGURE E-8 RECREATION OPPORTUNITIES IN THE STAIRS PROJECT AREA**

## NATIONALLY OR REGIONALLY RECOGNIZED DESIGNATIONS

The Utah Scenic Byway Program serves as a support system to local scenic byway communities in their planning endeavors, grant acquisitions, and efforts to preserve and promote the unique roads throughout Utah that link travelers with tourism destinations, outstanding recreational opportunities, and public lands (Utah Office of Tourism 2023). Within the Utah Scenic Byway Program, one scenic byway traverses through the Project Area: Big Cottonwood Canyon Scenic Byway (Big Cottonwood Canyon Road). Big Cottonwood Canyon Scenic Byway is a 15-mile Utah Scenic Byway offering scenic driving opportunities in a mountainous setting with opportunities for hiking, trail running, mountain biking, fishing, picnicking, wildlife viewing, camping, backcountry skiing and snowboarding, and downhill skiing and snowboarding at Brighton Resort and Solitude Mountain Resort (Utah Office of Tourism 2017). Individuals may also ride bicycles up Big Cottonwood Canyon Road.

Within the Project Area, there are no designated National Wild and Scenic Rivers; rivers or river segments listed in the Nationwide Rivers Inventory; All-American Roads or National Scenic Byways; or National Scenic Trails, National Historic Trails, or National Recreation Trails.

### 1.11.3 RECREATIONAL USE AND NEEDS IN THE PROJECT AREA

As noted previously, although not required by the current license, PacifiCorp has developed and maintains a picnic area (Stairs Powerhouse Picnic Area) immediately south of the Stairs Project powerhouse and partially within the Project Boundary. The most recent and relevant FERC Form 80 (since discontinued) recreation use data for recreation within the Project Boundary were provided in PacifiCorp's 2015 *Licensed Hydropower Development Recreation Report for Stairs Hydroelectric Project FERC Project No. 597-003* (FERC 2015). PacifiCorp annually reports Stairs Powerhouse Picnic Area use over the last 12 years (with the exception of two seasons when the site was closed due to adjacent tailrace area construction that eliminated parking and access to the site) to the USFS. Over that time, use of the site has averaged approximately 1,890 annual visitors, ranging from 1,269 to 2,560 visitors.

As discussed above, the Stairs Powerhouse Picnic Area is located on UWCNF lands and managed by PacifiCorp as part of the Stairs Project. Excluding dispersed use on PacifiCorp-owned lands at the Project's intake and diversion dam, all other recreational opportunities in the

Project Area are either managed by the USFS or located within UWCNF. Although the scope of monitoring extends well outside of Big Cottonwood Canyon and includes the entirety of the UWCNF, the USFS periodically monitors visitor use under its National Visitor Use Monitoring (NVUM) Program. The most recent NVUM data are described below to provide a general view of recreation use in the UWCNF. Given the location of PacifiCorp's Stairs Powerhouse Picnic Area on UWCNF lands and within the state of Utah, recreation needs identified under both the *Revised Forest Plan Wasatch-Cache National Forest* (Forest Plan) (USFS 2003) and *Utah's Statewide Comprehensive Outdoor Recreation Plan 2019–2023* (Utah SCORP) (UDNR 2019) are also described below.

#### **UINTA-WASATCH-CACHE NATIONAL FOREST VISITOR USE MONITORING**

USFS's NVUM Program has two goals: to produce estimates of the volume of recreational visitation to national forests and grasslands; and to produce descriptive information about that visitation, including activity participation, demographics, visit duration, measures of satisfaction, and trip spending connected to the visit (USFS 2024c). The most recent visitor use report for the UWCNF was updated on January 28, 2024, and summarizes data collected during fiscal year 2017 (USFS 2024c).

Summary data obtained from the USFS indicate that total visits to the UWCNF in fiscal year 2017 were estimated at 8,457,000 individuals (USFS 2024c). Many people frequent more than one site during their visit, so estimates are further broken down by site visits, totaling 10,702 visits. The most frequented site or area associated with the UWCNF is General Forest Area (5,858,000 visits) followed by Day Use Developed (3,308,000 visits), Overnight Use Developed Sites (1,062,000 visits), and Designated Wilderness (474,000 visits). Site visits are further broken down by each activity in which an individual participated during that visit. The most common activities selected by survey participants were hiking or walking, viewing natural features, relaxing, viewing wildlife, downhill skiing, and driving for pleasure. The most selected main activity by survey participants was hiking or walking, followed by downhill skiing, cross-country skiing, viewing natural features, and relaxing (USFS 2024c). A complete list of activity participation results is shown in Table E-15.

**TABLE E-15 ACTIVITY PARTICIPATION RESULTS**

ACTIVITY	PERCENTAGE OF PARTICIPATION (%)	PERCENTAGE OF MAIN ACTIVITY (%)	AVERAGE HOURS DOING MAIN ACTIVITY
Hiking or walking	49.4	30.2	2.2
Viewing natural features	44.4	8.0	1.6
Relaxing	32.1	5.6	13.1
Viewing wildlife	20.9	0.6	3.8
Downhill skiing	19.6	18.5	4.8
Driving for pleasure	13.8	3.5	2.2
Cross-country skiing	9.1	8.1	2.2
Developed camping	8.1	4.1	19.2
Picnicking	7.5	1.8	13.3
Fishing	6.1	3.3	4.8
Other (non-motorized)	5.7	2.4	1.9
Bicycling	5.6	3.8	1.7
Some other activity	5.0	3.4	2.1
Nature study	3.6	0.1	4.7
Nature center activities	3.4	0.2	2.8
Snowmobiling	2.5	2.3	4.5
Motorized trail activity	2.2	0.8	3.3
Visiting historic sites	2.0	0.2	1.0
Hunting	1.8	1.4	8.4
Gathering forest products	1.7	0.2	2.8
Non-motorized water	1.5	0.9	2.7
Resort use	1.4	0.2	26.9
Primitive camping	1.2	0.3	20.9
Off-highway vehicle (OHV) use	1.1	0.3	9.2
Backpacking	0.8	0.2	20.0
No activity reported	0.5	1.1	N/A
Motorized water activities	0.5	0.3	4.6
Horseback riding	0.1	0.1	3.1
Other motorized activity	0.0	0.0	0.0

Source: USFS (2023).

Note: N/A = not applicable.

Demographic results estimate that 96.6 percent of visitors are White, followed by Hispanic/Latino (4.8 percent), Asian (3.2 percent), American Indian/Alaska native (1.6 percent), Hawaiian/Pacific Islander (0.8 percent), and Black/African American (0.5 percent). To compare these UWCNF visitation demographics with Utah race and ethnicity demographics, please see the Socioeconomic Resources section of this exhibit. Age distribution estimates that 22.6 percent of visitors are children under the age of 16, and 11.5 percent are over the age of 60. Most visitors (an estimated 58.1 percent), live within 25 miles of the UWCNF, and only 14.8 percent live 100 or more miles away (USFS 2024c).

### **REVISED FOREST PLAN WASATCH-CACHE NATIONAL FOREST (2003)**

The National Forest Management Act requires the development of management direction for each national forest. This direction is to be expressed through goals, objectives, standards, guidelines, management prescriptions, desired future conditions, and monitoring and evaluation requirements for the forest. The UWCNF Forest Plan was completed in 2003 with considerable environmental analysis and public involvement to provide broad, program-level direction for management of the land and its resources (USFS 2003).

As defined in the UWCNF Forest Plan's Goal No. 6, the USFS's primary goal for managing recreation in the UWCNF is to "manage for an array of recreation opportunities and settings to improve the quality of life for a variety of Forest recreation users. Balance growth and expansion of recreation by managing within the capability of sustainable ecosystems found on the Forest for today and the future" (USFS 2003). Within this forest-wide goal are seven subgoals, as detailed in Table E-16 below. The Project currently contributes to Goal 6d, because PacifiCorp operates and manages a public picnic facility within the Project Boundary (see the Recreation Opportunities at the Project section of this exhibit), and Goal 6g, because PacifiCorp maintains a minimum aesthetic flow of 4 cfs, or inflow, whichever is less, as required by Article 401 of its existing license. The Proposed Action would not alter the Project's current impact to recreational resource goals listed in the Forest Plan, because no new recreational resources are proposed, nor are any alterations to current Project facilities, operations, or maintenance activities proposed.

**TABLE E-16 FOREST-WIDE GOALS AND SUBGOALS FOR RECREATION ON THE UINTA-WASATCH-CACHE NATIONAL FOREST**

FOREST-WIDE GOAL	FOREST-WIDE SUBGOAL
6. Recreation	6a. Increase Forest recreation user stewardship of resources and strengthen awareness of user ethics for reducing resource and social conflicts.
	6b. Involve Forest users in developing strategies for managing recreation to meet desired future conditions and address recreation pressures and demands.
	6c. Manage uses of new recreational technologies to provide for opportunities while preventing or minimizing negative social and/or resource impacts to the Forest.
	6d. Encourage private enterprise to develop recreational facilities on and off the Forest that provide for a range of recreation opportunities (e.g., camping and picnicking areas, trailheads, and interpretive sites).
	6e. Manage recreation use of undeveloped areas on the Forest to provide for desirable opportunities while preventing or reducing resource impacts and social conflicts.
	6f. Recognize and manage for the importance of scenic forest landscapes to overall recreation settings as well as to the quality of life for communities adjacent to the Forest.
	6g. Restore, maintain or enhance landscape scenic integrity across the variety of landscape character themes found on the Forest.

Source: USFS (2003).

### UTAH'S STATEWIDE COMPREHENSIVE OUTDOOR RECREATION PLAN 2019–2023

The Utah SCORP reviews statewide recreational resources and identifies future needs surrounding recreational opportunities to improve recreation in the state (UDNR 2019). The Utah SCORP is prepared by the UDNR and the Utah Division of Parks and Recreation. The Utah SCORP lists the following recreation goals and strategies based on recreational needs identified in surveys of recreation professionals and state citizens (UDNR 2019):

- Goal 1: Provide funding and support for the development of new quality outdoor public recreation.
- Goal 2: Support and fund the renovation of existing public outdoor recreation facilities.
- Goal 3: Improve Utah's Land and Water Conservation Fund Program awareness and information sharing.

The Proposed Action would not alter the Project's current impact to recreational resource goals listed in the Utah SCORP because no new recreational resources are proposed, nor are any alterations to current Project facilities, operations, or maintenance activities proposed.

#### **1.11.4 ENVIRONMENTAL EFFECTS**

Because the Proposed Action is an administrative change, PacifiCorp does not anticipate any impact to recreation resources. As determined within PacifiCorp's Recreational Resources Technical Report (PacifiCorp 1998), a wide variety of recreational opportunities exist in the UWCNF, specifically within Big Cottonwood Canyon, and the narrow, steep, winding nature of the canyon restricts additional development of recreation facilities. Therefore, no recreational measures or facilities were considered feasible for the Project, and none were either recommended or required under the current license for the Stairs Project (FERC 1999; PacifiCorp 1998). PacifiCorp is proposing a single PME measure for recreation under the Proposed Action, which is to continue to manage and maintain the Stairs Powerhouse Picnic Area.

## 1.12 LAND USE AND COVER

This section provides a summary of land use and cover within the Project Boundary and Project Area. Land ownership is discussed in above.

### 1.12.1 LAND USE

Land use within the current Project Boundary is restricted to Project operations in addition to the maintenance and management of the publicly available recreation site known as the Stairs Powerhouse Picnic Area. The diversion dam and associated spillway, intake, and impoundment are primarily located on the 4.6 acres of PacifiCorp lands at the upper end of the Project (PacifiCorp 1998). Downstream of the diversion dam parcel, all other Project features are located on lands owned and managed by the USFS. Given the narrow, steep, winding nature of the canyon and the presence of the creek and road, limited space exists for developed land uses other than the existing PacifiCorp and USFS facilities.

Available Salt Lake County tax parcel data were analyzed to determine zoning classifications within the Project Area. As summarized in Table E-17 and depicted on Figure E-9, predominant zoning within the Project Area is classified as Forestry Recreation (976.43 acres), County Right-of-Way (22.2 acres), Forestry Multifamily (0.49 acre) or Commercial Residential (2.24 acres). According to the USFS, five SUPs have been issued within the Project Area: electric transmission line and Granite Project intake and flume (PacifiCorp), Big Cottonwood Canyon Road (Utah Department of Transportation), a concession permit for Storm Mountain Picnic Area, a telephone line (CenturyLink/Lumen), and fiber-optic and cell cables located in the highway road shoulder (Crown Castle) (Rosier 2024).

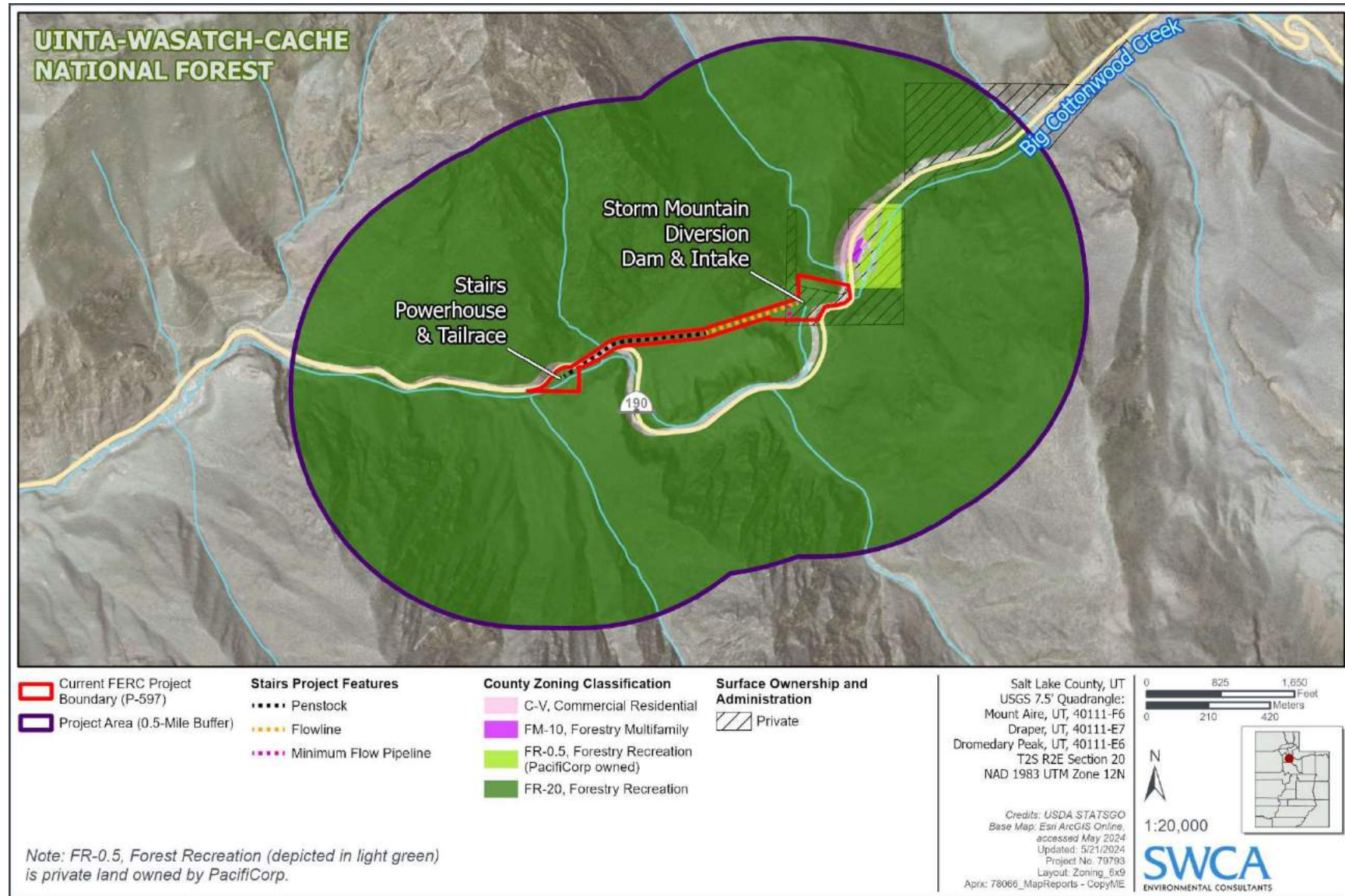


FIGURE E-9 ZONING

**TABLE E-17 SALT LAKE COUNTY ZONING CLASSIFICATIONS WITHIN THE PROJECT AREA**

ZONING CLASSIFICATION	ACRES	PERCENTAGE OF PROJECT AREA (%)
Forestry Recreation	976.43	97.51
Forestry Multifamily	0.49	0.05
County Right-of-Way (Big Cottonwood Canyon Road)	22.2	2.22
Commercial Residential	2.24	0.22
<b>Total</b>	1,001.36	100

### 1.12.2 LAND COVER

Land cover within the Project Area was estimated by analyzing the Multi-Resolution Land Characteristics Consortium’s (MRLC Consortium’s) National Land Use Cover Database, which provides land use information by generalizing land cover within an area (MRLC Consortium 2021). As summarized in Table E-18 below and depicted on Figure E-10, land cover within the Project Area is overwhelmingly classified as Evergreen Forest (574.0 acres), Deciduous Forest (144.3 acres), Mixed Forest (5.1 acres), Shrub/Scrub (242.8 acres), and Barren Lands (0.2 acre) (PacifiCorp 1998). As described previously, development within the Project Area is limited to a narrow strip of land parallel to both Big Cottonwood Creek and Big Cottonwood Canyon Road. The next most prominent land cover classifications within this area are Developed, Low Intensity (14.8 acres), Developed, Open Space (9.3 acres), and Developed, Medium Intensity (10.9 acres), incorporating Stairs Project facilities (surge tank, penstock, powerhouse, and tailrace), USFS recreation sites, and Big Cottonwood Canyon Road.

**TABLE E-18 NATIONAL LAND COVER DATABASE–MAPPED LAND COVER IN THE PROJECT AREA**

LAND COVER	DESCRIPTION OF CLASSIFICATION	ACRES	PERCENTAGE OF PROJECT AREA (%)
Evergreen Forest	Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75% of the tree species maintain their leaves all year. Canopy is never without green foliage.	574.0	57.3

LAND COVER	DESCRIPTION OF CLASSIFICATION	ACRES	PERCENTAGE OF PROJECT AREA (%)
Shrub/Scrub	Areas dominated by shrubs; less than 5 meters tall with shrub canopy typically greater than 20% of total vegetation. This class includes true shrubs, young trees in an early successional stage, or trees stunted from environmental conditions.	242.8	24.3
Deciduous Forest	Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75% of the tree species shed foliage simultaneously in response to seasonal change.	144.3	14.4
Developed, Low Intensity	Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20% to 49% of total cover. These areas most commonly include single-family housing units.	14.8	1.5
Developed, Medium Intensity	Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50% to 79% of the total cover. These areas most commonly include single-family housing units.	10.9	1.1
Developed, Open Space	Includes areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20% of total cover. These areas most commonly include large lot single-family housing units.	9.3	0.9
Mixed Forest	Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. Neither deciduous nor evergreen species are greater than 75% of total tree cover.	5.1	0.5
Barren Land (Rock/Sand/Clay)	Areas of bedrock, desert pavement, scarps, talus, slides, volcanic material, glacial debris, sand dunes, strip mines, gravel pits and other accumulations of earthen material. Generally, vegetation accounts for less than 15% of total cover.	0.2	0.02
<b>Total</b>		<b>1,001.4</b>	<b>100</b>

Source: MRLC Consortium (2021).

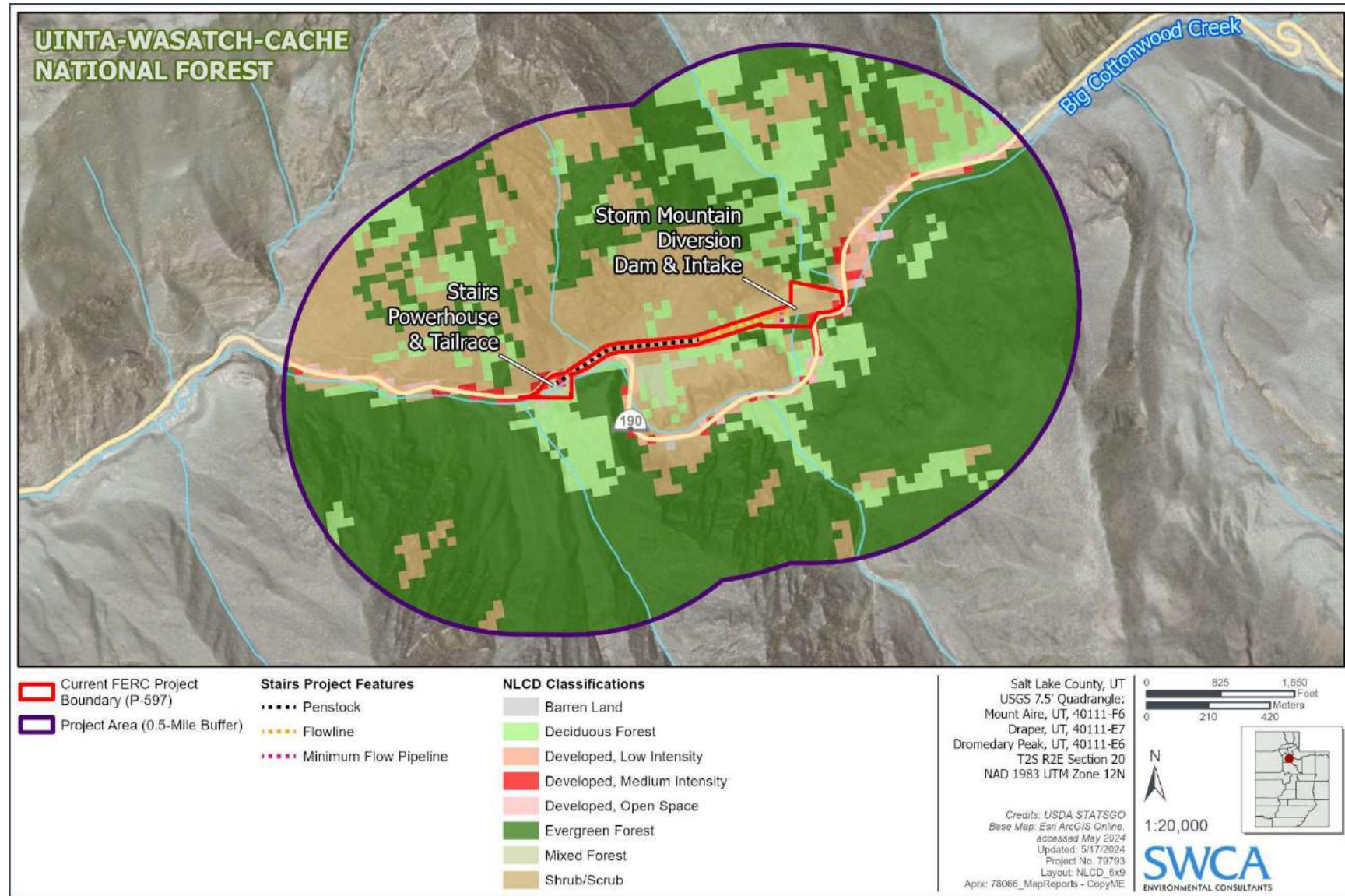


FIGURE E-10 NATIONAL LAND COVER DATABASE–MAPPED LAND COVER IN THE PROJECT AREA

### **1.12.3 ENVIRONMENTAL EFFECTS**

Under the Proposed Action, there would be no changes to Project features, operations, or maintenance activities. The administrative nature of the Proposed Action would not affect land uses of the Project or land uses within the Project Area. Because no impacts to land use are anticipated, no land use studies or PME measures are proposed.

## 1.13 AESTHETIC AND VISUAL RESOURCES

This section provides a summary of the aesthetic and visual resources present within the Project Vicinity. For the purposes of this section, the Project Vicinity is defined as a one-mile buffer around the Project Boundary. The one-mile buffer distance for the Project Vicinity was determined based on the lack of any proposed new Project facilities; degree of development in the city of Cottonwood Heights in Salt Lake County, Utah; and the steep and enclosed topography surrounding the Stairs Project in Big Cottonwood Canyon.

### 1.13.1 VISUAL CHARACTER OF PROJECT LANDS

The Stairs Project is surrounded by steep mountainous topography, which limits development in the area (mid-canyon) to the base of the mountain slopes. Other developments in the Project Vicinity consist of the two-lane roadway (Big Cottonwood Canyon Road) through the canyon, chain-link fencing surrounding the dam and facilities, and a wooden monopole distribution line. The slopes of the mountains around the Project are filled with coniferous and deciduous trees. Midway up the mountainside, vegetation grows sparser, and the mountains show more exposed rock and cliff faces.

### 1.13.2 VISUAL CHARACTER OF PROJECT VICINITY

Aesthetic or visual resources are the visible, physical features of a landscape that have an aesthetic value (i.e., scenic beauty) to viewers at typical viewing locations (residences, destination high points such as overlook trails, recreational areas, and vehicular travel routes). Physical features that make up the visible landscape include landforms and topography, water, vegetation, and human-made features (i.e., roadways, structures, and buildings). All these features contribute to the landscape and the visual character of an area. Within the Project Vicinity, the characteristic landscape is contained within the Semiarid Foothills ecoregion (EPA 2022b). The Semiarid Foothills ecoregion (approximately 6,158 square miles) includes lower mountain slopes, foothills, ridgetops, and alluvial fans in the semiarid mountainous region found within 5,000 and 8,000 feet in elevation (EPA 2022b). The deep V-shape of the canyon though this region provides a continual and strong enclosed directional corridor for observers. Widely spaced juniper (*Juniperus* sp.) and mountain mahogany (*Cercocarpus* sp.) typically occur in a matrix of sagebrush (*Artemisia* sp.), grama grass (*Bouteloua gracilis*), Rocky

Mountain maple (*Acer glabrum*), and Gambel oak on the south-facing slopes, while the more densely vegetated north-facing slopes are covered with conifers (primarily Douglas fir) and aspen, with an understory of forbs and some shrubs (e.g., currant). Wildlife habitat, livestock grazing, recreation, and water supply are the main uses of this ecoregion, although livestock grazing no longer occurs in Big and Little Cottonwood Canyons, and therefore does not occur in the Project Vicinity, with the exception of domestic goat grazing around some residences at the mouth of the canyons to reduce undergrowth as a form of wildfire prevention.

Within the Project Vicinity, residential development is limited, and the vast majority of the concentration of residences and commercial areas are located outside of Big Cottonwood Canyon in the city of Cottonwood Heights, which expands into the greater Salt Lake City area (the only exception is a small residential development upstream of the Project on private lands known as the Maxfield Lodge area).

As detailed in the Recreational Resources section of this exhibit, within the Project Vicinity, there are numerous USFS-developed recreational areas that are visited by both locals and tourists, including Dogwood Picnic Area, Ledgemere Picnic Area, Birches Picnic Area, and the Storm Mountain Picnic Area, which intersects the Project Boundary immediately downstream of the diversion dam. PacifiCorp also has developed and maintains a picnic area (Stairs Powerhouse Picnic Area) on lands formerly occupied by utility workers' cottages, immediately to the south of the Stairs Project powerhouse and partially within the current Project Boundary. As noted in the Recreational Resources section, PacifiCorp is proposing to continue maintaining and providing the Stairs Powerhouse Picnic Area, located across the creek from the Stairs powerhouse, as a publicly available recreation site. Dispersed recreation opportunities such as fishing, rock climbing, hiking, and photography or nature viewing may also be found at the Project (FERC 1999; Mountain Project 2024). There are a number of traditional and sport climbing routes near the flowline and intake with access routes intersecting the Project Boundary (Mountain Project 2024). Additionally, there are fishing opportunities in the bypass reach of Big Cottonwood Creek, and the pond created by the diversion dam is used for dispersed fishing (PacifiCorp 1998). Visitors to recreational areas would be sensitive to changes in the visual environment because they would likely be visiting these scenic areas for recreation within a natural landscape setting.

### **1.13.3 FEDERAL AND LOCAL VISUAL RESOURCES PLANNING OBJECTIVES**

#### **U.S. FOREST SERVICE SCENERY MANAGEMENT SYSTEM**

The USFS has inventoried lands in the Project Vicinity as part of the Scenery Management System, which systematically determines the relative value of scenery on USFS-managed lands (USFS 1995). The process involves identifying scenic components as they relate to people, mapping the components, and assigning a value for aesthetics. These components are described as one of five landscape character themes (LCT) with landscape character descriptions and Scenic Integrity Objectives (SIOs) (USFS 2003). Two Scenery Management System guidelines were identified in the Forest Plan to assess conformance with scenery management (USFS 2003:4–48):

- G59: Manage forest landscapes according to LCT and SIOs as mapped.
- G60: Resource management activities should not be permitted to reduce scenic integrity below objectives stated for management prescription categories.

The LCTs for the Project Vicinity are classified as Natural Evolving (2,580.9 acres; 86.5 percent) for the majority of undeveloped USFS lands at higher elevations within the canyon; Natural Appearing (336.7 acres; 11.3 percent) for most lands adjacent to Big Cottonwood Canyon Road and Big Cottonwood Creek; and Private Land for the few parcels of private lands also found adjacent to Big Cottonwood Canyon Road and Big Cottonwood Creek, including PacifiCorp lands at the Storm Mountain (Stairs) diversion dam and Project intake/flowline location (67.7 acres; 2.3 percent) (USFS 2003). Within the Project Boundary, LCTs are restricted to Natural Appearing (9.2 acres; 70.2 percent) and Private Lands (3.9 acres; 29.8 percent) (USFS 2003). The Natural Evolving theme “originates primarily from natural disturbances and succession of plants, with subtle changes due to indirect human activities” and “generally continues to change gradually over time through natural processes” (USFS 2003). The Natural Appearing theme has been influenced by both direct and indirect human activities but appears natural to most viewers. Natural elements such as native trees, shrubs, grasses, forbs, rock outcrops and streams or lakes dominate the views. Although there is evidence of human influence from historical use, campgrounds, small organization camps, rustic structures and management activity, it is part of the valued built environment in the landscape to the majority of viewers (USFS 2003).

The SIO classifications for the Project Vicinity are classified as Very High (2,580.9 acres; 86.5 percent) for the majority of undeveloped USFS lands at higher elevations within the canyon; High (336.7 acres; 11.3 percent) for most lands adjacent to Big Cottonwood Canyon Road and Big Cottonwood Creek; and Private Land for the few parcels of private lands also found adjacent to Big Cottonwood Canyon Road and Big Cottonwood Creek (67.7 acres; 2.3 percent) (USFS 2003). Within the Project Boundary, SIO classifications are restricted to High (9.2 acres; 70.2 percent) and Private Lands (3.9 acres; 29.8 percent) (USFS 2003).

A Very High SIO within a Natural Evolving LCT is intact with only subtle if any deviations; the Natural Evolving LCT and sense of place is expressed at the highest possible level (USFS 2003). A High SIO within a Natural Appearing LCT appears intact; deviations may be present, but should repeat form, line, color, texture, and pattern common to the landscape character so completely and at such a scale that they are not evident (USFS 2003).

Big Cottonwood Canyon Road is also identified as a USFS scenic byway (USFS 2003), which is managed to protect and maintain its outstanding scenic quality through three specific regulations:

- G2.5-1: Timber harvest, vegetation/fuel treatments, prescribed fire and wildland fire uses are allowed when these activities are necessary to maintain or enhance the scenic setting for the long term.
- G2.5-2: Grazing is allowed and managed for compatibility with other elements of scenic byway corridor management plans.
- G2.5-3: Road building, new recreation development, and new trail construction are allowed for purposes of enhancing use and enjoyment of the scenic byway corridor, while maintaining or enhancing the scenic setting.

The scenery of the area around Big Cottonwood Canyon will continue to be a valuable and pleasurable natural backdrop for the nearby urban area. Views up and within the canyons of natural and developed areas will be carefully managed to sustain scenic resources, including from the Scenic Byway of Big Cottonwood Canyon, and will continue to be managed for their recognized values (Cottonwood Canyons Scenic Byways Committee 2008; USFS 2003).

## COTTONWOOD CANYONS SCENIC BYWAYS CORRIDOR MANAGEMENT PLAN

Big Cottonwood Canyon Scenic Byway operation and maintenance is under the jurisdiction of the Utah Department of Transportation and is also managed through the *Cottonwood Canyons Scenic Byways Corridor Management Plan* (CMP) (Cottonwood Canyons Scenic Byways Committee 2008). The Town of Alta, with assistance from the USFS, prepared a grant application to fund this CMP for both Big and Little Cottonwood Canyons in 2005. Big Cottonwood Canyon contains strong components of each of the six intrinsic qualities identified by the Federal Highway Administration: scenic, natural, historic, cultural, archaeological, and recreational qualities (Cottonwood Canyons Scenic Byways Committee 2008). The vision outlined in the CMP for the Big Cottonwood Canyon Scenic Byway includes continuing to offer outstanding scenery, access to year-round developed and undeveloped recreation, visitor education and information, and creating an enjoyable and satisfying experience for visitors to the byway (Cottonwood Canyons Scenic Byways Committee 2008). To sustain the excitement and reverence found in Big and Little Cottonwood Canyons, and to provide enhanced experiences with an educational component, the Big and Little Cottonwood Canyons Scenic Byways support and consider the following:

- Protection of the watershed and natural resources of each canyon.
- Sustaining and enhancing the scenery of natural areas.
- Increased public education about the outstanding qualities of each canyon.
- Safe and enjoyable byway travel for all users, including drivers, cyclists, and pedestrians.
- Preservation and enhancement of the cultural resources of each canyon.
- Economic sustainability of the communities along the byways.
- Efficient and convenient transit and alternative transportation connecting byway destinations, as well as the byways to the Salt Lake Valley.
- High quality well-maintained recreation facilities.

Management of the Big Cottonwood Canyon Scenic Byway is intended to be collaborative and include federal, state, and local governments; businesses; residents; and the general public.

## COUNTY AND LOCAL PLANS

PacifiCorp has reviewed the following county and local plans:

- *Wasatch Canyons General Plan* (Salt Lake County 2020b)
- *Cottonwood Heights General Plan* (City of Cottonwood Heights 2005)
- *Sensitive Lands Evaluation and Development Standards (SLEDS) 2023 Ordinance Amendment* (City of Cottonwood Heights 2023).

The *Wasatch Canyon General Plan* focuses on the protection, enhancement, and promotion of ecological and social values in the canyons of Salt Lake County. This plan is designed to encourage the aesthetic beauty of the human-made environment and the protection of the scenic natural environment. As a matter of policy, the plan states that new infrastructure is designed and installed per general plan goals regarding aesthetics, environmental and water quality, and the character of the canyons (Salt Lake County 2020b).

The *Cottonwood Heights General Plan* has a stated objective to protect visual and scenic resources by requiring development to proceed in a way that respects key viewsheds. This document highlights ridgelines as being one of the most visually striking features of the foothills and suggests designating significant ridgelines for protection from development. It also suggests protecting the foothills, ridgelines, and existing vegetation for their aesthetic qualities, which are vital to the city's attractiveness and economic viability (City of Cottonwood Heights 2005). This document alters a few existing land use classifications, including the designation of a sensitive lands classification for areas with visual or environmental qualities that should be protected. This goal is represented in the *Sensitive Lands Evaluation and Development Standards (SLEDS) 2023 Ordinance Amendment* (City of Cottonwood Heights 2023). This amendment requires future development to regard the view of hillsides from outside the development area, protect viewsheds to the greatest extent reasonably practicable through terrain-sensitive building practices, increase ridgeline setbacks and the use of natural topography to shield human-made structures from the view of the valley. The amendment also stipulates clustering of structures and requires setbacks between structures to consolidate the building envelope of a property. It also contains provisions for the protection of aesthetic values in riparian protection areas (City of Cottonwood Heights 2023).

Because the Stairs Project is an existing facility and there are no plans for new construction, the Stairs Project is in conformance with all of the goals or objectives in these plans.

#### **1.13.4 ENVIRONMENTAL EFFECTS**

Under the Proposed Action, no changes to Project features or operations and maintenance activities are proposed. The Proposed Action is administrative in nature, and there are no proposed changes to infrastructure, operations, or maintenance. Therefore, the Proposed Action would create no new visual contrasts; changes in views from residences, recreation areas, or travel routes, including the Big Cottonwood Canyon Scenic Byway; or impacts to current scenic designations. Accordingly, no studies or PME measures are proposed.

## 1.14 SOCIOECONOMIC RESOURCES AND ENVIRONMENTAL JUSTICE

This section discusses the socioeconomic context of the Project Vicinity, which is defined as Salt Lake County and the City of Cottonwood Heights for the purposes of this analysis. References to statewide socioeconomic conditions are included for additional context. Cottonwood Heights is the largest incorporated city near the Stairs Project. Additionally, this section discusses environmental justice (EJ) in accordance with guidance provided by the Council for Environmental Quality (CEQ) environmental justice (EJ) guidelines.

### 1.14.1 POPULATION PATTERNS AND DIVERSITY

In 2021, the total population of Cottonwood Heights was approximately 33,597 people, representing a 0.2 percent increase from the year 2010. By comparison, the total population of Salt Lake County was estimated to be 1,185,238 people in 2021, which represented a 17.3 percent increase from the year 2010 (Headwaters Economics 2024a, 2024b).

The ethnic composition of the city of Cottonwood Heights was primarily residents who identify as “White alone” (91.4 percent); “White alone, not Hispanic or Latino” (88.5 percent); and “Hispanic or Latino” (4.6 percent) (U.S. Census Bureau 2024a). Table E-19 provides percentages of the ethnic groups represented in the U.S. Census Bureau data for Cottonwood Heights, Salt Lake County, and Utah.

**TABLE E-19 RACE AND ETHNICITY IN COTTONWOOD HEIGHTS, SALT LAKE COUNTY, AND UTAH**

RACE AND ETHNICITY	COTTONWOOD HEIGHTS (%)	SALT LAKE COUNTY (%)	UTAH (%)
American Indian and Alaska Native alone	0.2	1.4	1.5
Asian alone	2.4	4.8	2.8
Black or African American alone	0.4	2.4	1.6
Hispanic or Latino	4.6	19.7	15.1
Native Hawaiian and Pacific Islander alone	0.4	1.9	1.2
White alone, not Hispanic or Latino	88.5	68.9	76.7

RACE AND ETHNICITY	COTTONWOOD HEIGHTS (%)	SALT LAKE COUNTY (%)	UTAH (%)
Two or more races	3.9	3.1	2.9
White alone	91.4	86.4	90.0

Source: U.S. Census Bureau (2024b).

As of 2021, 6.12 percent of Cottonwood Heights residents (approximately 2,006 people) and 12.9 percent of Salt Lake County (approximately 151,000 people) were born outside of the United States (Data USA 2024a, 2024b). English is the most dominant language spoken at home in both Cottonwood Heights and in Salt Lake County (91.4 percent Cottonwood Heights; 78.2 percent Salt Lake County). In Cottonwood Heights, the second most prevalent languages spoken at home are other Indo-European languages (3.5 percent), as compared to Salt Lake County, where the second most prevalent language spoken at home is Spanish (13.6 percent) (U.S. Census Bureau 2024c, 2024d).

Women make up just over half of the population in Cottonwood Heights (51.4 percent), and just under half in Salt Lake County (49.3 percent). People in Cottonwood Heights and Salt Lake County aged 18 or younger make up 21.7 and 25.0 percent of the population, respectively (U.S. Census Bureau 2024a). Table E-20 details age groups in the Project Vicinity.

**TABLE E-20    AGE GROUPS IN COTTONWOOD HEIGHTS, SALT LAKE COUNTY, AND UTAH**

AGE	COTTONWOOD HEIGHTS (%)	SALT LAKE COUNTY (%)	UTAH (%)
Under 5 years	5.2	6.3	6.9
Under 18 years	21.7	25.0	27.6
18 to 24 years	8.5	10.0	11.8
25 to 29 years	6.7	8.3	7.6
30 to 34 years	6.2	8.0	6.9
35 to 39 years	7.5	7.7	7.1
40 to 44 years	6.8	7.1	6.7
45 to 49 years	7.1	6.1	5.7
50 to 54 years	5.4	5.4	4.9
55 to 59 years	6.6	5.0	4.7
60 to 64 years	6.1	5.0	4.6
65 years and over	17.0	12.1	12.0

Source: U.S. Census Bureau (2024b).

### **1.14.2 HOUSEHOLD DISTRIBUTION, INCOME, AND EMPLOYMENT**

Cottonwood Heights was originally known as Butlerville, named after the Butler family, who settled the area as part of the Latter-day Saint pioneer migrations of the mid-nineteenth century. Lumber from the area was used to supply homes and railroads, and granite blocks from nearby Little Cottonwood Canyon were used to construct the Latter-day Saint temple. Cottonwood Heights became an incorporated city in 2005 and continues to host gateway communities for the world-class resorts in both Big and Little Cottonwood Canyons (City of Cottonwood Heights 2024).

According to the U.S. Census Bureau, there are 18,740 employed civilians aged 16 years or older in Cottonwood Heights, and 617,561 in Salt Lake County (U.S. Census Bureau 2024e). Most workers in Cottonwood Heights (66.8 percent) and Salt Lake County (69.6 percent) are employees of privately owned companies. The employment rate in both Cottonwood Heights (69.2 percent) and Salt Lake County (70.6 percent) are above the employment rate for the state of Utah (67.8 percent) (U.S. Census Bureau 2024c, 2024d, 2024f).

The top two major industries in Cottonwood Heights are educational services and health care and social services (24.2 percent) and professional, scientific and management and administrative and waste management services (17.4 percent). These industries are also highest in Salt Lake County (20.7 and 14.0 percent, respectively) (Table E-21). The number of workers and relative percentage of the workforce in various occupations is presented in Table E-22 (U.S. Census Bureau 2024c, 2024d).

Workers in Salt Lake County average 38.2 hours of work per week, whereas in Cottonwood Heights, workers spend an average of 37.8 hours per week working (U.S. Census Bureau 2024c, 2023c). Most workers in both Salt Lake County and Cottonwood Heights spend approximately 22 minutes commuting to work, and the majority drive to work alone (65.4 and 70.1 percent, respectively). Approximately 16.9 percent of workers in Cottonwood Heights work from home and do not commute; in Salt Lake County, the percentage is slightly higher, at 19.0 percent (U.S. Census Bureau 2024c, 2024d).

**TABLE E-21 MAJOR INDUSTRIES IN THE PROJECT VICINITY**

INDUSTRY	COTTONWOOD HEIGHTS (%)	SALT LAKE COUNTY (%)
Agriculture, forestry, fishing and hunting, and mining	0.6	0.7
Construction	6.3	7.8
Manufacturing	7.4	10.1
Wholesale trade	2.6	1.9
Retail trade	9.8	12.1
Transportation and warehousing, and utilities	3.5	7.3
Information	1.7	2.2
Finance and insurance, and real estate and rental and leasing	9.7	7.8
Professional, scientific, and management and administrative and waste management services	17.4	14.0
Educational services and health care and social assistance	24.2	20.7
Arts, entertainment, and recreation, and accommodation and food services	9.7	7.7
Other services, except public administration	4.2	4.3
Public administration	3.0	3.3

Source: U.S. Census Bureau (2024c, 2024d).

**TABLE E-22 MAJOR OCCUPATIONS IN THE PROJECT VICINITY**

OCCUPATION	COTTONWOOD HEIGHTS		SALT LAKE COUNTY	
	NUMBER OF WORKERS	PERCENTAGE OF TOTAL (%)	NUMBER OF WORKERS	PERCENTAGE OF TOTAL (%)
Management, business, science and arts occupations	10,002	53.4	280,190	45.3
Service occupations	2,330	12.4	88,758	14.4
Sales (including real estate) and office occupations	4,089	21.8	138,483	22.4

OCCUPATION	COTTONWOOD HEIGHTS		SALT LAKE COUNTY	
	NUMBER OF WORKERS	PERCENTAGE OF TOTAL (%)	NUMBER OF WORKERS	PERCENTAGE OF TOTAL (%)
Natural resources, construction, and maintenance occupations	1,053	5.6	54,154	8.8
Production, transportation, and material moving occupations	1,266	6.7	90,743	14.7

Source: U.S. Census Bureau (2024c, 2024d, 2024f).

### 1.14.3 EDUCATION

Cottonwood Heights has a greater percentage of the population aged 25 and older who have obtained a high school degree or higher (97 percent) than Salt Lake County or Utah (91.1 and 93.0 percent, respectively) (U.S. Census Bureau 2024a). Table E-23 provides the percentages of residents in the Project Vicinity by level of education attained.

**TABLE E-23 EDUCATIONAL ATTAINMENT IN THE PROJECT VICINITY**

EDUCATIONAL ATTAINMENT	COTTONWOOD HEIGHTS (%)	SALT LAKE COUNTY (%)
High school or equivalent degree	15.1	22.5
Some college, no degree	19.4	20.6
Associate’s degree	7.9	9.1
Bachelor’s degree	33.4	24.8
Graduate or professional degree	21.3	14.1

Source: U.S. Census Bureau (2024a, 2024c).

### 1.14.4 PROJECT EMPLOYMENT SOURCES

PacifiCorp employs approximately 6,000 people throughout its service area, which encompasses Washington, Oregon, California, Idaho, Utah, and Montana. The Stairs Project has two operators and is normally staffed in conjunction with the Granite Project with an operator on duty during the day and available for off-hours callout 7 days a week. Another six full-time maintenance employees switch duties between this Project and the 14 other PacifiCorp hydropower facilities located across Idaho and Utah in PacifiCorp’s Hydro East area (Idaho and Utah), with other

operators traveling from outside the area available to cover the Stairs and Granite area in the case of the assigned operators being unavailable (sick or gone) or to provide additional emergency support (PacifiCorp 2024). There are also 10 PacifiCorp renewable resources staff and additional management and contractors that support the Stairs Project and other PacifiCorp hydroelectric projects in the Hydro East area.

#### **1.14.5 ENVIRONMENTAL JUSTICE**

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, applies to federal agencies that conduct activities that may substantially affect human health or the environment. In addition, Executive Order 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, sets expectations for a whole-of-government approach to advancing equity for all. Therefore, consistent with these executive orders and the CEQ EJ guidance under the National Environmental Policy Act (NEPA), PacifiCorp has reviewed demographic and EJ data from the U.S. Census Bureau and has utilized the EPA's EJ tool (EJScreen) for the Project Vicinity to provide the following analysis. For this section, the Project Vicinity is defined as census tract block groups that intersect the Project Boundary and a one-mile radius around it.

