

**Weber Hydroelectric Project
FERC Project No. 1744**

**Final Study Plan
Cultural Resources**

March 2016

Prepared by:

PacifiCorp

Hydro Resources

1407 West North Temple, Room 110

Salt Lake City, UT 84116



For Public Review

TABLE OF CONTENTS

1.0 INTRODUCTION 1
2.0 PROJECT AREA..... 2
3.0 PROPOSED CULTURAL RESOURCE STUDY 4
 3.1 Existing Information 4
 3.2 Nexus to Project..... 6
 3.3 Area of Potential Effects (APE)..... 7
 3.4 Methods 7
 3.4.1 Pre-field File Search and Permitting 8
 3.4.2 Field Survey 8
 3.4.3 Reporting 9
 3.5 Level of Effort and Cost 9
4.0 REFERENCES 10

List of Tables

Table 1. Previous Projects Conducted within 1 Mile of the Project Area 5
Table 2. Previously Documented Cultural Resources within 1 Mile of the Project Area 6

List of Figures

Figure 1. Weber Hydro Relicensing Project Location 3

1.0 INTRODUCTION

PacifiCorp, a subsidiary of Berkshire Hathaway Energy, plans to file a new application for relicensing of a major project, the Weber Hydroelectric Project (Project), Federal Energy Regulatory Commission (FERC or Commission) Project No. 1744, on the Weber River in Weber, Morgan, and Davis counties in Utah. The current license will expire on May 31, 2020. The Project has a generation capacity of 3.85 megawatts (MW) and is located partially on federal lands managed by the Uinta-Wasatch-Cache National Forest (U-W-CNF), and partially on lands owned by the Union Pacific Railroad Company. PacifiCorp filed a Notice of Intent to File Application for New License (NOI) and a Pre-Application Document (PAD) to initiate the FERC Alternative Licensing Process (ALP) for the Project on May 29, 2015.

During preparation of the PAD, PacifiCorp conducted a desktop-level assessment to evaluate existing information on potential cultural resources in the Project Area and to inform analysis of Project impacts on these resources. In summary, the desktop assessment identified two cultural resources sites located in the Project Area: the Union Pacific Railroad and the Devil's Gate Weber Hydroelectric Power Plant Historic District (the Weber Plant's historic name). It is unlikely that additional cultural resource surveys within the Project Area would identify new cultural resources because of the existing development along the narrow canyon floor (e.g., multiple pipelines, railroads, Interstate 84, the Project); it is also unlikely that any subsurface deposits would remain intact and be able to convey important information about the prehistory or history of the region. As a result, no significant impacts to cultural resources are expected from continued operation of the Project, as no new ground disturbing activities are proposed in any previously undisturbed areas.

PacifiCorp prepared and implemented a cultural resource management plan as part of their previous FERC license to address potential impacts to the existing historical district. PacifiCorp will follow the standards and procedures outlined in the plan in coordination with the State Historic Preservation Office (SHPO) for continued operation and maintenance as well as any new proposed construction, and may update the existing document.

Although it is unlikely that additional surveys within the Project Area would identify new cultural resources, PacifiCorp proposes to conduct a formal cultural inventory of the Project Area to verify the results of the 2015 desktop assessment.

A literature review was conducted during preparation of the PAD to prepare a context for historic tribal land use in the vicinity of the Project Area. This context is provided in section 3.1. There are no tribal lands or tribal claims within or immediately adjacent to the Project Area. However, tribal concerns about confidentiality could preclude a site-specific inventory of traditional cultural places. FERC is the lead agency for purposes of Section 106 of the National Historic Preservation Act (NHPA) and tribal consultation. FERC will consult with potentially affected tribes to discuss any concerns they may have about potential effects of continued operation of the Project on traditional places and resources.

2.0 PROJECT AREA

For the purposes of this document, the FERC Project Boundary (or Project Boundary) is defined as all lands and waters within the existing FERC Project Boundary for the Weber Hydroelectric Project No. 1744, as denoted on the project's Exhibit G. The **Project Area** is the area which contains all project features (encompassing the FERC Project Boundary as defined above), and which extends out for the purposes of characterization and analysis from the furthest edge of the Project Boundary, and across the river to the far riverbank (including the river regardless of which side of the river the project features are found), as shown in Figure 1.

The existing Project consists of:

- (1) a 27-foot-high, 79-foot-long concrete diversion dam, having two radial gates approximately 29 feet wide, and a 35-foot-wide intake structure, for a total width of 114 feet, on the Weber River;
- (2) a 9,107-foot-long, 5-foot to 6.3-foot diameter steel pipeline partially encased in concrete beginning at the intake and terminating at the powerhouse on the Weber River;
- (3) a 3-foot by 18-foot non-operative fish passage structure (used however to pass the minimum flow through the calibrated slide gate opening);
- (4) a powerhouse containing a generating unit with a rated capacity of 3,850 kilowatt (kW) operating under a head of 185 feet producing a 30-year average annual energy output of 16,932 megawatt-hours (MWh);
- (5) a discharging pipe returning turbine flows into the Weber River at the powerhouse; and,
- (6) a 77-foot-long, 46-kilovolt (kV) transmission line which connects to the Weber substation.