The CEQ EJ guidelines for evaluating the potential environmental effects of projects under NEPA use three criteria for identifying EJ communities: 1) the percentage of a census block group's population self-identifying as something other than "White alone not Hispanic"<sup>7</sup> (referred to as minority) exceeds 50 percent, or the percentage is 10 percent greater than the same measure in the county; 2) the percentage of a block group's residents self-identifying as American Indian or Alaska Native Alone exceeds the same measure in the county; or 3) the percentage of a block group's residents whose income is less than two times (200 percent) the poverty level is greater than the same measure in the county.

Minority populations include the following population groups: American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, Black or African-American, some other race (other than White), a combination of two or more races, or Hispanic. Except for White

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<sup>7</sup> The U.S. Census Bureau defines "White alone not Hispanic" as individuals who responded "No, not Spanish/Hispanic/Latino" and who reported "White" as their only entry in the race question (U.S. Census Bureau 2024a)

non-Hispanics, all other racial and ethnic groups are considered minorities; therefore, the total minority population of an area is calculated by subtracting the White non-Hispanic population from the total population.

For this analysis, EJScreen was used to identify census tract block groups and determine if EJ communities are present within the Project Vicinity. The two census tract block groups present within (i.e., that intersect) the Project Vicinity are Census Tracts 1101.06 Block Group 3 and 1101.05 Block Group 2 (Figure E-11). As shown in Table E-24, neither of the block groups present in the Project Vicinity meet the CEQ EJ criteria for identifying as an EJ community.

**TABLE E-24 ENVIRONMENTAL JUSTICE COMMUNITIES IN THE PROJECT VICINITY**

CATEGORY	UTAH	SALT LAKE COUNTY	CENSUS TRACT 1101.06, BLOCK GROUP 3	CENSUS TRACT 1101.05, BLOCK GROUP 2
Total Population	3,231,370	1,173,331	526	881
White Alone Not Hispanic (%)	77.3	69.8	92.6	95.5
Black or African American (%)	1.1	1.7	0	0
American Indian and Alaska Native (%)	0.8	0.6	0	0
Asian (%)	2.3	4	0	1.6
Native Hawaiian and Other Pacific Islander (%)	0.9	1.5	0	0
Some other race (%)	0.3	0.4	3.6	0
Two or more races (%)	3	3.2	0	3
Hispanic or Latino (%)	14.4	18.8	7.4	0
Total racial minority (%)	22.7	30.2	0	4.5
Percentage Below 200% of the Poverty Line	24.70%	23.00%	14.60%	19.80%
EJ Community? Y/N	N	N	N	N

Source: U.S. Census Bureau (2021a, 2021b).

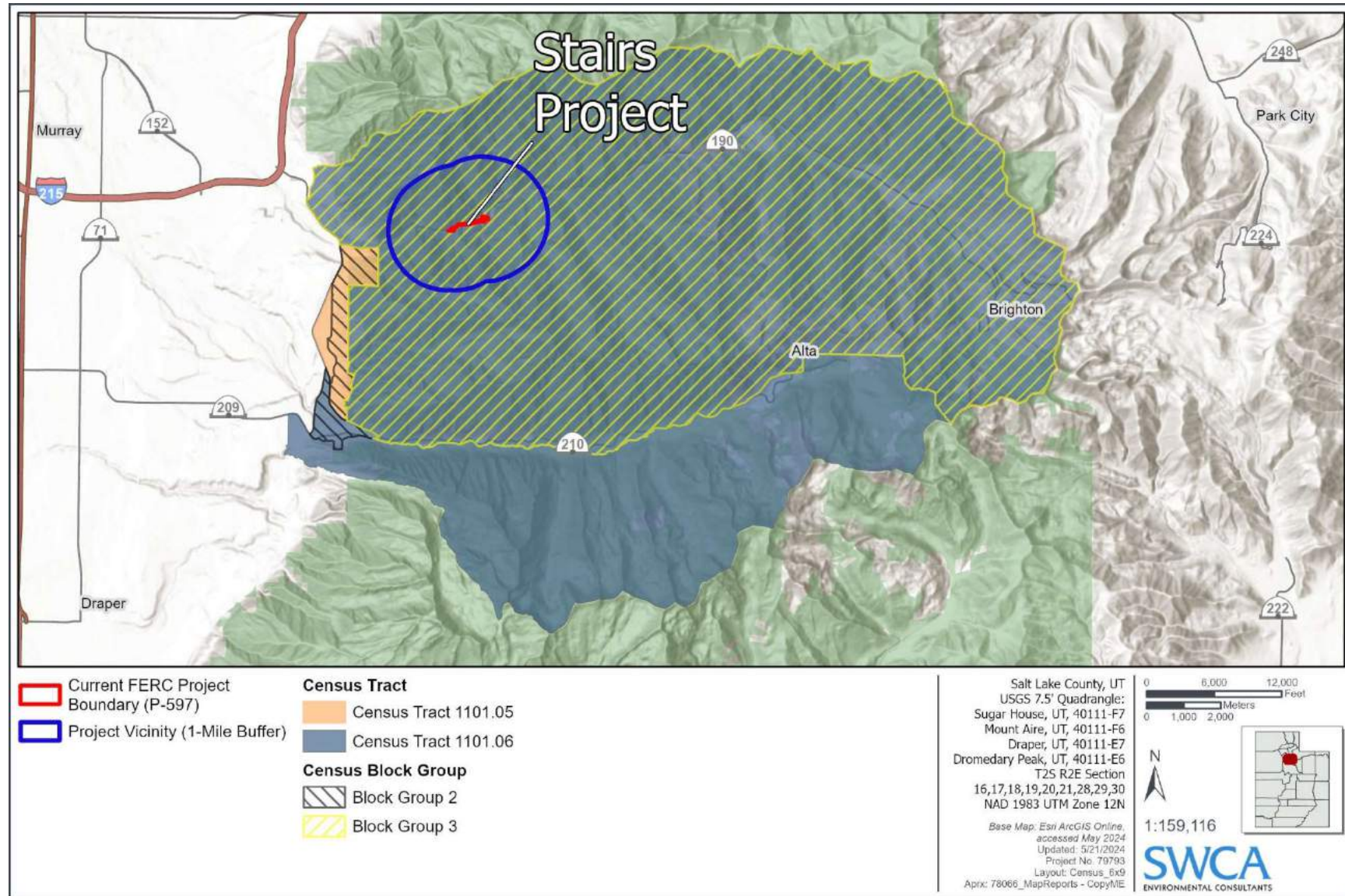


FIGURE E-11 CENSUS TRACTS AND BLOCK GROUPS IN THE PROJECT VICINITY

### **1.14.6 ENVIRONMENTAL EFFECTS**

Under the Proposed Action, no impacts to socioeconomic conditions are expected because no changes to the operation or maintenance of any parts of the Project are proposed. Therefore, no PME measures or studies are proposed.

As noted above, the census tract block groups within the Project Vicinity are Census Tracts 1101.06, Block Group 3 and 1101.05, Block Group 2. As neither of the block groups present in the Project Vicinity meet the CEQ EJ criteria for identifying as an EJ community, it can be reasonably assumed that no EJ community would be disproportionately exposed to environmental harms or have an increased vulnerability to such hazards (Foresight Design Initiative 2017) through implementation of the Proposed Action. Further, as the Proposed Action is essentially an administrative action, with no construction or other changes to the operation or maintenance of any parts of the Project proposed, no impacts to existing EJ conditions are expected, and no studies or PMEs are proposed.

## 1.15 PROJECT ALTERNATIVES

Pursuant to 18 CFR 4.92(e)(3), Exhibit E of this Joint Application should include a “description of alternative means of obtaining an amount of power equivalent to that provided by the proposed or existing facility.” Unlike most exemption applications, the Project facilities under this Proposed Action are already constructed and operational. PacifiCorp is proposing no changes to the current operation and maintenance of those facilities, nor to the expected generation output of the Project itself, regardless of whether it is granted a conduit exemption. Rather, in the event that a conduit exemption is not granted by FERC, PacifiCorp unequivocally states its intention to alternatively convert this Joint Application into a relicense application, as contemplated under 18 CFR 4.93(d), and to withdraw its application for surrender of the current FERC license.

While Exhibit E typically discusses alternate energy resources and short- and long-term resource requirements in the event a facility is not constructed (or is taken offline), PacifiCorp notes the critical benefits that the Stairs Project provides to the grid system as currently operated. The Stairs Project is one of 11 small hydroelectric projects (under 2 MW) that are owned and operated by PacifiCorp in Utah, Idaho, and Wyoming. Although the Stairs Project is small in comparison to PacifiCorp’s thermal and other larger renewable resource projects, the benefits associated with continued operation of this low-cost Project are significant. These facilities support variable energy sources such as wind and solar, as well as being responsive to changes in snowpack, precipitation, and seasonal variations in water availability and demand for power. Additionally, as reflected in PacifiCorp’s proposed action, the Project is part of a critical municipal water supply system for Salt Lake City and the surrounding areas. Salt Lake City’s BCCWTP supports the continued operation of the Stairs Project because water delivered through the conduit and tailrace has historically been higher quality than water delivered from the alternate diversion intake at the BCCWTP (PacifiCorp 2011). While BCCWTP’s own intake screen was replaced in 2022 to address the water quality concerns, BCCWTP values that water is reliably delivered through the Granite tailrace, even during periods of renovation and construction activities at BCCWTP (Davies 2024b).

## 1.16 SUMMARY OF IMPACTS AND PROPOSED MEASURES

Per 18 CFR 4.38(b)(2)(vii), descriptions of any proposed studies (none are proposed given the administrative nature of the proposed action), and PME measures are required. PacifiCorp's proposed PME measures are outlined in Table E-25. As discussed throughout this document, there would be no construction of new facilities, changes to current facilities or infrastructure, or changes to Project operations or maintenance activities under the Proposed Action.

**TABLE E-25 PROPOSED PROTECTION, MITIGATION, AND ENHANCEMENT MEASURES (NO STUDIES ARE PROPOSED)**

RESOURCE AREA(S)	PME MEASURES
Fisheries, Wildlife, Aesthetics, Water Quality	Maintain minimum flow of 4 cfs, or inflow to the Project, whichever is less, for protection and enhancement of fish and wildlife resources, aesthetic resources, and water quality in the bypassed reach of Big Cottonwood Creek.
Recreation	Continue annual consultation meeting with the USFS. Continue to maintain and offer the Stairs Powerhouse Picnic Area site for public recreation by reservation.
Cultural Resources	Develop, implement, and maintain a historic properties management plan.

## 1.17 REFERENCES

- AAA Native Arts. 2024. Confederated Tribes of the Goshute Reservation. Available at: <https://www.aaanativearts.com/confederated-tribes-of-the-goshute-index>. Accessed April 10, 2024.
- Aikens, C. Melvin. 1970. Hogup Cave. Salt Lake City: University of Utah Anthropological Papers No. 93.
- Aikens, C. Melvin, and David B. Madsen. 1986. Prehistory of the Eastern Area. In *Handbook of North American Indians, Volume 11: Great Basin*, edited by Warren L. D'Azevedo, pp. 149–160. Washington, D.C.: Smithsonian Institution Press.
- Aikens, C. Melvin, and Y.T. Witherspoon. 1986. Great Basin Numic prehistory: linguistics, archaeology, and environment. In *Anthropology of the Desert West: Essays in Honor of Jesse D. Jennings*, edited by C.J. Condie and D.D. Fowler, pp. 7–20. Salt Lake City: University of Utah Anthropological Papers 110.
- All Trails. 2023. Map of trails near Salt Lake City. Available at: [https://www.alltrails.com/explore/us/utah/salt-lake-city?b\\_tl\\_lat=40.63362003901469&b\\_tl\\_lng=-111.7857272043588&b\\_br\\_lat=40.610414238943434&b\\_br\\_lng=-111.72673813165294](https://www.alltrails.com/explore/us/utah/salt-lake-city?b_tl_lat=40.63362003901469&b_tl_lng=-111.7857272043588&b_br_lat=40.610414238943434&b_br_lng=-111.72673813165294). Accessed April 10, 2024.
- Allison, James R. 1998. Dealing with Mixed Archaeological Deposits: Bayesian Unmixing of the Salt Lake Airport Site. Paper presented at the Inter-Congress Meeting of the Union Internationale Des Sciences Préhistoriques et Protohistoriques, Commission 4: Data Management and Mathematical Methods in Archaeology, Scottsdale, Arizona.
- Allison, James R., Arlene Colman, and Anne Webb. 1997. Archaeology at the Salt Lake Airport: 1996-1997 Test Excavations and Data Recovery Plan. Research Report No. U96-31. Orem, Utah: Baseline Data, Inc. On file at the Utah Division of State History.
- American Indian Relief Council. 2022. Idaho: Northwestern Band of the Shoshone Nation. Available at: [http://www.nativepartnership.org/site/PageServer?pagename=airc\\_res\\_id\\_bandofshos&printer\\_friendly=1](http://www.nativepartnership.org/site/PageServer?pagename=airc_res_id_bandofshos&printer_friendly=1). Accessed April 10, 2024.
- Antevs, Ernst. 1948. Climatic Changes and Pre-white Man. *University of Utah Bulletin* 38(20):167–191.
- Baldwin, Connely. 2024. Personal communication, email from Connely Baldwin, PacifiCorp, to Emily Waters, SWCA Environmental Consultants, April 10, 2024.
- Barlow, K. Renee. 2002. Predicting maize agriculture among the Fremont: an economic comparison of farming and foraging in the American Southwest. *American Antiquity* 67(1):65–88.
- Barton, John D. 1998. *A History of Duchesne County*. Salt Lake City: Utah State Historical Society.

- Beck, Charlotte, and George T. Jones. 1997. The Terminal Pleistocene/Early Holocene archaeology of the Great Basin. *Journal of World Prehistory* 11(2):161–236.
- Bell, Martin, and Michael J.C. Walker. 1992. *Late Quaternary Environmental Change: Physical and Human Perspectives*. New York: Longman Scientific and Technical.
- Berni, L., M. Hubbard-Rice, B. Thompson, S. Taylor, and S. Magnifico. 2014. Stream Care Guide. A Handbook for Residents of Salt Lake County. Jordan River Commission. Available at: [https://jordanrivercommission.com/wp-content/uploads/StreamCareGuide\\_SLC01.pdf](https://jordanrivercommission.com/wp-content/uploads/StreamCareGuide_SLC01.pdf). Accessed April 10, 2024.
- Bettinger, Robert L. 1991. Aboriginal occupation at high altitude: alpine villages in the White Mountains of eastern California. *American Anthropologist* 93:656–679.
- Bettinger, R.L., and M.A. Baumhoff. 1982. The Numic spread: Great Basin cultures in competition. *American Antiquity* 47:485–503.
- . 1983. Return rates and intensity of resource use in Numic and Prenumic adaptive strategies. *American Antiquity* 48:830–834.
- Broughton, Jack M., David A. Byers, Reid Bryson, William P. Eckerle, and David B. Madsen. 2008. Did climatic seasonality control Late Quaternary artiodactyl densities in Western North America? *Quaternary Science Reviews* 27:1916–1937.
- Bryan, Alan L. 1977. Smith Creek Cave. In *The Archaeology of Smith Creek Canyon, Eastern Nevada*, edited by D.R. Tuohy and D.L. Rendall. Nevada State Museum Anthropological Papers No. 17. Carson City: Nevada State Museum. On file at the Nevada State Historic Preservation Office.
- Byers, David A., and Jack M. Broughton. 2004. Holocene environmental change, artiodactyl abundances, and human hunting strategies in the Great Basin. *American Antiquity* 69:235–257.
- Burton, Doris Karren. 1996. *A History of Uintah County: Scratching the Surface*. Utah Centennial County History Series. Salt Lake City: Utah State Historical Society.
- Carlyle, Shawn W., Ryan L. Parr, M. Geoffrey Hayes, and Dennis H. O'Rourke. 2000. Context of maternal lineages in the greater Southwest. *American Journal of Physical Anthropology* 113(1):85–101.
- City of Cottonwood Heights. 2005. *Cottonwood Heights General Plan*. Available at: <https://www.cottonwoodheights.utah.gov/home/showpublisheddocument/294/637054918981270000>. Accessed April 10, 2024.
- . 2023. *An Ordinance Amending and Restating Chapter 19.72. Cottonwood Heights Code of Ordinances, Concerning Sensitive Lands Evaluation and Development Standards (SLEDS)*. Available at:

- <https://www.cottonwoodheights.utah.gov/home/showpublisheddocument/7732/638321029487000000>. Accessed April 10, 2024.
- . 2024. About Cottonwood Heights. Available at: <https://www.cottonwoodheights.utah.gov/community/about-cottonwood-heights>. Accessed April 10, 2024.
- Colman, Arlene, and Quint A. Colman. 1998. *A Cultural Resource Inventory of the Proposed Legacy-West Davis Highway in Davis and Salt Lake Counties, Utah*. Research Report Number U97-5. Orem, Utah: Baseline Data, Inc. On file at the Utah Division of State History.
- Coltrain, Joan B., and Steven W. Leavitt. 2002. Climate and diet in Fremont prehistory: economic variability and abandonment of maize agriculture in the Great Salt Lake Basin. *American Antiquity* 67(3):453–485.
- Copeland, James M., and Richard E. Fike. 1988. Fluted Projectile Points in Utah. *Utah Archaeology* 1988:5–28.
- Cottonwood Canyons Scenic Byways Committee. 2008. *Cottonwood Canyons Scenic Byways Corridor Management Plan*. Available at: [https://travel.utah.gov/wp-content/uploads/CMP\\_121608\\_portable.pdf](https://travel.utah.gov/wp-content/uploads/CMP_121608_portable.pdf). Accessed April 10, 2024.
- Cowley, Paul. 2023. Personal communication, email from Paul Cowley, Natural Resources and Planning Staff Officer, USFS, to Caitlyn Reilley, SWCA Environmental Consultants, October 31, 2023.
- Crum, Steven J. 1987. The Skull Valley Band of the Goshute Tribe – deeply attached to their native homeland. *Utah Historical Quarterly* 55(3):250–267. Available at: [https://issuu.com/utah10/docs/uhq\\_volume55\\_1987\\_number3/s/153694](https://issuu.com/utah10/docs/uhq_volume55_1987_number3/s/153694). Accessed April 10, 2024.
- Cuch, Forrest S. (ed.). 2003. *A History of Utah's American Indians*. Salt Lake City: Utah State Division of Indian Affairs and Utah State Division of History.
- Data USA. 2024a. Cottonwood Heights, UT. Available at: <https://datausa.io/profile/geo/cottonwood-heights-ut>. Accessed April 10, 2024.
- . 2024b. Salt Lake County, UT. Available at: <https://datausa.io/profile/geo/salt-lake-county-ut>. Accessed April 10, 2024.
- Daughters of the Utah Pioneers of Uintah County (DUPUC). 1947. *Builders of Uintah: A Centennial History of Uintah County 1872 to 1947*. Springville, Utah: Art City Publishing Co.
- Davies, Eve. 2024a. Personal communication, Eve Davies, Principal Environmental Scientist and Relicensing Manager PacifiCorp, Document Comment to Julia Aaronson, SWCA Staff Environmental Planner, January 30, 2024.

- \_\_\_\_\_. 2024b. Personal communication, Eve Davies, Principal Environmental Scientist and Relicensing Manager PacifiCorp, Document Comment to Emily Waters, SWCA Project Manager, May 13, 2024.
- Davis, William E. 1985. The Montgomery Folsom site. *Current Research in the Pleistocene* 2:11–12.
- \_\_\_\_\_. 1989. The Lime Ridge Clovis site. *Utah Archaeology* 1989:66–76.
- D’Azevedo, Warren L. 1986. Introduction. In *Handbook of North American Indians, Volume 11: Great Basin*, edited by Warren L. D’Azevedo, pp. 1–14. Washington, D.C.: Smithsonian Institution Press.
- Duncan, Clifford. 2003. The Northern Utes of Utah. In *A History of Utah’s American Indians*, edited by F.S. Cuch, pp. 167–224. Salt Lake City: Utah State Division of Indian Affairs and Utah State Division of History. On file at the Utah Division of State History.
- Eastern Shoshone. 2022. About the Shoshone Tribe. Available at: <https://easternshoshone.org/about/>. Accessed April 10, 2024.
- Eldredge, Sandy. 2010. Geosights: Glacial Landforms in Big and Little Cottonwood Canyons, Salt Lake County, Utah. Survey Notes. Utah Geological Survey. Available at: <https://geology.utah.gov/map-pub/survey-notes/geosights/glacial-landforms-in-big-and-little-cottonwood-canyons/>. Accessed April 10, 2024.
- Enger, Walter D. 1942. *Archeology of Black Rock 3 Cave, Utah*. Salt Lake City: University of Utah Anthropological Papers No. 7.
- Envision Utah. 2010. *Wasatch Canyons Tomorrow*. Available at: [https://static1.squarespace.com/static/5c059ead36099b1445c1d246/t/5d02bcf2e68aa40001dce334/1560460549643/WasatchCanyonsTomorrow\\_FullReport\\_LowRes.pdf](https://static1.squarespace.com/static/5c059ead36099b1445c1d246/t/5d02bcf2e68aa40001dce334/1560460549643/WasatchCanyonsTomorrow_FullReport_LowRes.pdf). Accessed February 6, 2024.
- Federal Energy Regulatory Commission (FERC). 1999. *Order Issuing Subsequent License for Stairs Hydroelectric Project FERC Project No. 597-003*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=199910050266](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=199910050266). Accessed April 10, 2024. ———. 2008. *Order Approving Revised Streamflow Gaging Plan, Article 403*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=20080502-3027](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=20080502-3027). Accessed April 10, 2024.
- \_\_\_\_\_. 2015. *Licensed Hydropower Development Recreation Report for Stairs Hydroelectric Project FERC Project No. 597-003*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_Number=20150330-5166](https://elibrary.ferc.gov/eLibrary/docinfo?accession_Number=20150330-5166). Accessed October 25, 2023.

Fiege, Mark, and Janet Ore. 1988. National Register Nomination for Stairs Station Hydroelectric Power Plant Historic District. Prepared for Utah Power and Light Company. On file at the Utah Department of State History, Salt Lake City, Utah.

Foresight Design Initiative. 2017. What Does an Environmental Justice Community Even Mean? Available at:  
<https://www.foresightdesign.org/blog/2017/7/19/xcd8aq95i73fy933hw4ppjappv346t>. Accessed April 10, 2024.

Fowler, Don D., and David B. Madsen. 1986. Prehistory of the Southeastern Area. In *Handbook of North American Indians, Volume 11: Great Basin*, edited by Warren L. D'Azevedo, pp. 173–182. Washington, D.C.: Smithsonian Institution Press.

Giddings, E.M., L.R. Brown, T.M. Short, and M.R. Meador. 2006. Relation of fish communities to environmental conditions in urban streams of the Wasatch front, Utah. *Western North American Naturalist* 66(2). Available at:  
[https://www.researchgate.net/publication/232688237\\_Relation\\_of\\_fish\\_communities\\_to\\_environmental\\_conditions\\_in\\_urban\\_streams\\_of\\_the\\_Wasatch\\_Front\\_Utah](https://www.researchgate.net/publication/232688237_Relation_of_fish_communities_to_environmental_conditions_in_urban_streams_of_the_Wasatch_Front_Utah). Accessed April 10, 2024

Global Biodiversity Information Facility (GBIF). 2023. GBIF occurrence download. Downloaded from: <https://doi.org/10.15468/dl.pk7zr6> on October 26, 2023.

Goff, Sheila. 2024. Northern Ute People (Uintah and Ouray Reservation). Available at:  
<https://coloradoencyclopedia.org/article/northern-ute-people-uintah-and-ouray-reservation>. Accessed April 10, 2024.

Graf, Kelly E., and Dave N. Schmitt. (eds.). 2007. *Paleoindian or Paleoarchaic? Great Basin Human Ecology at the Pleistocene/Holocene Transition*. Salt Lake City: University of Utah Press.

Grayson, Donald K. 1993. *The Desert's Past: A Natural Prehistory of the Great Basin*. Washington D.C.: Smithsonian Institution Press.

Gunnerson, James H. 1956. A fluted point site in Utah. *American Antiquity* 21:412–415.

Headwaters Economics. 2024a. Cottonwood Heights, UT. Available at:  
<https://headwaterseconomics.org/apps/economic-profile-system/4900016270>. Accessed April 10, 2024.

———. 2024b. Salt Lake County, UT. Available at:  
<https://headwaterseconomics.org/apps/economic-profile-system/49035>. Accessed April 10, 2024.

Heaton, John W. 2005. *The Shoshone-Bannocks: Culture and Commerce at Fort Hall, 1870-1940*. University Press of Kansas, Lawrence.

- Hester, Thomas R. 1973. *Chronological Ordering of Great Basin Prehistory*. Contributions of the University of California Archaeological Research Facility 17.
- Historic Utah Buildings. 2024. Database, Utah State Historic Preservation Office. Available at: <https://shpo.utah.gov/portal/apps/webappviewer/index.html?id=8e218e18c2b74477b5f520e5617bebafe>. Accessed April 10, 2024.
- Hockett, Bryan S., and Maury Morgenstein. 2003. Ceramic production, Fremont foragers, and the Late Archaic prehistory of the north-central Great Basin. *Utah Archaeology* 16:1–36.
- Holmer, Richard G. 1978. A mathematical typology for Archaic projectile points of the Eastern Great Basin. Unpublished Ph.D. dissertation, Department of Anthropology, University of Utah, Salt Lake City.
- Holt, Ronald L. 1994. Paiute Indians of Utah. In *Utah History Encyclopedia*, edited by A.K. Powell. Salt Lake City: University of Utah Press. Available at: [https://www.uen.org/utah\\_history\\_encyclopedia/p/PAIUTES.shtml](https://www.uen.org/utah_history_encyclopedia/p/PAIUTES.shtml). Accessed April 10, 2024.
- Hull, Kathleen L. 1994. Obsidian Studies. In *Kern River Pipeline Cultural Resources Data Recovery Report: Utah*, edited by W. Geoffrey Spaulding, pp. 7-1 through 7-63. Prepared for Kern River Gas Transmission Company. Las Vegas, Nevada: Dames and Moore.
- . 2013. Ames Hydro: Making History Since 1891. Available at: <https://www.hydroreview.com/2013/08/27/ames-hydro-making-history-since-1891/#gref>. Accessed April 10, 2024.
- Jackson Hole Historical Society. 2022. An Introduction to the Wind River Indian Reservation of Wyoming. Available at: <https://jacksonholehistory.org/an-introduction-to-the-wind-river-indian-reservation-of-wyoming/>. Accessed April 10, 2024.
- Janetski, Joel. 1985. *Archaeological Investigations at Sparrow Hawk (42TO261): A High Altitude Prehistoric Hunting Camp in the Southern Oquirrh Mountains, Tooele County, Utah*. Museum of Peoples and Cultures Technical Series 85-37. Provo, Utah: Brigham Young University.
- . 1994. Recent transitions in the Eastern Great Basin: the archaeological record. In *Across the West: Human Population Movement and the Expansion of the Numa*, edited by D.B. Madsen and D. Rhode, pp. 157–178. Salt Lake City: University of Utah Press.
- Janetski, Joel C., and Grant C. Smith. 2007. *Hunter-Gatherer Archaeology in Utah Valley*. Occasional Paper No. 12. Museum of Peoples and Cultures. Provo, Utah: Brigham Young University.
- Jennings, Jesse D. 1957. *Danger Cave*. Salt Lake City: University of Utah Anthropological Papers No. 27.

- . 1978. *Prehistory of Utah and the Eastern Great Basin*. Salt Lake City: University of Utah Anthropological Papers No. 98.
- Jones, George T., and Charlotte Beck. 1999. Paleoarchaic archaeology in the Great Basin. In *Models for the Millennium: Great Basin Anthropology Today*, edited by C. Beck, pp. 83–95. Salt Lake City: University of Utah Press.
- Kaestle, Frederika A., and David Glenn Smith. 2001. Ancient mitochondrial DNA evidence for prehistoric population movement: the Numic expansion. *American Journal of Physical Anthropology* 115:1–12.
- Keller, Charles L. 2001. *The Lady in the Ore Bucket: A History of Settlement and Industry in the Tri-Canyon Area of the Wasatch Mountains*. Salt Lake City: University of Utah Press.
- Kelly, Robert L. 1997. Late Holocene Great Basin prehistory. *Journal of World Prehistory* 11(1):1–50.
- King, Gilbert. 2012. The aftermath of Mountain Meadows. *Smithsonian Magazine* 19 February. Available at: <https://www.smithsonianmag.com/history/the-aftermath-of-mountain-meadows-110735627/>. Accessed April 10, 2024.
- Lamb, Sydney M. 1958. Linguistic prehistory in the Great Basin. *International Journal of American Linguistics* 24(2):95–100.
- Lamborn, C.C. and S.W. Burr. 2016. An Estimation of Visitor Use in Little Cottonwood, Big Cottonwood, and Millcreek Canyons. Available at: [https://extension.usu.edu/iort/files/Tri\\_Canyon\\_Visitor\\_Use\\_Estimate.pdf](https://extension.usu.edu/iort/files/Tri_Canyon_Visitor_Use_Estimate.pdf). Accessed April 10, 2024.
- Larson, Gustive O. 1974. Uintah dream: the Ute Treaty—Spanish Fork, 1865. *BYU Studies Quarterly* 14(3):361–381. Available at: <https://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=1636&context=byusq>. Accessed April 10, 2024.
- Lewis, David Rich. 1994. Uintah-Ouray Indian Reservation. In *Utah History Encyclopedia*, edited by K. Powell. Salt Lake City: University of Utah Press. Available at: [https://www.uen.org/utah\\_history\\_encyclopedia/u/UINTAH-OURAY\\_INDIAN\\_RESERVATION.shtml](https://www.uen.org/utah_history_encyclopedia/u/UINTAH-OURAY_INDIAN_RESERVATION.shtml). Accessed April 10, 2024.
- Lindsay, La Mar W., and Kay Sargent. 1979. *Prehistory of the Deep Creek Mountain Area, Western Utah*. Salt Lake City, Utah: Antiquities Section Selected Papers, No. 14.
- Little, John R., and Landon E. McKinney. 1992. *Viola frank-smithii*. Available at: [http://beta.floranorthamerica.org/Viola\\_frank-smithii](http://beta.floranorthamerica.org/Viola_frank-smithii). Accessed April 10, 2024.
- Lund, William R. 1980. *Report of Investigation No. 147: Geologic and Topographic Constraints to Land Use, Big Cottonwood Canyon, Salt Lake County, Utah*. Urban and Engineering Geology Section. Available at:

- [https://ugspub.nr.utah.gov/publications/reports\\_of\\_investigations/RI-147.pdf](https://ugspub.nr.utah.gov/publications/reports_of_investigations/RI-147.pdf). Accessed April 10, 2024.
- Lyneis, Margaret M. 1982. Prehistory in the southern Great Basin. In *Man and Environment in the Great Basin*, edited by D.B. Madsen and J.F. O'Connell, pp. 172–185. SAA Papers No. 2. Washington, D.C.: Society for American Archaeology.
- Madsen, David B. 1975. Dating Paiute-Shoshoni Expansion in the Great Basin. *American Antiquity* 40:82–86.
- . 1983. *Black Rock Cave Revisited*. Salt Lake City, Utah: Bureau of Land Management Cultural Resource Series No. 14.
- . 1986. *Exploring the Fremont*. Salt Lake City: University of Utah Press.
- Madsen, David B., Charles G. Oviatt, and Dave N. Schmitt. 2005. A geomorphic, environmental, and cultural history of the Camels Back Cave Region. In *Camels Back Cave*, edited by D.N. Schmitt and D.B. Madsen, pp. 136–177. Anthropological Papers No. 125. Salt Lake City: University of Utah Press.
- Madsen, David, and David Rhode (eds). 1994. *Across the West: Human Population Movement and the Expansion of the Numa*. Salt Lake City: University of Utah Press.
- Madsen, David B., and Dave N. Schmitt. 2005. *Buzz-Cut Dune and Fremont Foraging at the Margin of Horticulture*. Salt Lake City: University of Utah Anthropological Papers Number 124.
- Madsen, David B., and Stephen R. Simms. 1998. The Fremont complex: a behavioral perspective. *Journal of World Prehistory* 12:255–336.
- Marwitt, John P. 1986. Fremont Cultures. In *Handbook of North American Indians Vol. 11: Great Basin*, edited by W.L. D'Azevedo, pp.161–172. Washington, D.C.: Smithsonian Institution Press.
- Massimino, Jacquelyn, and Duncan Metcalfe. 1999. New form for the Formative. *Utah Archaeology* 12:1–16.
- May, Dean L. 1987. *Utah: A People's History*. Salt Lake City: University of Utah Press.
- Miller, Rod. 2008. *Massacre at Bear River: First, Worst, Forgotten*. Caxton Press, Caldwell, Idaho.
- Mountain Project. 2024. *Climbing Map of Big Cottonwood Canyon*. Available at: <https://www.mountainproject.com/map/105739280/big-cottonwood-canyon>. Accessed April 10, 2024

- Multi-Resolution Land Characteristics Consortium (MRLC Consortium). 2021. National Land Cover Database 2021. Available at: <https://www.mrlc.gov/data/nlcd-2021-land-cover-conus>. Accessed April 10, 2024.
- Murphy, R.F., and Y. Murphy. 1986. Northern Shoshone and Bannock. In *Great Basin*, edited by W.L. D'Azevedo, pp. 284–307. Handbook of North American Indians Vol. 11, W.C. Sturtevant, general editor. Washington, D.C.: Smithsonian Institution.
- National Oceanic and Atmospheric Administration. 2022. Glossary: Endangered Species Act. Available at: <https://www.fisheries.noaa.gov/laws-and-policies/glossary-endangered-species-act#:~:text=Anadromous%20is%20the%20term%20that,and%20some%20species%20of%20sturgeon>. Accessed April 10, 2024.
- National Park Service. 1989. National Register of Historic Places registration form for Granite Hydroelectric Power Plant Historic District. Available at: [https://npgallery.nps.gov/NRHP/GetAsset/NRHP/89000283\\_text](https://npgallery.nps.gov/NRHP/GetAsset/NRHP/89000283_text). Accessed April 10, 2024.
- . 2021. The Great Basin. Available at: <https://www.nps.gov/grba/planyourvisit/the-great-basin.htm>. Accessed April 10, 2024.
- . 2024. Upland Vegetation and Soils. Available at: <https://www.nps.gov/im/ncpn/uplands.htm>. Accessed April 16, 2024.
- Native Ministries International. 2022a. Ute Indian Tribe of the Uintah and Ouray Reservation, Utah. Available at: <https://data.nativemi.org/tribal-directory/Details/ute-indian-tribe-of-the-uintah-ouray-reservation-utah-198435>. Accessed April 10, 2024.
- . 2022b. Confederated Tribes of the Goshute Reservation, Nevada and Utah. Available at: <https://data.nativemi.org/tribal-directory/Details/confederated-tribes-of-the-goshute-reservation-nevada-and-utah-198704>. Accessed April 10, 2024.
- NatureServe. 2009. International Classification Standard: Terrestrial Ecological Classifications. Data current as of February 6, 2009. Arlington, Virginia: NatureServe Central Database. Available at: <https://www.natureserve.org/products/terrestrial-ecological-systems-united-states>. Accessed April 10, 2024.
- . 2024a. *Myotis volans*. Long-legged myotis. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.102173/Myotis\\_volans](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.102173/Myotis_volans). Accessed April 10, 2024.
- . 2024b. *Myotis evotis*. Long-eared myotis. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.798516/Myotis\\_evotis](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.798516/Myotis_evotis). Accessed April 10, 2024.

- . 2024c. *Lithobates pipiens*. Northern leopard frog. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.101454/Lithobates\\_pipiens](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.101454/Lithobates_pipiens). Accessed April 10, 2024.
- . 2024d. *Succinea rusticana*. Rustic ambersnail. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.110825/Succinea\\_rusticana](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.110825/Succinea_rusticana). Accessed April 10, 2024.
- . 2024e. *Contopus cooperi*. Olive-sided flycatcher. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.102228/Contopus\\_cooperi](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.102228/Contopus_cooperi). Accessed April 10, 2024.
- . 2024f. *Cypseloides niger*. Black swift. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.101434/Cypseloides\\_niger](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.101434/Cypseloides_niger). Accessed April 10, 2024.
- . 2024g. *Falco peregrinus*. Peregrine falcon. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.102654/Falco\\_peregrinus](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.102654/Falco_peregrinus). Accessed April 10, 2024.
- . 2024h. *Haliaeetus leucocephalus*. Bald eagle. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.104470/Haliaeetus\\_leucocephalus](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.104470/Haliaeetus_leucocephalus). Accessed April 10, 2024.
- . 2024i. *Melanerpes lewis*. Lewis' woodpecker. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.106409/Melanerpes\\_lewis](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.106409/Melanerpes_lewis). Accessed April 10, 2024.
- . 2024j. *Bombus occidentalis*. Western bumble bee. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.916920/Bombus\\_occidentalis](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.916920/Bombus_occidentalis). Accessed April 10, 2024.
- . 2024k. *Canis lupus*. Gray wolf. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.105212/Canis\\_lupus](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.105212/Canis_lupus). Accessed April 10, 2024.
- . 2024l. *Corynorhinus townsendii*. Townsend's big-eared bat. Available at: [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.103228/Corynorhinus\\_townsendii](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.103228/Corynorhinus_townsendii). Accessed April 10, 2024.
- Northwestern Band of the Shoshone Nation. 2024. The Shoshone. Available at: <https://www.nwbsoshone.com/history/>. Accessed April 10, 2024.
- O'Neil, Floyd A. 1971. The reluctant suzerainty: the Uintah and Ouray Reservation. *Utah Historical Quarterly* 39(2):129–144. Available at: [https://issuu.com/utah10/docs/uhq\\_volume39\\_1971\\_number2/s/109630](https://issuu.com/utah10/docs/uhq_volume39_1971_number2/s/109630). Accessed April 10, 2024.

- O'Neil, Floyd A., and Kathryn L. MacKay. 1979. *A History of the Uintah-Ouray Ute Lands*. American West Center Occasional Papers. Salt Lake City: University of Utah Press.
- PacifiCorp. 1998. *License Application for the Stairs Hydroelectric Project, FERC Project No. 597-003*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=19980625-0332](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=19980625-0332). Accessed April 10, 2024.
- . 1999. Final Environmental Assessment for Hydropower License, FERC Project No. 597-003. Available at: <https://elibrary.ferc.gov/eLibrary>. Accessed April 10, 2024.
- . 2000. *Minimum Flow Plan for the Stairs Hydroelectric Project, FERC Project No. 597-003*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=20010109-0129](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=20010109-0129). Accessed April 10, 2024.
- . 2008. *Revised Minimum Flow Plan for the Stairs Hydroelectric Project, FERC Project No. 597-003*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=20081125-5028](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=20081125-5028). Accessed April 10, 2024.
- . 2011. *Application for Exemption of Small Conduit Hydroelectric Facility: Granite Hydroelectric Project, FERC No. 14293*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=20110927-5060](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=20110927-5060). Accessed April 10, 2024.
- . 2013. *Storm Mountain Dam Vegetation Management Plan and Embankment Vegetation Removal Project Completion*. Available at: [https://elibrary.ferc.gov/eLibrary/docinfo?accession\\_number=20131101-5013](https://elibrary.ferc.gov/eLibrary/docinfo?accession_number=20131101-5013). Accessed April 10, 2024.
- . 2024. Hydro. Available at: <https://www.pacificorp.com/energy/hydro.html>. Accessed April 10, 2024.
- Paiute Indian Tribe of Utah. 2023. Home page. Available at: <https://pitu.gov/>. Accessed April 10, 2024.
- Peterson, Charles S., and Linda E. Speth. 1980. *A History of the Wasatch-Cache National Forest, Utah State University, Logan, Utah*. Submitted to Wasatch-Cache National Forest. Copies available from the Uinta-Wasatch-Cache National Forest, South Jordan, Utah. Available at: [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5053310.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5053310.pdf). Accessed April 10, 2024.
- Poll, Richard D., Thomas G. Alexander, Eugene E. Campbell, and David E. Miller. 1989. *Utah's History*. Logan: Utah State University Press.

- Powder. 2024. Utah Ski Resort Building First Mountain Biking Trail. Available at: <https://www.powder.com/trending-news/brighton-new-mtb-trail>. Accessed April 10, 2024.
- Reid, Kenneth C., Kenneth P. Cannon, Molly B. Cannon, Joel L. Pederson, Jonathan M. Peart, Houston Martin, and John Blong. 2017. *Archaeological Investigations: Bear River Massacre National Historic Landmark, Franklin County, Idaho*. Washington, D.C.: National Park Service.
- Rosier, Charlie. 2024. Personal communication, email from Charlie Rosier, Recreation, Lands, and Special Uses Permit Administrator, USFS, to Emily Waters, SWCA Environmental Consultants, February 12, 2024.
- Salt Lake County. 2003. *Big Cottonwood Creek Guide, A Handbook for Riparian and Aquatic Habitat*. Available at: <https://geodata.geology.utah.gov/pages/download.php?direct=1&noattach=true&ref=7916&ext=pdf&k=>. Accessed April 10, 2024.
- . 2020a. Weeds. Available at: <https://slco.org/health/weeds/>. Accessed April 10, 2024.
- . 2020b. *Wasatch Canyons General Plan*. Available at: <https://slco.org/globalassets/1-site-files/planning--transportation/wasatch-canyons/wasatch-canyons-general-plan-update-slco.pdf>. Accessed May 14, 2024.
- Schwager, K., and Cowley, P. 2000. Big Cottonwood Creek Stream Survey Report. U.S. Department of Agriculture Wasatch-Cache National Forest Salt Lake Ranger District. Available at: <https://slco.org/globalassets/1-site-files/watershed/watershed-library/bigctnwdcrstrsurvrpt2000.pdf?v=04012022104407507>. Accessed April 10, 2024.
- Schmitt, Dave N., and David B. Madsen. 2005. *Camels Back Cave*. University of Utah Anthropological Papers No. 125. Salt Lake City: University of Utah Press.
- Schroedl, Alan R. 1991. Paleo-Indian Occupation in the Eastern Great Basin and Northern Colorado Plateau. *Utah Archaeology* 1991:1–15.
- Schwantes, C. 1991. *Mountain Shadows*. Lincoln: University of Nebraska Press.
- Seddon, Matthew T. 2005. The Paleoindian era. In *Kern River 2003 Expansion Project Utah - Volume VI: Synthesis of Regional Archaeological Data*, edited by A.D. Reed, M.T. Seddon, and H.K. Stettler. Montrose, Colorado: Alpine Archaeological Consultants, Inc., and Salt Lake City, Utah: SWCA Environmental Consultants. On file at the Utah Division of State History.
- Shimkin, D.B. 1986. Eastern Shoshone. In *Great Basin*, edited by W.L. D'Azevedo, pp. 308–335. Handbook of North American Indians Vol. 11, W.C. Sturtevant, general editor. Washington, D.C.: Smithsonian Institution.

- Shivwits Band of Paiutes. 2024. Shivwits Band History. Available at: <https://shivwits.org/shivwits-band-history/>. Accessed April 10, 2024.
- Shoshone-Bannock Tribes. 2021. Shoshone-Bannock Tribes. Available at: <http://www.sbtribes.com/about/>. Accessed April 10, 2024.
- Sillitoe, Linda. 1996. *A History of Salt Lake County*. Utah Centennial County History Series. Salt Lake City: Utah State Historical Society.
- Simms, Steven R., and Kathleen M. Heath. 1990. Site structure of the Orbit Inn: an application of ethnoarchaeology. *American Antiquity* 55(4):797–813.
- Simms, Steven R., and La Mar W. Lindsay. 1989. 42Md300, An early Holocene site in the Sevier Desert. *Utah Archaeology* 1989:56–66.
- Slater, Mike. 2024. Personal communication, email from Mike Slater, Central Region Sportfish Project Leader, UDWR, to Caitlyn Reilley, SWCA Environmental Consultants, January 23, 2024.
- Solitude Mountain Resort. 2024. Nordic and Snowshoe. Available at: <https://www.solitudemountain.com/things-to-do/nordic-and-snowshoe>. Accessed April 10, 2024.
- Spangler, Jerry D. 1995. *Paradigms and Perspectives: A Class I Overview of Cultural Resources in the Uinta Basin and Tavaputs Plateau Vol. 2*. Three volumes. Salt Lake City, Utah: Uinta Research.
- Spaulding, W. Geoffrey. 1994. *Kern River Pipeline Cultural Resources Data Recovery Report: Utah*. Prepared for Kern River Gas Transmission Company. Las Vegas, Nevada: Dames and Moore. On file at the Nevada State Historic Preservation Office.
- Steward, Julian H. 1937. *Ancient Caves of the Great Salt Lake Region*. Bureau of American Ethnology Bulletin 116. Washington, D.C.: Smithsonian Institution.
- . 1997. *Basin-Plateau Aboriginal Sociopolitical Groups*. University of Utah Press, Salt Lake City. Reprinted. Originally published 1938, Bulletin 120, Bureau of American Ethnology, Smithsonian Institution, Washington D.C.
- TAG Historical Research and Consulting. 2016. *Grace Dam Historic Context*. Available at: [https://apps.itd.idaho.gov/apps/env/cultural/ENV\\_GraceDamContext2017.pdf](https://apps.itd.idaho.gov/apps/env/cultural/ENV_GraceDamContext2017.pdf). Accessed April 10, 2024.
- U.S. Census Bureau 2021a. American Community Survey Table B03002: Hispanic or Latino Origin by Race. 5-year averages ending 2021. Available at: <https://data.census.gov/table?q=B03002>. Accessed April 10, 2024.
- . 2021b. American Community Survey Table C17002: Ratio of Income to Poverty Level in the Past 12 Months. 5-year averages ending in 2021. Available at:

- [https://data.census.gov/table/ACSDT5YSPT2021.C17002?q=C17002:+Ratio+of+Income+to+Poverty+Level+in+the+Past+12+Months&g=040XX00US49\\_050XX00US49035&moe=true&mode=results](https://data.census.gov/table/ACSDT5YSPT2021.C17002?q=C17002:+Ratio+of+Income+to+Poverty+Level+in+the+Past+12+Months&g=040XX00US49_050XX00US49035&moe=true&mode=results). Accessed April 10, 2024.
- . 2024a. QuickFacts: Utah; Salt Lake County, Utah; Cottonwood Heights City, Utah. Available at: <https://www.census.gov/quickfacts/fact/table/UT,saltlakecountyutah,cottonwoodheightsci tyutah/PST045222>. Accessed April 10, 2024.
- . 2024b. Population Estimates Program. Available at: <https://www.census.gov/programs-surveys/popest.html>. Accessed: May 14, 2024.
- . 2024c. Cottonwood Heights City, Utah. Available at: [https://data.census.gov/profile/Cottonwood\\_Heights\\_city,\\_Utah?g=160XX00US4916270](https://data.census.gov/profile/Cottonwood_Heights_city,_Utah?g=160XX00US4916270). Accessed April 10, 2024.
- . 2024d. Salt Lake County, Utah. Available at: [https://data.census.gov/profile/Salt\\_Lake\\_County,\\_Utah?g=050XX00US49035](https://data.census.gov/profile/Salt_Lake_County,_Utah?g=050XX00US49035). Accessed April 10, 2024.
- . 2024e. U.S. Census Data Table S2401: Occupation by Sex for the Civilian Employed Population 16 Years and Over; Salt Lake County and Cottonwood Heights City, Utah. Available at: [https://data.census.gov/table/ACSST5Y2021.S2401?g=050XX00US49035\\_160XX00US4916270](https://data.census.gov/table/ACSST5Y2021.S2401?g=050XX00US49035_160XX00US4916270). Accessed April 10, 2024.
- . 2024f. Utah. Available at: <https://data.census.gov/profile/Utah?g=040XX00US49>. Accessed April 10, 2024.
- U.S. Environmental Protection Agency (EPA). 2022a. Big Cottonwood Creek-2. Overview of Total Maximum Daily Loads (TMDLs). Available at: [https://mywaterway.epa.gov/waterbody-report/UTAHDWQ/UT16020204-020\\_00/2022](https://mywaterway.epa.gov/waterbody-report/UTAHDWQ/UT16020204-020_00/2022). Accessed April 10, 2024.
- . 2022b. Level III and IV Ecoregions of Utah. Available at: <https://www.epa.gov/eco-research/ecoregion-download-files-state-region-8#pane-42>. Accessed April 10, 2024.
- U.S. Fish and Wildlife Service (USFWS). 2006. Gray Wolf Biology Questions and Answers. Available at: <https://fwp.mt.gov/binaries/content/assets/fwp/conservation/wildlife-reports/wolf/qandasgraywolfbiology.pdf>. Accessed April 10, 2024.
- . 2022. Monarch butterfly (*Danaus plexippus*). Environmental Conservation Online System. Available at: <https://ecos.fws.gov/ecp/species/9743>. Accessed October 25, 2023.
- . 2024a. Information for Planning and Consultation (IPaC) tool. Available at: <https://ipac.ecosphere.fws.gov/>. Accessed April 10, 2024.
- . 2024b. Gray wolf. Overview. Available at: <https://www.fws.gov/species/gray-wolf-canis-lupus>. Accessed April 10, 2024.

- . 2024c. Canada lynx (*Lynx canadensis*). Environmental Conservation Online System. Available at: <https://ecos.fws.gov/ecp/species/3652>. Accessed April 10, 2024.
- . 2024d. National Wetlands Inventory Mapping. Available at: <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>. Accessed April 10, 2024.
- U.S. Forest Service (USFS). 1995. *Landscape Aesthetics, A Handbook for Scenery Management*. Agriculture Handbook Number 701. Available at: [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5412126.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5412126.pdf). Accessed April 10, 2024.
- . 2003. *Revised Forest Plan Wasatch-Cache National Forest*. Available at: [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5347083.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5347083.pdf). Accessed April 10, 2024.
- . 2016. Intermountain Region (R4) Threatened, Endangered, Proposed, and Sensitive Species Known/Suspected Distribution by Forest. Available at: [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5370041.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5370041.pdf). Accessed April 10, 2024.
- . 2023. *Visitor Use Report: Uinta-Wasatch-Cache NF, USDA Forest Service Region 4, National Visitor Use Monitoring, Data Collected FY 2017*. Available at: [https://apps.fs.usda.gov/nvum/results/ReportCache/2017\\_A04119\\_Master\\_Report.pdf](https://apps.fs.usda.gov/nvum/results/ReportCache/2017_A04119_Master_Report.pdf). Accessed October 27, 2023.
- . 2024a. Storm Mountain Amphitheater. Available at: <https://www.fs.usda.gov/recarea/uwcnf/recarea/?recid=9715>. Accessed April 10, 2024.
- . 2024b. Recreation. Available at: <https://www.fs.usda.gov/recmain/uwcnf/recreation>. Accessed April 10, 2024.
- . 2024c. Visitor Use Report: Uinta-Wasatch-Cache NF, USDA Forest Service Region 4, National Visitor Use Monitoring, Data Collected FY 2017. Available at: [https://apps.fs.usda.gov/nvum/results/ReportCache/2017\\_A04119\\_Master\\_Report.pdf](https://apps.fs.usda.gov/nvum/results/ReportCache/2017_A04119_Master_Report.pdf). Accessed April 10, 2024.
- U.S. Geological Survey (USGS). 2023a. USGS National Hydrography Dataset (NHD) FileGDB. Available at: <https://prd-tnm.s3.amazonaws.com/index.html?prefix=StagedProducts/Hydrography/NHD/State/GDB/>. Accessed April 10, 2024.
- . 2023b. USGS National Water Information System: USGS 10168300 Tailrace at Stairs Plant near Salt Lake City, Utah. Available at: [https://waterdata.usgs.gov/nwis/inventory?site\\_no=10168300&agency\\_cd=USGS](https://waterdata.usgs.gov/nwis/inventory?site_no=10168300&agency_cd=USGS). Accessed April 10, 2024.

- \_\_\_\_\_. 2024. Great Salt Lake Hydro Mapper. Available at: <https://webapps.usgs.gov/gsl/>. Accessed April 10, 2024.
- Utah American Indian Digital Archive (UAIDA). 2008a. Goshute. Available at: <https://utahindians.org/archives/goshute.html>. Accessed April 10, 2024.
- \_\_\_\_\_. 2008b. History: The Paiutes. Available at: <https://utahindians.org/archives/paiutes/history.html>. Accessed April 10, 2024.
- Utah Department of Agriculture and Food. 2022. State of Utah noxious weed list. Available at: <https://ag.utah.gov/plant-industry/noxious-weed-control-resources/state-of-utah-noxious-weed-list/>. Accessed April 10, 2024.
- Utah Department of Environmental Quality (UDEQ). 2024a. Beneficial Uses and Water Quality Assessment Map: Big Cottonwood Creek. Available at: <https://wq.deq.utah.gov/>. Accessed April 10, 2024.
- \_\_\_\_\_. 2024b. Utah Environmental Interactive Map. Available at: <https://enviro.deq.utah.gov/>. Accessed April 10, 2024.
- Utah Department of Natural Resources (UDNR). 2019. *Utah's Statewide Comprehensive Outdoor Recreation Plan 2019–2023*. Available at: <https://site.utah.gov/stateparks/wp-content/uploads/sites/13/2019/01/UtahsOutdoorRecreationPlanSCORP2019.pdf>. Accessed April 10, 2024.
- \_\_\_\_\_. 2022a. Commonly Asked Questions About Utah's Great Salt Lake and Ancient Lake Bonneville. Available at: <https://geology.utah.gov/popular/great-salt-lake/commonly-asked-questions/>. Accessed April 10, 2024.
- \_\_\_\_\_. 2022b. Utah Upland Game Management Plan. Available at: [https://wildlife.utah.gov/pdf/uplandgame/2022\\_upland\\_game\\_management\\_plan.pdf](https://wildlife.utah.gov/pdf/uplandgame/2022_upland_game_management_plan.pdf). Accessed April 10, 2024.
- Utah Division of Indian Affairs. 2019. Confederated Tribes of the Goshutes. Available at: [indian.utah.gov/confederated-tribes-of-the-goshutes/](http://indian.utah.gov/confederated-tribes-of-the-goshutes/). Accessed April 10, 2024.
- \_\_\_\_\_. 2024a. Northwestern Band of Shoshone. Available at: <https://indian.utah.gov/northwestern-band-of-shoshone/>. Accessed April 10, 2024.
- \_\_\_\_\_. 2024b. Ute Indian Tribe of the Uintah and Ouray Reservation. Available at: <https://indian.utah.gov/ute-indian-tribe-of-the-uintah-ouray-reservation/>. Accessed April 10, 2024.
- \_\_\_\_\_. 2024c. Skull Valley Band of Goshute. Available at: <https://indian.utah.gov/skull-valley-band-of-goshute/>. Accessed April 10, 2024.
- \_\_\_\_\_. 2024d. Paiute Indian Tribe of Utah. Available at: <https://indian.utah.gov/paiute-indian-tribe-of-utah/>. Accessed April 10, 2024.

Utah Division of Water Rights. 2024. Water Right Details, Water Right: 57-10292. Available at: [https://waterrights.utah.gov/asp\\_apps/wrprint/wrprint.asp?wrnum=57-10292](https://waterrights.utah.gov/asp_apps/wrprint/wrprint.asp?wrnum=57-10292). Accessed April 10, 2024.

Utah Division of Wildlife Resources (UDWR). 2021. Utah's Species of Greatest Conservation Need. Available at: <https://wildlife.utah.gov/pdf/WAP/2021-10-sgcgn-list.pdf>. Accessed April 10, 2024.

———. 2024a. 2023 Fish Stocking Information. Available at: <https://dwrapps.utah.gov/fishstocking/Fish>. Accessed April 10, 2024.

———. 2024b. Fish stocking reports for Twin Lakes Reservoir and Silver Lake, Utah. Available at: [https://dwrapps.utah.gov/fishing/fStart?NA=Silver%20Lake%20\(Big%20Cottonwood%20Canyon\)](https://dwrapps.utah.gov/fishing/fStart?NA=Silver%20Lake%20(Big%20Cottonwood%20Canyon)). Accessed April 10, 2024.

———. 2024c. Utah Natural Heritage Program Online Species Search Report. Available at: <https://wildlife.utah.gov/natural-heritage.htmlucdc>. Accessed April 10, 2024.

Utah Geological Survey. 2000. *How was Utah's Topography Formed?* Available at: <https://geology.utah.gov/map-pub/survey-notes/glad-you-asked/how-was-utahs-topography-formed/>. Accessed April 10, 2024.

Utah Native Plant Society (UNPS). 2023. Utah Rare Plant Guide. Available at: [https://www.utahrareplants.org/rpg\\_species.html](https://www.utahrareplants.org/rpg_species.html). Accessed April 10, 2024.

Utah Office of Tourism. 2017. Utah Scenic Byways. Available at: [https://travel.utah.gov/wp-content/uploads/UOT-17\\_ScenicByways\\_Guide\\_digital.pdf](https://travel.utah.gov/wp-content/uploads/UOT-17_ScenicByways_Guide_digital.pdf). Accessed April 14, 2024.

———. 2023. Scenic Byways. Available at: <https://travel.utah.gov/scenic-byways/scenic-byways>. Accessed October 27, 2023.

Utah State University (USU). 2019. Jordan River Watershed. Available at: <https://streamsidescience.usu.edu/stream-side-science-in-your-watershed/Jordan-River-Watershed/index>. Accessed April 10, 2024.

Ute Indian Tribe Political Action Committee. 2020. About the Ute Tribe. Formerly available at: <https://utepac.com/>. Accessed April 10, 2024.

Warner, Ted. J. (Ed.) 1995. *The Domínguez-Escalante Journal: Their Expedition Through Colorado, Utah, Arizona, and New Mexico in 1776*. Salt Lake City: University of Utah Press.

Waymark. 2010. Stairs Station Hydroelectric Power Plant. Available at: [https://www.waymarking.com/waymarks/wm9QFJ\\_Stairs\\_Station\\_Hydroelectric\\_Power\\_Plant\\_Salt\\_Lake\\_City\\_Utah](https://www.waymarking.com/waymarks/wm9QFJ_Stairs_Station_Hydroelectric_Power_Plant_Salt_Lake_City_Utah). Accessed April 10, 2024.

Willey, Gordon R., and Philip Phillips. 1958. *Method and Theory in American Archaeology*. Illinois: University of Chicago Press.

Wooley, Ralf R. 1924. *Water Powers of the Great Salt Lake Basin*. Available at: <https://pubs.usgs.gov/wsp/0517/report.pdf>. Accessed April 10, 2024.

Young, David A., and R. L. Bettinger. 1992. The Numic Spread: A Computer Simulation. *American Antiquity* 57(1):85–99.

# DRAFT JOINT CONDUIT EXEMPTION AND LICENSE SURRENDER APPLICATION

## EXHIBIT F STRUCTURAL DRAWINGS

### STAIRS HYDROELECTRIC PROJECT (FERC PROJECT NO. 597)



*Prepared by:*



MAY 2024

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**EXHIBIT F: STRUCTURAL DRAWINGS**

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Exhibit F is a general set of design drawings of principal project works that must conform to the specifications of 18 CFR 4.41(g) and 18 CFR 4.39. The currently approved Exhibit F drawing for the Stairs Project (Exhibit F-1; FERC Drawing No. 597-1001) was submitted on June 24, 1998, with the previous license application and approved by FERC's September 30, 1999, Order Issuing Subsequent License (Minor Project). FERC Drawing No. 597-1001 currently depicts Project works that will no longer be part of a future conduit exemption. PacifiCorp is currently revising its engineering drawings to conform to the specifications of 18 CFR 4.41(g) and 18 CFR 4.39 and to depict only those Project works proposed for a future conduit exemption.

FERC Order No. 630, issued February 21, 2003, provides that the material prepared for Exhibit F is critical energy infrastructure information (CEII) and should be filed with FERC as confidential information pursuant to 18 CFR 388.112. Therefore, revised Exhibit F drawings to be filed with the final Joint Application will be electronically filed separately as privileged information.

# **DRAFT JOINT CONDUIT EXEMPTION AND LICENSE SURRENDER APPLICATION**

## **EXHIBIT G**

### **MAP OF THE PROJECT BOUNDARY**

#### **STAIRS HYDROELECTRIC PROJECT (FERC PROJECT NO. 597)**



*Prepared by:*



MAY 2024

## EXHIBIT G: MAP OF THE PROJECT BOUNDARY

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Exhibit G is a map of the Project and Project Boundary and must conform to the specifications of 18 CFR 4.41(h). As PacifiCorp is proposing changes to the current FERC Project Boundary, the maps provided in this exhibit depict the proposed modified Project Boundary. Final maps will be developed and filed with the final Joint Application.

### 1.1 EXISTING PROJECT BOUNDARY AND LAND OWNERSHIP

The current Stairs Project Boundary encompasses approximately 13.3 acres. The Project occupies federal (entirely within the UWCNF) and private PacifiCorp lands. There are no privately owned parcels within the Project Boundary besides those owned by PacifiCorp. The Project's existing Exhibit G (Project Boundary Maps) was submitted on June 24, 1998, (PacifiCorp 1998) and was approved on September 30, 1999, by FERC in its issuance of the new project license.

**TABLE G-1 LAND OWNERSHIP WITHIN THE CURRENT FEDERAL ENERGY REGULATORY COMMISSION PROJECT BOUNDARY**

LANDOWNER	AREA WITHIN CURRENT FERC PROJECT BOUNDARY
Federal	8.7 acres
PacifiCorp	4.6 acres
Total	13.3 acres

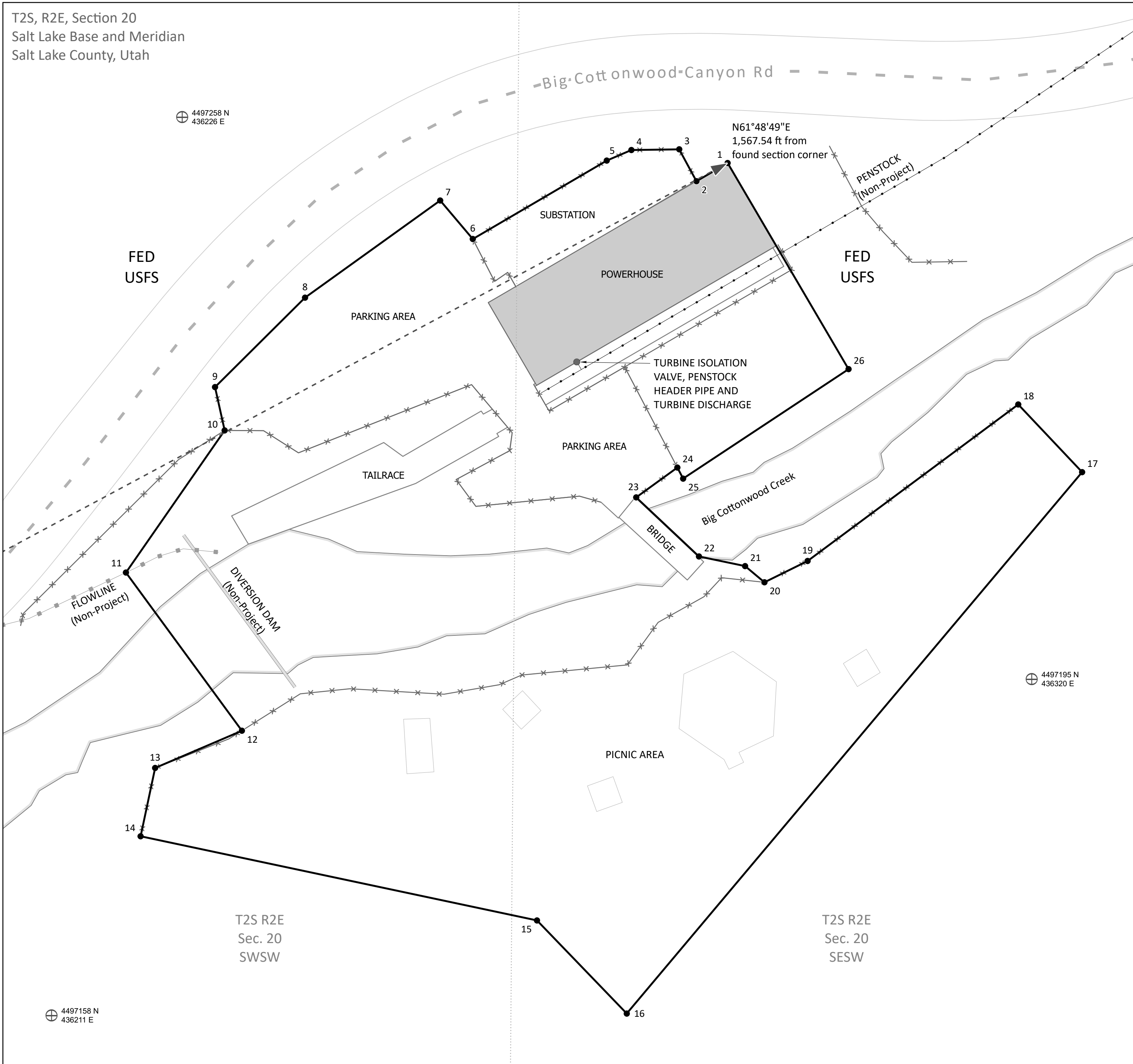
### 1.2 PROPOSED PROJECT BOUNDARY AND LAND OWNERSHIP

There would be no construction of new facilities, physical changes to current facilities, or changes to Project operations or maintenance under the Proposed Action; however, PacifiCorp believes that changes to the Project Boundary are warranted. Specifically, PacifiCorp is proposing to remove all portions of the current Project Boundary except for the area surrounding the Project powerhouse, tailrace, picnic area, and appurtenant facilities necessary for continued access to, operation, and maintenance of the Project. These changes are shown on Figure ES-3.

**TABLE G-2 LAND OWNERSHIP IN THE PROPOSED PROJECT BOUNDARY**

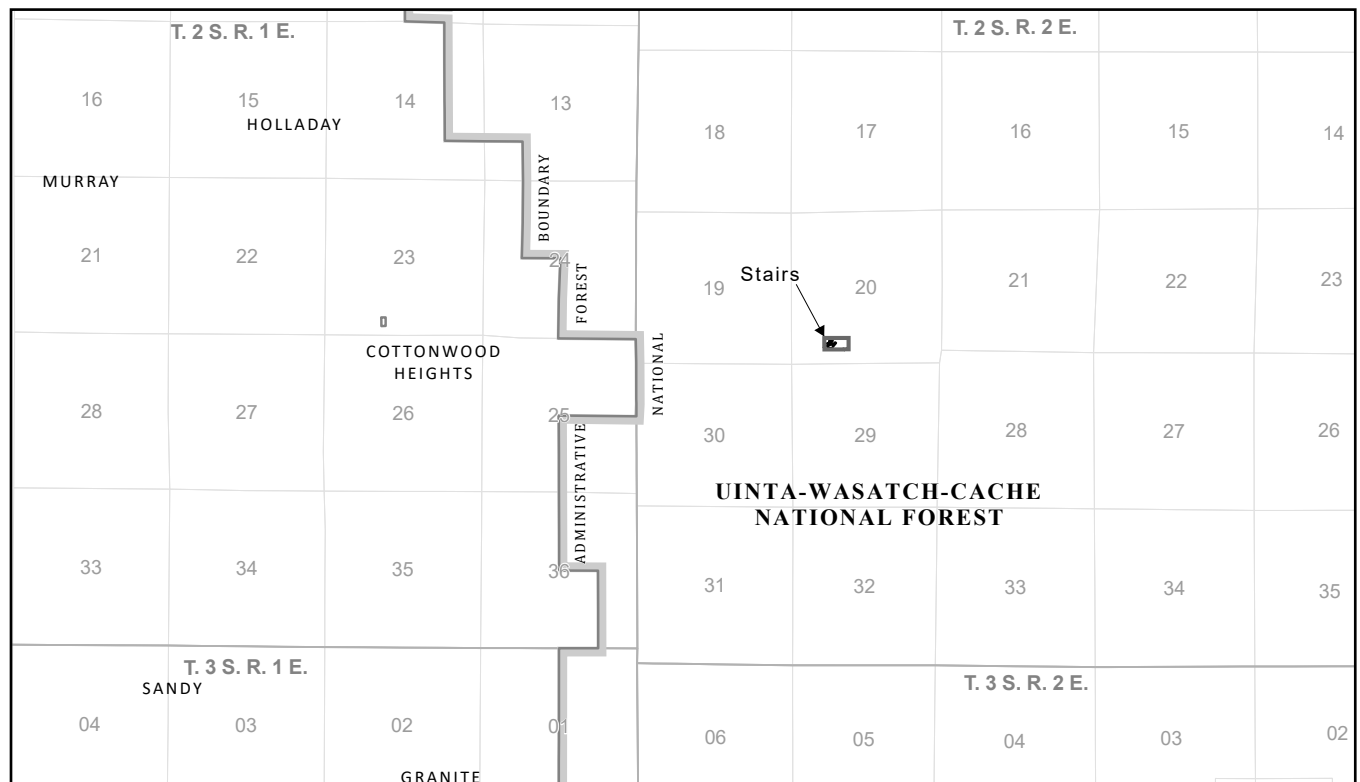
LANDOWNER	AREA WITHIN CURRENT FERC PROJECT BOUNDARY
Federal	1.0 acre
PacifiCorp	0.0 acre
Total	1.0 acre

T2S, R2E, Section 20  
Salt Lake Base and Meridian  
Salt Lake County, Utah



Project Boundary Table

Point	Northing (Meters)	Easting (Meters)	Bearing	Distance (feet)	Remarks
1	4497252	436286			BEGINNING AT THE SW CORNER OF SWSW SEC 20 T2S R2E SL MERIDIAN, SAID SW CORNER BEING A FOUND STONE CORNER MONUMENT; THENCE N61°48'49"E 1567.54 FEET (GIS CALCULATED) TO THE NE CORNER OF THE STAIRS POWERHOUSE
			S59°45'44"W	13	ALONG THE NORTHERN EDGE OF THE STAIRS POWERHOUSE
2	4497250	436283			INTX W/ ENDPOINT OF SUBSTATION FENCE; THENCE ALONG SUBSTATION FENCE LINE AS DESCRIBED BY THE FOLLOWING COURSES BETWEEN POINTS 2 AND 6:
			N28°23'49"W	13	
3	4497254	436281			
			S89°08'43"W	17	
4	4497254	436276			
			S66°48'39"W	10	
5	4497253	436273			
			S59°40'04"W	57	
6	4497244	436258			INTX W/ EAST EDGE OF PARKING AREA; THENCE ALONG PARKING AREA AS DESCRIBED BY THE FOLLOWING COURSES BETWEEN POINTS 6 AND 9:
			N40°16'50"W	18	
7	4497248	436254			
			S54°18'01"W	61	
8	4497238	436239			
			S45°11'31"W	46	
9	4497228	436229			INTX W/ ENDPOINT OF PARKING AREA FENCE AND GATE
			S12°29'44"E	16	
10	4497223	436230			INTX W/ FENCE CORNER
			S34°47'30"W	63	ALONG A STRAIGHT LINE TO A POINT ON THE FLOWLINE
11	4497207	436219			INTX W/ AN UNMARKED POINT ON THE FLOWLINE THAT IS LOCATED 25 FEET SOUTHWESTERLY FROM THE CREST OF DIVERSION DAM
			S36°15'18"E	71	ALONG A STRAIGHT LINE THAT IS 25 FEET PARALLEL TO THE CREST OF DIVERSION DAM
12	4497190	436232			INTX W/ AN UNMARKED POINT ON FENCE
			S66°46'49"W	34	APPROX. ALONG THE NORTH EDGE OF PICNIC AREA
13	4497185	436223			INTX W/ A CORNER POINT ON FENCE LINE
			S12°00'56"W	25	ALONG WEST EDGE OF FENCE LINE AND PICNIC AREA
14	4497178	436221			INTX W/ ENDPOINT OF FENCE LINE AND TOPOGRAPHIC BREAK AT WEST CORNER OF PICNIC AREA; THENCE ALONG THE SOUTHERLY EDGE OF PICNIC AREA/TOPOGRAPHIC BREAK LINE DESCRIBED BY THE FOLLOWING COURSES:
			S78°00'55"E	148	
15	4497168	436265			
			S43°57'45"E	47	
16	4497158	436275			
			N40°04'28"E	258	
17	4497218	436326			INTX W/ AN UNMARKED POINT ON EAST CORNER OF PICNIC AREA
			N43°21'17"W	34	ALONG EAST EDGE OF PICNIC AREA
18	4497226	436318			INTX W/ ENDPOINT OF FENCE LINE ON NORTHEAST CORNER OF PICNIC AREA; THENCE ALONG NORTH EDGE OF PICNIC AREA DESCRIBED BY THE FOLLOWING COURSES BETWEEN POINTS 18 AND 20:
			S53°23'59"W	96	
19	4497208	436295			
			S63°43'07"W	18	
20	4497206	436290			INTX W/ A CORNER ON FENCE LINE
			N50°09'07"W	9	ALONG A LINE TO THE TOPOGRAPHIC BREAK SOUTH OF BIG COTTONWOOD CREEK
21	4497208	436288			INTX W/ AN UNMARKED POINT ON A TOPOGRAPHIC BREAK ON THE SOUTH SHORELINE OF BIG COTTONWOOD CREEK
			N78°11'05"W	17	ALONG A LINE PARALLEL TO BRIDGE ABUTMENT WALL ON SOUTH SIDE OF BIG COTTONWOOD CREEK
22	4497209	436283			INTX W/ THE EAST EDGE OF BRIDGE
			N46°44'31"W	31	
23	4497215	436276			INTX W/ ENDPOINT OF PARKING AREA FENCE LINE; THENCE ALONG THE EAST EDGE OF THE PARKING AREA FENCE LINE AS DESCRIBED BY THE FOLLOWING COURSES BETWEEN POINTS 23 AND 24:
			N54°03'11"E	18	
24	4497219	436281			INTX W/ A CORNER ON FENCE LINE
			S27°38'30"E	5	
25	4497217	436281			INTX W/ AN UNMARKED POINT ON A TOPOGRAPHIC BREAK AND ROCK WALL ON THE NORTH SHORELINE OF BIG COTTONWOOD CREEK
			N56°30'17"E	72	ALONG TOPOGRAPHIC BREAK AND ROCK WALL ON THE NORTH SHORELINE OF BIG COTTONWOOD CREEK
26	4497230	436300			INTX W/ UNMARKED POINT ON TOPOGRAPHIC BREAK
			N30°25'08"W	87	ALONG A LINE PARALLEL TO THE EAST SIDE OF STAIRS POWERHOUSE
1	4497252	436286			THE NORTHEAST CORNER OF STAIRS POWERHOUSE



- Reference Point \*

Boundary Point \*\*

Tie

Project Boundary

Stairs Tailrace

Stairs Powerhouse

Project Facility Point

Picnic Area and Facilities

Penstock

Dam

Flowline
- Fence
- Highway
- Big Cottonwood Creek
- Qtr Qtr Section

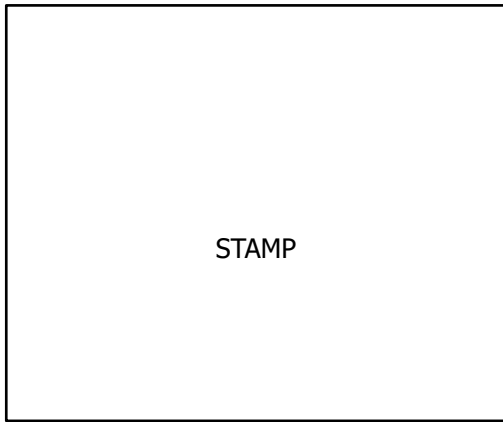
\* Reference Point coordinates are in UTM Zone 12, NAD 83, meters.

\*\* Boundary Point numbers correspond to the boundary description table on this sheet (G-1.)

Map Projection: NAD 1983 UTM Zone 12N Meters

MAP TEXT ABBREVIATIONS:

- FED = Federally Owned Land
- USFS = USDA Forest Service
- C.L. = Centerline
- INTX W/ = Intersects with



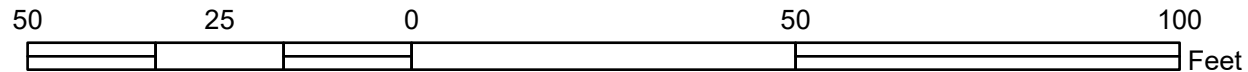
PROJECT BOUNDARY ACREAGE	
Total PacifiCorp Project Boundary:	00.00 ACRES
Federal Lands included within the project boundary:	1.4 ACRES

I hereby state that the project boundary represented on this drawing is developed with reasonable accuracy in accordance with FERC requirements. PLSS protractors were calculated based on PLSS monuments for SW20 T2S R2E and E/4 20 T2S R2E, and a witness corner on the E line of SE20 T2S R2E recovered by field survey by Meridian Engineering, Inc. Other data has been developed from surveys, orthophotos, and other sources including Federal, State, County, and PacifiCorp GIS sources. All reasonable efforts have been made to ensure that positional accuracy conforms to National Map Accuracy Standards for maps at 1:24,000 scale. Public Land Survey lines and Property lines are survey grade and are based on the Salt Lake Meridian.

PacifiCorp has reviewed the Project boundary shown herein. PacifiCorp either owns in fee simple or possesses the property rights for all non-federal lands drawn on this map that are inside the boundary.

Exhibit G-1  
Stairs Hydroelectric Project FERC No. 597  
Draft Joint Conduit Exemption & License Surrender Application

Project Boundary Map  
May 24, 2024  
Scale as Shown



Rev. 0b



**ATTACHMENT A**

**EVIDENCE OF PACIFICORP OWNERSHIP: ARTICLES OF INCORPORATION,  
MERGER WITH UTAH POWER AND LIGHT, AND ORIGINAL PROPERTY DEED FOR  
PROJECT AREA**

PacificCorp has all of the real property interests in the lands necessary to develop and operate the Project, such as a deed, option, or lease. The Stairs Project was first owned and constructed in 1895 by Robert M. Jones and the Big Cottonwood Power Company. Between the original construction date and 1912, the facility was sold to Utah Light and Railway Company, which later became Utah Power and Light Company; both are predecessor companies to PacificCorp. This Attachment, as well as Exhibit G, contain documentary evidence of the applicant's interest in and current ownership of the lands, as required by 18 CFR 4.31(b)(ii)(2)(ii).

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**FILED**  
IN THE OFFICE OF THE SECRETARY  
OF STATE OF THE STATE OF OREGON

JAN 9 1989

CORPORATION DIVISION

**ARTICLES OF MERGER  
OF**

**PACIFICORP AND UTAH POWER & LIGHT COMPANY NR✓  
WITH AND INTO  
PC/UP&L MERGING CORP.**

Pursuant to ORS 60.494 and 60.501 PC/UP&L Merging Corp., an Oregon corporation ("Merging Corp."), adopts the following Articles of Merger pursuant to which PacifiCorp, a Maine corporation ("PacifiCorp"), and Utah Power & Light Company, a Utah corporation ("UP&L") will be merged with and into Merging Corp.: \*

1. The Plan of Merger ("Plan") is attached as Exhibit A to these Articles of Merger.
2. As to each corporation participating in the merger, the designation, number of outstanding shares and number of votes entitled to be cast by each voting group entitled to vote separately on the Plan on the record date for determining the shareholders entitled to vote on the Plan, and the number of votes cast by each such voting group for and against the Plan are as follows:

A. PacifiCorp #000677-28

Designation of Shares Entitled to Vote as a Separate Voting Group

	<u>Common</u>	<u>5% Preferred</u>	<u>Serial Preferred</u>	<u>No Par Serial Preferred</u>
Number of Shares Outstanding	69,675,102	126,533	754,092	1,183,815
Number of Votes Entitled to be Cast	69,675,102	126,533	754,092	1,670,703
Number of Votes Cast For	47,212,261	99,675	440,923	1,056,028
Number of Votes Cast Against	1,339,236	6,115	5,676	1,854

HA  
1-9

B. UP&L

Designation of Shares Entitled to Vote as a Separate Voting Group

	<u>Common</u>	<u>Preferred, \$25 Par</u>
Number of Shares Outstanding	58,953,462	2,000,000
Number of Votes Entitled to be Cast	58,953,462	2,000,000
Number of Votes Cast For	43,954,062	1,199,677
Number of Votes Cast Against	952,936	57,244

C. Merging Corp.

Designation of Shares Entitled to Vote as a Separate Voting Group

	<u>Common</u>
Number of Shares Outstanding	100
Number of Votes Entitled to be Cast	100
Number of Votes Cast For	100
Number of Votes Cast Against	0

Dated: January 10, 1989

PC/UP&L MERGING CORP.

By *A. M. Gleason*  
A. M. Gleason, President

EXHIBIT A

PLAN OF MERGER

a. Parties. The names of the participating corporations in the merger ("Merger") are PacifiCorp, a Maine corporation ("PacifiCorp"), Utah Power & Light Company, a Utah corporation ("UP&L"), and PC/UP&L Merging Corp., an Oregon corporation ("Merging Corp."). Merging Corp. shall be the surviving corporation into which PacifiCorp and UP&L shall merge.

b. Terms and Conditions. Upon consummation of the Merger, PacifiCorp and UP&L each shall be merged with and into Merging Corp. in the manner and with the effect provided by the Maine Business Corporation Act ("MBCA"), the Utah Business Corporation Act ("UBCA"), and the Oregon Business Corporation Act, the separate existence of PacifiCorp and UP&L shall cease and thereupon UP&L, PacifiCorp, and Merging Corp. shall be a single corporation subject to the Articles of Incorporation, as amended pursuant to paragraph d. of this Plan of Merger, and Bylaws of Merging Corp.

c. Conversion of Shares. The manner and basis of converting the shares of each participating corporation into shares or securities of the surviving corporation shall be as follows:

(i) PacifiCorp Common Stock. Each share of PacifiCorp Common Stock, \$3.25 par value, which shall be outstanding immediately before the later of the time when the Articles of Merger are duly filed with the Secretary of State of the State of Maine, the time when a certificate of merger is issued by the Division of Corporations and Commercial Code of the State of Utah, and the time when Articles of Merger are duly filed with the Corporation Division of the State of Oregon ("Effective Time") shall by virtue of the Merger and without any action on the part of the holder thereof, cease to exist and be converted into and become one share of Merging Corp. Common Stock, \$3.25 par value ("Merging Corp. Common Stock").

(ii) PacifiCorp Preferred Stock. Each share of PacifiCorp Serial Preferred Stock, \$100 par value, each share of PacifiCorp 5% Preferred Stock, \$100 par value, and each share of PacifiCorp No Par Serial Preferred Stock (collectively, "PacifiCorp Preferred Stock") which shall be outstanding immediately before the Effective Time (other than shares with respect to

which the holder thereof has properly perfected dissenters' rights if the holders of PacifiCorp Preferred Stock shall be deemed to have the right to dissent under the MBCA) shall by virtue of the Merger and without any action on the part of the holder thereof, cease to exist and be converted into and become one share of that class and series of Merging Corp. Preferred Stock (collectively, "Merging Corp. Preferred Stock") bearing the same name as the share of PacifiCorp Preferred Stock that is converted.

(iii) UP&L Common Stock. Each share of UP&L Common Stock, \$6.40 par value ("UP&L Common Stock"), which shall be outstanding immediately before the Effective Time shall by virtue of the Merger and without any action on the part of the holder thereof, cease to exist and be converted into and become .909 shares of Merging Corp. Common Stock.

(iv) UP&L Cumulative Preferred Stock. Each share of UP&L Cumulative Preferred Stock (Series A through E), \$25 par value (the "UP&L Preferred Stock"), which shall be issued and outstanding immediately before the Effective Time (other than shares with respect to which the holder thereof has properly perfected dissenters' rights pursuant to Sections 16-10-75 and 16-10-76 of the UBCA) shall by virtue of the Merger and without any action on the part of the holder thereof, cease to exist and be converted into and become one share of that series of Merging Corp. No Par Serial Preferred Stock bearing the same dividend rate as the share of UP&L Preferred Stock that is converted.

(v) Surrender of Certificates. After the Effective Time, each holder of shares of PacifiCorp Common Stock, PacifiCorp Preferred Stock, UP&L Common Stock or UP&L Preferred Stock outstanding immediately prior to the Effective Time shall, upon surrender for cancellation of a certificate or certificates representing such shares to Merging Corp. or its agent designated for such purpose, be entitled to receive a certificate or certificates representing the number of shares of Merging Corp. Common Stock or Merging Corp. Preferred Stock into which such shares of PacifiCorp Common Stock, PacifiCorp Preferred Stock, UP&L Common Stock or UP&L Preferred Stock shall have been converted pursuant to the provisions of clauses (i), (ii), (iii), and (iv) of this paragraph c. Until so surrendered, the certificates which prior to the Merger represented shares of PacifiCorp Common Stock,

PacifiCorp Preferred Stock, UP&L Common Stock or UP&L Preferred Stock shall be deemed, for all corporate purposes, to evidence ownership of the shares of Merging Corp. Common Stock or Merging Corp. Preferred Stock into which such shares of PacifiCorp Common Stock, PacifiCorp Preferred Stock, UP&L Common Stock or UP&L Preferred Stock shall have been converted; provided, however, that no dividends with respect to shares of UP&L Common Stock or UP&L Preferred Stock shall be paid until the holder shall have surrendered certificates therefor, at which time the holder shall be paid the amount of dividends, if any, without interest, which shall theretofore have become payable with respect to the shares of Merging Corp. Common Stock or Merging Corp. Preferred Stock into which such shares shall have been converted. If any certificate for shares of Merging Corp. Common Stock or Merging Corp. Preferred Stock is to be issued in a name other than that in which the certificate surrendered in exchange therefor is registered, it shall be a condition of the issuance thereof that the certificate so surrendered shall be properly endorsed and otherwise in proper form for transfer, and that the person requesting such exchange pay to Merging Corp. or its agent designated for such purpose any transfer or other taxes required by reason of the issuance of a certificate for shares of Merging Corp. Common Stock or Merging Corp. Preferred Stock in any name other than that of the registered holder of the certificate surrendered, or establish to the satisfaction of Merging Corp. or its agent that such tax has been paid or is not payable.

(vi) Treasury Shares. At the Effective Time, all shares of PacifiCorp Common Stock or PacifiCorp Preferred Stock that shall then be held in its treasury, if any, and all shares of UP&L Common Stock or UP&L Preferred Stock that shall then be held in its treasury, if any, shall automatically cease to exist without being converted hereunder and all certificates representing such shares shall be canceled.

(vii) Certain Adjustments. If, between the date of the Agreement and the Effective Time, the outstanding shares of UP&L Common Stock or the outstanding shares of PacifiCorp Common Stock shall have been changed into a different number of shares or a different class by reason of any reclassification, recapitalization, stock split, stock dividend, exchange of shares, or similar adjustment, the number

of shares of UP&L Common Stock to be converted into shares of Merging Corp. stock by virtue of the Merger shall be appropriately adjusted.

(viii) Fractional Shares. No fractional shares of Merging Corp. Common Stock shall be issued in the Merger but, in lieu of any such fractional shares, each holder of shares of UP&L Common Stock who would otherwise have been entitled to a fraction of a share of Merging Corp. Common Stock upon surrender of stock certificates as provided in clause (v) of this paragraph c will upon such surrender be paid an amount of cash (without interest) determined by multiplying (a) \$35.713 by (b) the fractional share interest in Merging Corp. Common Stock to which such holder would otherwise be entitled pursuant to the terms of clause (iii) of this paragraph c.

(ix) Merging Corp. Common Stock. Each share of Merging Corp. Common Stock outstanding immediately prior to the Effective Time shall be deemed canceled and shall automatically cease to exist.

d. Amendments to Articles of Incorporation. As of the Effective Time, the Articles of Incorporation of Merging Corp. shall be amended and restated to read in their entirety as set forth in Exhibit B to the Agreement and Plan of Reorganization and Merger (the "Agreement") and attached hereto as Appendix I and incorporated herein.

e. Directors. The persons who shall serve as the directors of Merging Corp. from the Effective Time until the annual meeting of shareholders of Merging Corp. next following the Effective Time and thereafter until their successors shall have been elected and qualified, or until earlier death, resignation, or removal, and the class to which each such person shall belong, are as follows:

<u>Name</u>	<u>Class</u>
Charles M. Binkley .....	I
F. Paul Carlson .....	I
John C. Hampton .....	I
Betty E. Hawthorne .....	I
William D. Hendry .....	I
Philip H. Knight .....	I
A. M. Gleason .....	II
Stanley K. Hathaway .....	II
Louis B. Perry .....	II
Robert A. Skotheim .....	II
Roy A. Young .....	II

Richard C. Edgley .....	II
C. M. Bishop, Jr. ....	III
Don C. Frisbee .....	III
Eugene L. Shields .....	III
A. W. Sweet .....	III
Nancy Wilgenbusch .....	III

PacifiCorp shall name a replacement for any director provided for hereinabove who shall, prior to the Effective Time, be unable or unwilling to serve.

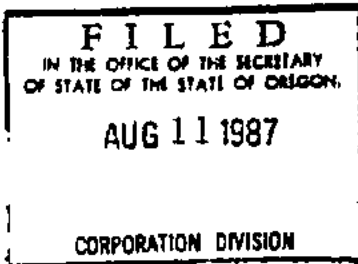
After the Effective Time, three additional directors of Merging Corp. will be designated under Section 3.4.7(b) of the Agreement.

f. Termination. This Plan of Merger may be terminated and abandoned at any time prior to the Effective Time by either UP&L or PacifiCorp by action of its Board of Directors in the event the Agreement is terminated.

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ARTICLES OF INCORPORATION  
OF  
PC/UP&L MERGING CORP.

ARTICLE I

The name of the corporation is PC/UP&L Merging Corp.  
and its duration shall be perpetual.

ARTICLE II

The purpose for which the corporation is organized is  
to engage in any lawful business for which corporations may be  
organized under the Oregon Business Corporation Act.

ARTICLE III

The aggregate number of shares which the corporation  
shall have authority to issue is 100 shares of common stock.

ARTICLE IV

The corporation shall indemnify to the fullest extent  
not prohibited by law any person who is made, or threatened to  
be made, a party to an action, suit or proceeding, whether  
civil, criminal, administrative, investigative, or otherwise  
(including an action, suit or proceeding by or in the right of  
the corporation) by reason of the fact that the person is or was  
a director, officer, employee or agent of the corporation or a  
fiduciary within the meaning of the Employee Retirement Income  
Security Act of 1974 with respect to any employee benefit plan

of the corporation, or serves or served at the request of the corporation as a director, officer, employee or agent, or as a fiduciary of an employee benefit plan, of another corporation, partnership, joint venture, trust or other enterprise. The corporation shall pay for or reimburse the reasonable expenses incurred by any such person in any such proceeding in advance of the final disposition of the proceeding to the fullest extent not prohibited by law. This Article shall not be deemed exclusive of any other provisions for indemnification or advancement of expenses of directors, officers, employees, agents and fiduciaries that may be included in any statute, bylaw, agreement, general or specific action of the board of directors, vote of shareholders or otherwise.

#### ARTICLE V

No director of the corporation shall be personally liable to the corporation or its shareholders for monetary damages for conduct as a director; provided that this Article V shall not eliminate the liability of a director for any act or omission for which such elimination of liability is not permitted under the Oregon Business Corporation Act. No amendment to the Oregon Business Corporation Act that further limits the acts or omissions for which elimination of liability is permitted shall affect the liability of a director for any act or omission which occurs prior to the effective date of such amendment.

#### ARTICLE VI

The name and address of the person who is to serve as director until the first annual meeting of shareholders or until a successor is elected and shall qualify are:

<u>Name</u>	<u>Address</u>
Don C. Frisbee	1600 Pacific First Federal Center 851 SW Sixth Avenue Portland, Oregon 97204

#### ARTICLE VII

The street address and the mailing address of the initial registered office of the corporation is 1600 Pacific First Federal Center, 851 SW Sixth Avenue, Portland, Oregon 97204 and the name of its initial registered agent at such address is Sally A. Nofziger.

#### ARTICLE VIII

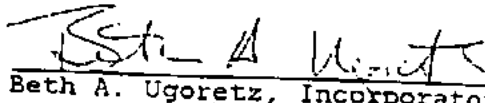
The name and address of the incorporator are:

<u>Name</u>	<u>Address</u>
Beth A. Ugoretz	900 SW Fifth Avenue Suite 2300 Portland, Oregon 97204

#### ARTICLE IX

The mailing address for the corporation for notices is Attention: Sally A. Nofziger, 1600 Pacific First Federal Center, 851 SW Sixth Avenue, Portland, Oregon 97204.