Figure 1. Weber Hydro Relicensing Project Location

3.0 PROPOSED CULTURAL RESOURCE STUDY

3.1 Existing Information

A search of project, site, and preservation files at the Utah Division of State History (UDSH) was conducted on February 23, 2015. In all, 19 archaeological projects have been conducted within 1 mile of the Project Area. Of the 19 projects, three have been conducted within the Project Area (Table 1). In the course of the 19 projects, 12 sites were documented, and two of these sites (42MO000059 and 42WB000328) are located within the Project Area (Table 2). Site 42MO000059 is the Union Pacific Railroad (UPR). Site 42WB000328 is the Devil's Gate Weber Hydroelectric Power Plant Historic District. The Devil's Gate Plant was formally changed to the name Weber Plant in 1917. However, the National Register of Historic Places (NRHP) registration form retains both names. While several historic canal sites were identified within one mile of the Project Area during the file search, none of the canals cross the Project Area. One historic architectural locality (UPR Gateway Bridge) was identified in the UDSH historic files, but it is not located within the Project Area.

In addition, General Land Office (GLO) plat maps and several GIS layers were examined for potential cultural resources. These layers, available from state and federal agencies, include the NRHP properties, Utah historic trails, Utah historic districts, historic topographic maps, and other historic aerial imagery. Two NRHP properties were identified within 1 mile of the Project Area: Devil's Gate Weber Hydroelectric Power Plant Historic District (42WB000328) and Farmington Main Street Historic District. The Devil's Gate Weber Hydroelectric Power Plant Historic District is located within the Project Area, but the Farmington Main Street Historic District is not located within the Project Area. The Weber Historic District was added to the NRHP in 1989.

Several potential historic resources were identified within 1 mile of the Project Area on three GLO maps: three unnamed roads, two unnamed buildings, two unnamed bridges, a flag station, a section house, a field, and the UPR. Only two of these resources are located in the Project Area: the UPR and one of the unnamed roads. This portion of the UPR identified on the GLO maps has not been previously documented, but is part of the historic portion of the UPR. One of the pipelines associated with the Weber hydroelectric plant crosses the railroad near the eastern end of the Project Area. Based on aerial imagery from Google Earth, the pipe appears to have been bored under the active UPR line; PacifiCorp records also indicate this. In addition, the flag station, the section house, and one of the unnamed bridges are related to the UPR, but they do not fall within the Project Area.

The unnamed road originally followed along the river (located on the south side of the river near the canyon mouth, it historically crossed to the north side of the river very near the Weber powerhouse and went immediately in front of the cottages in the historic district) and was later used as part of the old state highway which traversed the canyon prior to the construction of Interstate 84. Portions of the road are still visible and cross the Project Area. The road is in disrepair because the paved areas have severely deteriorated. The road has also been affected by the construction and subsequent updates to the UPR and the construction of Interstate 84. The portion of the road within the Project Area is partially located within the historic district, and

partially within the UDOT right of way, where it has been disturbed by road construction activities as well as the installation of a buried pipeline through the area.

The previous cultural inventory projects conducted within one mile of the Project Area have covered only a small portion of the Project Area. However, it is unlikely that additional survey projects within the Project Area would identify new cultural resources due to the heavy disturbances from the Interstate 84 and various UPR and pipeline rights of way, as well as the construction of the hydroelectric project. It is unlikely that any subsurface deposits would remain intact and be able to convey important information about the prehistory or history of the region.