Executed: August 11, 1987.

  
Beth A. Ugoretz, Incorporator

# RESTATED ARTICLES OF INCORPORATION of PACIFICORP

## ARTICLE I

The name of the Company is PacificCorp.

## ARTICLE II

The purposes for which the Company is organized are the manufacture, production, generation, storage, utilization, purchase, sale, supply, transmission, distribution, or disposition of electric energy, natural or artificial gas, water or steam, or power produced thereby; and the transaction of any and all other lawful businesses for which corporations may be organized under the Oregon Business Corporation Act.

## ARTICLE III

(1) The total amount of the authorized capital stock of the Company is 319,626,533 shares, divided into 126,533 shares of 5% Preferred Stock of the par value of \$100 per share, 3,500,000 shares of Serial Preferred Stock of the par value of \$100 per share, 16,000,000 shares of No Par Serial Preferred Stock, without par value (the 5% Preferred Stock, the Serial Preferred Stock and the No Par Serial Preferred Stock collectively referred to herein as the "Senior Securities"), and 300,000,000 shares of Common Stock of the par value of \$3.25 per share.

(2) The 5% Preferred Stock, *pari passu* with the other Senior Securities, shall be entitled, but only when and as declared by the Board of Directors, out of funds legally available for the payment of dividends, in preference to the Common Stock, to dividends at the rate of 5 per centum (5%) per annum of the par value thereof, and no more, payable quarterly on February 15, May 15, August 15 and November 15 of each year or otherwise as the Board of Directors may determine (such dates, including any changes thereof, being hereinafter referred to as the "Payment Dates"), to shareholders of record as of a date to be fixed by the Board of Directors, not exceeding thirty (30) days and not less than ten (10) days preceding the Payment Dates, such dividends to be cumulative from the day immediately following the last period for which dividends on the 5% Preferred Stock of PacificCorp, a Maine corporation, have been declared (such date being hereinafter referred to as the "Accrual Date"). The Serial Preferred Stock, *pari passu* with the other Senior Securities, shall be entitled, but only when and as declared by the Board of Directors, out of funds legally available for the payment of dividends, in preference to the Common Stock, to dividends at the rate or rates, which may be subject to adjustment, as to each series thereof, fixed and determined pursuant to Section (5) or (6) of this Article at the time of the creation of such dividends to be cumulative from the date of issue of such stock or as otherwise provided in Section (6) of this Article. The No Par Serial Preferred Stock, *pari passu* with the other Senior Securities, shall be entitled, but only when and as declared by the Board of Directors, out of funds legally available for the payment of dividends, in preference to the Common Stock, to dividends at the rate or rates, which may be subject to adjustment, as to each series thereof, fixed and determined pursuant to Section (5) or (7) of this Article at the time of the creation of such dividends, and no more, payable as the Board of Directors may from time to time determine, such dividends to be cumulative from the date of issue of such stock or as otherwise provided in Section (7) of this Article.

(3) In the event of any voluntary liquidation, dissolution or winding up of the Company, the 5% Preferred Stock, *pari passu* with the other Senior Securities, shall also have a preference over the Common Stock until \$110 per share and five per centum (5%) per annum on the par value

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UTAH LIGHT AND TRACTION COMPANY, GRANTOR

TO

UTAH POWER & LIGHT COMPANY, GRANTEE

E-2 R-2 P.R. - 14 A-

22018

**Deed**

STATE OF UTAH } ss  
County of Morgan }

FILED FOR RECORD

and recorded January 27 A.D.  
1945, at 11:45 o'clock A. M, and  
recorded in book 10 page 485

Anna Sommer  
County Recorder

*Dated as of December 31, 1944*

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*File 20163-D*

PDQ

## D E E D

KNOW ALL MEN BY THESE PRESENTS: That UTAH LIGHT AND TRACTION COMPANY, a Corporation organized by Agreement of Consolidation between Utah Light and Railway Company and Salt Lake Light & Traction Company, September 18, 1914, under the laws of the State of Utah, hereinafter sometimes referred to as "Grantor," also hereinafter sometimes referred to as "Company", pursuant to action duly taken by the stockholders and directors thereof, does hereby transfer, grant, assign and convey unto the UTAH POWER & LIGHT COMPANY, hereinafter sometimes referred to as "Grantee," a Corporation organized under the laws of the State of Maine, qualified to do and doing business within the State of Utah, with its office and principal place of business therein at Salt Lake City, and being the owner of all the shares of the capital stock of said Utah Light and Traction Company, except Directors' qualifying shares, in consideration of One Dollar (\$1.00) and other good and valuable consideration to it in hand paid receipt of which is hereby acknowledged, including (1) assumption by Grantee of all liabilities including claims for damages pending against Grantor; (2) forgiveness of all indebtedness owing by Grantor to Grantee; (3) return to Grantor for cancellation of all its outstanding capital stock owned by Grantee, all and singular, the following described property, to-wit:

ALL OF THE COMPANY'S PROPERTY, including all electric generating plants; all water appropriations and water rights, reservoir, storage and flowage rights; all electric substations; all electric transmission lines, electric distribution lines and systems, and telephone lines; all lands of the Company, upon which the same are situated; all automobiles and other vehicles; all merchandise, equipment, stores, materials and supplies, tools, machines and machinery; all easements, licenses, rights of way, permits, municipal and other franchises, certificates of convenience and necessity, privileges, consents and rights for or appertaining to the construction, maintenance and operation of said property or any part thereof, through, in, over, under, across or upon any public street or highway, or the public lands of the United States or of any State, or other lands, public or private;

all furniture, office equipment and supplies; all contracts, agreements, leases and the business of the Company; together with all other property of the Company, real, personal or mixed, forming a part thereof or in anywise appertaining thereto; including but not limited to the following described property:

### PARAGRAPH ONE.

#### Electric Generating Plants.

The Electric Generating Plants, Developments and Stations of the Company, including all dams, reservoirs, diversion works, pipe lines, tunnels, canals, flumes, power houses, buildings, boilers, generators, machinery, poles, wires and other equipment; and all lands of the Company upon which the same are situated; and all other property of the Company, real, personal or mixed, forming a part thereof or appertaining thereto; together with all of the Company's water appropriations and water rights, reservoir, storage and flowage rights, licenses, easements, rights of way, permits, franchises, privileges, consents and rights for or relating to the construction, maintenance and operation thereof, including, but not limited to the following described property situated in the State of Utah:

(1) *Pioneer Hydroelectric Plant*, consisting of a waterway and generating station, situated on Ogden River in Sections 21 and 22, T. 6 N., R. 1 W., in Ogden City, including an undivided 125/280 interest in U. S. Pineview Reservoir pipe line situated in Sections 23 and 24, T. 6 N., R. 1 W., and Sections 16, 17, 18 and 19, T. 6 N., R. 1 E., S. L. B. & M., in Weber County, Utah.

#### (a) *Lands:*

1. Beginning in the south line of the NW  $\frac{1}{4}$  of Section 22, T. 6 N., R. 1 W., S. L. B. & M., at a point 232 feet east from the quarter corner common to Sections 21 and 22, said Township and Range, thence running east 54.25 feet, thence running in center line of existing power line N.  $0^{\circ} 31'$  E. 127.7 feet and N.  $7^{\circ} 40'$  E. 352.96 feet to south line of Ogden Canyon County Road, thence in south line of said road S.  $64^{\circ} 11'$  E. 48.17 feet, thence N.  $0^{\circ} 32'$  E. 199.7 feet, thence east 286.4 feet, thence North 660 feet to the north line of the SW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of said Section 22, thence west 660 feet to the west line of said Section 22, thence south 312.6 feet, thence west 78 feet, thence south 302.94 feet to the north bank of Western Canal, thence east 40 feet, more or less, to south right

A 2"

of way line of Ogden Canyon Road, thence southeasterly in south right of way line of said road to a point 521.06 feet, more or less, north and south  $89^{\circ} 01'$  east 222 feet from the aforesaid quarter corner, thence S.  $0^{\circ} 59'$  W. 310.4 feet, thence south  $89^{\circ} 01'$  E. 10.9 feet, thence south  $1^{\circ} 22'$  W. 207.7 feet to beginning, containing 12.59 acres, more or less, together with and including a right of way for pipe line over and across a portion of the S  $\frac{1}{2}$  of the NW  $\frac{1}{4}$  of Section 22, T. 6 N., R. 1 W., S. L. B. & M., described as follows:

Beginning at a point 1,755 feet south of the northeast corner of the northwest quarter of said Section 22, thence running west 1,985 feet to the east line of the NW  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of said Section 22, thence south 50 feet, thence east 1,985 feet, thence north 50 feet to beginning.

2. Beginning on the north line of the NW  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of Section 22, T. 6 N., R. 1 W., S. L. B. & M., at a point S  $89^{\circ} 46'$  E. 194.15 feet from the quarter corner common to Sections 21 and 22, Township and Range aforesaid, thence running S.  $89^{\circ} 46'$  E. in the north line of the NW  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of said Section 22, 78.10 feet, thence S.  $0^{\circ} 31'$  W. parallel to the section line between said Sections 21 and 22, 1320 feet, thence N.  $89^{\circ} 46'$  W. 251.25 feet, thence S.  $0^{\circ} 31'$  W. 273.05 feet, thence N.  $73^{\circ} 10'$  W. 32.3 feet, thence N.  $0^{\circ} 31'$  E. 603.41 feet to the north line of 16th Street at a point 33 feet north at right angles from the center line of said street (old Utah and Idaho Railroad) Ogden City survey, thence N.  $86^{\circ} 31'$  E. in the north line of 16th Street 190.8 feet, thence N.  $1^{\circ} 20'$  E. 968.23 feet to beginning and containing 4.33 acres, more or less. A212

Also all lands, rights or other property acquired by the Company or its predecessors in interest by and under the following deeds recorded in the records of the County Recorder of Weber County, Utah, which are hereby referred to for more particular descriptions of said lands and rights:

3. Pipe Line Right of Way:

(a) Deed dated October 10, 1895, from John H. and Caroline P. Winslow, et al., recorded December 13, 1895 in Book 26 of Deeds, page 168.

(b) Deed dated November 30, 1895 from J. C. and Robert Anderson, recorded December 14, 1895 in Book 26 of Deeds, page 186.

(c) Deed dated January 4, 1896, from Fred J. and Julia Kiesel, recorded January 7, 1896 in Book 26 of Deeds, page 215.

(d) Deed dated January 4, 1896, from F. H. Huff, recorded January 4, 1896 in Book A of Miscellaneous, page 540.

(e) Deed dated June 26, 1896 from William G. and Mary Wilson, recorded June 27, 1896 in Book D of Leases, page 360.

(f) Deed dated July 3, 1896 from Utah Powder Company recorded July 18, 1896, in Book 26 of Deeds, page 442.

(g) Deed dated August 21, 1896, from John H. and Caroline P. Winslow, recorded August 21, 1896, in Book 26 of Deeds, page 482.

(h) Deed dated May 27, 1896, from Geo. J. and Emma M. Kelly, recorded May 27, 1896, in Book 27 of Deeds, page 281.

(i) Deed dated April 16, 1918, from William G. and Mary W. Wilson, recorded June 25, 1918, in Book N of Leases, page 47.

(j) Deed dated April 16, 1918, from William G. and Mary W. Wilson, recorded June 25, 1918, in Book 83 of Deeds, page 324.

Excepting from the above an undivided one-half interest in pipe line right of way deeded by the Company to the United States of America, November 17, 1934, recorded November 20, 1934 in Book 122 of Deeds, page 200, in the records of the County Recorder of Weber County, Utah.

(b) *Water Rights:*

1. Deed dated November 27, 1893 from Charles K. Bannister and Emma W. Bannister, recorded November 28, 1893 in Book 19, page 569, in the records of the County Recorder of Weber County, Utah.

(a) Notice of appropriation of all the waters of Ogden River dated November 22, 1893 and recorded in Book D, page 84, in the records of the County Recorder of Weber County, Utah.

Subject to contract between the United States of America and the Ogden River Water Users Association and the "Company" dated October 18, 1934.

(2) *Weber Hydroelectric Plant*, consisting of a dam, reservoir, pipe line and generating station, situated on Weber River in Sections 28, 29 and 30, T. 5 N., R. 1 E., S. L. B. & M., near Ogden City, in Weber, Morgan and Davis Counties, Utah.

(a) *Lands:*

1. All right, title and interest of the Company to the use of the lands upon which said Weber Plant is located, as set forth in that certain Agreement between Union Pacific Railroad Company and Utah Light and Railway Company, dated August 1, 1908.

(b) *Water Rights:*

1. Deed dated January 2, 1908 from E. W. Wade, recorded January 4, 1908 in Book "A" of Water Claims, page 73 in the records of the County Recorder of Weber County, February 21, 1908 in Book 1 of Water Records, pages 4-5 in the records of the County Recorder of Morgan County and January 27, 1908 in Book "C" of Water Claims in the records of the County Recorder of Davis County.

(a) Notice of Appropriation of all waters of Weber River, being 500 cubic feet per second, dated December 4, 1902 and recorded in Book "A", page 50 of Water Claims in the records of the County Recorder of Weber County, Book "A" of Water Records, pages 78-9 in the records of the County Recorder of Morgan County and Book "C" of Water Claims, page 55 in the records of the County Recorder of Davis County.

2. Certificate of Appropriation of Water, No. 989 issued to the "Company" November 27, 1920 by the State Engineer of Utah for 0.025 of a second foot of a spring, with priority of July 16, 1910 and recorded in Book W-1 of Water Records in the records of the County Recorder of Morgan County.

Confirmed to the "Company" by Decree No. 7487, District Court of Weber County, Utah, June 2, 1937, for:

- 365 second feet of the flow of Weber River for power, priority 1903.
- 100 second feet of the flow of Weber River for storage power, priority 1903.
- 0.01 of a second foot of the flow of Weber River for Domestic Use, priority 1903.
- 0.02 of a second foot from Spring for Domestic Use, priority 1903.
- 0.025 of a second foot from Spring in Morgan County for Domestic Use, priority July 16, 1910.

Subject to contract between the United States of America, the Provo River Water Users' Association and the Weber River Water Users' Association, and the "Company", dated December 20, 1938.

(3) *Granite Hydroelectric Plant*, consisting of a dam, reservoir, pipe line, flume and generating station, situated on Big Cottonwood Creek in Section 25, T. 2 S., R. 1 E., and Sections 19, 20 and 30, T. 2 S., R. 2 E., S. L. B. & M. in Salt Lake County, Utah.

(a) *Lands:*

1. Beginning at the Northwest corner of the Northeast quarter of Section 25, T. 2 S., R. 1 E., S. L. B. & M., thence running South 2,034 feet to a point 606 feet North from the Southwest corner of said quarter Section, thence S. 82° 17' E. 2,664 feet to the east line of said Section 25, thence North 2,282 feet, more or less, to the Northeast corner of said Section 25, thence West 2,640 feet to the place of beginning. Containing 131.2 Acres, more or less.

Excepting from above described tract of land rights of way granted to Salt Lake City Corporation and Salt Lake County, recorded in the records of the County Recorder of Salt Lake County, December 26, 1905, in Book 7-G of Deeds, pages 22 and 23 and April 14, 1916 in Book 9-L of Deeds, pages 293 and 294.

(b) *Water Rights:*

1. Deed dated July 23, 1935 from Utah Power Company, recorded August 7, 1935 in Book 143 of Deeds, pages 523-5 in the records of the County Recorder of Salt Lake County, Utah.

(a) Notice of appropriation of all the water of Big Cottonwood Creek dated June 5, 1894 and recorded June 6, 1894, in Book "A" of Water Claims, page 230, in the records of the County Recorder of Salt Lake County, Utah.

(4) *Stairs Hydroelectric Plant*, consisting of a dam, reservoir, pipe line and generating station situated on Big Cottonwood Creek in Section 20, T. 2 S., R. 2 E., S. L. B. & M., in Salt Lake County, Utah.

(a) *Lands:*

1. Beginning at the southwest corner of the NE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 20, T. 2 S., R. 2 E., S. L. B. & M., thence running East 698.87 feet, thence N.  $0^{\circ} 03' W.$  453.2 feet, thence N.  $32^{\circ} 23' W.$  84.1 feet, thence West 68.44 feet, thence S.  $4^{\circ} 26' W.$  268.25 feet, thence N.  $78^{\circ} 46' W.$  575.1 feet, more or less, to the west side of the NE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of said Section 20, thence S.  $0^{\circ} 03' E.$  500 feet to beginning. Containing 7.7 acres, more or less.

(b) *Water Rights:*

1. Deed dated Dec. 2, 1893 from Robert M. Jones and Alice B. Jones, recorded Dec. 8, 1893 in Book "A" of Water Claims, pages 210-12, in the records of the County Recorder of Salt Lake County, Utah.

(a) Notice of Appropriation of all the water of Big Cottonwood Creek dated Oct. 26, 1891, and recorded May 15, 1893 in Book "A" of Water Claims, pages 188-9, in the records of the County Recorder of Salt Lake County, Utah.

(5) *Jordan Steam Electric Plant*, consisting of plant buildings, steam turbines, and generators, situated on Jordan River in Salt Lake City, Salt Lake County, Utah.

(a) *Lands:*

1. Beginning at a point 16.5 feet south of the Northwest Corner of Block 54, Plat "C", Salt Lake City Survey, thence running South 96.74 feet, thence East 11.71 feet to the west wall of the present power house building, thence South 76 feet, thence West 137.47 feet, thence North 132.22 feet, thence West 95.09 feet, more or less, to the east bank of Jordan River, thence South along the East bank of said River 382.48 feet, more or less, to the North line of the right of way of the O. S. L. Railroad, thence Northeasterly along said right of way to the Southeast corner of Lot 17, Block 1, Jones Subdivision of said Block 54, thence North 133.98 feet to the Northeast corner of Lot 15 of said Block 1, thence West 132 feet, thence

North 99 feet, thence West 528 feet to beginning and being a part of Blocks 1 and 2 of said Jones Subdivision, and part of Lot 4, Section 2, T. 1 S., R. 1 W., S. L. B. & M.

Including a perpetual right of way described as follows: Beginning at the Northeast corner of Lot 12, Block 1, said Jones Subdivision, thence running South one rod, thence West 748.85 feet, more or less, to the east bank of Jordan River, thence North one rod, thence East 748.85 feet, more or less, to beginning.

2. Beginning at the Northwest corner of Block 1, Jordan Addition to Salt Lake City, thence running South 361.24 feet to the Southwest corner of said Block 1, thence N. 83° 00' E. 411.49 feet to the west bank of Jordan River, thence down said river bank to the south line of South Temple Street, thence West to beginning, and being part of Section 2, T. 1 S., R. 1 W., S. L. B. & M. Containing 3.22 Acres, more or less. - SL-479

3. Beginning at a point 594 feet West and 610.5 feet South from the Northeast corner of Section 3, T. 1 S., R. 1 W., S. L. B. & M., thence running West 165 feet, thence South 138 feet, thence N. 80° 11' E. 167.6 feet, thence South 163.2 feet to the north right of way of the Western Pacific Railroad Company, thence N. 89° 33' E. along said right of way 245.7 feet, more or less, to the northerly right of way line of Los Angeles and Salt Lake Railroad Company, thence following said right of way Northeasterly 325.45 feet, N. 69° 00' E. 34.21 feet, N. 70° 45' E. 100 feet, N. 72° 55' E. 100 feet, N. 74° 45' E. 100 feet, N. 76° 45' E. 100 feet, N. 78° 45' E. 100 feet, N. 80° 45' E. 100 feet, N. 82° 35' E. 100 feet, and N. 83° 30' E. 159.4 feet to the west bank of Jordan River, thence down said River N. 5° 45' E. 209.1 feet, thence S. 83° 00' W. 676.5 feet, thence S. 76° 30' W. 783.75 feet, thence North 8.25 feet to beginning, and being a part of Lot 4, Section 2 and part of Lot 1, Section 3, T. 1 S., R. 1 W., S. L. B. & M. Containing 8.62 Acres, more or less. - SL-481

4. Beginning at a point 1,320 feet west, more or less, and 705.72 feet south from the northeast corner of Section 3, T. 1 S., R. 1 W., S. L. B. & M., thence running N. 80° 22' E. 542.3 feet, thence South 210.02 feet, thence West 534.6 feet, thence North 119.28 feet to beginning. Containing 2.02 Acres, more or less. - SL-482

5. All of Lots 1 to 12, inclusive, the west half of Lot 13 and Lots 15 to 22, inclusive, of Block 2; Lots 1 to 22, inclusive, of Block 3; Lots 1 to 11, inclusive, and Lots 16 to 19, inclusive, of Block 4; Lots 1, 2, 10, 11, 12, 13 and Lots 17 to 22, inclusive, of Block 5; Lots 1 to 15, inclusive, of Block 6 and Lots 1 to 11, inclusive, of Block 7, Jordan Addition to Salt Lake City. - SL-483

6. Beginning 36 rods West and 14 rods South from the northeast corner of Section 3, T. 1 S., R. 1 W., S. L. B. & M., thence running West 10 rods, thence South 9 rods, thence East 10 rods, thence North 9 rods, to beginning, containing 0.56 of an acre. - SL-484

7. Beginning 759 feet West and 748 feet South from the northeast corner of Section 3, T. 1 S., R. 1 W., S. L. B. & M., thence running S. 76.5 feet, thence East 165 feet, thence North 102.5 feet, thence S. 80° 11' W. 167.6 feet to beginning. - SL-485

(b) *Water Rights:*

1. Certificate of Appropriation of Water No. 86-B, issued Oct. 11, 1912, by the State Engineer of Utah for 10 second feet of the flow of Jordan River with priority of Sept. 13, 1909 and recorded in Book "B" of Water Claims, page 562, in the records of the County Recorder of Salt Lake County, Utah.

2. Certificate of Appropriation of Water No. 659 issued to the "Company" Dec. 20, 1917, by the State Engineer of Utah for 47.66 second feet of the flow of Jordan River with priority of June 14, 1910 and recorded in Book "C" of Water Claims, pages 41-2 in the records of the County Recorder of Salt Lake County, Utah.

3. Certificate of Appropriation of Water No. 1469, issued to the "Company" June 2, 1926 by the State Engineer of Utah for 75 second feet of the flow of Jordan River with priority of Nov. 22, 1923, and recorded in Book "C" of Water Claims, page 199 in the records of the County Recorder of Salt Lake County, Utah.

Also all other electric generating plants, developments and stations of the Company, or parts thereof, and all lands owned by the Company acquired for or in connection with the same, and all other properties of the Company, real, personal or mixed, forming a part thereof, or appertaining thereto, together with all of the Company's easements, licenses, rights of way, permits, privileges, franchises, consents and rights for or relating to the construction, maintenance and operation of the same.

## PARAGRAPH TWO.

## Substations, Switchyards and Switchracks.

The Electric Substations, Switchyards and Switchracks of The Company, including all buildings, motor generator sets, convertors, switchboards, rectifiers and storage batteries, structures, towers, poles, underground structures, conduits, equipment, appliances and devices for transforming, converting and distributing electric energy; and all lands of the Company upon which the same are situated; and all other property of the Company, real, personal or mixed, forming a part thereof, or appertaining thereto; together with all of the Company's easements, licenses, rights of way, permits, municipal and other franchises, certificates of convenience and necessity, privileges, consents, and rights for or relating to the construction, maintenance and

operation thereof, through, in, over, under, across or upon any public street or highway, or the public lands of the United States, or of any State, or other lands, public or private; including, but not limited to, the following described property:

(1) *Northeast 44-KV Substation*, consisting of substation structures, transformers and switches, situated at 134 Eleventh East Street, in Salt Lake City, Salt Lake County, Utah.

(a) *Lands:*

1. Beginning 175 feet south from the northeast corner of Lot 8, Block 29, Plat "F" Salt Lake City survey, thence running West 142.5 feet, thence South 155 feet to the south line of said Lot 8, thence East 142.5 feet, thence North 155 feet to the place of beginning.

Together with a right of way over alley-ways described as follows: Beginning at a point 132 feet south from the northeast corner of said Lot 8, thence running west 297 feet, thence south 10 feet, thence East 132.5 feet, thence southeasterly 14 1/6 feet, thence South 178 feet, thence East 12 feet, thence North 188 feet, thence East 142.5 feet, thence North 10 feet to the place of beginning.

2. Beginning at the northeast corner of Lot 1, Block 29, Plat "F", Salt Lake City Survey, thence running West 159 feet, thence South 40 feet, thence East 159 feet, thence North 40 feet, to the place of beginning.

Together with a perpetual right of way over a 10-foot alley on the south side of said land running the full length thereof and also a perpetual right of way over a strip of ground six (6) feet wide on the west side of said Lot One (1), Block 29, Plat "F," thence North 160 feet to the northwest corner of said lot to connect with an alley having an outlet on Eleventh East Street.

3. Sewer Right of Way. Easement dated Sept. 11, 1925 from Frank I. Kooyman and Elizabeth J. Kooyman, recorded Sept. 24, 1925 in Book 3-W of Liens and Leases, page 368.

(2) *Southeast 44-KV Substation*, consisting of substation structures, transformers and switches, situated at 2420 Highland Drive in Salt Lake City, Salt Lake County, Utah.

(a) *Lands:*

1. All of Lots One Hundred Twenty-seven (127), One Hundred Twenty-eight (128), One Hundred Twenty-nine (129) and One Hundred Thirty (130) in Highland Park Plat "B", a subdivision of part of Block Forty-six (46), Ten (10) Acre Plat "A", Big Field Survey, Salt Lake County, Utah.

(3) *Pioneer 44-KV-4KV Switchyard*, situated at the Company's Pioneer Plant.

(4) *Jordan 44-KV Switchrack*, situated at the Company's Jordan Steam Electric Plant.

(5) *Stairs 22-KV Switchrack*, situated at the Company's Stairs plant.

(6) *Granite 22-KV Switchrack*, situated at the Company's Granite plant.

(7) *West Temple 4-KV Substation*, consisting of substation structures, transformers and switches, situated at 133 South West Temple Street in Salt Lake City, Salt Lake County, Utah.

(8) *Distribution Substations*, consisting of substation structures, transformers and switches, located in Blocks 51, 57, 70, 75 and 76 Plat "A" Salt Lake City, including all lands, rights or other property acquired by the Company or its predecessors in interest by and under the following described deeds recorded in the records of the County Recorder of Salt Lake County, Utah, which are hereby referred to for more particular descriptions of said lands and rights:

(a) *Lands:*

1. Deed dated September 23, 1907, from Albert Mayers and Nellie Mayers, his wife, recorded October 12, 1907 in Book 7-G of Deeds, pages 495-6.

2. Deed dated October 3, 1907, from Mrs. Gardin Jones and A. P. Jones, her husband, recorded October 3, 1907 in Book 7-R of Deeds, page 26.

3. Deed dated November 10, 1907, from John E. Dooly and May V. Dooly, his wife, recorded January 18, 1908 in Book 7-U of Deeds, pages 138-9.

4. Deed dated April 20, 1908, from Simon Bamberger and Ida M. Bamberger, his wife, recorded April 27, 1908 in Book 8-A of Deeds, page 34.

5. Easement dated June 30, 1909, from William R. Wallace and Annie M. Wallace his wife and John F. Bennett and Rosetta W. Bennett, his wife, recorded July 9, 1909 in Book 7-U of Deeds, page 476.

6. Agreement dated November 10, 1927 with Salt Lake Tribune Publishing Company, recorded November 19, 1927 in Book 14 of Liens and Leases, pages 345-6.

7. Easement dated November 10, 1927 from Salt Lake Tribune Publishing Company, recorded November 19, 1927 in Book 14 of Liens and Leases, page 345.

(9) *Underground Substation Vaults*, situated on public streets of Salt Lake City including all underground conduit connections with Interior Block Substations, West Temple Substation and Jordan Steam Electric Station.

Also all other electric substations, switchyards and switchracks owned by the Company, and all lands of the Company upon which the same are situated, and all other property of the Company, real, personal or mixed, forming a part thereof, or appertaining thereto; together with all of the Company's easements, licenses, rights of way, permits, municipal and other franchises, privileges, consents and rights for or relating to the construction, maintenance and operation thereof, through, in, over, under, across or upon any public streets or highways or the public lands of the United States, or of any state or other lands public or private.

### PARAGRAPH THREE.

#### Transmission Lines.

The Electric Transmission Lines of the Company, including all towers, poles, pole lines, transformers, wires, switchracks, insulators and other appliances and equipment; and all lands of the Company upon which the same are situated; and all other property of the Company, real, personal or mixed, forming a part thereof, or appertaining thereto, together with all of the Company's easements, licenses, rights of way, permits, municipal and other franchises, privileges, consents, and rights for or relating to the construction, maintenance and operation thereof, through, in, over, under, across, or upon any public streets or highways, or the public lands of the United States, or of any State, or other lands, public or private, including, but not limited to, the following property situated in the State of Utah:

1. *Pioneer-Jordan Transmission Line*, a 44-kv, suspension type insulator, double circuit, steel tower type transmission line in Weber, Davis and Salt Lake Counties, Utah, extending from the Company's Pioneer Plant in a general southerly direction to the Company's Jordan Steam Plant.

2. *Weber-Terminal Transmission Line* (steel tower section only) a 44-kv, suspension type insulator, single circuit, steel tower type transmission line in Weber and Davis Counties, Utah, extending from the Company's Weber Plant in a general southerly direction to a point in Section 19, T. 3 N., R. 1 E., S. L. B. & M., Davis County from whence it extends in a general southerly direction to the Company's Terminal Substation as Utah Power & Light Company property.

3. *Salt Lake City Loop*, a 44-kv, pin type insulator, single circuit, single wood pole type transmission line in Salt Lake City, Salt Lake County, Utah, extending from the Company's Jordan Steam Plant in a general southeasterly direction to the Company's Southeast Substation thence in a general northeasterly direction to the Utah Power & Light Company's Emigration Substation, thence in a general northwesterly direction to the Company's Northeast Substation, thence in a general westerly direction to the Company's Jordan Steam Plant.

4. *Terminal-Jordan (No. 3 and No. 4) Transmission Line*, 1.74 miles of the 4.51 miles of a 44-kv, suspension type insulator, double circuit, steel type transmission line in Salt Lake County, Utah, extending from the Company's Terminal Substation in a general northeasterly direction to the Company's Jordan Steam Plant.

5. *Granite-Southeast Transmission Line*, a 22-kv, pin type insulator, single circuit, single wood pole type transmission line in Salt Lake County, Utah, extending from the Company's Granite Plant in a general northwesterly direction to the Company's Southeast Substation.

6. *Stairs-Granite Transmission Line*, a 22-kv, pin type insulator, single circuit, single wood pole type transmission line in Salt Lake County, Utah, extending from the Company's Stairs Plant in a general southwesterly direction to the Company's Granite Plant.

Also all extensions, branches and taps of said transmission lines or any of them; and all other transmission lines of the Company, and all lands owned by the Company upon which the same are situated; and all other properties of the Company, real, personal or mixed, forming a part thereof, or appertaining thereto, together with all of the Company's easements, licenses, rights of way, permits, privileges, franchises, consents and rights for or relating to the construction, maintenance and operation thereof, through, in, over, under, across or upon any public streets or highways, or the public lands of the United States, or of any State, or other lands, public or private.

**PARAGRAPH FOUR.****Distribution Lines and Systems.**

The Electric Distribution Lines and Systems of the Company, including all towers, poles, pole lines, wires, switchracks, transformers, insulators, underground conduits and ducts, meters and appurtenances, appliances, devices and equipment, and all lands of the Company upon which the same are situated; and all other property of the Company, real, personal or mixed, forming a part thereof, or appertaining thereto: together with all of the Company's easements, licenses, rights of way, permits, municipal and other franchises, privileges, consents, and rights for or relating to the construction, maintenance and operation thereof, through, in, over, under, across or upon any public streets or highways or the public lands of the United States, or of any State, or other lands public or private, including all of the Company's right, title and interest in and to:

The Electric distribution lines and systems of the Company as constructed and equipped in or near the communities, villages, towns, cities and counties enumerated in paragraph eight of this Indenture.

Also all extensions, branches and taps of said distribution lines and systems; and all other distribution lines and systems of the company; and all lands owned by the Company upon which the same are situated; and all other property of the Company, real, personal or mixed, forming a part thereof, or appertaining thereto; together with all of the Company's easements, licenses, rights of way, permits, privileges, franchises, consents, and rights for or relating to the construction, maintenance and operation thereof, through, in, over, under, across or upon any public streets or highways, or the public lands of the United States or of any State, or other lands, public or private.

**PARAGRAPH FIVE.****Telephone Lines.**

The Telephone Lines of the Company, including all poles, pole lines, wires, structures, insulators, hardware, ground wires, supports and other appliances and apparatus, and all lands of the Company

upon which the same are situated; and all other property of the Company, real, personal, or mixed, forming a part thereof or appertaining thereto; together with all of the Company's easements, licenses, rights-of-way, permits, municipal and other franchises, privileges, consents and rights for or relating to the construction, maintenance and operation thereof, through, in, over, under, across or upon any public streets or highways, or the public lands of the United States, or of any State, or other lands public or private, including all of the Company's right, title and interest in and to the following described property in the state of Utah:

1. *Pioneer-Jordan Telephone Line*, a single two wire circuit installed on the Pioneer-Jordan Steel Tower 44-kv Transmission Line in Weber, Davis and Salt Lake Counties, Utah.

2. *Stairs-Granite Telephone Line*, a single two wire circuit installed on the Stairs-Granite 22-kv Transmission Line in Salt Lake County.

3. *Jordan-Southeast Telephone Line*, a single two wire circuit installed on the Salt Lake City 44-kv Loop from the Company's Jordan Steam Plant to the Company's Southeast Substation.

Also all extensions, branches and taps of said telephone lines or any of them; and all other telephone lines of the Company; and all lands owned by the Company upon which the same are situated; and all other properties of the Company, real, personal or mixed, forming a part thereof, or appertaining thereto, together with all of the Company's easements, licenses, rights of way, permits, privileges, franchises, consents and rights for or relating to the construction, maintenance and operation thereof, through, in, over, under, across or upon any public streets or highways, or the public lands of the United States, or of any State, or other lands, public or private.

#### PARAGRAPH SIX.

##### Federal Licenses and Rights of Way.

The licenses, permits, rights of way and grants, issued, granted or made to the Company or its predecessors in interest, by the United

States of America or the Departments thereof, which authorize or permit the Company to construct, maintain and operate on lands of the United States, dams, reservoirs, diversion works, pipe lines, tunnels, canals, flumes, power houses, electric generating plants, buildings, towers, poles, power lines, substations, switchracks, and other property forming a part thereof or appertaining thereto, including all of the Company's right, title and interest in and to the following Licenses and Permits which cover the use and occupancy of certain lands of the United States used in connection with the Company's plants and lines as indicated:

#### ELECTRIC GENERATING PLANTS.

1. Federal Power Commission License Project 597-Utah, Stairs Plant issued June 13, 1927, expires June 30, 1970.
2. Federal Power Commission License Project 1744, Weber Plant, not yet issued.

#### TRANSMISSION LINES.

3. Federal Power Commission License Project 764-Utah, Stairs-Granite 22-kv Line, issued June 13, 1927, expires June 30, 1970.

Also all other licenses, permits, rights of way and grants, issued, granted or made to the Company or its predecessors in interest by the United States of America or the Departments thereof, which authorize or permit the Company to construct, maintain and operate on lands of the United States, dams, reservoirs, diversion works, pipe lines, tunnels, canals, flumes, power houses, electric generating plants, buildings, towers, poles, power lines, substations, or switchracks and other property forming a part thereof or appertaining thereto.

#### PARAGRAPH SEVEN.

Easements and Rights of Way for  
Transmission Lines, Distribution Lines, Telephone Lines  
and Underground Conduits.

#### WEBER COUNTY, UTAH

All of the rights of way over land situated in Weber County, Utah, granted to the Utah Light and Traction Company, or its predecessors,

by easements bearing the dates hereinafter set out and recorded in the office of the County Recorder of Weber County, Utah, in the book and at the page hereinafter particularly described.

1. Easement dated June 6, 1911, from Dora P. Holther, recorded April 16, 1912 in Book "H" of Leases, page 200.
2. Easement dated June 13, 1911, from Joseph P. Beus, recorded August 31, 1911 in Book "H" of Leases, page 76.
3. Easement dated June 14, 1911, from Lottie M. Stephens, recorded August 31, 1911 in Book "H" of Leases, page 80.
4. Easement dated June 14, 1911, from Henry Penman recorded August 31, 1911 in Book "H" of Leases, page 79.
5. Easement dated June 16, 1911 from Mary McGrath, recorded August 31, 1911 in Book "H" of Leases, page 81.
6. Easement dated June 26, 1911, from James A. Stephens, recorded August 31, 1911 in Book "H" of Leases, page 82.
7. Easement dated July 5, 1911, from John C. De LaMare, recorded October 28, 1911 in Book "H" of Leases, page 108.
8. Easement dated July 14, 1911, from Geo. Q. Cannon Association, recorded August 31, 1911 in Book "H" of Leases, page 72.
9. Easement dated July 18, 1911, from George J. Kelly, recorded August 31, 1911 in Book "H" of Leases, page 77.
10. Easement dated July 18, 1911, from George J. Kelly, recorded August 21, 1911 in Book "H" of Leases, page 75.
11. Easement dated July 22, 1911, from John W. Chambers, recorded October 28, 1911 in Book "H" of Leases, page 109.
12. Easement dated July 25, 1911, from Ogden Medicinal Springs Company, recorded August 31, 1911 in Book "H" of Leases, page 74.
13. Easement dated September 9, 1911, from Vinyard Farm and Dairy Co., recorded October 28, 1911 in Book "H" of Leases, page 112.
14. Easement dated September 16, 1911, from L. C. Railey, recorded November 25, 1911, in Book "H" of Leases, page 129.
15. Easement dated March 18, 1912, from Ogden Land Company, recorded April 16, 1912 in Book "H" of Leases, page 198.
16. Easement dated March 22, 1912, from George J. Kelly, recorded April 6, 1912, in Book "H" of Leases, page 195.
17. Condemnation dated May 22, 1912, from W. L. Jenkins, recorded May 24, 1912, in Book "H" of Leases, page 216.

18. Easement dated August 10, 1915, from John and Mary M. Malone, recorded September 7, 1915 in Book "L" of Leases, page 396.
19. Easement dated December 2, 1915, from Geo. J. Kelly Company, et al., recorded November 6, 1917 in Book "M" of Leases, page 356.
20. Easement dated December 22, 1916, from J. W. Allen, recorded December 6, 1935, in Book "W" of Leases, page 303.
21. Easement dated April 16, 1918, from William G. and Mary W. Wilson, recorded June 25, 1918 in Book "N" of Leases, page 47.
22. Easement dated April 16, 1918, from William G. and Mary W. Wilson, recorded June 25, 1918 in Book "N" of Leases, page 46.
23. Easement dated May 16, 1918, from Utah-Idaho Central Railroad Company, recorded June 25, 1918 in Book "N" of Leases, page 45.
24. Easement dated July 20, 1918, from D. H. Peery Estate, recorded February 5, 1919 in Book "N" of Leases, page 303.
25. Easement dated August 23, 1918, from Ogden Medicinal Springs Company, recorded February 5, 1919 in Book "N" of Liens and Leases, page 302.
26. Easement dated August 29, 1931, from D. S. Tracy, recorded April 10, 1942 in Book 155 of Leases, page 229.
27. Easement dated December 6, 1937, from Harriet E. Maw, recorded January 13, 1938 in Book "X" of Leases, page 522.
28. Easement dated December 21, 1937, from F. James and Norma B. Garner, recorded March 15, 1938 in Book "X" of Leases, page 595.
29. Easement dated January 14, 1939, from Utoming Investment Company, recorded February 7, 1939 in Book "Y" of Leases, page 274.
30. Easement dated December 6, 1939, from Margaret Mallery, recorded December 6, 1939 in Book "Y" of Leases, page 545.
31. Easement dated February 17, 1940 from Oetta Browning Glasscock, recorded June 14, 1940 in Book "Z" of Leases, page 51.

#### DAVIS COUNTY, UTAH

All of the rights of way over land situated in Davis County, Utah, granted to the Utah Light and Traction Company, or its predecessors, by easements bearing the dates hereinafter set out and recorded in the office of the County Recorder of Davis County, Utah, in the book and at the page hereinafter particularly described.

1. Easement dated October 28, 1896, from Wilford Barlow, recorded November 2, 1896 in Book "A" of Misc., page 197.

2. Easement dated October 28, 1896, from Mrs. Thomas Roberts, recorded November 2, 1896, in Book "A" of Misc., page 181.
3. Easement dated October 28, 1896, from Elizabeth Thurgood, recorded November 2, 1896 in Book "A" of Misc., page 195.
4. Easement dated October 28, 1896, from Mary Jane Walker, recorded November 2, 1896 in Book "A" of Misc., page 189.
5. Easement dated October 28, 1896, from John Stahle, recorded November 2, 1896 in Book "A" of Misc., page 187.
6. Easement dated October 28, 1896, from Sarah W. Eldredge, recorded November 2, 1896 in Book "A" of Misc., page 185.
7. Easement dated October 28, 1896, from Joseph C. Hill, recorded November 2, 1896 in Book "A" of Misc., page 188.
8. Easement dated October 28, 1896, from Alvin W. Hatch, recorded November 2, 1896 in Book "A" of Misc., page 186.
9. Easement dated October 29, 1896, from Abel Alexander, recorded November 2, 1896 in Book "A" of Misc., page 203.
10. Easement dated October 29, 1896, from John H. Barlow, recorded November 2, 1896 in Book "A" of Misc., page 190.
11. Easement dated October 29, 1896, from Rose Ellen Hatch, recorded November 2, 1896 in Book "A" of Misc., page 192.
12. Easement dated October 29, 1896, from Mrs. J. H. Moss, recorded November 2, 1896 in Book "A" of Misc., page 201.
13. Easement dated October 29, 1896, from Moroni Moss, recorded November 2, 1896 in Book "A" of Misc., page 191.
14. Easement dated October 29, 1896, from Joseph Moss, recorded November 2, 1896 in Book "A" of Misc., page 200.
15. Easement dated October 29, 1896, from Emma A. Moss, recorded November 2, 1896 in Book "A" of Misc., page 184.
16. Easement dated October 29, 1896, from Joseph Hogan, recorded November 2, 1896 in Book "A" of Misc., page 198.
17. Easement dated October 29, 1896, from Joseph Hogan, recorded November 2, 1896 in Book "A" of Misc., page 181.
18. Easement dated October 29, 1896, from Marian C. Adams, recorded November 2, 1896 in Book "A" of Misc., page 191.
19. Easement dated October 29, 1896, from J. P. Benson, recorded November 2, 1896 in Book "A" of Misc., page 183.
20. Easement dated October 29, 1896, from Elizabeth W. Hatch, recorded November 2, 1896 in Book "A" of Misc., page 186.

21. Easement dated October 29, 1896, from Ellen Brown, et al., recorded November 2, 1896 in Book "A" of Misc., page 202.

22. Easement dated October 29, 1896, from Rachel E. Piercey, recorded November 2, 1896 in Book "A" of Misc., page 193.

23. Easement dated October 29, 1896, from Elizabeth W. Cleverly, recorded November 2, 1896 in Book "A" of Misc., page 203.

24. Easement dated October 29, 1896, from Wm. E. Pace, recorded November 2, 1896 in Book "A" of Misc., page 199.

25. Easement dated October 29, 1896, from James Howard, recorded November 2, 1896 in Book "A" of Misc., page 168.

26. Easement dated October 31, 1896, from Betsey Jane Howard, recorded June 19, 1905, in Book "C" of Misc., page 39.

27. Easement dated October 31, 1896, from Sarah A. Howard, recorded June 19, 1905 in Book "C" of Misc., page 40.

28. Easement dated October 31, 1896, from Mrs. John Howard, recorded June 19, 1905 in Book "C" of Misc., page 39.

29. Easement dated October 31, 1896, from the S. S. Walker Estate Co., recorded November 14, 1896 in Book "A" of Misc., page 204.

30. Easement dated November 5, 1896, from Stephen J. Hart, recorded November 14, 1896 in Book "A" of Misc., page 209.

31. Easement dated November 5, 1896, from I. H. Barlow, recorded November 14, 1896 in Book "A" of Misc., page 208.

32. Easement dated November 5, 1896, from Daniel C. Lee, recorded November 14, 1896 in Book "A" of Misc., page 210.

33. Easement dated November 5, 1896, from Daniel C. Lee, recorded November 14, 1896 in Book "A" of Misc., page 207.

34. Easement dated November 5, 1896, from Ben Platt, recorded November 14, 1896, in Book "A" of Misc., page 209.

35. Easement dated November 13, 1896, from John D. Craig, recorded December 10, 1896 in Book "A" of Misc., page 219.

36. Easement dated December 11, 1896, from Joseph Argyle, Sr., recorded June 6, 1897 in Book "A" of Misc., page 223.

37. Easement dated December 11, 1896, from James Kippen, recorded January 6, 1897 in Book "A" of Misc., page 224.

38. Easement dated December 11, 1896, from O. P. Hatch, recorded January 6, 1897 in Book "A" of Misc., page 226.

39. Easement dated July 12, 1897, from George W. Adams, recorded July 15, 1897 in Book "A" of Misc., page 242.

40. Easement dated February 1, 1910, from Charles H. Pall, recorded October 14, 1910 in Book "C" of Misc., page 508.
41. Easement dated February 3, 1910, from Harriet Gipson, recorded October 14, 1910 in Book "C" of Misc., page 520.
42. Easement dated February 3, 1910, from Mathew Bambrough, recorded October 14, 1910 in Book "C" of Misc., page 524.
43. Easement dated February 3, 1910, from George H. Firth, recorded October 14, 1910 in Book "C" of Misc., page 510.
44. Easement dated February 3, 1910, from C. Stark, recorded October 14, 1910 in Book "C" of Misc., page 511.
45. Easement dated February 3, 1910, from Byron L. Bybee, recorded October 14, 1910 in Book "C" of Misc., page 515.
46. Easement dated February 3, 1910, from W. M. Bybee, recorded October 14, 1910 in Book "C" of Misc., page 522.
47. Easement dated February 3, 1910, from James Herbertson, recorded October 14, 1910 in Book "C" of Misc., page 513.
48. Easement dated February 4, 1910, from Mary J. Jones, recorded October 14, 1910 in Book "C" of Misc., page 506.
49. Easement dated February 16, 1910, from Joseph Bambrough Estate, recorded October 14, 1910 in Book "C" of Misc., page 525.
50. Easement dated February 21, 1910, from Fredrick J. Cobabe, recorded October 14, 1910 in Book "C" of Misc., page 513.
51. Easement dated April 11, 1910, from John Mildon, recorded October 14, 1910 in Book "C" of Misc., page 516.
52. Easement dated November 15, 1910 from Theo. L. Seebold, recorded August 15, 1911 in Book "D" of Misc., page 153.
53. Easement dated November 18, 1910, from David Moss, recorded April 28, 1911 in Book "C" of Misc., page 581.
54. Easement dated November 18, 1910, from J. P. Benson, recorded April 28, 1911 in Book "C" of Misc., page 576.
55. Easement dated November 18, 1910, from John E. Hatch, recorded April 28, 1911 in Book "C" of Misc., page 574.
56. Easement dated November 18, 1910, from Ezra T. Hatch, recorded April 28, 1911 in Book "C" of Misc., page 573.
57. Easement dated November 18, 1910, from Emily Piercey, recorded April 28, 1911 in Book "C" of Misc., page 571.
58. Easement dated November 18, 1910, from E. W. Cleverly, recorded April 28, 1911 in Book "C" of Misc., page 570.

59. Easement dated November 18, 1910, from James H. Howard, recorded April 28, 1911 in Book "C" of Misc., page 566.

60. Easement dated November 18, 1910, from James Howard, recorded April 28, 1911 in Book "C" of Misc., page 564.

61. Easement dated November 18, 1910, from David Moss, recorded April 28, 1911 in Book "C" of Misc., page 563.

62. Easement dated November 18, 1910, from B. J. Howard, recorded April 28, 1911 in Book "C" of Misc., page 561.

63. Easement dated November 18, 1910, from Sarah A. Howard, recorded April 28, 1911 in Book "C" of Misc., page 559.

64. Easement dated November 18, 1910, from Josephine Corless, recorded April 28, 1911 in Book "C" of Misc., page 558.

65. Easement dated November 19, 1910, from John Stahle, recorded April 28, 1911 in Book "C" of Misc., page 596.

66. Easement dated November 19, 1910, from Daniel C. Lee, recorded April 28, 1911 in Book "C" of Misc., page 590.

67. Easement dated November 19, 1910, from M. B. Mann, recorded April 28, 1911 in Book "C" of Misc., page 588.

68. Easement dated November 19, 1910, from Jos. C. Wood, recorded April 28, 1911 in Book "C" of Misc., page 586.

69. Easement dated November 19, 1910 from A. W. Hatch, recorded April 28, 1911 in Book "C" of Misc., page 584.

70. Easement dated November 19, 1910, from John H. Moss, recorded April 28, 1911 in Book "C" of Misc., page 583.

71. Easement dated November 19, 1910, from Joseph Hogan, recorded April 28, 1911 in Book "C" of Misc., page 578.

72. Easement dated November 19, 1910, from Joseph Hogan, recorded April 28, 1911 in Book "C" of Misc., page 579.

73. Easement dated November 19, 1910, from Miriam A. Eakle, recorded April 28, 1911 in Book "D" of Misc., page 14.

74. Easement dated November 22, 1910, from Sarah Call Barlow, recorded April 28, 1911 in Book "D" of Misc., page 11.

75. Easement dated November 22, 1910, from Fanny Barlow, recorded April 28, 1911 in Book "D" of Misc., page 9.

76. Easement dated November 22, 1910, from James Kippen, recorded April 28, 1911 in Book "D" of Misc., page 6.

77. Easement dated November 22, 1910, from John H. Barlow, Sr., recorded April 28, 1911 in Book "D" of Misc., page 4.

78. Easement dated November 22, 1910, from Wilford Barlow, recorded April 28, 1911 in Book "D" of Misc., page 2.

79. Easement dated November 22, 1910, from Joseph Argyle, recorded April 28, 1911 in Book "D" of Misc., page 1.

80. Easement dated November 22, 1910, from Thomas Roberts, recorded April 28, 1911 in Book "C" of Misc., page 598.

81. Easement dated November 22, 1910, from Jessie E. Stringham, recorded April 28, 1911 in Book "C" of Misc., page 595.

82. Easement dated November 22, 1910, from Eliza E. Grant, recorded April 28, 1911 in Book "C" of Misc., page 593.

83. Easement dated November 22, 1910, from J. E. Lee, recorded April 28, 1911 in Book "C" of Misc., page 591.

84. Easement dated November 22, 1910, from Jos. Parkin, recorded April 28, 1911 in Book "D" of Misc., page 12.

85. Easement dated November 22, 1910, from Ben Platt, recorded April 28, 1911 in Book "C" of Misc., page 568.

86. Easement dated November 23, 1910, from Isreal Call, recorded April 28, 1911 in Book "D" of Misc., page 7.

87. Easement dated November 28, 1910, from John Varley, recorded September 1, 1911 in Book "D" of Misc., page 163.

88. Easement dated November 28, 1910, from Intermountain Packing Co., recorded September 1, 1911 in Book "D" of Misc., page 164.

89. Easement dated December 7, 1910, from Franklin Parker, recorded September 1, 1911 in Book "D" of Misc., page 166.

90. Easement dated December 16, 1910, from Hyrum B. Parkin, recorded September 1, 1911 in Book "D" of Misc., page 168.

91. Easement dated December 27, 1910, from James C. Leary, et al., recorded September 1, 1911 in Book "D" of Misc., page 170.

92. Easement dated December 29, 1910, from Millicent C. Crocker, recorded September 1, 1911 in Book "D" of Misc., page 173.

93. Easement dated January 31, 1911, from Wm. Moss, recorded September 1, 1911 in Book "D" of Misc., page 172.

94. Easement dated March 9, 1911, from P. P. and Geo. S. Parrish, recorded September 1, 1911 in Book "D" of Misc., page 175.

95. Easement dated March 15, 1911, from Eugene H. Clark, recorded April 28, 1911 in Book "D" of Misc., page 17.

96. Easement dated March 15, 1911, from Hyrum D. Clark, recorded April 28, 1911, in Book "D" of Misc., page 37.

97. Easement dated March 15, 1911, from Joseph S. Miller, recorded April 28, 1911 in Book "D" of Misc., page 19.

98. Easement dated March 15, 1911, from Mary S. Clark, recorded April 28, 1911 in Book "D" of Misc., page 39.

99. Easement dated March 15, 1911, from Lucy Sanders, recorded April 28, 1911 in Book "D" of Misc., page 22.

100. Easement dated March 15, 1911, from Thos. Steed Association, recorded April 28, 1911 in Book "D" of Misc., page 34.

101. Easement dated March 15, 1911, from Charles E. France, recorded April 28, 1911 in Book "D" of Misc., page 47.

102. Easement dated March 15, 1911, from Fred Bros. Land & Livestock Co., recorded April 28, 1911 in Book "D" of Misc., page 40.

103. Easement dated March 15, 1911, from John Ford, Jr., recorded April 28, 1911 in Book "D" of Misc., page 46.

104. Easement dated March 15, 1911, from Amanda M. Cheney, recorded April 28, 1911 in Book "D" of Misc., page 44.

105. Easement dated March 15, 1911, from Lorin C. Wooley, recorded April 28, 1911 in Book "D" of Misc., page 42.

106. Easement dated March 17, 1911, from Clarence E. Smith, recorded April 28, 1911 in Book "D" of Misc., page 32.

107. Easement dated March 17, 1911, from John L. Mitchell, recorded April 28, 1911 in Book "D" of Misc., page 31.

108. Easement dated March 18, 1911, from Daniel Bodily, recorded April 28, 1911 in Book "D" of Misc., page 56.

109. Easement dated March 18, 1911, from Christopher Burton, Sr., recorded April 28, 1911 in Book "D" of Misc., page 51.

110. Easement dated March 18, 1911, from Samuel B. Rushforth, recorded April 28, 1911 in Book "D" of Misc., page 49.

111. Easement dated March 23, 1911, from Wm. H. Perry, recorded September 1, 1911 in Book "D" of Misc., page 177.

112. Easement dated March 25, 1911, from Mary J. Smith, et al., recorded April 28, 1911 in Book "D" of Misc., page 66.

113. Easement dated March 25, 1911, from S. G. Hart, recorded April 28, 1911 in Book "D" of Misc., page 68.

114. Easement dated March 25, 1911, from R. E. Hatch, recorded April 28, 1911 in Book "D" of Misc., page 62.

115. Easement dated March 25, 1911, from Henry Moss, recorded April 28, 1911 in Book "D" of Misc., page 64.

116. Easement dated April 3, 1911, from Alma Moss, recorded April 28, 1911 in Book "D" of Misc., page 69.

117. Easement dated April 7, 1911, from Empire Brick Company, recorded September 1, 1911 in Book "D" of Misc., page 180.

118. Easement dated April 8, 1911, from James H. Larkins, recorded September 1, 1911 in Book "D" of Misc., page 178.

119. Easement dated April 12, 1911, from Sterling Clark, et al., recorded April 28, 1911 in Book "D" of Misc., page 71.

120. Easement dated April 20, 1911, from Rosel Hyde, recorded September 1, 1911 in Book "D" of Misc., page 182.

121. Easement dated May 15, 1911, from Davis County, recorded August 15, 1911 in Book "D" of Misc., page 146.

122. Easement dated May 18, 1911, from Thomas E. Harris, recorded June 8, 1911 in Book "D" of Misc., page 102.

123. Easement dated May 18, 1911, from S. H. Nalder, recorded June 8, 1911 in Book "D" of Misc., page 104.

124. Easement dated May 18, 1911, from Stephen N. Nalder, recorded June 8, 1911 in Book "D" of Misc., page 92.

125. Easement dated May 18, 1911, from Wm. N. Nalder, recorded June 8, 1911 in Book "D" of Misc., page 93.

126. Easement dated May 18, 1911, from John D. Craig, recorded June 8, 1911 in Book "D" of Misc., page 97.

127. Easement dated May 18, 1911, from J. D. Craig recorded June 8, 1911 in Book "D" of Misc., page 95.

128. Easement dated May 18, 1911, from J. E. Wiggill, recorded June 8, 1911 in Book "D" of Misc., page 105.

129. Easement dated May 18, 1911, from Abram Higgs, recorded June 8, 1911 in Book "D" of Misc., page 99.

130. Easement dated May 18, 1911, from James Smith, recorded June 8, 1911 in Book "D" of Misc., page 100.

131. Easement dated May 21, 1911, from Charles T. Bennett, recorded September 1, 1911, in Book "D" of Misc., page 190.

132. Easement dated June 12, 1911, from B. F. Bowman, recorded August 15, 1911 in Book "D" of Misc., page 155.

133. Easement dated June 16, 1911, from Wm. H. Firth, recorded August 15, 1911 in Book "D" of Misc., page 158.

134. Easement dated June 16, 1911, from Angus Bowman, recorded August 15, 1911, in Book "D" of Misc., page 157.

135. Easement dated June 17, 1911, from Robert Byram, recorded August 15, 1911, in Book "D" of Misc., page 160.
136. Easement dated June 23, 1911, from D. B. Harris, recorded August 15, 1911 in Book "D" of Misc., page 144.
137. Easement dated June 26, 1911, from Henry Ellis, recorded September 1, 1911, in Book "D" of Misc., page 187.
138. Easement dated June 26, 1911, from Jesse Sill, recorded September 1, 1911 in Book "D" of Misc., page 186.
139. Easement dated June 26, 1911, from John Sandall, recorded September 1, 1911, in Book "D" of Misc., page 189.
140. Easement dated July 1, 1911, from Moroni Moss, recorded August 15, 1911 in Book "D" of Misc., page 150.
141. Condemnation dated July 14, 1911, from Lucina Call Perkins, recorded July 29, 1911 in Book "D" of Misc., page 129.
142. Easement dated August 7, 1911, from Sarah A. Spackman Estate, recorded October 30, 1911 in Book "D" of Misc., page 233.
143. Easement dated August 10, 1911, from Peter Barton, recorded October 30, 1911 in Book "D" of Misc., page 223.
144. Easement dated August 10, 1911, from John Colemere, recorded October 30, 1911 in Book "D" of Misc., page 239.
145. Easement dated August 10, 1911, from Annie S. Robinson, recorded October 30, 1911 in Book "D" of Misc., page 244.
146. Easement dated August 12, 1911, from Thomas Hancock, recorded September 1, 1911 in Book "D" of Misc., page 192.
147. Easement dated August 26, 1911, from Elizabeth Kirkham, recorded October 30, 1911 in Book "D" of Misc., page 221.
148. Easement dated September 19, 1911, from Gabriel W. Smith, recorded October 30, 1911 in Book "D" of Misc., page 231.
149. Easement dated September 19, 1911, from Josephine E. Rose, recorded October 30, 1911 in Book "D" of Misc., page 235.
150. Easement dated September 19, 1911, from Charles A. Miller, recorded October 30, 1911 in Book "D" of Misc., page 240.
151. Easement dated September 19, 1911, from Ely Manning, recorded October 30, 1911 in Book "D" of Misc., page 242.
152. Easement dated September 19, 1911, from George Bentz, recorded October 30, 1911 in Book "D" of Misc., page 230.
153. Easement dated September 19, 1911, from John Preece, recorded October 30, 1911 in Book "D" of Misc., page 237.

154. Easement dated September 19, 1911, from Sarah C. Knowlton, recorded October 25, 1911 in Book "D" of Misc., page 211.

155. Easement dated September 19, 1911, from Elias Van Fleet, recorded October 30, 1911 in Book "D" of Misc., page 228.

156. Easement dated September 19, 1911, from Edward B. Clark, recorded October 30, 1911 in Book "D" of Misc., page 226.

157. Easement dated September 26, 1911, from George A. Hess, recorded October 30, 1911 in Book "D" of Misc., page 224.

158. Easement dated April 1, 1912, from Levi Taylor Estate, recorded May 3, 1912 in Book "D" of Misc., page 317.

159. Easement dated June 27, 1912, from S. T. Baldwin, et al., recorded August 10, 1912 in Book "D" of Misc., page 362.

160. Easement dated July 5, 1912, from E. E. and Mary A. B. Rich, recorded August 10, 1912 in Book "D" of Misc., page 364.

161. Easement dated May 13, 1918, from Sarah A. Howard, recorded September 13, 1918 in Book "F" of Liens and Leases, page 275.

162. Easement dated May 13, 1918, from Betsey Jane Howard, recorded September 13, 1918 in Book "F" of Liens and Leases, page 276.

163. Easement dated August 2, 1918, from Salt Lake Union Stock Yards, recorded September 13, 1918 in Book "F" of Liens and Leases, page 277.

164. Easement dated June 1, 1921, from Herman Bamberger, recorded September 1, 1921 in Book "G" of Liens and Leases, page 69.

165. Easement dated July 14, 1921, from Ida M. Bamberger, recorded September 1, 1921 in Book "G" of Liens and Leases, page 68.

166. Easement dated March 29, 1923, from J. W. Mellon, et al., recorded January 14, 1924 in Book "G" of Liens and Leases, page 433.

167. Easement dated February 3, 1938, from the Cudahy Packing Company, recorded November 17, 1938 in Book "L" of Liens and Leases, page 566.

168. Easement dated March 14, 1940, from Ann Jones, recorded April 10, 1941 in Book "N" of Liens and Leases, page 157.

169. Easement dated March 14, 1940, from Robert and Janet Byram, recorded April 10, 1941 in Book "N" of Liens and Leases, page 158.

170. Easement dated March 18, 1940, from Davis County, recorded April 10, 1941 in Book "N" of Liens and Leases, page 148.

171. Easement dated February 18, 1941, from Elizabeth Brambrough, et al., recorded April 10, 1941 in Book "N" of Liens and Leases, page 156.

172. Easement dated February 18, 1941, from Robert and Janet Byram, recorded April 10, 1941 in Book "N" of Liens and Leases, page 156.

173. Easement dated February 19, 1941, from Neva Harris Thurgood, recorded April 10, 1941 in Book "N" of Liens and Leases, page 150.

174. Easement dated February 19, 1941, from Leora Harris Thurgood, recorded April 10, 1941 in Book "N" of Liens and Leases, page 150.

175. Easement dated February 20, 1941, from Ohloe Harris, recorded April 10, 1941 in Book "N" of Liens and Leases, page 155.

176. Easement dated February 20, 1941, from Otha K. Green, Admx., recorded April 10, 1941 in Book "N" of Liens and Leases, page 151.

177. Easement dated February 20, 1941, from Charles and Mary E. Sill, recorded April 10, 1941 in Book "N" of Liens and Leases, page 153.

178. Easement dated February 24, 1941, from Aletha H. Fallis, recorded April 10, 1941 in Book "N" of Liens and Leases, page 149.

179. Easement dated February 28, 1941, from Daniel D. and Jennie C. Harris, recorded April 10, 1941 in Book "N" of Liens and Leases, page 154.

180. Easement dated March 11, 1941, from F. R. and Edwina W. Knowlton, recorded April 10, 1941 in Book "N" of Liens and Leases, page 152.

181. Easement dated October 27, 1944, from Daniel E. Lee, recorded November 8, 1944 in Book "O" of Liens and Leases, page ....., Instrument No. 87913.

182. Easement dated October 30, 1944, from Kate W. Anderson, recorded November 8, 1944 in Book "O" of Liens and Leases, page ....., Instrument No. 87912.

183. Easement dated November 6, 1944, from Cotton C. Wood, recorded November 22, 1944 in Book "O" of Liens and Leases, page ....., Instrument No. 88028.

184. Easement dated November 13, 1944, from Wasatch Oil Refining Company, recorded December 1, 1944 in Book "O" of Liens and Leases, page ....., Instrument No. 88106.

#### SALT LAKE COUNTY, UTAH

All of the rights of way over land situated in Salt Lake County, Utah, granted to the Utah Light and Traction Company, or its predecessors, by easements bearing the dates hereinafter set out and recorded in the office of the County Recorder of Salt Lake County, Utah, in the book and at the page hereinafter particularly described.

1. Easement dated September 30, 1907, from Wm. R. Wallace, et al., recorded August 21, 1908 in Book 2-L of Liens and Leases, pages 398-400.

2. Easement dated May 8, 1908, from Spencer Clawson and Company, recorded August 21, 1908 in Book 2-M of Liens and Leases, pages 364-5.
3. Easement dated May 20, 1908, from Margaret B. Salisbury, Executrix, et al., recorded August 21, 1908 in Book 2-L of Liens and Leases, pages 400-1.
4. Easement dated June 19, 1908, from J. E. Paine, recorded August 21, 1908 in Book 2-L of Liens and Leases, pages 401-3.
5. Easement dated July 31, 1908 from Blanche Kimball Scheid, et al., recorded August 21, 1908 in Book 2-N of Liens and Leases, pages 66-7.
6. Easement dated August 20, 1908, from David Keith and James Ivers, recorded August 21, 1908 in Book 2-N of Liens and Leases, pages 64-5.
7. Easement dated September 20, 1908, from Mary Judge, recorded August 21, 1908 in Book 2-N of Liens and Leases, pages 67-8.
8. Easement dated October 27, 1908, from W. B. and Louie S. Richards, recorded October 30, 1908 in Book 2-F of Liens and Leases, pages 299-300.
9. Easement dated October 28, 1908, from Samuel Newhouse, recorded November 4, 1908 in Book 7-V of Deeds, pages 255-7.
10. Easement dated October 31, 1908, from Elizabeth M. Snell, recorded November 9, 1908 in Book 8-E of Deeds, pages 11-12.
11. Easement dated November 25, 1908, from James E. Jennings, recorded November 30, 1908 in Book 2-F of Liens and Leases, pages 301-2.
12. Easement dated May 6, 1909, from Joseph F. Smith, Trustee in Trust, recorded May 26, 1909 in Book 2-F of Liens and Leases, pages 403-4.
13. Easement dated November 12, 1909, from Thomas Kearns, recorded November 30, 1909 in Book 2-F of Liens and Leases, pages 595-7.
14. Easement dated September 6, 1910, from Franklin Walker, et al., recorded January 19, 1911 in Book 2-R of Liens and Leases, pages 226-7.
15. Easement dated September 6, 1910, from Fred F. Moses, et al., recorded January 19, 1911 in Book 2-R of Liens and Leases, pages 224-5.
16. Easement dated September 6, 1910, from Jesse H. and R. M. Wheeler, recorded January 19, 1911 in Book 2-R of Liens and Leases, pages 225-6.
17. Easement dated September 6, 1910, from James and Fannie A. Godfrey, recorded January 19, 1911 in Book 2-R of Liens and Leases, pages 227-8.
18. Easement dated October 15, 1910, from Wm. H. Walker Estate, recorded January 19, 1911 in Book 2-R of Liens and Leases, pages 223-4.
19. Easement dated November 28, 1910, from James and Fannie A. Godfrey, recorded January 19, 1911 in Book 2-R of Liens and Leases, pages 222-3.
20. Easement dated December 16, 1910, from Franklin Walker, et al., recorded January 19, 1911 in Book 2-N of Liens and Leases, pages 489-90.

21. Easement dated December 27, 1910, from John U. Hicks, recorded February 9, 1911 in Book 2-R of Liens and Leases, pages 252-3.
22. Easement dated December 28, 1910, from Hyrum P. Folsom, recorded September 5, 1911 in Book 7-Y of Deeds, pages 373-4.
23. Easement dated December 28, 1910, from Nephi Bowthorpe Estate, recorded February 9, 1911 in Book 2-R of Liens and Leases, pages 251-2.
24. Easement dated March 2, 1911, from W. S. McCornick, recorded September 5, 1911 in Book 7-Y of Deeds, pages 378-9.
25. Easement dated March 2, 1911, from S. M. Riddle, recorded September 5, 1911 in Book 7-Y of Deeds, pages 380-1.
26. Easement dated March 2, 1911, from W. S. McCornick, recorded September 5, 1911 in Book 7-Y of Deeds, pages 379-80.
27. Easement dated March 2, 1911, from Milner Corporation, recorded September 5, 1911 in Book 7-Y of Deeds, pages 377-8.
28. Easement dated March 3, 1911, from Utah Loan & Building Association, recorded September 5, 1911 in Book 7-Y of Deeds, pages 383-4.
29. Easement dated March 3, 1911, from Theodore McKean, Jr., recorded September 5, 1911 in Book 7-Y of Deeds, pages 381-2.
30. Easement dated March 6, 1911, from Wm. F. Beer, recorded September 5, 1911 in Book 7-Y of Deeds, pages 382-3.
31. Easement dated March 15, 1911, from Jens and Berthe Hansen, recorded May 10, 1911 in Book 2-U of Liens and Leases, pages 165-6.
32. Easement dated March 16, 1911, from Julias A. and Mary E. Rockwood, recorded May 10, 1911 in Book 2-U of Liens and Leases, pages 164-5.
33. Easement dated March 16, 1911, from L. H. and Lula Y. Sims, recorded May 10, 1911 in Book 2-U of Liens and Leases, pages 163-4.
34. Easement dated March 17, 1911, from Joseph F. Evans, recorded September 5, 1911 in Book 7-Y of Deeds, pages 376-7.
35. Easement dated March 17, 1911, from Sarah E. Reed, recorded September 5, 1911 in Book 7-Y of Deeds, pages 375-6.
36. Easement dated April 6, 1911, from W. E. Smails, recorded September 5, 1911 in Book 7-Y of Deeds, page 384-5.
37. Easement dated April 19, 1911, from the Salt Lake Investment Co., recorded September 5, 1911 in Book 7-Y of Deeds, pages 374-5.
38. Deed dated June 5, 1911, from Salt Lake County, recorded June 6, 1911 in Book 8-N of Deeds, page 94.
39. Easement dated July 5, 1911, from Prudence Beardsley, recorded September 5, 1911 in Book 7-Y of Deeds, pages 387-8.

40. Easement dated July 10, 1911, from Alex V. Gorla, recorded September, 5, 1911 in Book 7-Y of Deeds, pages 391-2.
41. Easement dated July 17, 1911, from George E. Martin, recorded September 5, 1911 in Book 7-Y of Deeds, pages 385-6.
42. Easement dated July 29, 1911, from John E. Dooly, et al., recorded November 15, 1911 in Book 2-V of Deeds, pages 184-5.
43. Easement dated August 1, 1911, from Leopold Kabis, et al., recorded September 5, 1911 in Book 7-Y of Deeds, pages 389-90.
44. Easement dated August 7, 1911, from Leonidas Pampel, recorded September 5, 1911 in Book 7-Y of Deeds, pages 390-1.
45. Easement dated August 11, 1911, from Joseph W. Mellon, recorded September 5, 1911 in Book 7-Y of Deeds, pages 388-9.
46. Easement dated August 12, 1911, from Dominick Dougherty, recorded September 5, 1911 in Book 7-Y of Deeds, pages 386-7.
47. Easement dated August 19, 1911, from The Salt Lake Investment Co., recorded October 30, 1911 in Book 8-G of Deeds, pages 259-60.
48. Easement dated August 19, 1911, from The Salt Lake Investment Co., recorded October 30, 1911 in Book 8-G of Deeds, pages 257-9.
49. Easement dated December 8, 1911, from Jane Irvine, recorded January 9, 1912 in Book 7-Y of Deeds, pages 557-8.
50. Easement dated May 29, 1912, from Hyrum P. Folsom, et al., recorded June 24, 1912 in Book 8-V of Deeds, pages 15 and 16.
51. Easement dated May 28, 1915, from E. T. and Ida M. Beyle, recorded August 16, 1915, in Book 10-H of Deeds, pages 62-3.
52. Easement dated June 15, 1915, from Utah Savings and Trust Company, et al., recorded August 16, 1915 in Book 10-H of Deeds, pages 63-5.
53. Easement dated June 15, 1915, from Utah Savings and Trust Company, et al., recorded August 16, 1915, in Book 10-H of Deeds, pages 60-2.
54. Easement dated June 15, 1915, from Utah Savings and Trust Company, et al., recorded August 16, 1915 in Book 8-V of Deeds, pages 548-9.
55. Easement dated June 15, 1915, from Utah Savings and Trust Company, et al., recorded August 16, 1915 in Book 9-A of Deeds, pages 590-1.
56. Easement dated June 15, 1915, from Utah Savings and Trust Company, recorded August 16, 1915 in Book 9-A of Deeds, pages 591-3.
57. Easement dated June 25, 1915, from Franz and Anna Kunkel, recorded July 17, 1915 in Book 9-V of Deeds, pages 127-8.
58. Easement dated June 28, 1915, from The J. J. Corum Investment Company, recorded July 17, 1915 in Book 9-V of Deeds, pages 126-7.

59. Easement dated June 28, 1915, from E. W. F. Kunkel, recorded July 17, 1915 in Book 9-V of Deeds, pages 129-30.
60. Deed dated July 1, 1915, from Elmer A. and Leila V. Clark, recorded February 5, 1919 in Book 10-I of Deeds, page 340.
61. Deed dated July 1, 1915, from Elmer A. and Leila V. Clark, recorded February 5, 1919 in Book 10-I of Deeds, page 339.
62. Deed dated July 1, 1915, from Elmer A. and Leila V. Clark, recorded July 3, 1919 in Book 10-T of Deeds, page 412.
63. Easement dated July 8, 1915, from Joseph F. and Jeannette Proctor, recorded July 20, 1915 in Book 9-C of Deeds, pages 342-3.
64. Easement dated September 23, 1915, from Brigham Young Cemetery Association, recorded October 15, 1915 in Book 8-V of Deeds, pages 599-600.
65. Deed dated December 4, 1915, from Elmer A. and Leila V. Clark, recorded December 19, 1924 in Book 12-K of Deeds, page 87.
66. Easement dated June 10, 1916, from the Country Club, recorded September 25, 1916, in Book 3-E of Liens and Leases, pages 195-6.
67. Easement dated September 18, 1916, from B. & M. Investment Company, recorded September 25, 1916 in Book 3-F of Liens and Leases, pages 244-5.
68. Easement dated August 21, 1919, from Modern Furniture Company, recorded October 2, 1919 in Book 3-M of Liens and Leases, page 156.
69. Easement dated December 2, 1920, from William H. McIntyre Company, recorded June 2, 1921 in Book 3-K of Liens and Leases, pages 362-3.
70. Easement dated January 24, 1923, from Nels and Gerda Petersen, recorded March 27, 1923 in Book 3-S of Liens and Leases, page 359.
71. Easement dated February 16, 1923 from James A. Eldredge, et al., recorded March 27, 1923 in Book 3-S of Liens and Leases, page 360.
72. Easement dated March 20, 1923, from Cecelia A. Swenson, et al., recorded March 27, 1923 in Book 3-S of Liens and Leases, pages 359-60.
73. Easement dated March 27, 1923, from Mrs. Alberta Lyman, recorded May 1, 1923 in Book 3-S of Liens and Leases, pages 407-8.
74. Easement dated December 14, 1923, from Charles L. and Edla M. Weed, recorded December 28, 1923 in Book 3-U of Liens and Leases, page 132.
75. Easement dated December 19, 1923, from C. A. McPhail, et al., recorded December 28, 1923 in Book 3-U of Liens and Leases, pages 131-2.
76. Easement dated December 20, 1923, from Frank L. and Vera G. Hoagland, recorded December 28, 1923 in Book 3-U of Liens and Leases, page 132.

77. Easement dated July 1, 1925, from Sisters of the Holy Cross of Salt Lake City, recorded July 30, 1925 in Book 3-W of Liens and Leases, page 287.

78. Easement dated July 9, 1928, from Zions Securities Corporation, recorded November 13, 1935 in Book 155 of Liens and Leases, pages 443-4.

79. Easement dated October 10, 1928, from Apex Investment Company, recorded October 22, 1931, in Book 96 of Liens and Leases, page 331.

80. Easement dated October 29, 1928, from D. A. Raybould, et al., recorded August 17, 1936 in Book 157 of Liens and Leases, page 484.

81. Easement dated April 30, 1929, from I. X. L. Stores Company, recorded May 21, 1929 in Book 57 of Liens and Leases, pages 133-4.

82. Easement dated December 29, 1933, from John E. Dooly Company, et al., recorded March 26, 1934 in Book 125 of Liens and Leases, pages 334-5.

83. Deed dated July 23, 1935, from Utah Power Company, recorded August 7, 1935 in Book 143 of Deeds, pages 523-5.

84. Easement dated February 12, 1937 from James R. and Priscilla H. Nilson, recorded March 7, 1938 in Book 201 of Liens and Leases, page 436.

85. Easement dated September 24, 1938, from Elizabeth Breen, recorded November 14, 1938 in Book 214 of Liens and Leases, pages 313-4.

86. Easement dated September 27, 1938, from Lonora C. Stewart, recorded November 14, 1938 in Book 214 of Liens and Leases, page 314.

87. Easement dated September 27, 1938, from St. Joseph Water & Irrigation Company, recorded November 14, 1938 in Book 214 of Liens and Leases, pages 314-15.

88. Easement dated September 28, 1938, from Jane Hunter Jackson, et al., recorded November 14, 1938 in Book 214 of Liens and Leases, page 315.

89. Easement dated April 7, 1939, from Jesse D. and Birdie C. Palfreyman, recorded June 28, 1939 in Book 214 of Liens and Leases, page 635.

90. Easement dated April 11, 1939, from U. Grant Swan, recorded June 28, 1939 in Book 214 of Liens and Leases, pages 634-5.

91. Easement dated May 1, 1939, from Brown Corporation of Utah, recorded June 28, 1939 in Book 214 of Liens and Leases, page 634.

92. Easement dated January 9, 1941, from Oquirrh Investment Company, recorded January 14, 1941 in Book 256 of Deeds, page 388.

93. Easement dated January 9, 1941, from Edward A. and Helen Murray, recorded January 14, 1941 in Book 256 of Deeds, pages 387-8.

94. Easement dated May 12, 1941, from Carl D. Davidson, recorded June 4, 1941 in Book 273 of Deeds, page 574.

95. Easement dated December 30, 1942 from Salt Lake County, recorded February 25, 1944 in Book 373, page 73.

96. Easement dated February 16, 1943 from Karl D. Hardy, recorded February 25, 1944 in Book 373, page 68.

97. Easement dated April 23, 1943 from Diomantina Contri, recorded February 25, 1944 in Book 373, page 71.

#### PARAGRAPH EIGHT.

##### Franchises.

The Franchises of the Company, including all franchises, certificates, licenses, privileges, permits, grants and consents for the construction, maintenance and operation of electric transmission lines, distribution lines and systems, and telephone lines, through, in, over, under, across and upon the streets, alleys, highways, roads, public grounds and rights-of-way, and all rights incident thereto which have been granted to the Company or its predecessors by the governing bodies of the respective cities and counties of the state of Utah, as follows:

##### MUNICIPAL FRANCHISES.

Name	Town or City	Service	Expiration
Ogden	2nd Class	G. E. S.*	August 1, 1965
Salt Lake City	1st Class	G. E. S.*	July 1, 1955
Sandy	3rd Class	G. E. S.*	August 1, 1956
S. L. County	County Franchises	Distribution Line	Indeterminate
Weber County		G. E. S.*	Nov. 27, 1956
Davis County		Distribution Line	Nov. 17, 1946

\*Note: G. E. S.—General Electric Service.

Also all other franchises, certificates, licenses, privileges, permits, grants and consents owned by the Company for the construction, maintenance and operation of transmission lines, distribution lines and systems, underground conduits and telephone lines through, in, over, under, across and upon the streets, alleys, highways, roads, public grounds and rights-of-way, and all rights incident thereto.

## PARAGRAPH NINE.

## Miscellaneous Property.

*All Miscellaneous Land* and rights and interests in said land of the Company, together with the improvements located thereon, described as follows:

## IMPROVED PROPERTY IN SALT LAKE COUNTY, UTAH

1. *West Temple Offices, Substation & Stores*

Part of Lots 3 and 4, Block 69, Plat "A" Salt Lake City survey described as follows: Beginning 82.5 feet north from the southeast corner of said Lot 3, thence running North 165 feet, thence West 95 feet, thence North 41.25 feet, thence West 70 feet, thence South 26 feet, thence West 20 feet, thence South 15.25 feet, thence West 145 feet, thence South 165 feet, thence East 330 feet to beginning, together with perpetual right of way of alley being the west 145 feet of the South 15.25 feet of the North half of said Lot 4; subject to pipe line easement heretofore granted to Utah Power & Light Company; also an easement for vehicle traffic over the East, 15.23 feet heretofore granted to Henry Dinwoodey Company.

2. *Salt Lake Division Service Department—Offices and Stores.*  
(Part of old car barn property.)

Beginning in the north property line of Block 25, Plat "B", Salt Lake City Survey, at a point 66 feet east from the northwest corner of said Block 25, thence running southerly along a line parallel to the west property line of said Block 25, 144 feet, more or less, thence easterly along a line parallel to the north property line of said Block 25, 330 feet, more or less, thence northerly along a line parallel to the west property line of said Block 25, 144 feet, more or less, to the north property line of said Block 25, thence westerly along the north property line of said Block 25, 330 feet, more or less, to beginning, and being a part of Lots 5, 6 and 7 of said Block 25.

Also beginning in the east property line of said Block 25 at a point 65 feet north from the southeast corner of said Block 25, thence running north 1.63 feet, more or less, to the intersection with the easterly-westerly line passing through the center of the

brick wall common to the fourth bay of the car barns and Utah Power & Light Company Service Department, thence westerly along said easterly-westerly center line of said common wall 660 feet, more or less, to the west property line of said Block 25, thence south 1.93 feet, more or less, to a point 65 feet north from the southwest corner of said Block 25, thence east 660 feet to beginning and being a part of Lots 1, 2, 3 and 4 of said Block 25.

### 3. *Fourth West Warehouse*

Part of Lot 3, Block 65, Plat "A", Salt Lake City survey described as follows: Beginning at the Northwest corner of said Lot 3, thence running South  $7\frac{1}{2}$  rods, thence East 10 rods, thence South  $2\frac{1}{2}$  rods, thence East 4 rods, thence North 10 rods, thence West 14 rods to beginning; subject to trackage easement heretofore granted to Oregon Short Line Railroad Company.

### 4. *Fourth West Storage Yard*

Lot 1 and part of Lots 2, 3, 7 and 8, Block 82, Plat "A", Salt Lake City survey described as follows: Beginning at the Southeast corner of said Lot 1, thence running West 391.875 feet, thence North 120 feet, thence Northeasterly 460 feet, more or less, to a point 125 feet West and 165 feet North of the Southeast corner of said Lot 8, thence South 495 feet to beginning.

### 5. *Sixth East Storeroom*

Part of Lot 7, Block 24, Plat "B", Salt Lake City survey, described as follows: Beginning at the northeast corner of said Lot 7, thence running South  $3\frac{1}{2}$  rods, thence West 10 rods, thence North  $3\frac{1}{2}$  rods, thence East 10 rods to beginning.

### 6. *Fifth North Material Yard*

Part of Lots 2, 3, 4 and 5, Block 137, Plat "A", Salt Lake City survey, described as follows: Beginning 60 feet East from the northwest corner of said Lot 5, thence running East 92 feet, thence South 330 feet, thence West 20 feet, thence South 165 feet, thence East 20.46 feet, thence South 165 feet, thence West 92.46 feet, thence North 660 feet to beginning.

Subject to that certain agreement by and between the Utah Light and Traction Company and the Utah Oil Refining Company, dated Jan. 9, 1924 and recorded Feb. 7, 1924 in Book 3-T of Liens and Leases at pages 484-5.

## IMPROVED PROPERTY, IN WEBER COUNTY, UTAH

7. *Ogden 23rd Street Warehouse*

Beginning at the southwest corner of Lot 3, Block 40, Plat "A", Ogden City survey, thence running North 8 rods, thence East 7 rods, thence South 8 rods, thence West 7 rods to beginning.

## UNIMPROVED PROPERTY, IN SALT LAKE COUNTY, UTAH

1. *Old Public Service Property*

That part of Lots 5 and 6, Block 66, Plat "A", Salt Lake City survey, described as follows: Beginning at a point 7.5 rods East from the northwest corner of said Lot 5, thence running South 10 rods, thence East 1.5 rods, thence South 2 rods, thence West 9 rods, thence South 8 rods, thence East 15 rods, thence North 12 rods, thence West 72.5 feet, thence North 132 feet, thence West 51.25 feet to beginning.

2. *North Temple Street Subdivision*

Lots five, six, seven and eight in Block 55, Plat "C", Salt Lake City survey, being Lots One to Fifty-two, inclusive, of North Temple Street Subdivision.

3. *Warm Springs Gravel Pit*

(a) Lot 26, Block 5, City View Addition to Salt Lake City, except the south 5 feet thereof.

(b) Beginning at a point 14 rods and 12 feet North from the southeast corner of Block 150, Plat "A" Salt Lake City survey, thence running Northwesterly to a point 10 rods South and 18 rods West from the northeast corner of said Block 150, thence East 152.5 feet, thence N. 43° 30' E. 825 feet, thence S. 46° 30' E. 301.5 feet, more or less, to the intersection with the Northwestern boundary line of City View Addition projected, thence S. 43° 30' W. 849.75 feet, thence N. 32° 00' W. 101.47 feet, thence South 109.11 feet to beginning. Subject to rights of way for Wall Street and State Road.

4. *Pasture Land*

Lots 16, 17 and 20, Block 6, Five Acre Plat "B", Big Field survey, Salt Lake County, Utah.

## UNIMPROVED PROPERTY, IN WEBER COUNTY, UTAH

5. *Old Steam Plant*

Lots 1, 2, 3 and 4, Block 1, Riverside Park Addition to Ogden City.

6. *Old Gas Plant*

A part of Lots Four (4) and Five (5), Block Seven (7) in Ogden Five-acre Plat "A", of Ogden City Survey; Beginning at a point 477.5 feet N.  $0^{\circ} 58'$  E. and 49.5 feet S.  $89^{\circ} 02'$  E. from the Monument at the intersection of 21st Street and Wall Avenue, in Ogden City, and running thence S.  $89^{\circ} 02'$  E. 140 feet, thence N.  $0^{\circ} 58'$  E. 50 feet, thence N.  $89^{\circ} 02'$  W. 140 feet, thence S.  $0^{\circ} 58'$  W. 50 feet to the place of beginning. The beginning point of the above described tract of land being the Northeast corner of Spencer Street and Wall Avenue, and said land being 140 feet along the north line of Spencer Street and 50 feet along the east line of Wall Avenue.

7. *Ogden Canyon Lands*

(a) The north one third ( $\frac{1}{3}$ ) of the east one half ( $\frac{1}{2}$ ) of the Southeast quarter of Section 22, T. 6 N., R. 1 W., S. L. B. & M. Containing 26.66 acres, more or less.

(b) An undivided one third ( $\frac{1}{3}$ ) interest in the north one half ( $\frac{1}{2}$ ) and the southeast quarter of Section 23, T. 6 N., R. 1 W., S. L. B. & M.

(c) Beginning at a point 2,472.2 feet South and 3,353.9 feet West from the northeast corner of Section 24, T. 6 N., R. 1 W., S. L. B. & M., thence running N.  $69^{\circ} 31'$  W. 50.4 feet, thence S.  $10^{\circ} 32'$  W. 57.9 feet, thence S.  $69^{\circ} 31'$  E. 11.8 feet, thence N.  $47^{\circ} 05'$  E. 63.8 feet to beginning, containing 0.04 acre, including a 12-foot right of way, the center line being described as follows: Beginning near the center of wagon bridge across Ogden River, at a point 245 feet West from the Southeast corner of the northwest  $\frac{1}{4}$  of said Section 24, thence running N.  $1^{\circ} 25'$  W. 30.3 feet, thence N.  $70^{\circ} 55'$  E. 138 feet, thence N.  $59^{\circ} 55'$  E. 115.0 feet, thence N.  $18^{\circ} 25'$  E. 120 feet, thence N.  $20^{\circ} 05'$  W. 43.0 feet, thence N.  $56^{\circ} 45'$  W. 53 feet, thence S.  $71^{\circ} 25'$  W. 388.0 feet, thence N.  $59^{\circ} 15'$  W. 58.0 feet, thence N.  $84^{\circ} 15'$  W. 86.0 feet, thence S.  $69^{\circ} 15'$  W. 78.0 feet, thence S.  $61^{\circ} 49'$  W. 24.8 feet, containing 0.30 of an acre.

(d) The North one-half of Section 17, T. 6 N., R. 1 E., S. L. B. & M. containing 320 Acres, more or less.

Also beginning at the southwest corner of NW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 17, T. 6 N., R. 1 E., S. L. B. & M., thence running N. 0° 43' E. 40 feet, thence East 560.21 feet, thence N. 0° 54' W. 36.92 feet, thence N. 73° 13' W. 115.61 feet, to the center of Ogden River, thence North 57 feet to the south right of way line of Ogden Canyon Highway, State Route No. 39, thence in south right of way line of said highway, on an 18° curve to the right with a radius of 319.5 feet, a distance of 109.2 feet, N. 69° 53' W. 236.3 feet and on a 4° 06' curve to the left with a radius of 1399.69 feet, a distance of 108.29 feet to the west line of said Section 17, thence N. 0° 43' E. in the west line of said Section 17, 1012.13 feet to the northwest corner of the SW $\frac{1}{4}$  of said Section 17, thence east 5280 feet to the northeast corner of the SE $\frac{1}{4}$  of said Section 17, thence south 660 feet, thence west 1320 feet, thence south 211.4 feet more or less to the south right of way line of Ogden Canyon Highway, State Route No. 39, thence in south right of way line of said Highway on a 5° 10' curve to the left with a radius of 1113.2 feet a distance of 50 feet, more or less, S. 74° 03' W. 95 feet and on a 21° 04' curve to the right with a radius of 273.6 feet a distance of 80 feet, more or less, to a point 10 feet north more or less, from the center of east end of Ogden City pipeline bridge thence South 40 feet, more or less to center of Ogden River, thence southeasterly up the center of said River 250 feet, more or less, thence South 883.6 feet, thence East 1320 feet, thence South 660 feet to the southeast corner of said Section 17, thence West 5280 feet to the Southwest corner of said Section 17, thence North 1320 feet to beginning, containing 277.2 acres, more or less; subject to a pipe line easement heretofore granted to Ogden City.

(e) All of Sections 19, 21, 31, T. 6 N., R. 1 E., and all of Section 25, T. 6 N., R. 1 W., S. L. B. & M.; subject to a pipe line easement across Section 19, heretofore granted to Ogden City. Containing 2515 acres, more or less.

TOGETHER WITH ALL AND SINGULAR the tenements, hereditaments, and appurtenances, belonging or in any wise appertaining to the property herein described, it being the intention by this conveyance to convey and transfer to the Grantee all right, title and interest of the Grantor in and to all of the property of any kind and nature whatsoever now owned by said Grantor.

This sale is made in connection with the simplification of the corporate structure of Utah Power & Light Company and pursuant to the "Order Granting Application and Permitting Declaration to become effective" issued by the Securities and Exchange Commission "In the Matter of Utah Power & Light Company and Utah Light and Traction Company, File No. 70-978," which said Order contains the following:

"IT IS FURTHER ORDERED that the proposal by Utah Company to acquire the properties of Traction Company and (a) assume all the liabilities of Traction Company, (b) forgive all indebtedness of Traction Company due it, (c) surrender for cancellation all of Traction Company's outstanding capital stock, and (d) cause Traction Company to be dissolved, are necessary and appropriate to the integration or simplification of the holding company system of which Utah Company and Traction Company are a part and necessary and appropriate to effectuate the provisions of Section 11(b) of the Public Utility Holding Company Act of 1935 within the meaning of the applicable provisions of the Internal Revenue Code, as amended, including Section 1808(f) and Supplement R thereof."

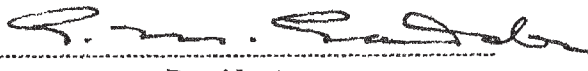
Title and possession of the property herein conveyed was delivered to Grantee as of 11:59 P. M., December 31, 1944.

This deed has been simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

WITNESS the hand of said Grantor as of the 31st day of December, 1944, this 18th day of January, 1945.

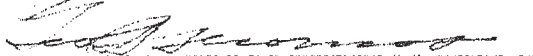
UTAH LIGHT AND TRACTION COMPANY

By



President

ATTEST:



Secretary

40

STATE OF UTAH }  
COUNTY OF SALT LAKE } ss.

On the 18th day of January, 1945, personally appeared before me G. M. Gadsby, who being by me duly sworn, did say that he is the President of Utah Light and Traction Company, a corporation, and that the foregoing instrument was signed on behalf of said Corporation by authority of a Resolution of its Board of Directors and said G. M. Gadsby acknowledged to me that said Corporation executed the same.

Charlotte Cummings  
Notary Public

Residing at Salt Lake City, Utah

My Commission expires:

Dec. 12, 1946.

To the County Clerks of Salt Lake, Davis, Weber, and Morgan Counties, Utah:

The foregoing conveyance does not involve a sale, or transfer for a valuable consideration, within the meaning of the Internal Revenue Code of the United States, and is not subject to the stamp tax on certain conveyances imposed by said Code.

UTAH LIGHT AND TRACTION COMPANY

By

B. Jones  
Treasurer

## **ATTACHMENT B**

### **STATEMENT OF FEES REQUIRED TO DEVELOP SECTION 30 (C) CONDITIONS**

Pursuant to 18 CFR 4.301, within the draft application comment period provided in § 4.38(c)(5), a fish and wildlife agency must provide a prospective section 30(c) applicant with a reasonable estimate of the total costs the agency anticipates it will incur to set mandatory terms and conditions for the proposed project. An agency may provide an applicant with an updated estimate as it deems necessary. If an agency believes that its most recent estimate will be exceeded by more than 25 percent, it must supply the prospective applicant or applicant with a new estimate and submit a copy to FERC.

**ATTACHMENT C**  
**CONSULTATION RECORD**

DATE	TITLE	METHOD	REQUIRED OR VOLUNTARY	BRIEF DESCRIPTION
01/08/2024	Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Interested Parties	Email	Voluntary	Invitation to attend preliminary meeting to introduce the Proposed Action to interested parties.
01/23/2024	RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Interested Parties	Email	Voluntary	Notification of scheduled preliminary meeting for interested parties.
01/31/2024	Stairs Hydroelectric Project (FERC No. 597) Preliminary Meeting	Virtual meeting	Voluntary	Preliminary meeting to discuss Proposed Action with initial list of interested parties.
02/08/2024	Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up	Email	Voluntary	Preliminary meeting follow-up sent to interested parties.
02/16/2024	PacifiCorp submits Initial Consultation Documents for Proposed License Exemption and Surrender Application, et al. for the Stairs Hydroelectric Project under P-597	eFile	Required pursuant to 18 CFR 4.38(b)(2)	Initial Consultation Document for the Stairs Hydroelectric Project (FERC No. 597) filed with FERC.

DATE	TITLE	METHOD	REQUIRED OR VOLUNTARY	BRIEF DESCRIPTION
02/26/2024	Notice of Stairs Hydroelectric Project (FERC Project No. 597) Initial Consultation Document Filing with FERC	Email, eFile	Required pursuant to 18 CFR 4.38(a)(7)	Notification for interested parties that the Initial Consultation Document has been filed with FERC.
03/05/2024	Newspaper notice of Stairs Hydroelectric Project (FERC Project No. 597) Joint agency and Public Meeting filed with FERC	eFile	Required pursuant to 18 CFR 4.38(g)(1)	Newspaper notice of the joint agency and public meeting (JAPM) for interested parties and Tribes filed with FERC.
03/06/2024	Newspaper notice of Stairs Hydroelectric Project (FERC Project No, 597) Joint Agency and Public Meeting published in the Salt Lake Tribune	Newspaper (printed and digital)	Required pursuant to 18 CFR 4.38(g)(1)	Newspaper notice of the JAPM for interested parties and Tribes filed with FERC published in the Salt Lake Tribune.
03/12/2024	Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting	Email	Required pursuant to 18 CFR 4.38(b)(3)(B)	Notification for interested parties that PacifiCorp will host a JAPM for the Stairs Hydroelectric Project.

DATE	TITLE	METHOD	REQUIRED OR VOLUNTARY	BRIEF DESCRIPTION
03/15/2024	Comments of U.S. Forest Service in support of PacifiCorp's Request for Conduit Exemption re the Stairs Hydroelectric Project under P-597.	eComment	Voluntary	Letter of support for conduit exemption from the USFS.
03/18/2024	Reminder: Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting	Email	Voluntary	Reminder that PacifiCorp will host a JAPM for the Stairs Hydroelectric Project.
03/21/2024	Stairs Hydroelectric Project Joint Agency and Public Meeting	eFiled, In-person	Required pursuant to 14 CFR 4.38(b)(3)(B)(ii)	JAPM held for interested parties.
03/21/2024	Stairs Hydroelectric Project Site Visit	In-person	Required pursuant to 14 CFR 4.38(b)(3)(B)(ii)	Site visit to the Stairs Hydroelectric Project.
04/02/2024	Stairs Hydroelectric Project Joint Agency and Public Meeting Follow Up	Email, eFile	Required pursuant to 14 CFR 4.38(b)(4)	JAPM follow-up sent to interested parties.

Note: N/A = not applicable.

## **January 31, 2024 Meeting Correspondence**

### ***Identified Agencies***

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**From:** Emily Waters  
**Sent:** Thursday, February 8, 2024 12:06 PM  
**To:** teresa.gray@slcgov.com; Michelle.Barry@slcgov.com; Tamara.prue@slcgov.com; Scott.Catton@tu.org; michael Slater@utah.gov; charles.rosier@usda.gov; Peter.Gomben@usda.gov; Weekley, George M; dannette\_weiss@fws.gov; Sandy Wingert; chrisCrockett@utah.gov  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up  
**Attachments:** Stairs\_PreliminaryMtgNotes\_20240131.pdf; Stairs\_PreliminaryMtg\_Presentation\_20240131.pdf

Good afternoon,

On behalf of Eve and myself, thank you again to those that were able to join us last week to informally discuss PacifiCorp's proposal to apply with FERC for the conversion of the Stairs Project to the more appropriate, conduit exemption classification and correspondingly surrender the current FERC license once a conduit exemption has been granted. As discussed on the call, the formal consultation process will begin with the public distribution of an Initial Consultation Document (ICD) – currently planned for mid-February – that describes the current Project and the proposed action, followed by a formal review/comment period and joint agency meeting and site visit. You will be cc'd on the FERC filing when it is made, and we would be happy to further address any specific comments or question you may have regarding that filing and subsequent comment deadlines.

We would like to invite you and your agency/interested party to provide preliminary support for PacifiCorp's proposal to be included as an appendix to our ICD. If you are willing, this would be as simple as a brief response to this email stating as such. We would also love to hear any feedback, questions, or other comments that you may have regarding the proposal, whether they support the proposed action or not. Note that we will be filing the ICD by the end of next week, so if you do wish to voice support/concern for PacifiCorp's proposal in the ICD appendix (which would be most appreciated!), we would need your response in short order.

Again, we greatly appreciate your time and feedback regarding this proposal so far and look forward to initiating the formal process and discussing further with you and your agency/interested party. Please reach out with any questions or concerns.

Thank you-

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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*Note: my typical work hours are Mon – Fri, 7 a.m. – 3:30 p.m. Pacific time*

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**From:** Emily Waters  
**Sent:** Thursday, January 18, 2024 4:22 PM  
**To:** Michael Slater; Weekley, George M; dannette\_weiss@fws.gov; Peter.Gomben@usda.gov; Sandy Wingert  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hi everyone,

I'm following up on behalf of Eve, as we're looking to get the preliminary meeting invite out on calendars soon. Based on initial results from the doodle poll I sent out earlier this month, we're looking at scheduling a one-hour meeting to discuss the Stairs Project the afternoon of Wednesday, January 31<sup>st</sup>. Are there any hard blocks that would prevent you from attending at that date/time? Thanks!

Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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*Note: my typical work hours are Mon – Fri, 7 a.m. – 3:30 p.m. Pacific time*

---

**From:** Emily Waters  
**Sent:** Monday, January 8, 2024 11:34 AM  
**To:** teresa.gray@slcgov.com; Michelle.Barry@slcgov.com; Tamara.prue@slcgov.com; Scott.Catton@tu.org; michael Slater@utah.gov; charles.rosier@usda.gov; Peter.Gomben@usda.gov; george\_weekley@fws.gov; dannette\_weiss@fws.gov; swingert@utah.gov  
**Cc:** Davies, Eve (PacifiCorp) <Eve.Davies@PacifiCorp.com>; Annie Ng <Annie.Ng@swca.com>; Charlotte Garris <Charlotte.Garris@swca.com>  
**Subject:** Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hello,

PacifiCorp is the owner, operator, and licensee of the 1.2-megawatt Stairs Hydroelectric Project (Stairs Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 576. The Project is located on Big Cottonwood Creek in Salt Lake County, Utah. The current Project license was issued by FERC on September 30, 1999, with an effective date of July 1, 2000, and expires on June 30, 2030. This means that PacifiCorp would be required to file a Notice of Intent to initiate relicensing of the Project no later than June 30, 2025. You are receiving this email because PacifiCorp has identified your organization as a key stakeholder for preliminary consultation.

Water from the Stairs Project is released directly into PacifiCorp's Granite Project (FERC Project No. 14293) intake, which has already been classified by FERC as a conduit that conveys water directly to the Big Cottonwood Canyon Water Treatment Plant (BCWTP) for municipal consumption. Because the Stairs Project also acts as a conduit by conveying

water directly to the BCWTP via the Granite Project, PacifiCorp is proposing to apply with FERC for the conversion of the Project to the more appropriate, conduit exemption, and correspondingly surrender the current FERC license once a conduit exemption has been granted. This proposed action is largely an administrative action, as there would be no construction of new facilities or changes to existing facilities, ownership, or operations and maintenance activities. PacifiCorp would continue to maintain the Project in accordance with applicable federal and state dam safety standards.

Pursuant to Title 18 Code of Federal Regulations Section 4.38, the formal consultation process will begin with the public distribution of an Initial Consultation Document (ICD) that describes the current Project and the proposed action, followed by a formal review and comment period, a joint agency meeting, and Project site visit. It is important to note that since this is largely an administrative action, PacifiCorp is proposing no studies at this time. However, study requests may be submitted to FERC during the ICD review window.

Prior to initiation of the formal consultation process, PacifiCorp identified your organization as a key stakeholder for PacifiCorp's Stairs Project and would like to invite you to a preliminary meeting in January 2024 to informally discuss the proposal and answer any initial questions. Please fill out the following doodle poll with all time slots for which you could attend.

<https://doodle.com/meeting/participate/id/aQA1ogLa/vote>.

Should there be a more appropriate or additional contact from your organization to participate in this meeting, please reply with their contact information and we will ensure they are included in this poll and future communication.

On behalf of PacifiCorp, we look forward to discussing this proposal with you. Please reach out to Eve Davies ([Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)) or myself if you have any questions.

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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---

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**Sent:** Monday, January 8, 2024 12:34 PM  
**To:** teresa.gray@slcgov.com; Michelle.Barry@slcgov.com; Tamara.prue@slcgov.com; Scott.Catton@tu.org; michael Slater@utah.gov; charles.rosier@usda.gov; Peter.Gomben@usda.gov; Weekley, George M; dannette\_weiss@fws.gov; Sandy Wingert  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hello,

PacifiCorp is the owner, operator, and licensee of the 1.2-megawatt Stairs Hydroelectric Project (Stairs Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 576. The Project is located on Big Cottonwood Creek in Salt Lake County, Utah. The current Project license was issued by FERC on September 30, 1999, with an effective date of July 1, 2000, and expires on June 30, 2030. This means that PacifiCorp would be required to file a Notice of Intent to initiate relicensing of the Project no later than June 30, 2025. You are receiving this email because PacifiCorp has identified your organization as a key stakeholder for preliminary consultation.

Water from the Stairs Project is released directly into PacifiCorp's Granite Project (FERC Project No. 14293) intake, which has already been classified by FERC as a conduit that conveys water directly to the Big Cottonwood Canyon Water Treatment Plant (BCWTP) for municipal consumption. Because the Stairs Project also acts as a conduit by conveying water directly to the BCWTP via the Granite Project, PacifiCorp is proposing to apply with FERC for the conversion of the Project to the more appropriate, conduit exemption, and correspondingly surrender the current FERC license once a conduit exemption has been granted. This proposed action is largely an administrative action, as there would be no construction of new facilities or changes to existing facilities, ownership, or operations and maintenance activities. PacifiCorp would continue to maintain the Project in accordance with applicable federal and state dam safety standards.

Pursuant to Title 18 Code of Federal Regulations Section 4.38, the formal consultation process will begin with the public distribution of an Initial Consultation Document (ICD) that describes the current Project and the proposed action, followed by a formal review and comment period, a joint agency meeting, and Project site visit. It is important to note that since this is largely an administrative action, PacifiCorp is proposing no studies at this time. However, study requests may be submitted to FERC during the ICD review window.

Prior to initiation of the formal consultation process, PacifiCorp identified your organization as a key stakeholder for PacifiCorp's Stairs Project and would like to invite you to a preliminary meeting in January 2024 to informally discuss the proposal and answer any initial questions. Please fill out the following doodle poll with all time slots for which you could attend.

<https://doodle.com/meeting/participate/id/aQA1ogLa/vote>.

Should there be a more appropriate or additional contact from your organization to participate in this meeting, please reply with their contact information and we will ensure they are included in this poll and future communication.

On behalf of PacifiCorp, we look forward to discussing this proposal with you. Please reach out to Eve Davies (Eve.Davies@PacifiCorp.com) or myself if you have any questions.

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**

P 801.658.2256 | C 360.713.4281



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**From:** Sandy Wingert <swingert@utah.gov>

**Sent:** Friday, January 19, 2024 8:27 AM

**To:** Emily Waters <emily.waters@swca.com>

**Subject:** Re: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Emily,

I am free on Wed 1/31 but a bit later in the day. I have a meeting from 11-12pm that day. I filled out the doodle poll. I can make Fridays work if needed.

---

On Thu, Jan 18, 2024 at 4:21 PM Emily Waters <[emily.waters@swca.com](mailto:emily.waters@swca.com)> wrote:

Hi everyone,

I'm following up on behalf of Eve, as we're looking to get the preliminary meeting invite out on calendars soon. Based on initial results from the doodle poll I sent out earlier this month, we're looking at scheduling a one-hour meeting to discuss the Stairs Project the afternoon of Wednesday, January 31<sup>st</sup>. Are there any hard blocks that would prevent you from attending at that date/time? Thanks!

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**

P 801.658.2256 | C 360.713.4281



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*Note: my typical work hours are Mon – Fri, 7 a.m. – 3:30 p.m. Pacific time*

**From:** Emily Waters

**Sent:** Monday, January 8, 2024 11:34 AM

**To:** [teresa.gray@slcgov.com](mailto:teresa.gray@slcgov.com); [Michelle.Barry@slcgov.com](mailto:Michelle.Barry@slcgov.com); [Tamara.prue@slcgov.com](mailto:Tamara.prue@slcgov.com); [Scott.Catton@tu.org](mailto:Scott.Catton@tu.org); [michaelslater@utah.gov](mailto:michaelslater@utah.gov); [charles.rosier@usda.gov](mailto:charles.rosier@usda.gov); [Peter.Gomben@usda.gov](mailto:Peter.Gomben@usda.gov); [george\\_weekley@fws.gov](mailto:george_weekley@fws.gov); [dannette\\_weiss@fws.gov](mailto:dannette_weiss@fws.gov); [swingert@utah.gov](mailto:swingert@utah.gov)

**Cc:** Davies, Eve (PacifiCorp) <[Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)>; Annie Ng <[Annie.Ng@swca.com](mailto:Annie.Ng@swca.com)>; Charlotte Garris <[Charlotte.Garris@swca.com](mailto:Charlotte.Garris@swca.com)>

**Subject:** Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

---

Hello,

PacifiCorp is the owner, operator, and licensee of the 1.2-megawatt Stairs Hydroelectric Project (Stairs Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 576. The Project is located on Big Cottonwood Creek in Salt Lake County, Utah. The current Project license was issued by FERC on September 30, 1999, with an effective date of July 1, 2000, and expires on June 30, 2030. This means that PacifiCorp would be required to file a Notice of Intent to initiate relicensing of the Project no later than June 30, 2025. You are receiving this email because PacifiCorp has identified your organization as a key stakeholder for preliminary consultation.

Water from the Stairs Project is released directly into PacifiCorp's Granite Project (FERC Project No. 14293) intake, which has already been classified by FERC as a conduit that conveys water directly to the Big Cottonwood Canyon Water Treatment Plant (BCWTP) for municipal consumption. Because the Stairs Project also acts as a conduit by conveying water directly to the BCWTP via the Granite Project, PacifiCorp is proposing to apply with FERC for the

license once a conduit exemption has been granted. This proposed action is largely an administrative action, as there would be no construction of new facilities or changes to existing facilities, ownership, or operations and maintenance activities. PacifiCorp would continue to maintain the standards.

distribution of an Initial Consultation Document (ICD) that describes the current Project and the proposed action, followed by a formal review and comment period, a joint agency meeting, and Project site visit. It is important to note that since this is largely an administrative action, PacifiCorp is proposing no studies at this time. However, study requests may be submitted to FERC during the ICD review window.

Prior to initiation of the formal consultation process, PacifiCorp identified your organization as a key stakeholder for PacifiCorp's Stairs Project and would like to invite you to a preliminary meeting in January 2024 to informally discuss the proposal and answer any initial questions. Please fill out the following doodle poll with all time slots for which you could attend.

<https://doodle.com/meeting/participate/id/aQA1ogLa/vote>.

Should there be a more appropriate or additional contact from your organization to participate in this meeting, please reply with their contact information and we will ensure they are included in this poll and future communication.

On behalf of PacifiCorp, we look forward to discussing this proposal with you. Please reach out to Eve Davies ([Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)) or myself if you have any questions.

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**

P 801.658.2256 | C 360.713.4281



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--

**Sandy Wingert | Upper Provo and Jordan River Coordinator | Watershed Protection Section**

**Work Cell: 385-256-3438**



---

**From:** Amy Dickey <adickey@utah.gov>

**Sent:** Friday, December 29, 2023 2:41 PM

**To:** Matthew Harper <Matthew.Harper@swca.com>

**Cc:** Jodi Gardberg <jgardberg@utah.gov>; Davies, Eve (PacifiCorp) <Eve.Davies@PacifiCorp.com>; Emily Waters <emily.waters@swca.com>; Trevor Herritt <Trevor.Herritt@swca.com>; Annie Ng <Annie.Ng@swca.com>; Christine Osborne <cosborne@utah.gov>; Sandy Wingert <swingert@utah.gov>

**Subject:** Re: FW: Pioneer Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hi Matthew,

For the Pioneer project, please contact:

Christine Osborne

[cosborne@utah.gov](mailto:cosborne@utah.gov)

(801)536-4185

For the Stairs project, please contact:

Sandy Wingert

[swingert@utah.gov](mailto:swingert@utah.gov)

(385)256-3438

Both are copied on this message.

Good luck with the projects!

Amy

On Fri, Dec 29, 2023 at 12:52 PM Matthew Harper <[Matthew.Harper@swca.com](mailto:Matthew.Harper@swca.com)> wrote:

Hi Amy!

Copying you per Jodi's email response in case this is a question you could answer for us.

Thanks!

**Matthew Harper** | *he, him, his*

FERC Hydropower Consultant

971.325.5056



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---

**From:** Matthew Harper

**Sent:** Friday, December 29, 2023 12:32 PM

**To:** [jgardberg@utah.gov](mailto:jgardberg@utah.gov)

**Cc:** Davies, Eve (PacifiCorp) <[Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)>; Emily Waters <[emily.waters@swca.com](mailto:emily.waters@swca.com)>; Trevor Herritt <[Trevor.Herritt@swca.com](mailto:Trevor.Herritt@swca.com)>; Annie Ng <[Annie.Ng@swca.com](mailto:Annie.Ng@swca.com)>

**Subject:** FW: Pioneer Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Good afternoon, Jodi,

As you see from the message below, PacifiCorp is initiating the process to apply for a conduit exemption for the Pioneer Hydroelectric Project, located predominantly within the Ogden Canyon and parallel to the Ogden River below Pineview Dam. PacifiCorp will also be initiating a similar process for its Stairs Hydroelectric Project, located in Big Cottonwood Canyon and along Big Cottonwood Creek. We wanted to reach out to confirm who might be the appropriate contact(s) from the Utah Department of Environmental Quality to participate in the application process for either or both Pioneer and Stairs Projects. We currently have you listed for both.

Thank you for your input, and we look forward to discussing these proposals with you.

Sincerely,

**Matthew Harper** | *he, him, his*

FERC Hydropower Consultant



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---

**From:** Matthew Harper

**Sent:** Friday, December 29, 2023 12:14 PM

**To:** [chrispenne@utah.gov](mailto:chrispenne@utah.gov); [charles.rosier@usda.gov](mailto:charles.rosier@usda.gov); Gomben, Pete - FS, UT <[Peter.Gomben@usda.gov](mailto:Peter.Gomben@usda.gov)>; [jgardberg@utah.gov](mailto:jgardberg@utah.gov); [george\\_weekley@fws.gov](mailto:george_weekley@fws.gov); [dannette\\_weiss@fws.gov](mailto:dannette_weiss@fws.gov); [pcrookston@usbr.gov](mailto:pcrookston@usbr.gov); Kent Wilkerson ([kent@weberriver.org](mailto:kent@weberriver.org)) <[kent@weberriver.org](mailto:kent@weberriver.org)>; [tanner.cox@tu.org](mailto:tanner.cox@tu.org)

**Cc:** Davies, Eve (PacifiCorp) <[Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)>; Trevor Herritt <[Trevor.Herritt@swca.com](mailto:Trevor.Herritt@swca.com)>; Nuria Holmes <[nuria.holmes@swca.com](mailto:nuria.holmes@swca.com)>

**Subject:** Pioneer Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Good afternoon,

PacifiCorp is the owner, operator, and licensee of the 5.0-megawatt Pioneer Hydroelectric Project (Pioneer Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 2722. The current Project license was issued by FERC on May 26, 2000, with an effective date of September 1, 2000, and expires on August 31, 2030. This ultimately means that PacifiCorp would be required to file a Notice of Intent to initiate relicensing of the Project no later than September 1, 2025.

Alternatively, PacificCorp believes that the Pioneer Project is more appropriately classified as a FERC conduit exemption, which would also exempt it from the upcoming FERC relicensing process. Therefore, PacifiCorp is proposing to apply with FERC for the conversion of the Project to the more appropriate, conduit exemption form of a license, and correspondingly surrender the current FERC license once a conduit exemption has been granted. As we will discuss in more detail, the proposed action would be largely administrative as there would be no construction of new facilities or changes to existing facilities, ownership, or operations and maintenance activities.

Pursuant to Title 18 Code of Federal Regulations Section 4.38, the formal consultation process would begin with the public distribution of an Initial Consultation Document (ICD) that describes the current Project and the proposed action, followed by a formal review/comment period and joint agency meeting and site visit. It is important to note that, since this is largely an administrative action, PacifiCorp is proposing no studies at this time.

Prior to initiation of this formal process, PacifiCorp has identified your organization as a key stakeholder for PacifiCorp's Pioneer Project and would like to invite you to a preliminary meeting in January 2024 to informally discuss the proposal. Please fill out the following doodle poll with all time slots for which you could attend.

[DOODLE POLL](#) (Please note that the initially proposed dates are in early to mid-January 2024)

Should there be a more appropriate or additional contact from your organization to participate in this meeting, please provide us their contact information and we will ensure they are included in this poll and future communication.

On behalf of PacifiCorp, we look forward to discussing this proposal with you. Please reach out to Eve Davies ([Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)) or myself if you have any questions.

Sincerely,

**Matthew Harper** | *he, him, his*

FERC Hydropower Consultant

971.325.5056



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**Amy Dickey**

Environmental Scientist | Division of Water Quality

**Office:** (385)501-9581

---

**From:** Gomben, Pete - FS, UT <Peter.Gomben@usda.gov>

**Sent:** Thursday, January 18, 2024 4:14 PM

**To:** Emily Waters <emily.waters@swca.com>

**Subject:** RE: [External Email]RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hi Emily,

The afternoon of Wednesday, July 31 is open for me.

Thanks,

Pete



**Pete Gomben, PhD**  
**Inter-Regional Hydropower Program Mgr.: Regions 1, 2, 3 and 4**  
**Located in the Region 4 Lands and Minerals Staff**  
**Hispanic Heritage special emphasis program manager**

**Forest Service**  
**Intermountain Region**

[peter.gomben@usda.gov](mailto:peter.gomben@usda.gov)

---

324 25th Street  
Ogden, UT 84401



**Caring for the land and serving people**

---

**From:** Emily Waters <[emily.waters@swca.com](mailto:emily.waters@swca.com)>  
**Sent:** Thursday, January 18, 2024 4:22 PM  
**To:** Michael Slater <[michaelslater@utah.gov](mailto:michaelslater@utah.gov)>; Weekley, George M <[george\\_weekley@fws.gov](mailto:george_weekley@fws.gov)>;  
[dannette\\_weiss@fws.gov](mailto:dannette_weiss@fws.gov); Gomben, Pete - FS, UT <[Peter.Gomben@usda.gov](mailto:Peter.Gomben@usda.gov)>; Sandy Wingert <[swingert@utah.gov](mailto:swingert@utah.gov)>  
**Cc:** Davies, Eve (PacifiCorp) <[Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)>; Annie Ng <[Annie.Ng@swca.com](mailto:Annie.Ng@swca.com)>; Charlotte Garriss  
<[Charlotte.Garris@swca.com](mailto:Charlotte.Garris@swca.com)>  
**Subject:** [External Email]RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

You don't often get email from [emily.waters@swca.com](mailto:emily.waters@swca.com). [Learn why this is important](#)

[External Email]

If this message comes from an **unexpected sender** or references a **vague/unexpected topic**;

Use caution before clicking links or opening attachments.

Please send any concerns or suspicious messages to: [Spam.Abuse@usda.gov](mailto:Spam.Abuse@usda.gov)

Hi everyone,

I'm following up on behalf of Eve, as we're looking to get the preliminary meeting invite out on calendars soon. Based on initial results from the doodle poll I sent out earlier this month, we're looking at scheduling a one-hour meeting to discuss the Stairs Project the afternoon of Wednesday, January 31<sup>st</sup>. Are there any hard blocks that would prevent you from attending at that date/time? Thanks!

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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---

**From:** Emily Waters  
**Sent:** Monday, January 8, 2024 11:34 AM  
**To:** [teresa.gray@slcgov.com](mailto:teresa.gray@slcgov.com); [Michelle.Barry@slcgov.com](mailto:Michelle.Barry@slcgov.com); [Tamara.prue@slcgov.com](mailto:Tamara.prue@slcgov.com); [Scott.Catton@tu.org](mailto:Scott.Catton@tu.org);  
[michaelslater@utah.gov](mailto:michaelslater@utah.gov); [charles.rosier@usda.gov](mailto:charles.rosier@usda.gov); [Peter.Gomben@usda.gov](mailto:Peter.Gomben@usda.gov); [george\\_weekley@fws.gov](mailto:george_weekley@fws.gov);  
[dannette\\_weiss@fws.gov](mailto:dannette_weiss@fws.gov); [swingert@utah.gov](mailto:swingert@utah.gov)  
**Cc:** Davies, Eve (PacifiCorp) <[Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)>; Annie Ng <[Annie.Ng@swca.com](mailto:Annie.Ng@swca.com)>; Charlotte Garriss  
<[Charlotte.Garris@swca.com](mailto:Charlotte.Garris@swca.com)>  
**Subject:** Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hello,

PacifiCorp is the owner, operator, and licensee of the 1.2-megawatt Stairs Hydroelectric Project (Stairs Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 576. The Project is located on Big Cottonwood Creek in Salt Lake County, Utah. The current Project license was issued by FERC on September 30, 1999, with an effective date of July 1, 2000, and expires on June 30, 2030. This means that PacifiCorp would be required to file a Notice of Intent to initiate relicensing of the Project no later than June 30, 2025. You are receiving this email because PacifiCorp has identified your organization as a key stakeholder for preliminary consultation.

Water from the Stairs Project is released directly into PacifiCorp's Granite Project (FERC Project No. 14293) intake, which has already been classified by FERC as a conduit that conveys water directly to the Big Cottonwood Canyon Water Treatment Plant (BCWTP) for municipal consumption. Because the Stairs Project also acts as a conduit by conveying water directly to the BCWTP via the Granite Project, PacifiCorp is proposing to apply with FERC for the conversion of the Project to the more appropriate, conduit exemption, and correspondingly surrender the current FERC license once a conduit exemption has been granted. This proposed action is largely an administrative action, as there would be no construction of new facilities or changes to existing facilities, ownership, or operations and maintenance activities. PacifiCorp would continue to maintain the Project in accordance with applicable federal and state dam safety standards.

Pursuant to Title 18 Code of Federal Regulations Section 4.38, the formal consultation process will begin with the public distribution of an Initial Consultation Document (ICD) that describes the current Project and the proposed action, followed by a formal review and comment period, a joint agency meeting, and Project site visit. It is important to note that since this is largely an administrative action, PacifiCorp is proposing no studies at this time. However, study requests may be submitted to FERC during the ICD review window.

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<https://doodle.com/meeting/participate/id/aQA1ogLa/vote>.

Should there be a more appropriate or additional contact from your organization to participate in this meeting, please reply with their contact information and we will ensure they are included in this poll and future communication.

On behalf of PacifiCorp, we look forward to discussing this proposal with you. Please reach out to Eve Davies ([Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)) or myself if you have any questions.

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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---

**From:** Weiss, Dannette T <dannette\_weiss@fws.gov>

**Sent:** Friday, January 19, 2024 2:05 PM

**To:** Emily Waters <emily.waters@swca.com>

**Subject:** Re: [EXTERNAL] RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hi Emily,

Thank you for the offer to attend the meeting. However, due to work load issues, I will not be attending the meeting.

---

Regards,

*Dannette Weiss*

Fish and Wildlife Biologist  
Ecological Field Services Office  
U.S. Fish and Wildlife Service  
2369 West Orton Circle, Suite 50  
West Valley City, Utah 84119  
Office phone: 801-239-0560

Please submit all project requests to:

[utahfieldoffice\\_ea@fws.gov](mailto:utahfieldoffice_ea@fws.gov)

---

**From:** Emily Waters <[emily.waters@swca.com](mailto:emily.waters@swca.com)>

**Sent:** Thursday, January 18, 2024 4:21 PM

**To:** Michael Slater <[michaelslater@utah.gov](mailto:michaelslater@utah.gov)>; Weekley, George M <[george\\_weekley@fws.gov](mailto:george_weekley@fws.gov)>; Weiss, Dannette T <[dannette\\_weiss@fws.gov](mailto:dannette_weiss@fws.gov)>; [Peter.Gomben@usda.gov](mailto:Peter.Gomben@usda.gov) <[Peter.Gomben@usda.gov](mailto:Peter.Gomben@usda.gov)>; Sandy Wingert <[swingert@utah.gov](mailto:swingert@utah.gov)>

**Cc:** Davies, Eve (PacifiCorp) <[Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)>; Annie Ng <[annie.ng@swca.com](mailto:annie.ng@swca.com)>; Charlotte Garriss <[Charlotte.Garriss@swca.com](mailto:Charlotte.Garriss@swca.com)>

**Subject:** [EXTERNAL] RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Hi everyone,

I'm following up on behalf of Eve, as we're looking to get the preliminary meeting invite out on calendars soon. Based on initial results from the doodle poll I sent out earlier this month, we're looking at scheduling a one-hour meeting to discuss the Stairs Project the afternoon of Wednesday, January 31<sup>st</sup>. Are there any hard blocks that would prevent you from attending at that date/time? Thanks!

Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**

P 801.658.2256 | C 360.713.4281



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*Note: my typical work hours are Mon – Fri, 7 a.m. – 3:30 p.m. Pacific time*

---

**From:** Emily Waters

**Sent:** Monday, January 8, 2024 11:34 AM

**To:** [teresa.gray@slcgov.com](mailto:teresa.gray@slcgov.com); [Michelle.Barry@slcgov.com](mailto:Michelle.Barry@slcgov.com); [Tamara.prue@slcgov.com](mailto:Tamara.prue@slcgov.com); [Scott.Catton@tu.org](mailto:Scott.Catton@tu.org); [michaelslater@utah.gov](mailto:michaelslater@utah.gov); [charles.rosier@usda.gov](mailto:charles.rosier@usda.gov); [Peter.Gomben@usda.gov](mailto:Peter.Gomben@usda.gov); [george\\_weekley@fws.gov](mailto:george_weekley@fws.gov); [dannette\\_weiss@fws.gov](mailto:dannette_weiss@fws.gov); [swingert@utah.gov](mailto:swingert@utah.gov)

**Cc:** Davies, Eve (PacifiCorp) <[Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)>; Annie Ng <[Annie.Ng@swca.com](mailto:Annie.Ng@swca.com)>; Charlotte Garriss <[Charlotte.Garriss@swca.com](mailto:Charlotte.Garriss@swca.com)>

**Subject:** Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hello,

PacifiCorp is the owner, operator, and licensee of the 1.2-megawatt Stairs Hydroelectric Project (Stairs Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 576. The Project is located on Big Cottonwood Creek in Salt Lake County, Utah. The current Project license was issued by FERC on September 30, 1999, with an effective date of July 1, 2000, and expires on June 30, 2030. This means that PacifiCorp would be required to file a Notice of Intent to initiate relicensing of the Project no later than June 30, 2025. You are receiving this email because PacifiCorp has identified your organization as a key stakeholder for preliminary consultation.

Water from the Stairs Project is released directly into PacifiCorp's Granite Project (FERC Project No. 14293) intake, which has already been classified by FERC as a conduit that conveys water directly to the Big Cottonwood Canyon Water Treatment Plant (BCWTP) for municipal consumption. Because the Stairs Project also acts as a conduit by conveying water directly to the BCWTP via the Granite Project, PacifiCorp is proposing to apply with FERC for the conversion of the Project to the more appropriate, conduit exemption, and correspondingly surrender the current FERC license once a conduit exemption has been granted. This proposed action is largely an administrative action, as there would be no construction of new facilities or changes to existing facilities, ownership, or operations and maintenance activities. PacifiCorp would continue to maintain the Project in accordance with applicable federal and state dam safety standards.

Pursuant to Title 18 Code of Federal Regulations Section 4.38, the formal consultation process will begin with the public distribution of an Initial Consultation Document (ICD) that describes the current Project and the proposed action, followed by a formal review and comment period, a joint agency meeting, and Project site visit. It is important to note that since this is largely an administrative action, PacifiCorp is proposing no studies at this time. However, study requests may be submitted to FERC during the ICD review window.

Prior to initiation of the formal consultation process, PacifiCorp identified your organization as a key stakeholder for PacifiCorp's Stairs Project and would like to invite you to a preliminary meeting in January 2024 to informally discuss the proposal and answer any initial questions. Please fill out the following doodle poll with all time slots for which you could attend.

<https://doodle.com/meeting/participate/id/aQA1ogLa/vote>.

Should there be a more appropriate or additional contact from your organization to participate in this meeting, please reply with their contact information and we will ensure they are included in this poll and future communication.

On behalf of PacifiCorp, we look forward to discussing this proposal with you. Please reach out to Eve Davies ([Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)) or myself if you have any questions.

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**

P 801.658.2256 | C 360.713.4281



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---

**From:** Emily Waters  
**Sent:** Wednesday, January 10, 2024 7:35 AM  
**To:** Charlotte Garris  
**Cc:** Annie Ng  
**Subject:** FW: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Please add Chris Crockett to the Stairs stakeholder list. I'll send him an individual email with the invite and doodle poll link.

Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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*Note: my typical work hours are Mon – Fri, 7 a.m. – 3:30 p.m. Pacific time*

---

**From:** Michael Slater <michaelslater@utah.gov>  
**Sent:** Tuesday, January 9, 2024 3:14 PM  
**To:** Emily Waters <emily.waters@swca.com>  
**Subject:** Re: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hello Emily, Please include Chris Crockett [chriscrockett@utah.gov](mailto:chriscrockett@utah.gov) our Aquatics Program Manager from our UDWR Central Region Office. He may be more appropriate in attending and providing input than myself. I will have a conversation with him when he returns (out of the office right now) to confirm this or who can be of most help to you in this process. Thanks, Mike



**Mike Slater**  
Central Region Sportfish Project Leader  
**M:** (801) 367-5941  
**E:** [michaelslater@utah.gov](mailto:michaelslater@utah.gov)

Utah Department of Natural Resources  
Division of Wildlife Resources



[wildlife.utah.gov](http://wildlife.utah.gov)

sender. If you received this message by mistake, please reply to this message and follow with its deletion so that we can ensure such a mistake does not occur in the future.

On Mon, Jan 8, 2024 at 12:34 PM Emily Waters <[emily.waters@swca.com](mailto:emily.waters@swca.com)> wrote:

Hello,

PacifiCorp is the owner, operator, and licensee of the 1.2-megawatt Stairs Hydroelectric Project (Stairs Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 576. The Project is located on Big Cottonwood Creek in Salt Lake County, Utah. The current Project license was issued by FERC on September 30, 1999, with an effective date of July 1, 2000, and expires on June 30, 2030. This means that PacifiCorp would be required to file a Notice of Intent to initiate relicensing of the Project no later than June 30, 2025. You are receiving this email because PacifiCorp has identified your organization as a key stakeholder for preliminary consultation.

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Prior to initiation of the formal consultation process, PacifiCorp identified your organization as a key stakeholder for PacifiCorp's Stairs Project and would like to invite you to a preliminary meeting in January 2024 to informally discuss the proposal and answer any initial questions. Please fill out the following doodle poll with all time slots for which you could attend.

<https://doodle.com/meeting/participate/id/aQA1ogLa/vote>.

Should there be a more appropriate or additional contact from your organization to participate in this meeting, please reply with their contact information and we will ensure they are included in this poll and future communication.

On behalf of PacifiCorp, we look forward to discussing this proposal with you. Please reach out to Eve Davies ([Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)) or myself if you have any questions.

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**

P 801.658.2256 | C 360.713.4281



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**January 31, 2024 Meeting Correspondence**

***Ute Indian Tribe of the Uintah and Ouray Reservation, Utah***

---

**From:** Emily Waters  
**Sent:** Thursday, February 8, 2024 2:24 PM  
**To:** juliusm@utetribes.com  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up  
**Attachments:** Stairs\_PreliminaryMtgNotes\_20240131.pdf; Stairs\_PreliminaryMtg\_Presentation\_20240131.pdf

Good afternoon,

On behalf of Eve and myself, thank you again to those that were able to join us last week to informally discuss PacifiCorp's proposal to apply with FERC for the conversion of the Stairs Project to the more appropriate, conduit exemption classification and correspondingly surrender the current FERC license once a conduit exemption has been granted. As discussed on the call, the formal consultation process will begin with the public distribution of an Initial Consultation Document (ICD) – currently planned for mid-February – that describes the current Project and the proposed action, followed by a formal review/comment period and joint agency meeting and site visit. You will be cc'd on the FERC filing when it is made, and we would be happy to further address any specific comments or question you may have regarding that filing and subsequent comment deadlines.

We would like to invite you and your Tribe to provide preliminary support for PacifiCorp's proposal to be included as an appendix to our ICD. If you are willing, this would be as simple as a brief response to this email stating as such. We would also love to hear any feedback, questions, or other comments that you may have regarding the proposal, whether they support the proposed action or not. Note that we will be filing the ICD by the end of next week, so if you do wish to voice support/concern for PacifiCorp's proposal in the ICD appendix (which would be most appreciated!), we would need your response in short order.

Again, we greatly appreciate your time and feedback regarding this proposal so far and look forward to initiating the formal process and discussing further with you. Please reach out with any questions or concerns.

Thank you-

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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---

**From:** Emily Waters  
**Sent:** Tuesday, January 23, 2024 2:27 PM  
**To:** juliusm@utetribes.com  
**Cc:** Annie Ng; Charlotte Garriss; Davies, Eve (PacifiCorp)  
**Subject:** RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hello,

I'm following up from my prior email to share that a virtual meeting to discuss the Stairs Hydroelectric Project has been scheduled for Wednesday, January 31<sup>st</sup>, 2024 from 1:00 – 2:00 pm Mountain Time. Your participation is welcome, and an invite will be sent shortly. Should you be unable to attend, meeting notes, including the presentation slides, will be sent to all invitees following the meeting. If you have any questions, please feel free to contact either Eve Davies ([eve.davies@pacificorp.com](mailto:eve.davies@pacificorp.com)) or myself. Thank you.

Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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*Note: my typical work hours are Mon – Fri, 7 a.m. – 3:30 p.m. Pacific time*

---

**From:** Emily Waters  
**Sent:** Monday, January 8, 2024 11:42 AM  
**To:** juliusm@utetribes.com  
**Cc:** Annie Ng <Annie.Ng@swca.com>; Charlotte Garriss <Charlotte.Garriss@swca.com>; Davies, Eve (PacifiCorp) <Eve.Davies@PacifiCorp.com>  
**Subject:** Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

Hello,

PacifiCorp is the owner, operator, and licensee of the 1.2-megawatt Stairs Hydroelectric Project (Stairs Project or Project), Federal Energy Regulatory Commission (FERC) Project No. 576. The Project is located on Big Cottonwood Creek in Salt Lake County, Utah. The current Project license was issued by FERC on September 30, 1999, with an effective date of July 1, 2000, and expires on June 30, 2030. This means that PacifiCorp would be required to file a Notice of Intent to initiate relicensing of the Project no later than June 30, 2025. You are receiving this email because PacifiCorp has identified your tribe as a key stakeholder for preliminary consultation.

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<https://doodle.com/meeting/participate/id/aQA1ogLa/vote>.

Should there be a more appropriate or additional contact from your tribe to participate in this meeting, please reply with their contact information and we will ensure they are included in this poll and future communication.

On behalf of PacifiCorp, we look forward to discussing this proposal with you. Please reach out to Eve Davies ([Eve.Davies@PacifiCorp.com](mailto:Eve.Davies@PacifiCorp.com)) or myself if you have any questions.

Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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**January 31, 2024 Meeting Correspondence**  
***Skull Valley Band of Goshute Indians of Utah***

---

**From:** Emily Waters  
**Sent:** Thursday, February 8, 2024 2:09 PM  
**To:** candanceb@svgoshutes.com; Danielm@svgoshutes.com  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** RE: Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up  
**Attachments:** Stairs\_PreliminaryMtgNotes\_20240131.pdf; Stairs\_PreliminaryMtg\_Presentation\_20240131.pdf

Good afternoon,

On behalf of Eve and myself, thank you again to those that were able to join us last week to informally discuss PacifiCorp's proposal to apply with FERC for the conversion of the Stairs Project to the more appropriate, conduit exemption classification and correspondingly surrender the current FERC license once a conduit exemption has been granted. As discussed on the call, the formal consultation process will begin with the public distribution of an Initial Consultation Document (ICD) – currently planned for mid-February – that describes the current Project and the proposed action, followed by a formal review/comment period and joint agency meeting and site visit. You will be cc'd on the FERC filing when it is made, and we would be happy to further address any specific comments or question you may have regarding that filing and subsequent comment deadlines.

We would like to invite you and your Tribe to provide preliminary support for PacifiCorp's proposal to be included as an appendix to our ICD. If you are willing, this would be as simple as a brief response to this email stating as such. We would also love to hear any feedback, questions, or other comments that you may have regarding the proposal, whether they support the proposed action or not. Note that we will be filing the ICD by the end of next week, so if you do wish to voice support/concern for PacifiCorp's proposal in the ICD appendix (which would be most appreciated!), we would need your response in short order.

Again, we greatly appreciate your time and feedback regarding this proposal so far and look forward to initiating the formal process and discussing further with you. We realize that tribal elections recently occurred and are therefore including both representatives we have on file for transparency; moving forward, we will update our contact list. Please reach out with any questions or concerns.

Thank you-

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

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---

**From:** Emily Waters  
**Sent:** Tuesday, January 23, 2024 2:26 PM  
**To:** Danielm@svgoshutes.com  
**Cc:** Annie Ng; Charlotte Garris; Davies, Eve (PacifiCorp)  
**Subject:** RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

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Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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---

**From:** Emily Waters  
**Sent:** Monday, January 8, 2024 11:42 AM  
**To:** Danielm@svgoshutes.com  
**Cc:** Annie Ng <Annie.Ng@swca.com>; Charlotte Garris <Charlotte.Garris@swca.com>; Davies, Eve (PacifiCorp) <Eve.Davies@PacifiCorp.com>  
**Subject:** Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

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Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

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**From:** postmaster@svgoshutes.com <postmaster@svgoshutes.com>  
**Sent:** Thursday, February 8, 2024 1:09 PM  
**To:** Emily Waters  
**Subject:** Undeliverable: RE: Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up

**Delivery has failed to these recipients or groups:**

[candanceb@svgoshutes.com](mailto:candanceb@svgoshutes.com)

Your message was rejected by the recipient email server. Please check the recipient's email address and try resending your message, or contact the recipient directly. For more tips to help resolve this issue, see [DSN code 5.1.0 in Exchange Online - Office 365](#). If the problem continues, contact your email admin.

**Diagnostic information for administrators:**

Generating server: DM6PR07MB7193.namprd07.prod.outlook.com

candanceb@svgoshutes.com

Remote server returned '554 5.1.0 < #5.1.10 smtp;550 5.1.10 RESOLVER.ADR.RecipientNotFound; Recipient candanceb@svgoshutes.com not found by SMTP address lookup>'

**Original message headers:**

ARC-Seal: i=2; a=rsa-sha256; s=arcselector9901; d=microsoft.com; cv=pass;

b=NQiQ/Ni960kAJbPei82bjPChL4xv7bqfLdZajj0jgj9uBm+xNX/d+zc2MaxTcbmKUrfxzNWjwpMfOjx8q2ZzPy1WE9v7HDPoxC7GPKvQ5+PAj8C6SqNIWp8vmM3aWlx2buaDQJedGU9r8vgTq+YGTm7P/zDI3Afdh0IDYo+VOcJXB1trIG8n+dUPNLdsLXw+sqnp3Ksfpkh12XMo0R4tWn7f9vCpFmiMR/N9TYxg4zfg5fvIVjMx+X9htOuHKdZqYJR21tSf/83p8mljWlKQSV8/x23/UKZAKRi6dlAKslyDDw9BKq3YYt6JTBRsQLfJcfl5hMVYkIzAlGuWWteIQw==

ARC-Message-Signature: i=2; a=rsa-sha256; c=relaxed/relaxed; d=microsoft.com; s=arcselector9901;

h=From:Date:Subject:Message-ID:Content-Type:MIME-Version:X-MS-Exchange-AntiSpam-MessageData-ChunkCount:X-MS-Exchange-AntiSpam-MessageData-0:X-MS-Exchange-AntiSpam-MessageData-1;

bh=UPliQNnf5rIZJwTVwiqbY96uRcKOVhsNzQFrRurFPvQ=;

b=Dl12BEuuZGOu06J/h6dT4qSZ4CxN17rZ5uzp350TTtek24T9WpH0PHyPkRfdRxzy0fnzoV+DXrF/6z3m/NmrmsFIu8DojBdTjHeyLsaMjY5bLdf/19GHQr07KzSLDL9dQ/ZfV7qWU0GLiiZV0aVWGx4EQpTnJNAavimMvmvCnveDC34

**January 31, 2024 Meeting Correspondence**

***Confederated Tribes of the Goshute Reservation, Nevada and Utah***

---

-----Original Message-----

From: MAILER-DAEMON@yahoo.com <MAILER-DAEMON@yahoo.com>

Sent: Thursday, February 8, 2024 12:57 PM

To: Emily Waters <emily.waters@swca.com>

Subject: Failure Notice

I'm afraid I wasn't able to deliver the following message.

This is a permanent error; I've given up. Sorry it didn't work out.

Subject: Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting:  
Follow-Up

To: virgil.johnson@ctgr.us

--- Below this line is a copy of the message.

---

**From:** Emily Waters  
**Sent:** Thursday, February 8, 2024 1:57 PM  
**To:** amos.murphy@ctgr.us; virgil.johnson@ctgr.us  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up  
**Attachments:** Stairs\_PreliminaryMtgNotes\_20240131.pdf; Stairs\_PreliminaryMtg\_Presentation\_20240131.pdf

Good afternoon,

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Thank you-

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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---

**From:** Emily Waters  
**Sent:** Tuesday, January 23, 2024 2:20 PM  
**To:** amos.murphy@ctgr.us  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

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Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
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**Sent:** Monday, January 8, 2024 11:42 AM  
**To:** amos.murphy@ctgr.us  
**Cc:** Annie Ng <Annie.Ng@swca.com>; Charlotte Garris <Charlotte.Garris@swca.com>; Davies, Eve (PacifiCorp) <Eve.Davies@PacifiCorp.com>  
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Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

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**January 31, 2024 Meeting Correspondence**

***Paiute Indian Tribe of Utah (Cedar Band of Paiutes, Kanosh Band of Paiutes, Koosharem Band of Paiutes, Indian Peaks Band of Paiutes, and Shivwits Band of Paiutes)***

---

**From:** Emily Waters  
**Sent:** Thursday, February 8, 2024 2:16 PM  
**To:** cbow@utahpaiutes.org  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up  
**Attachments:** Stairs\_PreliminaryMtgNotes\_20240131.pdf; Stairs\_PreliminaryMtg\_Presentation\_20240131.pdf

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Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

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**From:** Emily Waters  
**Sent:** Tuesday, January 23, 2024 2:25 PM  
**To:** cbow@utahpaiutes.org  
**Cc:** Annie Ng; Charlotte Garris; Davies, Eve (PacifiCorp)  
**Subject:** RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

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Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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**From:** Emily Waters  
**Sent:** Monday, January 8, 2024 11:42 AM  
**To:** cbow@utahpaiutes.org; nsmall@sbtribes.com  
**Cc:** Annie Ng <Annie.Ng@swca.com>; Charlotte Garris <Charlotte.Garris@swca.com>; Davies, Eve (PacifiCorp) <Eve.Davies@PacifiCorp.com>  
**Subject:** Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

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Sincerely,

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

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P 801.658.2256 | C 360.713.4281



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**January 31, 2024 Meeting Correspondence**

***Shoshone-Bannock Tribes of the Fort Hall Reservation***

---

**From:** Emily Waters  
**Sent:** Thursday, February 8, 2024 2:14 PM  
**To:** ltyler@sbtribes.com; nsmall@sbtribes.com  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up  
**Attachments:** Stairs\_PreliminaryMtgNotes\_20240131.pdf; Stairs\_PreliminaryMtg\_Presentation\_20240131.pdf

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**From:** Emily Waters  
**Sent:** Tuesday, January 23, 2024 2:26 PM  
**To:** nsmall@sbtribes.com  
**Cc:** Annie Ng; Charlotte Garris; Davies, Eve (PacifiCorp)  
**Subject:** RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

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**Sent:** Monday, January 8, 2024 11:42 AM  
**To:** nsmall@sbtribes.com  
**Cc:** Annie Ng <Annie.Ng@swca.com>; Charlotte Garris <Charlotte.Garris@swca.com>; Davies, Eve (PacifiCorp) <Eve.Davies@PacifiCorp.com>  
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**January 31, 2024 Meeting Correspondence**  
***Northwestern Band of the Shoshone Nation***

---

**From:** Emily Waters  
**Sent:** Thursday, February 8, 2024 2:08 PM  
**To:** dalex@nwbshoshone.com  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up  
**Attachments:** Stairs\_PreliminaryMtgNotes\_20240131.pdf; Stairs\_PreliminaryMtg\_Presentation\_20240131.pdf

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**To:** dalex@nwbshoshone.com  
**Cc:** Annie Ng; Charlotte Garris; Davies, Eve (PacifiCorp)  
**Subject:** RE: Stairs Hydroelectric Project: Conduit Exemption Application & Preliminary Meeting for Key Stakeholders

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**Stairs Hydroelectric Project Preliminary Meeting Presentation –  
January 31, 2024**

# Preliminary Meeting for Conduit Exemption and Eventual License Surrender

Stairs Hydroelectric Project  
(FERC Project No. 597)



# Welcome

## **Stairs Project Team:**

Eve Davies – Principal Environmental Scientist (PacifiCorp)

Nuria Holmes – FERC Technical Advisor (SWCA)

Emily Waters – Project Manager (SWCA)

Annie Ng – Assistant Project Manager (SWCA)

Charlotte Garriss – Project Coordinator (SWCA)



Pacific Power  
Rocky Mountain Power



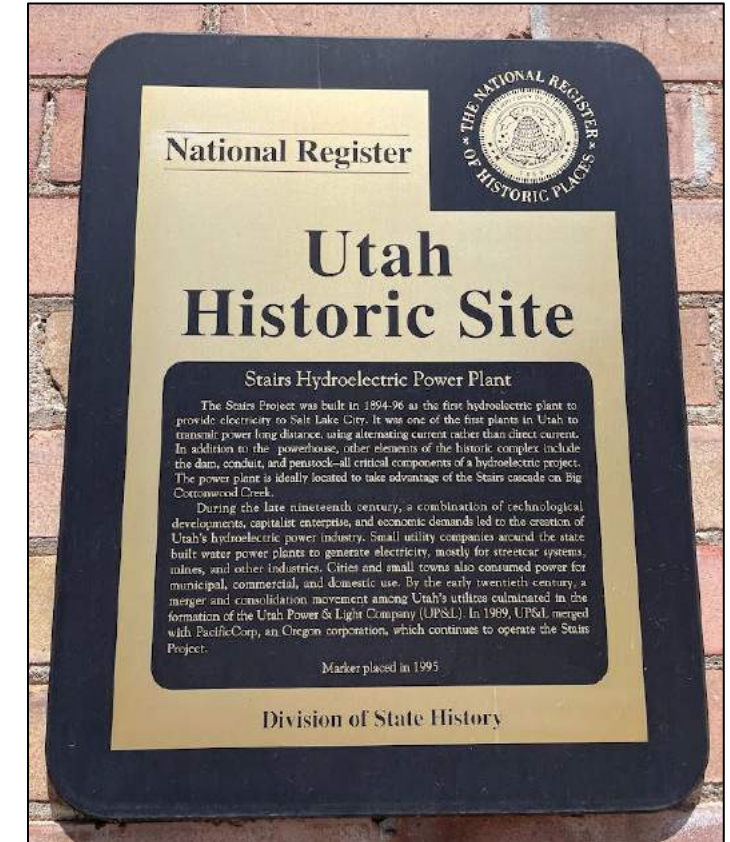
# Agenda

- Stairs Project and Licensing Overview
- Conduit Exemption Summary
- PacifiCorp's Proposed Action
- Three-Stage Consultation Process
- Tentative Schedule
- Questions and Discussion



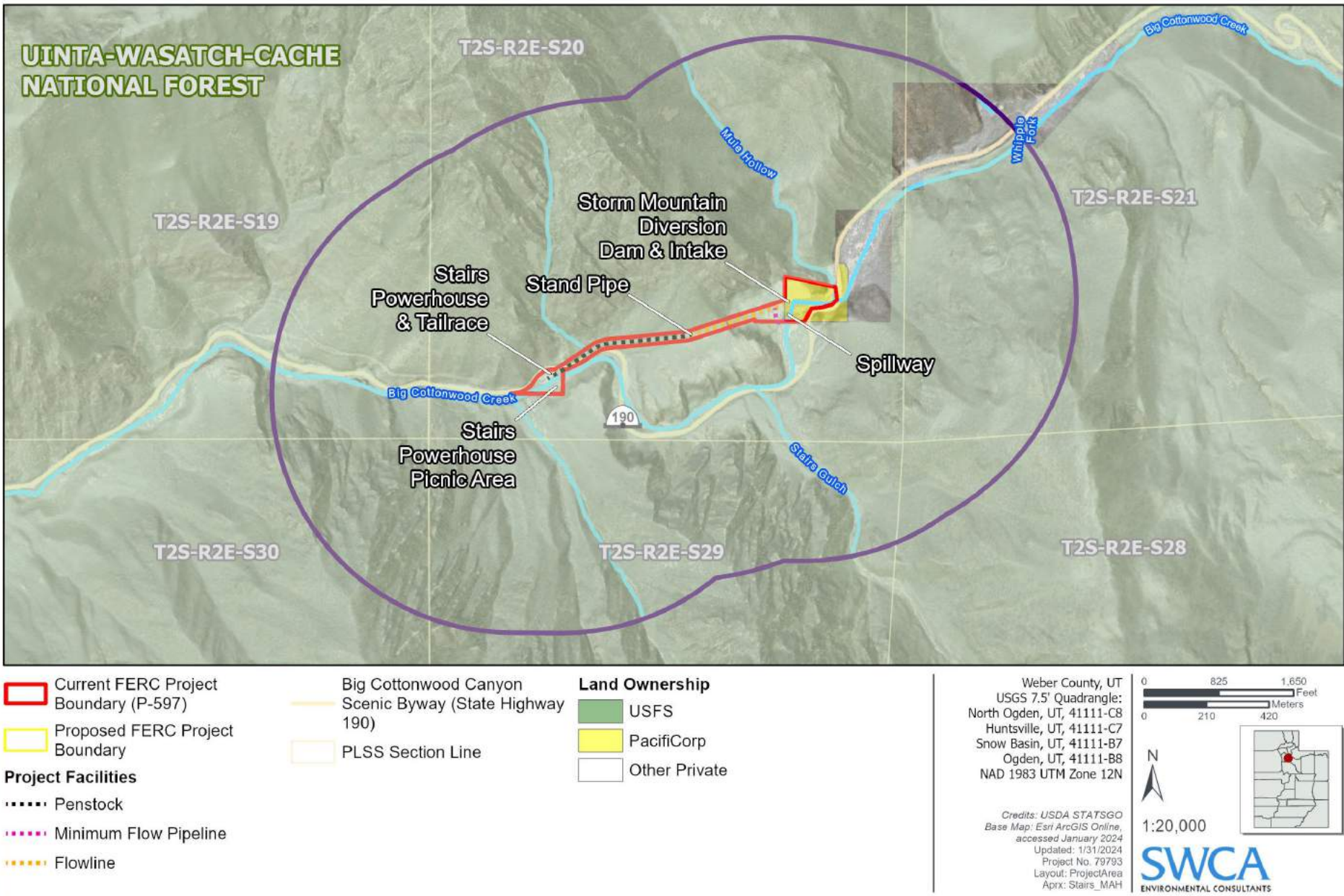
# Stairs Hydroelectric Project Overview

- 1,200 kW hydroelectric project with Project infrastructure located up Big Cottonwood Canyon in Salt Lake County, Utah. Located directly upstream of PacifiCorp's Granite Hydroelectric Plant (Stairs' sister-station).
- Current License issued September 30, 1999, with an effective date of July 1, 2000. The current license expiration date is June 30, 2030. Relicensing must start no later than June 2025.
- Major Project Features:
  - Storm Mountain Dam and intake
  - Penstock
  - Powerhouse with turbine- generator unit
  - Tailrace canal: *flow consumed by Granite Project's intake.*



# Stairs Project Location & Components

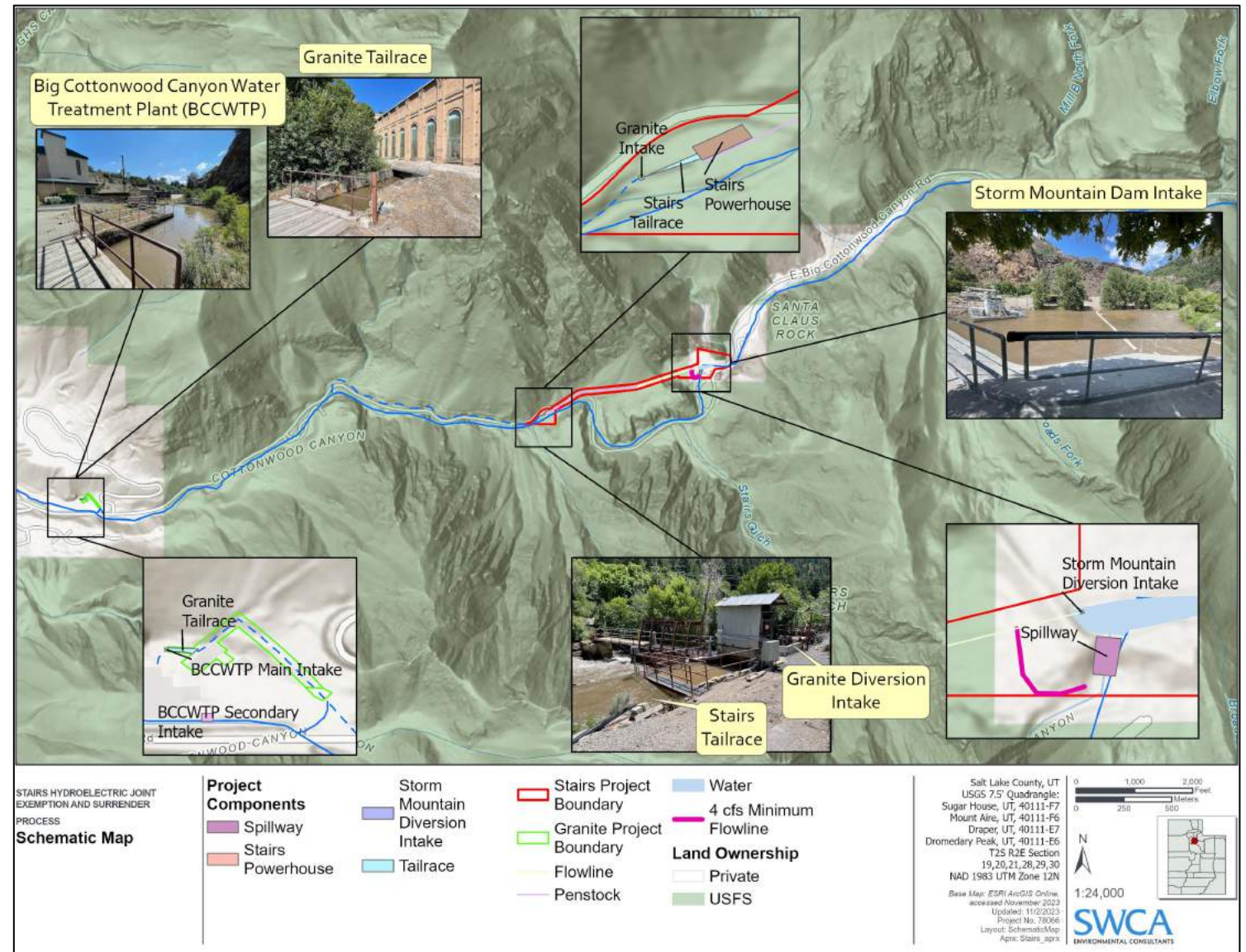
Approximately 2  
miles upstream  
(east) of the mouth  
of Big Cottonwood  
Canyon



# Stairs Schematic Map

Water conveyance from:

- Stairs Project Facilities into
- Granite Project Facilities into
- BCWTP Facilities for the purpose of municipal water use





## Stairs Project & Granite Project, and Big Cottonwood Water Treatment Plant

- Stairs Project was originally constructed in 1896 and was the first hydroelectric power station to supply power to Salt Lake City with AC electricity for long-distance power transmission

### **Coordination with other facilities down canyon:**

- Water taken from Cottonwood Creek at Stairs' Storm Mountain Dam goes through Stairs Project powerhouse and then leaves the Project through Stairs' tailrace directly to Granite Project's intake.
- The water from Stairs' Project tailrace goes through Granite Project's facilities and discharges its water directly into the Big Cottonwood Water Treatment Plant's (BCWTP) intake.
  - Water that goes through BCWTP facilities are used for the purpose of Salt Lake City's municipal water use.

# FERC Conduit Exemption

- **Currently, the Project has a 30-year Minor Project License (less than 5MW).**
- **18 CFR 4.90:** “small conduit hydroelectric facility” may be exempt from licensing requirements
- **Title 18 CFR § 4.30:** Qualifying Conduit Hydropower Facility
  - Applies when a facility, not including any dam or impoundment, that is not required to be licensed under Part I of the FPA because it is determined to meet the following criteria:
    - ✓ Generates electric power using only the hydroelectric potential of a non-federally owned conduit;
    - ✓ Has an installed capacity that does not exceed 40 megawatts (MW); and,
    - ✓ Was not licensed or exempted from the licensing requirements of Part I of the FPA on or before August 9, 2013.



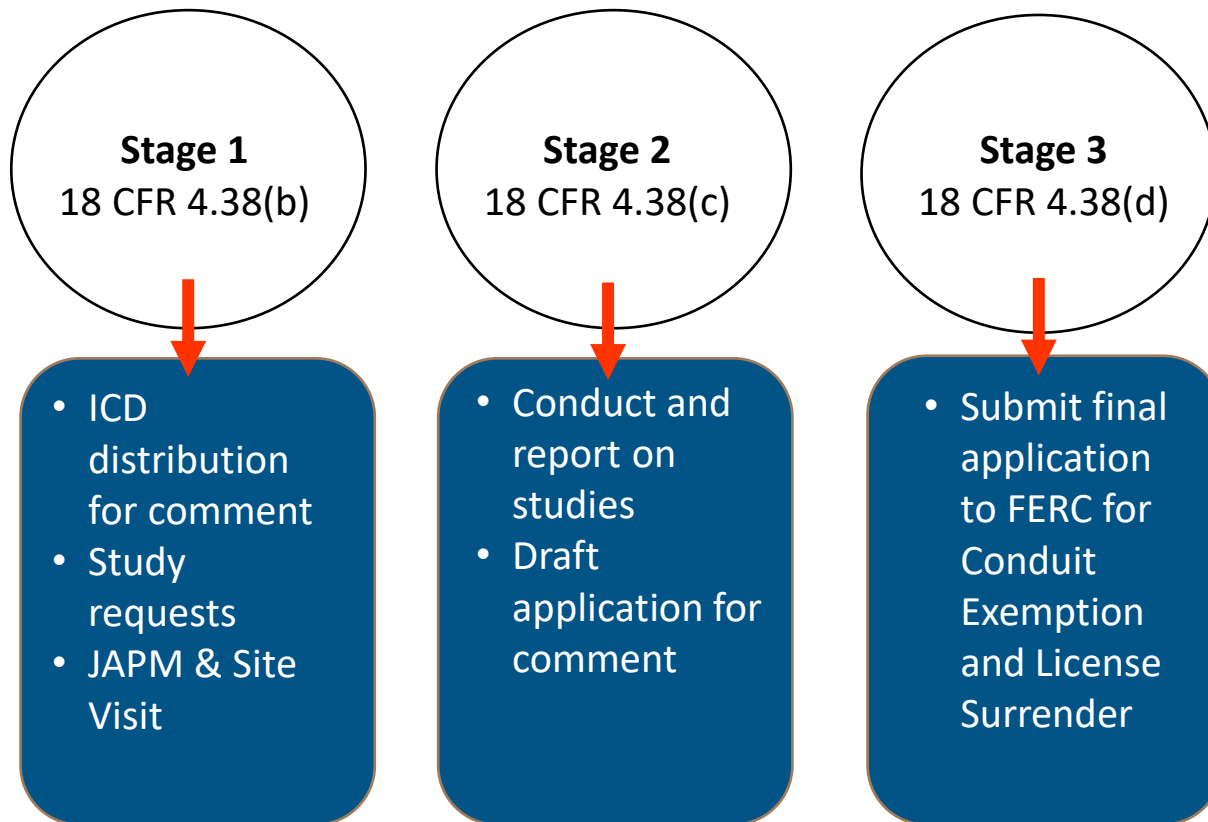
# Proposed Action

- PacifiCorp proposes to convert the Project to the more appropriate conduit exemption. Once granted (corresponding actions), surrender the current FERC project license.
- PacifiCorp believes that the Stairs Project meets the Federal Power Act definitions of a conduit; therefore, in lieu of initiating relicensing pursuant to 18 CFR 4.5 and 5.1.
- Should FERC not grant the exemption, PacifiCorp would convert the ICD developed as part of the three-stage consultation to a pre-application document required pursuant to relicensing regulations at 18 CFR 4.6 and 5.1



Granite Project's tailrace, which leads directly to the Big Cottonwood Water Treatment Plant

# Three Stage Consultation Process (18 CFR § 4.38)



Three-stage consultation involves:

- reaching out to relevant agencies, Tribes, and other interested parties
- holding a public meeting
- conducting study planning and reporting study results (if needed)
- providing a **draft ICD and application** for review

The Proposed Action would be largely administrative. There would be **no construction of new facilities or changes to existing facilities, ownership, or operations and maintenance activities**; therefore, PacifiCorp is neither proposing nor anticipating requests for studies at this time.

# License Exemption Process: Tentative Schedule

Responsible Entity	Milestone	Estimated Milestone Date
<i>Pre-Consultation Activities- Prior to Exemption Application Submittal</i>		
PacifiCorp	Identify data gaps and develop list of preliminary studies	Fall 2023
PacifiCorp	Conduct preliminary studies	N/A
<i>Stage 1 Consultation § 4.38(b)</i>		
PacifiCorp	File and distribute Initial Consultation Document (ICD) and proposed studies for <b>comment</b> and <b>requesting</b> additional study requests, if applicable  Request designation as FERC's non-federal representative for informal consultation pursuant to Section 106 of the National Historic Preservation Act and Section 7 of the Endangered Species Act	February 2024
PacifiCorp	Provide notification of joint agency and public meeting (JAPM) meeting location and timing	March 2024
FERC	FERC issues notice of approval of non-federal representative designation for informal consultation	March 2024
PacifiCorp/Interested Parties	JAPM and site visit	April 2024
FERC/Interested Parties	<i>Comments Due:</i> Initial Consultation Document <i>Deadline:</i> Proposed Study Requests	April-May 2024
<i>Stage 2 Consultation § 4.38(c)</i>		
PacifiCorp	Propose to waive Stage 2 Consultation due to no resource impacts	February 2024
<i>Stage 3 Consultation § 4.38(d)</i>		
PacifiCorp	Submit final Application for License Exemption and License Surrender	Summer 2024
FERC	FERC issues an order exempting the license and license surrender (subject to change)	TBD

A scenic landscape featuring a large, dark, rocky mountain peak in the background, partially covered with snow. The foreground is filled with lush green trees and a grassy field. A large, white, rounded rectangular text box is centered over the image, containing the text "Questions and Discussion" in a bold, black, sans-serif font.

# Questions and Discussion



**Thank you for attending! Please stay tuned for the meeting summary notes with our request for support in the Exemption process, and the publishing of the Stairs ICD in February and future correspondence on our upcoming JAPM!**

You can email questions or comments to PacifiCorp: [Eve.Davies@pacificorp.com](mailto:Eve.Davies@pacificorp.com)

*Stay tuned for a Project website coming soon!*

**Stairs Hydroelectric Project Preliminary Meeting Notes –  
January 31, 2024**

**PRELIMINARY MEETING (VIRTUAL) FOR CONDUIT EXEMPTION APPLICATION  
STAIRS HYDROELECTRIC PROJECT  
(FERC PROJECT NO. 597)  
MEETING SUMMARY: JANUARY 31, 2024, 1:00 PM MT**

**MEETING PARTICIPANTS**

NAME	TITLE	ORGANIZATION
Eve Davies	Principal Scientist/License Manager	PacifiCorp
Scott Catton	Project Manager; Weber River Watershed and General Wasatch Area	Trout Unlimited
Sandy Wingert		Utah Division of Water Quality
Charles Rosier	Lands and Special Uses Program Manager for Uinta-Wasatch Region	USFS
Tamara Prue	Water Resource Manager, Conservation and Hydrology Group	SLC Department of Public Utilities
Mike Slater	Central Region Aquatics Program Manager	Utah Division of Wildlife Resources
Teresa Gray	Water Quality Treatment Administrator	SLC Department of Public Utilities
Pete Gomben	Interregional Hydropower Program Manager	USFS
Michelle Barry	Program Manager at the BCWTP	SLC Department of Public Utilities
Nuria Holmes	SWCA FERC Technical Advisor	SWCA Environmental Consultants
Emily Waters	SWCA Project Manager	SWCA Environmental Consultants
Annie Ng	SWCA Assistant Project Manager	SWCA Environmental Consultants

## **MEETING PRESENTATION**

### **Introduction**

- Introduction of PacifiCorp, SWCA Consultants, and attendees.
- Overview of the meeting purpose and meeting agenda.

### **Stairs Project and Licensing Overview**

- PacifiCorp gave the attendees an overview of the Project including the Project history, licensing history, major Project features, the Project Boundary, and land ownership overlap between PacifiCorp and Forest Service.
- The Stairs Project location and key Project components were shown on the Project map.
- PacifiCorp gave context about the upcoming relicensing deadlines. They explained the Stairs relicensing process and timelines, noting that PacifiCorp is required to start relicensing no later than June 2025, as the license expires in June 30, 2030.

### **Stairs Project, Granite Project, and Big Cottonwood Water Treatment Plant**

- PacifiCorp walked the attendees through a schematic map to give context for the conduit exemption “beads on a string” logic, given the nexus with the downstream Granite project, which is regulated by FERC as a conduit exemption. The water that is diverted at Storm Mountain dam goes through the Stairs Project directly into Granite Project, and from Granite Project water goes directly into the Big Cottonwood Water Treatment Plant (BCWTP).
  - Also discussed how water that goes through the Stairs Project ends up at BCWTP for the purpose of city water consumption.
- PacifiCorp and SWCA explained that conduit exemption regulations were substantively changed in 2013, and consequently, this option was not available for the Stairs Project when it last went through relicensing (1999). PacifiCorp explained how the Stairs Project operates as a conduit and is more appropriately classified as a conduit exemption.
- PacifiCorp explained how the Granite Project (P-14293), Stairs’ sister Project, is a conduit exempted facility and is just downstream of the Stairs Project.

### **Definition of Conduit Exemption**

- PacifiCorp described FERC’s role in relicensing and exemptions.
- PacifiCorp described what a conduit exemption is and why Stairs would qualify as this, rather than going through a traditional relicensing. They noted that a conduit exemption is a different form of a license. The conduit exemption process can be simpler and less resource- and time-intensive than relicensing.
- PacifiCorp explained that the conduit exemption is an administrative change based on where the water typically goes and how the water is used after it leaves the Stairs Project. In this case, the water leaves the Project with the eventual purpose of municipal water use.

### **Proposed Action**

- PacifiCorp described the logistics of the administrative action, explaining that a conduit exemption would not change the operations, maintenance, or facilities of the Project.
- PacifiCorp's intention is to submit an application for the Project conduit exemption and concurrent license surrender, should FERC approve of the Proposed Action presented in the initial consultation document (ICD). If FERC finds that the Stairs Project does not qualify for a conduit exemption, PacifiCorp will convert the information from the ICD into a pre-application document and start the relicensing process.

### **Three Stage Consultation & Proposed Schedule**

- PacifiCorp notified the attendees about the upcoming filing of the ICD, the joint agency public meeting, and the joint application. PacifiCorp is optimistic that the Proposed Action could take just over a year, and could prevent the need for the five-year relicensing process.
- PacifiCorp described how the Proposed Action and application is an administrative action and no changes will be made to the Project, therefore they are proposing to FERC to waive studies, unless agencies or other interested parties request specific studies.
- PacifiCorp requests attendees send an email of support to Eve if they support this Proposed Action. They request support because PacifiCorp wants to show FERC that interested parties support the conduit exemption and preliminary consultation occurred.

## QUESTIONS AND DISCUSSION

### **What happens to streamflow if the Stairs or Granite Projects are offline?**

- If PacifiCorp facilities are offline, the water can still travel through the pipes down to BCWTP. Additionally, BCWTP has an additional intake off Big Cottonwood Creek that they can use if Granite Project is not operational.
- If Granite Project is offline, PacifiCorp explained that the water leaving Stairs' powerhouse through the tailrace would go back into the creek at the Granite diversion dam instead of into Granite Project's intake. If Stairs and Granite were offline, the water would not be diverted at the Storm Mountain dam.
- In rare cases, if BCWTP is offline, then the water leaving Granite Project's tailrace would be diverted back into the creek.

### **How much water is required to be put back into Big Cottonwood Creek?**

The current license requirement is for a 4cfs minimum instream flow, which is released to the stream at the Stairs/Storm Mountain diversion dam. When water goes into the intake at the Storm Mountain dam, 4 cfs is released back into the creek at the bottom of the Storm Mountain spillway. **Once the license is surrendered, how will FERC's Forest Service requirements be impacted?**

- The Stairs Project currently has annual consultation requirements with the Forest Service. If a conduit exemption and license surrender is granted, PacifiCorp would continue with special use authorizations and/or Forest Service consultation. In addition, PacifiCorp plans to maintain the 4 cfs minimum flow and develop and formalize a historic properties management plan (HPMP).

### **How would a FERC license vs. a conduit exemption impact potential changes occurring at BCWTP? For example, if Salt Lake Public Utilities wanted to direct flows from penstock to a different water treatment plant, how would the processes be different?**

- PacifiCorp explained that FERC's requirements for different changes can be more complex and time-consuming. For any changes to the Stairs Project within the FERC Project Boundary, PacifiCorp is required to consult and receive prior approval from FERC. Under a conduit exemption, the conduit itself could be removed from the Project Boundary, eliminating that portion of the Project from FERC jurisdiction. The Stairs Project would still be subject to FERC's dam safety requirements, and they would overlap with the State of Utah's dam safety requirements.

Notes:

- Mike requested Chris Crockett ([chrisrockett@utah.gov](mailto:chrisrockett@utah.gov)) be added to contact list.

**Meeting adjourned at 2:00 PM MT**

## **ICD Distribution Email – February 23, 2024**

**From:** [Emily Waters](#)  
**To:** [Gregory.Mehojah@bia.gov](#); [RThompson@slco.org](#); [justinshirley@utah.gov](#); [billkeach@utah.gov](#); [jasoncurry@utah.gov](#); [teresawilhelmsen@utah.gov](#); [council@slco.org](#); [jeffasmussen@utah.gov](#); [psc@utah.gov](#); [candicehasenyager@utah.gov](#); [Sandy.Wingert](#); [Mcculley, Brendan \(Eric\)](#); [uag@agutah.gov](#); [Juliusm](#); [virgil.johnson@ctgr.us](#); [amos.murphy](#); [candanceb@svgoshutes.com](#); [Danielm@svgoshutes.com](#); [cbow](#); [dalex@nwbshoshone.com](#); [ltyler@sbtribes.com](#); [nsmall@sbtribes.com](#); [Rosier, Charles - FS, UT](#); [Peter.Gomben@usda.gov](#); [Weekley, George M](#); [Weiss, Dannette T](#); [jgardberg@utah.gov](#); [Christopher Merritt](#); [clhansen@utah.gov](#); [Michelle.Barry@slcgov.com](#); [Michael Slater](#); [Tamara.prue@slcgov.com](#); [Chris Crockett](#); [Scott Catton](#)  
**Cc:** [Nuria Holmes](#); [Annie Ng](#); [Charlotte Garris](#); [Davies, Eve \(PacifiCorp\)](#)  
**Subject:** Notice of Stairs Hydroelectric Project (FERC Project No. 597) Initial Consultation Document Filing with FERC  
**Date:** Friday, February 23, 2024 10:18:30 AM  
**Attachments:** [Stairs\\_ICD\\_Filing\\_Letter.pdf](#)  
[image001.png](#)

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Hello,

You are receiving this email as you have previously been identified as an interested party in the Stairs Hydroelectric Project. On behalf of Eve Davies, and pursuant to Federal Energy Regulatory Commission (FERC) distribution regulations, I am writing to provide you with a copy of the cover letter that was filed with PacifiCorp's Initial Consultation Document (ICD) on February 16, 2024. Some of you are also interested parties on the Pioneer Hydroelectric Project, and recently received a similar email explaining PacifiCorp's request to convert the existing Pioneer Hydroelectric Project FERC license, to what we believe is the more appropriate regulatory category of a conduit exemption. PacifiCorp is pursuing the same action for the Stairs Hydroelectric Project, as was discussed at the January 31, 2024 Preliminary Meeting, and as explained in further detail in the ICD. You may find the ICD by searching FERC's elibrary (<https://elibrary.ferc.gov/elibrary/search>) for Docket number P-597, or by visiting PacifiCorp's Stairs Project website at: <https://www.pacificorp.com/energy/hydro/stairs.html>. Written comments on the ICD may be submitted to FERC until May 20, 2024. Please let Eve and me know if you have any questions regarding this information and thank you for your attention to these projects.

Sincerely,

Eve Davies, Principal Scientist

Renewable Resources, PacifiCorp

1407 West North Temple, Ste. 210

Salt Lake City, Utah 84116

801-220-2245

801-232-1704 (cell)

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**

P 801.658.2256 | C 360.713.4281



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## **March 21, 2024 Joint Agency and Public Meeting Correspondence**

### ***Identified Agencies***

## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Tuesday, April 2, 2024 3:06 PM  
**To:** Robert Thompson; Gregory.Mehojah@bia.gov; justinshirley@utah.gov; billkeach@utah.gov; jasoncurry@utah.gov; teresawilhelmsen@utah.gov; council@slco.org; jeffrasmussen@utah.gov; psc@utah.gov; candicehasenyager@utah.gov; Sandy Wingert; Mcculley, Brendan (Eric); uag@agutah.gov; Rosier, Charles - FS, UT; Peter.Gomben@usda.gov; Weekley, George M; Weiss, Dannette T; Jodi Gardberg; Christopher Merritt; 'clhansen@utah.gov'; Gray, Teresa; Michelle.Barry@slcgov.com; Michael Slater; Tamara.prue@slcgov.com; Scott Catton; Chris Crockett; gordonlarsen@utah.gov; jake.bornstein@mail.house.gov  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Trevor Herritt; Charlotte Garris  
**Subject:** Stairs Hydroelectric Project Joint Agency and Public Meeting Follow Up

Hello,

On behalf of Eve Davies, I'm writing to thank you for your participation at our Joint Agency and Public Meeting at the end of March. For those of you who were unable to attend, and for those interested in reviewing the materials we shared, you can find the presentation and other meeting materials on PacifiCorp's Stairs website (<https://www.pacificorp.com/energy/hydro/stairs.html>). Pursuant to 18 CFR 4.38(b)(4), PacifiCorp has also filed the meeting agendas, presentation, and recordings with FERC. You may find these (identical to what is on the PacifiCorp Stairs website) by searching docket P-597 on FERC's eLibrary at <https://elibrary.ferc.gov/eLibrary/search>.

Additionally, whether you agree with PacifiCorp's proposal or have a differing opinion, we would be grateful if you or your organization would provide letters of support and/or other comments. For your convenience, we have drafted a short statement below. Of course, you may choose to write your own statement or edit ours below to align with your opinions on this matter. If you elect to provide a letter of support, you may send an email to Eve and me, or if you choose, file the letter with FERC.

*Dear PacifiCorp/FERC (depending on whether you file this yourself with FERC or submit your comment to PacifiCorp—they will be filed with FERC either way)*

*[Your name/Name of Organization] has reviewed and discussed PacifiCorp's proposal to apply for a conduit exemption for the Stairs Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project Number 597 located on Big Cottonwood Creek near Cottonwood Heights, Utah. We understand that PacifiCorp intends to file a draft exemption application later this Spring, and as no impacts to resources are expected, nor any studies proposed, [your name/organization] supports PacifiCorp's proposal and urges the Commission to approve the exemption in-lieu of PacifiCorp and other interested parties needing to begin relicensing in June 2025.*

Again, thank you for your participation in this process. If you have any questions, please feel free to reach out to either Eve or myself.

Sincerely,

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245

801-232-1704 (cell)

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**

P 801.658.2256 | C 360.713.4281



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## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Monday, March 18, 2024 12:53 PM  
**To:** Robert Thompson; Gregory.Mehojah@bia.gov; justinshirley@utah.gov; billkeach@utah.gov; jasoncurry@utah.gov; teresawilhelmsen@utah.gov; council@slco.org; jeffasmussen@utah.gov; psc@utah.gov; candicehasenyager@utah.gov; Sandy Wingert; Mcculley, Brendan (Eric); uag@agutah.gov; Rosier, Charles - FS, UT; Peter.Gomben@usda.gov; Weekley, George M; Weiss, Dannette T; Jodi Gardberg; Christopher Merritt; 'clhansen@utah.gov'; Gray, Teresa; Michelle.Barry@slcgov.com; Michael Slater; Tamara.prue@slcgov.com; Scott Catton  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Trevor Herritt; Charlotte Garris  
**Subject:** Reminder: Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting  
**Attachments:** P-597\_Stairs JAPM Agendas.pdf

Hello,

On behalf of Eve Davies, I am writing to remind you of the upcoming Joint Agency and Public Meeting for the Stairs Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project Number 597, scheduled for this Thursday, March 21<sup>st</sup>. As noted in the attached agendas, there will be a morning session from 10 a.m. to 12:30 p.m.; a site visit from 1:30 p.m. to 3:00 p.m.; and an evening session from 5:45 p.m. to 7:45 p.m. Both the morning and evening sessions contain the same content, with each session including a presentation and opportunities to discuss the proposed conduit exemption, provide comments, and talk to PacifiCorp personnel. Only one site visit will be offered. We hope you can join us at one of the sessions and look forward to seeing you soon!

Sincerely,

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Tuesday, March 12, 2024 11:38 AM  
**To:** Charlotte Garris  
**Subject:** FW: Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting  
**Attachments:** P-597\_StairsFERC Notice Letter-Final.pdf

Please save for consultation record

---

**From:** Emily Waters  
**Sent:** Tuesday, March 12, 2024 10:08 AM  
**To:** Robert Thompson <RThompson@slco.org>; Gregory.Mehojah@bia.gov; justinshirley@utah.gov; billkeach@utah.gov; jasoncurry@utah.gov; teresawilhelmsen@utah.gov; council@slco.org; jeffrasmussen@utah.gov; psc@utah.gov; candicehasenyager@utah.gov; Sandy Wingert <swingert@utah.gov>; bmcculley@usbr.gov; uag@agutah.gov; Rosier, Charles - FS, UT <charles.rosier@usda.gov>; Peter.Gomben@usda.gov; george\_weekley@fws.gov; Weiss, Dannette T <dannette\_weiss@fws.gov>; Jodi Gardberg <jgardberg@utah.gov>; cmeritt@utah.gov; 'clhansen@utah.gov' <clhansen@utah.gov>; Gray, Teresa <teresa.gray@slcgov.com>; Michelle.Barry@slcgov.com; Michael Slater <michaelslater@utah.gov>; Tamara.prue@slcgov.com; Scott Catton <Scott.Catton@tu.org>  
**Cc:** Davies, Eve (PacifiCorp) <Eve.Davies@PacifiCorp.com>; Annie Ng <Annie.Ng@swca.com>; Charlotte Garris <Charlotte.Garris@swca.com>; Trevor Herritt <Trevor.Herritt@swca.com>; Nuria Holmes <nuria.holmes@swca.com>  
**Subject:** Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting

Hello,

On behalf of Eve Davies, I am writing to invite you to the Joint Agency and Public Meeting for the Stairs Hydroelectric Project. In case you missed the notice on FERC's docket or in the Salt Lake Tribune, the meeting is scheduled for next Wednesday at the Granite Hydroelectric Project Plant, located at 3933 E Big Cottonwood Canyon Road in Salt Lake City. A morning and evening session will be held, with an opportunity for a site visit following the morning meeting only. An agenda is attached to this email. Thank you for your previous participation, and we look forward to seeing you soon. If you have any questions, please don't hesitate to reach out to Eve or myself.

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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**March 21, 2024 Joint Agency and Public Meeting Correspondence**

***Ute Indian Tribe of the Uintah and Ouray Reservation, Utah***

## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Monday, March 18, 2024 1:29 PM  
**To:** Juliusm  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Reminder: Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting  
**Attachments:** P-597\_Stairs JAPM Agendas.pdf

Hello,

On behalf of Eve Davies, I am writing to remind you of the upcoming Joint Agency and Public Meeting for the Stairs Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project Number 597, scheduled for this Thursday, March 21<sup>st</sup>. As noted in the attached agendas, there will be a morning session from 10 a.m. to 12:30 p.m.; a site visit from 1:30 p.m. to 3:00 p.m.; and an evening session from 5:45 p.m. to 7:45 p.m. Both the morning and evening sessions contain the same content, with each session including a presentation and opportunities to discuss the proposed conduit exemption, provide comments, and talk to PacifiCorp personnel. Only one site visit will be offered. We hope you can join us at one of the sessions and look forward to seeing you soon!

Sincerely,

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Tuesday, March 12, 2024 11:52 AM  
**To:** Juliusm  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting  
**Attachments:** P-597\_StairsFERC Notice Letter.pdf

Hello,

On behalf of Eve Davies, I am writing to invite you to the Joint Agency and Public Meeting for the Stairs Hydroelectric Project. As noted in our previous email to you, and as advertised in the Salt Lake Tribune, the meeting is scheduled for next Thursday, March 21<sup>st</sup>, at the Granite Hydroelectric Project Shop, located at 3933 E Big Cottonwood Canyon Road in Salt Lake City. A morning and evening session will be held, with an opportunity for a site visit following the morning meeting only. An agenda is attached to this email. Thank you for your previous participation, and we look forward to seeing you soon. If you have any questions, please don't hesitate to reach out to Eve or myself.

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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**March 21, 2024 Joint Agency and Public Meeting Correspondence**

***Skull Valley Band of Goshute Indians of Utah***

## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Tuesday, April 2, 2024 3:26 PM  
**To:** Danielm@svgoshutes.com; candanceb@svgoshutes.com  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Stairs Hydroelectric Project Joint Agency and Public Meeting Follow Up

Hello,

On behalf of Eve Davies, I'm writing to provide information for reviewing the materials presented at PacifiCorp's Joint Agency and Public Meeting for the Stairs Hydroelectric Project, hosted at the end of March. You can find the presentation and other meeting materials on PacifiCorp's Stairs website (<https://www.pacificorp.com/energy/hydro/stairs.html>). Pursuant to 18 CFR 4.38(b)(4), PacifiCorp has also filed the meeting agendas, presentation, and recordings with FERC. You may find these (identical to what is on the PacifiCorp Stairs website) by searching docket P-597 on FERC's eLibrary at <https://elibrary.ferc.gov/eLibrary/search>.

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*Dear PacifiCorp/FERC (depending on whether you file this yourself with FERC or submit your comment to PacifiCorp—they will be filed with FERC either way)*

*[Your name/Name of Tribe] has reviewed and discussed PacifiCorp's proposal to apply for a conduit exemption for the Stairs Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project Number 597 located on Big Cottonwood Creek near Cottonwood Heights, Utah. We understand that PacifiCorp intends to file a draft exemption application later this Spring, and as no impacts to resources are expected, nor any studies proposed, [your name/Tribe] supports PacifiCorp's proposal and urges the Commission to approve the exemption in-lieu of PacifiCorp and other interested parties needing to begin relicensing in June 2025.*

Thank you for your participation in this process. If you have any questions, please feel free to reach out to either Eve or myself.

Sincerely,

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

**Emily Waters, MS** | she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Monday, March 18, 2024 1:27 PM  
**To:** Danielm@svgoshutes.com; candanceb@svgoshutes.com  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Reminder: Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting  
**Attachments:** P-597\_Stairs JAPM Agendas.pdf

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**Emily Waters, MS** | *she/her*  
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**Sent:** Tuesday, March 12, 2024 12:00 PM  
**To:** Danielm@svgoshutes.com  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Invitation to Stairs Hydroelectric Project (P-597) Joint Agency and Public Meeting  
**Attachments:** P-597\_StairsFERC Notice Letter.pdf

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Salt Lake City, Utah 84116  
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**Emily Waters, MS** | *she/her*  
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**March 21, 2024 Joint Agency and Public Meeting Correspondence**  
***Confederated Tribes of the Goshute Reservation, Nevada and Utah***

## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Tuesday, April 2, 2024 3:16 PM  
**To:** amos.murphy; virgil.johnson@ctgr.us  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Stairs Hydroelectric Project Joint Agency and Public Meeting Follow Up

Hello,

On behalf of Eve Davies, I'm writing to provide information for reviewing the materials presented at PacifiCorp's Joint Agency and Public Meeting for the Stairs Hydroelectric Project, hosted at the end of March. You can find the presentation and other meeting materials on PacifiCorp's Stairs website (<https://www.pacificorp.com/energy/hydro/stairs.html>). Pursuant to 18 CFR 4.38(b)(4), PacifiCorp has also filed the meeting agendas, presentation, and recordings with FERC. You may find these (identical to what is on the PacifiCorp Stairs website) by searching docket P-597 on FERC's eLibrary at <https://elibrary.ferc.gov/eLibrary/search>.

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Project Manager, FERC Hydropower

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## Charlotte Garris

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**From:** Emily Waters  
**Sent:** Monday, March 18, 2024 1:22 PM  
**To:** amos.murphy; virgil.johnson@ctgr.us  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Reminder: Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting  
**Attachments:** P-597\_Stairs JAPM Agendas.pdf

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**Emily Waters, MS** | *she/her*  
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## Charlotte Garris

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**From:** Emily Waters  
**Sent:** Tuesday, March 12, 2024 11:47 AM  
**To:** amos.murphy; virgil.johnson@ctgr.us  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting  
**Attachments:** P-597\_StairsFERC Notice Letter.pdf

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Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

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**March 21, 2024 Joint Agency and Public Meeting Correspondence**

***Paiute Indian Tribe of Utah (Cedar Band of Paiutes, Kanosh Band of Paiutes, Koosharem Band of Paiutes, Indian Peaks Band of Paiutes, and Shivwits Band of Paiutes)***

## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Tuesday, April 2, 2024 3:21 PM  
**To:** cbow  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Stairs Hydroelectric Project Joint Agency and Public Meeting Follow Up

Hello,

On behalf of Eve Davies, I'm writing to provide information for reviewing the materials presented at PacifiCorp's Joint Agency and Public Meeting for the Stairs Hydroelectric Project, hosted at the end of March. You can find the presentation and other meeting materials on PacifiCorp's Stairs website (<https://www.pacificorp.com/energy/hydro/stairs.html>). Pursuant to 18 CFR 4.38(b)(4), PacifiCorp has also filed the meeting agendas, presentation, and recordings with FERC. You may find these (identical to what is on the PacifiCorp Stairs website) by searching docket P-597 on FERC's eLibrary at <https://elibrary.ferc.gov/eLibrary/search>.

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Sincerely,

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**Emily Waters, MS** | she/her  
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## Charlotte Garris

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**From:** Emily Waters  
**Sent:** Monday, March 18, 2024 1:25 PM  
**To:** cbow  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Reminder: Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting  
**Attachments:** P-597\_Stairs JAPM Agendas.pdf

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**Emily Waters, MS** | *she/her*  
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**From:** Emily Waters  
**Sent:** Tuesday, March 12, 2024 11:57 AM  
**To:** cbow  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Invitation to Stairs Hydroelectric Project (P-597) Joint Agency and Public Meeting  
**Attachments:** P-597\_StairsFERC Notice Letter.pdf

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Salt Lake City, Utah 84116  
801-220-2245  
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Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
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**March 21, 2024 Joint Agency and Public Meeting Correspondence**

***Shoshone-Bannock Tribes of the Fort Hall Reservation***

## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Tuesday, April 2, 2024 3:24 PM  
**To:** nsmall@sbtribes.com; ltyler@sbtribes.com  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Stairs Hydroelectric Project Joint Agency and Public Meeting Follow Up

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**To:** ltyler@sbtribes.com  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
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## Charlotte Garris

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**From:** Emily Waters  
**Sent:** Tuesday, March 12, 2024 11:59 AM  
**To:** nsmall@sbtribes.com  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
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**March 21, 2024 Joint Agency and Public Meeting Correspondence**  
***Northwestern Band of the Shoshone Nation***

## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Tuesday, April 2, 2024 3:18 PM  
**To:** dalex@nwbsoshone.com  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Stairs Hydroelectric Project Joint Agency and Public Meeting Follow Up

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**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Monday, March 18, 2024 1:24 PM  
**To:** dalex@nwbsoshone.com  
**Cc:** Davies, Eve (PacifiCorp); Charlotte Garris; Annie Ng  
**Subject:** Reminder: Invitation to Stairs Hydroelectric Project Joint Agency and Public Meeting  
**Attachments:** P-597\_Stairs JAPM Agendas.pdf

Hello,

On behalf of Eve Davies, I am writing to remind you of the upcoming Joint Agency and Public Meeting for the Stairs Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project Number 597, scheduled for this Thursday, March 21<sup>st</sup>. As noted in the attached agendas, there will be a morning session from 10 a.m. to 12:30 p.m.; a site visit from 1:30 p.m. to 3:00 p.m.; and an evening session from 5:45 p.m. to 7:45 p.m. Both the morning and evening sessions contain the same content, with each session including a presentation and opportunities to discuss the proposed conduit exemption, provide comments, and talk to PacifiCorp personnel. Only one site visit will be offered. We hope you can join us at one of the sessions and look forward to seeing you soon!

Sincerely,

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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## Charlotte Garris

---

**From:** Emily Waters  
**Sent:** Tuesday, March 12, 2024 11:56 AM  
**To:** dalex@nwbsshoshone.com  
**Cc:** Davies, Eve (PacifiCorp); Annie Ng; Charlotte Garris  
**Subject:** Invitation to Stairs Hydroelectric Project (P-597) Joint Agency and Public Meeting  
**Attachments:** P-597\_StairsFERC Notice Letter.pdf

Hello,

On behalf of Eve Davies, I am writing to invite you to the Joint Agency and Public Meeting for the Stairs Hydroelectric Project (Federal Energy Regulatory Commission [FERC] Project P-597). As noted in our previous email to you, and as advertised in the Salt Lake Tribune, the meeting is scheduled for next Thursday, March 21<sup>st</sup>, at the Granite Hydroelectric Project Shop, located at 3933 E Big Cottonwood Canyon Road in Salt Lake City, Utah. A morning and evening session will be held, with an opportunity for a site visit following the morning meeting only. An agenda is attached to this email. Thank you for your previous participation, and we look forward to seeing you soon. If you have any questions, please don't hesitate to reach out to Eve or myself.

Eve Davies, Principal Scientist  
Renewable Resources, PacifiCorp  
1407 West North Temple, Ste. 210  
Salt Lake City, Utah 84116  
801-220-2245  
801-232-1704 (cell)

Sincerely,

**Emily Waters, MS** | *she/her*  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**  
P 801.658.2256 | C 360.713.4281



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**Agency/Interested Party Support Email**

***United States Forest Service***



United States  
Department of  
Agriculture

Forest  
Service

Uinta-Wasatch-Cache National Forest  
Supervisor's Office

857 West South Jordan Parkway  
South Jordan, UT 84095  
801-999-2103  
Fax: 801-253-8118

File Code: 2770

Date: March 13, 2024

Debbie-Anne Reese  
Acting Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

**Forest Service support for PacifiCorp's proposal to apply for a conduit exemption for the Stairs Hydroelectric Project FERC No. P-597**

Dear Secretary Reese,

PacifiCorp, which is the licensee for the Stairs Hydroelectric Project (P-597), is proposing to seek a conduit exemption for the project prior to the need to undergo relicensing. Operations would not change if an exemption were granted. All that is proposed would be an administrative downgrade from a license to an exemption.

If the Federal Energy Regulatory Commission grants the exemption, PacifiCorp would surrender the license and obtain a Forest Service Special Use Permit. The majority of the project, including the penstock, powerhouse, and recreation site for this project are located on National Forest System lands, within the Wasatch National Forest.

The Forest Service supports PacifiCorp's proposal to seek a conduit exemption. If you have questions or need further information, please contact Pete Gomben, Interregional Hydropower Program Manager, at [peter.gomben@usda.gov](mailto:peter.gomben@usda.gov).

Sincerely,

**KELSHA  
X ANDERSON**

Digitally signed by  
KELSHA ANDERSON  
Date: 2024.03.13  
13:50:11 -06'00'

Kelsha Anderson  
Deputy Forest Supervisor

cc: Hotze, Rebecca; Gomben, Pete; Rosier, Charles



Document Content(s)

20240313\_Forest Service support for exemption process for P-597.pdf.....1

**Agency/Interested Party Support Email**  
***Utah Department of Natural Resources –***  
***Division of Wildlife Resources***

**From:** [Michael Slater](#)  
**To:** [Emily Waters](#)  
**Cc:** [Chris Crockett](#); [Keith Lawrence](#)  
**Subject:** Re: Stairs Hydroelectric Project Conduit Exemption Preliminary Meeting: Follow-Up  
**Date:** Wednesday, February 14, 2024 2:00:54 PM  
**Attachments:** [image001.png](#)

---

Hello Emily,

Thank you for the meeting summary and proposal. Sorry I did not see this email earlier. I hope this written support on behalf of Utah Division of Wildlife Resources for the Stairs conduit exemption and license surrender. We recognize this doesn't really change the status of how things are operated there in Big Cottonwood Canyon and the Stairs plant just simply streamlining the licensing process. Thanks for including us.

On one other note please note the change in my position with UDWR listed below.

Thanks, Mike



**Mike Slater**

Central Region Sportfish Project Leader

**M:** (801) 367-5941

**E:** [michaelslater@utah.gov](mailto:michaelslater@utah.gov)

Utah Department of Natural Resources

Division of Wildlife Resources



[wildlife.utah.gov](http://wildlife.utah.gov)

The content of this email is confidential and intended for the recipient specified in the message only. It is strictly forbidden to share any part of this message with any third party without the written consent of the sender. If you received this message by mistake, please reply to this message and follow with its deletion so that we can ensure such a mistake does not occur in the future.

On Thu, Feb 8, 2024 at 12:06 PM Emily Waters <[emily.waters@swca.com](mailto:emily.waters@swca.com)> wrote:

Good afternoon,

On behalf of Eve and myself, thank you again to those that were able to join us last week to informally discuss PacifiCorp's proposal to apply with FERC for the conversion of the Stairs Project to the more appropriate, conduit exemption classification and correspondingly surrender the current FERC license once a conduit exemption has been granted. As discussed on the call, the formal consultation process will begin with the public distribution of an Initial Consultation Document (ICD) – currently planned for mid-February – that describes the current Project and the proposed action, followed by a formal review/comment period and joint agency meeting and site visit. You will be cc'd on the FERC filing when it is made, and we would be happy to further address any specific comments or question you may have regarding that filing and subsequent comment deadlines.

We would like to invite you and your agency/interested party to provide preliminary support

for PacifiCorp's proposal to be included as an appendix to our ICD. If you are willing, this would be as simple as a brief response to this email stating as such. We would also love to hear any feedback, questions, or other comments that you may have regarding the proposal, whether they support the proposed action or not. Note that we will be filing the ICD by the end of next week, so if you do wish to voice support/concern for PacifiCorp's proposal in the ICD appendix (which would be most appreciated!), we would need your response in short order.

Again, we greatly appreciate your time and feedback regarding this proposal so far and look forward to initiating the formal process and discussing further with you and your agency/interested party. Please reach out with any questions or concerns.

Thank you-

Eve Davies, Principal Scientist

Renewable Resources, PacifiCorp

1407 West North Temple, Ste. 210

Salt Lake City, Utah 84116

801-220-2245

801-232-1704 (cell)

**Emily Waters, MS** / she/her  
Project Manager, FERC Hydropower

**SWCA Environmental Consultants**

P 801.658.2256 | C 360.713.4281



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**ATTACHMENT D**

**NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM FOR THE  
STAIRS HYDROELECTRIC PLANT, 1987**

United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation Sheet

Section number \_\_\_\_\_ Page \_\_\_\_\_

## SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 89000284 Date Listed: 4/20/89Stairs Station Hydroelectric Power Plant Historic District  
Property NameSalt Lake Utah  
County StateElectric Power Plants of Utah MPS  
Multiple Name

-----  
This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Bruce J. Noble, Jr.  
Signature of the Keeper4/20/89  
Date of Action

## =====

Amended Items in Nomination:

The verbal boundary justification for this property states: "It was decided that the short underground portion of the penstock did warrant excluding the penstock from the district or creating a discontinuous district." Following a conversation with Roger Roper of the Utah State Historic Preservation Office, it was determined that this sentence contained a typographic error. The sentence should read, "It was decided that the short underground portion of the penstock did not warrant excluding the penstock from the district or creating a discontinuous district."

## DISTRIBUTION:

National Register property file  
Nominating Authority (without nomination attachment)

254

NPS Form 10-900  
(Rev. 8/86)  
Utah Word Processor Format (02731)  
(Approved 10/87)

OMB No. 1024-0018

MAR 08 1989  
NATIONAL  
REGISTER

United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
REGISTRATION FORM

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in Guidelines for Completing National Register Forms (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries. Use letter quality printer in 12 pitch, using an 85 space line and a 10 space left margin. Use only 25% or greater cotton content bond paper.

1. Name of Property Stairs Station Hydroelectric Power Plant Historic District

historic name

other names/site number Stairs, Stairs Plant, Big Cottonwood

2. Location

street & number State Highway 152

n/a not for publication

city, town Salt Lake City

x vicinity

state Utah

code UT

county Salt Lake

code 035

zip code 84100

3. Classification

Ownership of Property

Category of Property

No. of Resources within Property

x private

   building(s)

contributing

noncontributing

   public-local

x district

  1  

   buildings

   public-State

   site

   sites

   public-Federal

   structure

  4  

  3   structures

   object

   objects

  5  

  3   Total

Name of related multiple property listing:

No. of contributing resources  
previously listed in the  
National Register   0  

Electric Power Plants of Utah

#### 4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this x nomination    request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property x meets    does not meet the National Register criteria.    See continuation sheet.

May J. E.  
Signature of certifying official  
UTAH STATE HISTORICAL SOCIETY  
State or Federal agency and bureau

1-31-89  
Date

In my opinion, the property    meets    does not meet the National Register criteria.    See continuation sheet.

\_\_\_\_\_  
Signature of commenting or other official  
\_\_\_\_\_  
State or Federal agency and bureau

\_\_\_\_\_  
Date

#### 5. National Park Service Certification

I, hereby, certify that this property is:

✓ entered in the National Register.  
   See continuation sheet

   determined eligible for the National Register.    See continuation sheet

   determined not eligible for the National Register.

   removed from the National Register.

   other, (explain:) \_\_\_\_\_

Bruce J. Noble, Jr. 4/20/89

for Signature of the Keeper Date

#### 6. Functions or Use

Historic Functions  
(enter categories from instructions)

Current Functions  
(enter categories from instructions)

Industry/Processing/Extraction:  
energy facility

Industry/Processing/Extraction:  
energy facility

---

7. Description

---

Architectural Classification

(enter categories from instructions)

Materials

(enter categories from instructions)

Renaissance (powerhouse)

foundation concrete

walls brick

roof asphalt

other n/a

---

Describe present and historic physical appearance.

(see continuation sheet)

United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 7 Page 2

Constructed in 1894-1895, Stairs Hydroelectric Power Plant is located in Big Cottonwood Canyon near Salt Lake City. The plant consists of a powerhouse, switchyard, dam, pipeline, standpipe, and penstock, as well as a few ancillary structures. Five of these features are contributing and three are non-contributing. Since its construction, Stairs has sustained alterations, such as the reconstruction of its original dam, changes to the standpipe, removal of the operator's camp, and replacement of the brick parapet around the top of the powerhouse. These alterations, however, do not compromise the plant's overall integrity of location, setting, design, materials, workmanship, feeling, and association. Stairs Station is still an outstanding example of a high-head hydroelectric plant dating from the late nineteenth and early twentieth centuries.

General Setting

Stairs Station is located approximately eight miles southeast of Salt Lake City, Utah in Big Cottonwood Canyon along state highway number 152. Stairs Station is about two and one-half miles upstream from the Granite Power Plant, and is surrounded by the Wasatch National Forest. Lying in a narrow part of the canyon, the Stairs powerhouse is squeezed between the highway, about 15 feet to the north, and Big Cottonwood Creek to the south. Moving in a westerly fashion, the creek flows past the powerhouse and pools behind a dam just below the plant which diverts water for the Granite Hydroelectric Power Plant. An asphalt driveway provides access to the highway on the west side of the station, crosses a wooden bridge over Big Cottonwood Creek and enters a flat area used as a recreation and picnic site. This open space is lined with shade trees as is the driveway into the plant. Originally a shop/garage stood where now picnic tables are circled around a fire pit. The recreation area was almost totally rebuilt after a major flood destroyed the previous facility in the early 1980s. To the east of the picnic area and sand volleyball pit are the foundations of two operators' houses, today almost covered with vegetation. These homes have been removed. Steep canyon walls rise behind the recreation area, to the south.

(Rev. 8-86)

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NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 7 Page 3

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1. Powerhouse

The only original remaining building at the Stairs Station is the powerhouse. Constructed in 1895, this structure reflects the Second Renaissance Revival architectural style. A two-story, rectangular-shaped brick structure, the powerhouse has a concrete foundation and an asphalt, slightly gabled roof with a concrete capped parapet wall rising above it. Corbelled brick belt courses extend around the structure at top of the first story and below the parapet wall. The building's facades are divided into bays by pilaster strips which on the north and south facades contain star-shaped tire rod anchors. The north and south facades are divided into 7 bays, each containing a single window or pair of 2/2 double hung windows with a brick corbelled semi-circular arched lintel in the first and second stories. The lower portion of windows on the first story have heavy metal screens.

On the north side of the building is a substation/switchyard enclosed in a cyclone fence. This facade has an entrance to the substation yard that has a 2-light transom over a wooden door and screen door in the westernmost bay. The central bay has a sign reading "The Big Cottonwood Power Co./Stairs Station \*1895\*" which is lit with globed lights on metal brackets fastened on either side of the sign. Both the east and west facades are divided by pilasters into 3 bays. The side bays contain single windows. The central bay has a pair of windows over an entrance with a brick corbelled semi-circular arched lintel, an arched wooden transom and a pair of wooden doors. The eastern entrance retains the original transom window of 6-lights radiating around a central semi-circular shaped light.

Water both enters and leaves the power plant on the building's south side. A metal receiver pipe for the penstock runs the length of the facade, bringing water to the turbines. Segmental arched openings in the foundation wall allow the waste water to enter the tailrace, which flows under the receiver pipe and into Big Cottonwood Creek.

Since construction, the Stairs powerhouse has sustained only minor exterior alterations. A new parapet wall and concrete cap similar

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NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 7 Page 4

to the original has been added and new bricks have replaced deteriorating bricks. As the new brick is harder and darker in color, it is noticable, especially in the southeast corner. These alterations, however, do not overwhelm the building's original architectural style.

The interior of the Stairs powerhouse retains a level of integrity roughly compatible with its exterior, although some changes have been made over the years. The ground floor of Stairs powerhouse is the location of all generating equipment. Originally, the plant included four Pelton wheels attached to generators. These now have been replaced by one turbine-generator unit made up of a Francis reaction-type turbine (built by S. Morgan Smith) attached to a Westinghouse 2,300 volt a.c. generator, with field supplied by a General Electric 125 volt d.c. exciter. The unit has a capacity of about 1.2 megawatts. The turbine operates on a head of about 357 feet. Transmission equipment at Stairs is now mostly outside the powerhouse. The ground floor of the building, however, still includes a massive, air-cooled Westinghouse step-up transformer. The air cooling equipment, including a fan, is still in place. Other equipment at the ground-floor level of Stairs Station includes a modern switchboard, a sound-proof office, batteries, and an original 10-ton overhead traveling crane, probably built by the Silver Brothers of Salt Lake City (see the Hardesty article listed in the bibliography).

The second floor of the Stairs powerhouse is largely empty. This space originally housed transformers, bus bars, and switching equipment. The second floor is now used for storage of odd materials and tools. A few small machines, such as a drill press, are also still in place. Toward the west end of the second floor there is a wood balustrade with a small opening to allow passage. The purpose of this balustrade is unknown. Between the balustrade and the west wall there is a rectangular opening in the floor which allows ventilation for the ground floor and which is used to hoist materials between floors. Other than the features mentioned here the second floor is empty.

The ceilings over the first and second floors of the Stairs powerhouse feature a design similar to the ceiling of the Granite

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NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 7 Page 5

powerhouse. The Stairs powerhouse ceilings first consist of steel beams laid crosswise between the north and south powerhouse walls. The areas between the beams are filled with arched brick vaults, covered with plaster, which extend over the length of the building.

Stairs powerhouse has sustained a number of alterations since its construction. A new parapet wall has been installed. The original turbine-generator units have been replaced. Transformers have been moved outside, leaving the second floor empty. Overall, however, the powerhouse still appears much as it did about ninety years ago. Moreover, the powerhouse is still a key part of a basically intact, functioning, high-head hydroelectric plant. Stairs, despite its alterations, still retains integrity of location, design, setting, materials, workmanship, feeling, and association. The powerhouse is a contributing feature of the historic district.

## 2. Switchyard

The Stairs transmission equipment, consisting of modern switchrack and transformers, is now located outside the building, on its north side, between the building and Utah Highway 152. The switchrack does not contribute to the historic district.

## 3. Storm Mountain Dam

Big Cottonwood Creek water for Stairs Station is impounded behind Storm Mountain Dam, located about one half mile above the powerhouse in Big Cottonwood Canyon. The dam is situated in a natural basin at the head of a cascade called "the Stairs," which over a quarter mile section drops 200 ft. Storm Mountain Dam is an earth-fill structure faced on its upstream side with concrete. The dam is approximately 500 ft. in length and is approximately 10-20 ft. tall. About the northern two-thirds of the dam is straight, lying on a north-south axis. However, the rest of the dam angles toward the southeast. This portion of the dam has a reinforced concrete spillway about 35 ft. wide and 20 ft. tall on the downstream side. The spillway includes a flashboard gate system. Flashboards are set horizontally between steel I-beams

United States Department of the Interior  
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NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 7 Page 6

supported by steel stanchions. A walkway made of wood planks, with steel posts and cables for a handrail, is perched on top of the flashboard structure. The southerly end of the dam abuts a rock outcropping. The north end of the dam abuts the north side of Big Cottonwood Canyon. The intake at Storm Mountain Dam is located at about the middle of the dam, adjacent to its straight section, about 10 feet from its upstream face. The intake is a reinforced concrete structure with a valve and trashrack. The intake is enclosed by a small wood-frame shed covered with corrugated metal.

Storm Mountain Dam in its present configuration was built in 1921. The dam actually no longer functions. A small amount of water pools behind the dam, but Utah Power and Light no longer maintains a reservoir. The dam was officially retired in ca. 1955-1958, apparently because water impounded behind it somehow became unsuitable for Salt Lake City's Big Cottonwood Treatment Plant located near the mouth of the canyon, just below the Granite hydroelectric plant.

Other features at Storm Mountain Dam include portions of low retaining wall adjacent to the former reservoir area. These low walls, 1-2 ft. tall, consist of rubble and concrete. The walls are most visible on either side of Big Cottonwood Creek where Utah Highway 152 crosses the stream just east of Storm Mountain Dam.

As originally constructed in the 1890s, Storm Mountain Dam consisted of a curved, earth fill-structure, roughly situated on an east-west axis adjacent to the position of the current dam. A spillway, cut into bedrock, was located at the east end of this dam. A drain tunnel was bored through rock just east of the dam. The original dam created a much larger reservoir than the 1921 dam. The low retaining walls described above may have been associated with the original dam. Otherwise, the principal features of the original dam are no longer visible.

Storm Mountain Dam, as built in 1921, has sustained little alteration. Some weathering of the dam has occurred, such as the cracking and flaking of the upstream concrete face. Otherwise, storm mountain dam retains integrity of setting, location,

United States Department of the Interior  
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NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 7 Page 7

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feeling, association, design, materials, and workmanship. Storm Mountain Dam is a contributing feature in the Stairs Station Historic District.

#### 4. Conduit

Water entering the Storm Mountain Dam intake is first carried west through a welded steel pipe about 1,200 ft. long. Roughly the western half of the steel pipeline lies in a tunnel that was bored through a rock formation that extends from the north side of Big Cottonwood Canyon. Both ends of this tunnel have been closed with concrete, so the interior of the tunnel is not visible. Between the dam and the tunnel, the pipeline lies underground except for a short section just before it enters the tunnel. However, the course of the pipeline is apparent because earth was merely deposited over the pipeline so that it now appears as a long, low mound lying between the dam and the tunnel. After exiting the west end of the tunnel, the pipeline is now visible because Utah Power and Light has recently replaced a section of it between the tunnel and the top of the penstock. The original conduit, erected in the mid-1890s, was probably either replaced or renovated in 1921, at the time Storm Mountain Dam was built. Therefore, the conduit component of Stairs Station best represents the historic associations of a 1921 date.

Except for minor alteration, the steel pipeline conduit retains integrity of setting, location, feeling, materials, association, design, and workmanship. The conduit contributes to the historic district.

#### 5. Penstock

The penstock is original, and was fabricated by Fraser and Chalmers of Chicago. It consists of a riveted steel pipe approximately 1,750 ft. in length. At its top, the penstock has a 50 in. diameter and is made of steel 1/4 in. thick. The penstock gradually decreases in diameter and increases in thickness as it descends toward the powerhouse. At the bottom, the penstock has a 49 in. diameter and is made of steel 1/2 in. thick. The penstock is above ground except for about the last 150 ft., which now lies

United States Department of the Interior  
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NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 7 Page 8

underneath Utah Highway 152. The Stairs penstock is a particularly well-preserved and visible (except for about the last 150 ft.) example of a late-1890s penstock.

The Stairs Station penstock maintains integrity of design, setting, workmanship, location, feeling, materials, and association. The penstock is a contributing feature of the historic district.

#### 6. Standpipe

At the top of the penstock is a steel standpipe, built in 1939. The standpipe structure rests on a concrete block which is located at the point where the steel pipeline meets the top of the penstock. The top half of the standpipe was recently added by Utah Power and Light. Because of this recent addition, the standpipe no longer retains integrity of materials and design. It does not contribute to the Stairs Station Historic District.

#### 7.6. Ancillary Structures

Other structures at the Stairs Station include a small, concrete block outhouse with a flat metal-covered roof and a wooden door which sits just north of the powerhouse. East of the powerhouse, is a rock-terraced opening which extends into the hillside. This was the original oil shed (no. 7), but is currently unused because it has partially collapsed. Despite the collapse the oil shed from the outside appears intact. The oil shed still retains overall integrity of location, design, materials, workmanship, setting, feeling, and association. It is a contributing element of the historic district. Similar rock terracing as was used for the oil shed acts as riprap along the highway embankment just north of the powerhouse. Adjacent to the powerhouse and crossing Big Cottonwood Creek is a modern bridge (no. 8) which provides access to the UP&L picnic grounds. This is a modern structure made of steel with a wood deck and concrete abutments. It is a non-contributing feature of the historic district.

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:        nationally   x   statewide        locally

Applicable National Register Criteria   x   A        B   x   C        D

Criteria Considerations (Exceptions)        A        B        C        D        E        F        G

Areas of Significance

(enter categories from instructions)

Industry

Engineering

Period of Significance

1894-1921

Significant Dates

1896, 1921.

Cultural Affiliation

n/a

Significant Person

n/a

Architect/Builder

Jones, R.M. (engineer)/Big Cottonwood

Power Company

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

(see continuation sheet)

  x   See continuation sheet

United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 8 Page 2

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Stairs Station is historically significant under Criteria A and C. Under Criterion A, Stairs Station is historically significant within a statewide context because of its association with the first long-distance transmission of alternating current in Utah. Built in 1894-1896, in 1896 Stairs Station generated a.c. power and transmitted it over a 14-mile line to a substation in Salt Lake City. This inaugurated the widespread use in Utah of a.c. power generated from hydroelectric stations. Within a local context, Stairs Station is significant under Criterion A as the first hydroelectric power plant to supply electricity to Salt Lake City, Utah's largest urban/industrial center. Under Criterion C, Stairs Station is significant within a local context because it embodies the distinctive characteristics of a late nineteenth-century hydroelectric power plant (with later modifications). Situated in Big Cottonwood Canyon of the Wasatch range, Stairs Station's engineering features were ideally suited to its mountainous setting. Power companies built numerous high-head plants in Utah during the late nineteenth and early twentieth centuries. They were the most efficient type of hydroelectric technology for generating power on Utah's relatively small mountain streams.

Engineer Robert M. Jones originated the idea for Stairs Station, designed the facility, supervised its construction, and formed a company to oversee its operation. Jones was an experienced technician who had worked as a surveyor and mining engineer throughout the West, including New Mexico, Arizona, Colorado, Wyoming, and Utah. He also had assisted in the organization of the Laramie (Wyoming) Electric Light Company and had supervised the construction of its generating station. In 1889, Jones worked

United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 8 Page 3

on the installation of electrical equipment for the Salt Lake City Railway. His acquaintance with the Salt Lake City area no doubt led him to consider the feasibility of establishing a hydroelectric plant on one of the numerous streams that emerged from the Wasatch Mountains just east of Salt Lake City. Certainly the Salt Lake area offered a prime market for electricity generated from such a station. Jones scouted the canyons along the Wasatch range, and in September 1891 he located and filed an appropriation for water from Big Cottonwood Creek, along a cascade known as the Stairs.

Jones then set about developing the site. In 1893, he applied for a franchise from Salt Lake to furnish electricity to the city. He also led a group of citizens to the proposed power site and told them of his plan. But Jones met with failure as the mayor vetoed the council's approval of his franchise. Undaunted, Jones tried again. In support of his cause, he submitted a petition bearing the signatures of 126 Salt Lake City businessmen. The council then passed the franchise over the mayor's veto. Several months later, in December 1893, Jones organized the Big Cottonwood Power Company. Officers included president John W. Donnellan, vice president W.H. Rowe, secretary George M. Cannon, and treasurer George M. Downey. In 1894, workers employed by the Big Cottonwood Power Company began erecting the plant, but work was frequently halted because of construction difficulties and quarrels over water rights. In June 1895, the Big Cottonwood Power Company found some investors in the East and construction work continued. Stairs Station was finally completed in May 1896 at a cost of \$325,000.

Stairs Station was an outstanding example of a small, late nineteenth-century high-head plant. Jones had chosen an ideal site for the facility. The location of the dam at the top of the Stairs and the sharp drop in elevation (350 ft. in about 1/4 mile) at the site provided a high head for the turbines. Of equal importance, the short distance of the Stairs cascade necessitated only a minimum expenditure of materials and energy for the construction of a pipeline and penstock. In contrast, many high-head facilities had lengthy water delivery systems that were expensive to build and maintain (the wood flume and steel penstock for Granite Station, for instance, totalled about 1.75 miles in

United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 8 Page 4

length).

While construction of Stairs Station was underway, the Big Cottonwood Power Company looked for customers to purchase electricity from the plant. In January 1895, the company signed an agreement with the Salt Lake and Ogden Gas and Electric Light Company to supply the latter with power, purchased wholesale. Apparently the Salt Lake and Ogden Company's steam plant, located in the business section of downtown Salt Lake City, had drawn the ire of the local citizenry because it polluted the air. By drawing power from Stairs Station, the Salt Lake and Ogden Company hoped to abate the smoke problem caused by its coal-fired facility. But before Big Cottonwood Power could begin generating electricity, competition between the two companies arose. Big Cottonwood Power entered a bid for the Salt Lake City municipal street lighting contract, which the Salt Lake and Ogden Company wanted to keep. Apparently the ensuing squabble between the firms led to the nullification of their earlier contract.

Potential competition from power companies outside the Salt Lake area soon brought Big Cottonwood Power and the Salt Lake and Ogden Company back together. By 1896, L.L. Nunn of Provo and the Pioneer Electric Power Company of Ogden threatened to build lines to Salt Lake. Out of self-defense, the Big Cottonwood Power Company and the Salt Lake and Ogden Company entered into another agreement. A contract, dating from about June 1896, stipulated that Big Cottonwood Power would supply the Salt Lake and Ogden Company with electricity for ten years. R.F. Hayward, general manager of the Salt Lake and Ogden Company, supervised the construction of a transmission line, made of wood poles, from Stairs to a substation in Salt Lake City. Stairs Station began sending power over the 10,000 volt line on 2 June 1896. Stairs was the first hydroelectric power station to supply electricity to Salt Lake City. The transmission was the first in Utah to use alternating current over a long distance.

Big Cottonwood Power Company remained an independent business for only a short while. By 1897, owners of recently built hydroelectric power plants, including Stairs and Pioneer, instead of competing against each other merged their companies into one firm, the Union Light and Power Company. In 1899, Union Light and

(Rev. 8-86)

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United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 8 Page 5

Power underwent reorganization and was renamed Utah Light and Power. Shortly thereafter, Utah Light and Power began operating the Pioneer, Stairs, and Granite plants in conjunction with each other. As part of an integrated system, these plants served Salt Lake City and Ogden as well as a number of smelters south of Salt Lake. In 1904, Utah Light and Power merged with Consolidated Railway and Power to form Utah Light and Railway. Ten years later, in 1914, Utah Light and Railway and the Salt Lake Light and Traction Company merged to form Utah Light and Traction. In 1915, Utah Light and Traction came under the management of Utah Power and Light Company.

Since UP&L acquired Stairs Station, a number of changes have been made to the facility. Most importantly, in 1921 UP&L built Storm Mountain Dam, replacing the original structure which had rendered poor service because of its porosity. The construction of Storm Mountain Dam reflected UP&L's overall goal during the 1910s and 1920s of improving existing hydroelectric power plants so that each could function as a more reliable, efficient component in a huge network of electrical generating facilities. Another major alteration made to Stairs Station involved the replacement (date unknown) of the original generators and Pelton wheels with another unit featuring a Francis reaction turbine. Finally, at an undetermined date the company demolished the operator's quarters at the station. Despite these changes, the major technological components of Stairs Station--the dam, conduit, penstock, and powerhouse, remain essentially intact. Thus they still represent the historic associations of the period of significance and they still exhibit the important characteristics of an early high-head hydroelectric plant.

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## 9. Major Bibliographical References

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Previous documentation on file (NPS):

x See continuation sheet

       preliminary determination of  
      individual listing (36 CFR 67)  
      has been requested  
       previously listed in the National  
      Register  
       previously determined eligible by  
      the National Register  
       designated a National Historic  
      Landmark  
       recorded by Historic American  
      Buildings Survey #             
x recorded by Historic American  
      Engineering Record # UT-3

Primary location of additional data:

x State Historic preservation office  
       Other State agency  
       Federal agency  
       Local government  
x University  
x Other

Specify repository:

Utah Power and Light Company  
Marriott Library, University of Utah

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## 10. Geographical Data

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Acreeage of property 6.37 acres

### UTM References

A 1/2    4/3/7/1/2/0    4/4/9/7/2/6/0  
Zone    Easting        Northing

B 1/2    4/3/7/8/0/0    4/4/9/7/1/7/0  
Zone    Easting        Northing

C 1/2    4/3/6/4/4/0    4/4/9/7/1/3/0

D 1/2    4/3/6/3/8/0    4/4/9/7/0/3/0

       See continuation sheet

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### Verbal Boundary Description

x See continuation sheet

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### Boundary Justification

x See continuation sheet

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## 11. Form Prepared By

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date November 1988

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(Rev. 8-86)

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United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 9 Page 2

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"A Salt Lake City Transmission." The Electrical Engineer 31 (20 May 1896): 525.

Cravath, J.R. "Power Transmission in Utah." Electrical World and Engineer 37 (30 March 1901): 503-508.

Guy, George Heli. "Electrifying Zion: The Big Cottonwood Power Transmission, Salt Lake City, Utah." The Electrical Engineer 20 (11 September 1895): 245-249.

Hardesty, W.P. "The Water Power and Electric Transmission Plant of the Big Cottonwood Power Company." Engineering News 36 (1 October 1896): 220-222.

Utah Historical Society. Stairs Station Historic Photographs.

Utah Power and Light Company, Property Accounting Department. Expenditure Requisition File, Stairs Station.

Utah Power and Light Company. "Utah Light and Traction Company, History of Origin and Development." Unpublished report prepared in connection with Federal Power Commission Request Order dated May 11, 1937.

(Rev. 8-86)

Utah Word Processor Format (02741)

Approved 10/87

United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 10 Page 2

Verbal Boundary Description:

The Stairs Station Hydroelectric Plant Historic District is located in the SW corner of section 20, T3S, R2E, on the USGS topo map labelled Draper, Utah. The Dam component is located on eastern edge of section 20, T3S, R2E, on the USGS Quadrangle labelled Mount Aire, Utah.

The boundaries for the district begin at a point 40 ft. directly NW of the NW corner of the powerhouse which lies at the south edge of State Highway 152. The boundary then follows the south side of the highway 228 ft. to 10 ft. N of the penstock at the south edge of the highway. The boundary extends 10 ft. N of the penstock and conduit the total length of the conduit--2650 ft.--to within 300 ft. of Storm Mountain Dam. The boundary then proceeds directly N for 263 ft. along the FERC project boundary line where it then makes a right angle and travels due E for 525 ft., then makes another 90 degree angle and proceeds due S for 375 ft., then makes another right angle and proceeds due W for 525 ft. At this point, the boundary follows 10 ft. S of the conduit and penstock for 2650 ft. towards the powerhouse. Within 67 ft. E of the powerhouse, the boundary makes a 90 degree angle, proceeds SE for 57 ft., then makes a 90 degree angle and proceeds SW 110 ft. At this point, the boundary makes another 90 degree angle and proceeds 143 ft. to Point of Beginning. Total acreage is 6.37 acres.

Boundary Justification:

The boundary for Stairs Station Historic District encompasses all of the structures directly associated with the operation of the facility. The boundary encompasses the cleared, engineered ground upon which the powerhouse is situated and which Utah Power and Light uses to operate and maintain the plant. The boundary also encompasses the narrow corridor of ground upon which the penstock and conduit are located. A short portion of the penstock crosses under the highway adjacent to the powerhouse. Even though the penstock is hidden at this point, the rest of the structure is visible. It was decided that the short underground portion of the penstock did warrant excluding the penstock from the district or creating a discontinuous district. Thus the boundary follows the penstock as it runs under the highway and into the plant.

United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Stairs Station Hydroelectric Power  
Plant Historic District, Salt  
Lake City, Salt Lake County, Utah

Section number 10 Page 3

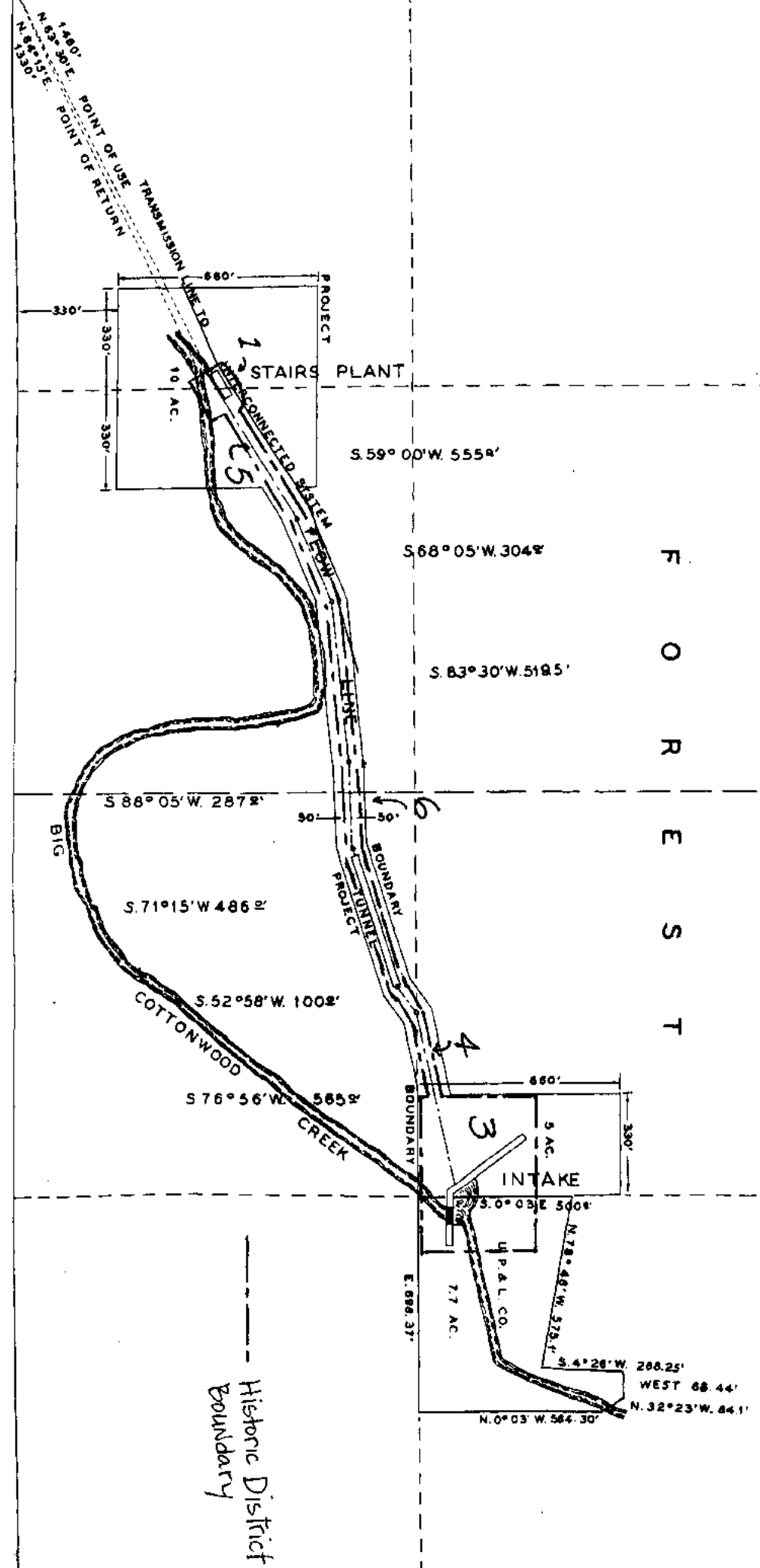
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Finally, the boundaries are extended to include the general setting of Storm Mountain Dam, a prominent feature which is situated in a large, open area at the top of the Big Cottonwood Creek cascade known as the Stairs.

W A S A T C H N A T I O N A L

F O R E S T

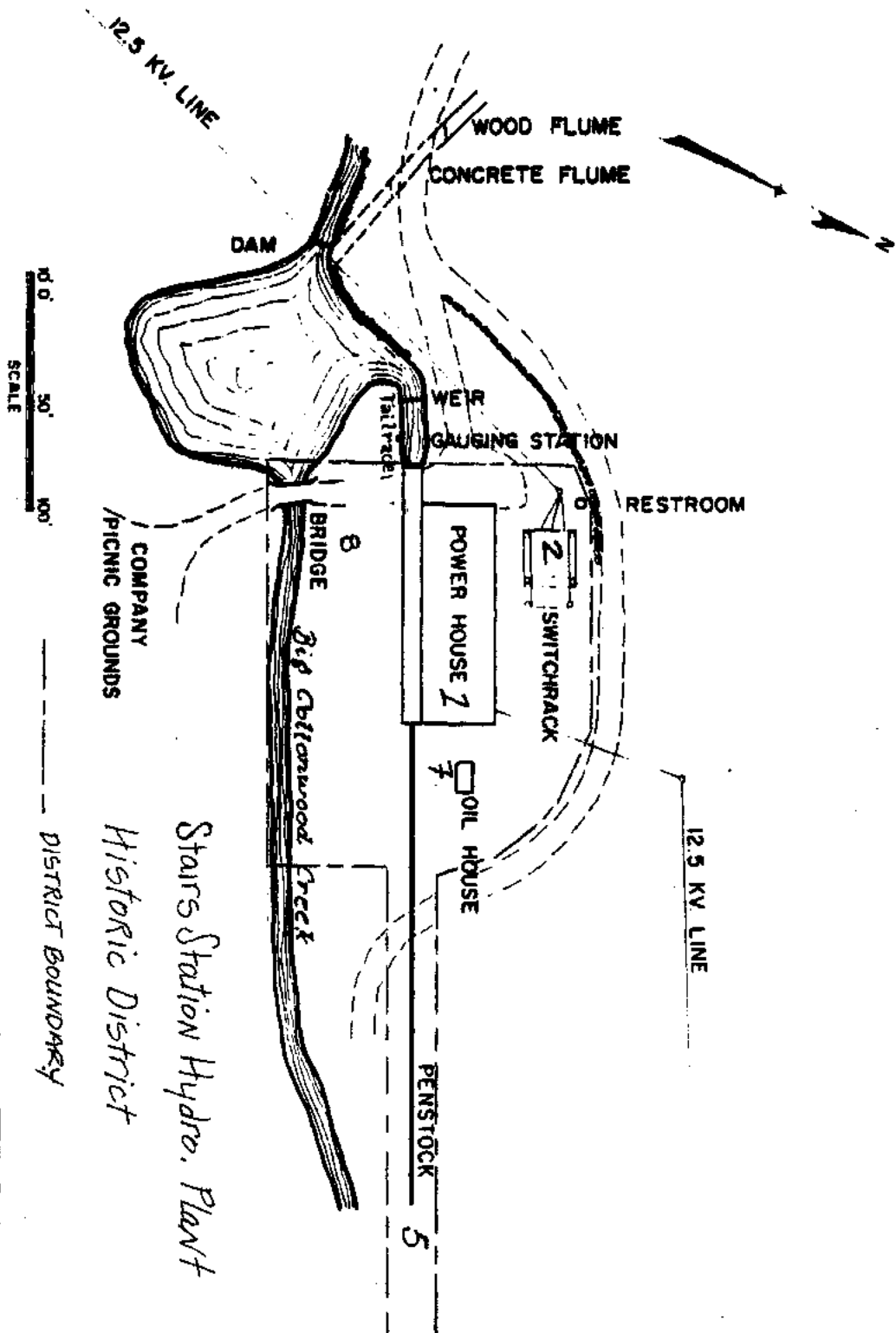
T.2S., R.2E., S.1.M.  
20



Stairs Station Hydro. Plant Historic District

DRAWN BY VR HUGHES  
 CHECKED BY JI. 7.  
 CORRECT

APPROVED: *J. R. Hughes*  
 CIVIL ENGINEER



*Stairs Station Hydro. Plant*  
*Historic District*  
*District Boundary*

STAIRS DEVELOPMENT  
 GENERAL MAP OF GROUNDS  
 UTAH POWER & LIGHT COMPANY  
 SALT LAKE CITY, UTAH  
 SCALE AS SHOWN DATE 12/02/74  
 UP-20167

Stairs Station Photograph Log:

Stairs Station Hydroelectric Power Plant Historic District Photos  
near Salt Lake City, Utah

Mark T. Fiege, photographer

July 1988

original negatives at Utah SHPO

Photo #:

1. Powerhouse (no. 1). view to southeast, with switchyard on left (no. 2).
2. Powerhouse (no. 1) interior, showing overhead crane. turbine-generator unit, view to east.
3. Storm Mountain Dam (no. 3), view to south.
4. Same, showing spillway, view to northeast.
5. Same, view to north.
6. Penstock (no. 5), view to east.