Table 1. Previous Projects Conducted within 1 Mile of the Project Area

Project Number	Project Title	Consultant
U84SJ0416	2 Grv1 Prospts/Weber Cyn nr Mt Green Cemetery/UDOT	Sagebrush Archaeological Consultants (Sagebrush)
U84SJ0425	Historical Assessment/W Gateway Hydroelectric Proj	Sagebrush
U87CN0615 [†]	AT&T Fiber Optics Cable Cheyenne-Sacramento	Centennial Archaeology
U88NP0463	El Monte-Weber 46 KV Relocation	A.K. Nielson and Associates
U89BC0057*	–	–
U89BC0578	Stoddard Diversion Dam and Gateway Canal	BYU - Office Of Public Archaeology (BYU-OPA)
U90FS0228 [†]	Weber Power Plant Picnic Area	USFS
U96JB0167	3 Pipeline Segments for Ogden Valley Project	JBR
U04UQ0416	Uintah U	Utah Division of Wildlife Resources (DWR)
U06ST1822 [†]	Rocky Mountain Pipeline- Legacy to SLC 16" Exploration	SWCA
U08LI1172	Questar Pipeline Replacement	Logan Simpson Design Inc. (LSD)
U08ST0600	Addendum To CRI Of The RMPS SLC 16" Pipeline	SWCA
U09ST0590	D Well Canal Improvements	SWCA
U09UQ0582	Lower Weber River Diversion Dam Modernization	UDWR
U11BC1133	DOGM Foothill Mine Inventory	BYU - OPA
U11LI0050	A Class II Cultural Resources Reconnaissance Of The Questar Pipeline's ML3 Peterson And Henefer Segments Replacement Project In Morgan And Summit Counties Utah	LSD
U12LI0642	A Class III Cultural Resources Inventory Of Questar Pipeline's ML3 Weber Canyon Segment Replacement Project In Davis And Morgan Counties Utah	LSD
U12XN0453	Cultural Resources Inventory For The 2012 Davis County Emergency Watershed Protection (EWP) Project Davis County Utah	Native-X Inc
U13TD0314	Additional Work For Questar's Mainline 3 In Weber County	Tetra Tech

*Copies of this report are not available from UDSH.

[†]Projects conducted in the project area

Note: The project titles listed in this table are taken directly from Preservation Pro, and have not been edited.

Table 2. Previously Documented Cultural Resources within 1 Mile of the Project Area

Site Number	Site Class	Site Type	NRHP Eligibility
42DV000120	Historic	Canal (Davis-Weber Canal)	Eligible
42DV000121	Historic	Retaining walls	Not Eligible
42DV000131	Historic	Canal (Davis-Weber Canal)	Eligible
42DV000143	Historic	Canal (South Weber Irrigation Canal)	Eligible
42MO000005	Prehistoric	Open campsite	Undetermined
42MO000007	Prehistoric	Lithic scatter	Undetermined
42MO000016*	–	–	–
42MO000059 [†]	Historic	Railroad (Union Pacific Railroad)	Eligible
42MO000068	Historic	Historic hard rock mine (Strawberry Mine)	Not Eligible
42WB000142	Prehistoric	Open campsite	Undetermined
42WB000328 [†]	Historic	Devil's Gate/Weber Hydroelectric Power Plant Historic District	NRHP-listed
42WB000465	Historic	Canal (Uintah Central Canal)	Eligible

*Copies of these site forms are not available from UDSH.

[†]Sites located in the project area

Historically, one Native American group, the Weber ‘Utes’ (likely a misnomer) or Weber Band of the Northwestern Shoshone, lived near the Project Area on the Weber River at the time of European contact (Alexander 2003:129; Hittman 2013:358; Idaho State Historical Society 1970). Multiple references identify The Weber Band as a band of the Northwestern Shoshone that spoke the Shoshone language and may have intermarried with Ute tribes. Depending on the text or ethnography that is consulted, they are considered one of the Northwestern Bands of the Shoshone or by one author as Utes “who frequently intermarried with the Shoshone” or (Hittman 2013:358; Idaho State Historical Society 1970; Thomas et al. 1986:262). Mounting pressure from white settlers led to tensions, and the Weber Band were eventually forced to surrender their weapons and live in Ogden, distributed amongst the white settlers during the winter of 1854 (Roberts and Sadler 1997:77–79). Although information is limited, by mid-1863, some of the Weber Band scattered and/or joined with other Shoshone Bands, although at least some members of Little Soldier’s (leader of the Weber Band) people concluded a “verbal treaty of peace or ‘satisfactory understanding’” (Madsen 1985), that appears to have led to at least Little Soldier’s assimilation with the local Mormon culture (Community Trees 2015).

3.2 Nexus to Project

In summary, the desktop assessment identified two cultural resources sites located in the Project Area: the Union Pacific Railroad and the Devil’s Gate Weber Hydroelectric Power Plant Historic District. Of these two sites, only the Weber Historic District is a NRHP property. It is unlikely that additional cultural resource surveys within the Project Area will identify new cultural resources and it is also unlikely that any subsurface deposits would remain intact and be able to convey important information about the prehistory or history of the region.

With the exception of potential fish passage facilities, there are no proposed additional changes to the historic nature of existing Project facilities and infrastructure. No significant impacts to cultural resources are expected from continued operation of the Project. PacifiCorp prepared and implemented a cultural resource management plan as part of their 1990 FERC license to address potential impacts to the district. Chris Hansen, the Deputy Utah SHPO Officer, reviewed the plan and original documentation of the Devil's Gate Weber Hydroelectric Power Plant Historic District and found them to be adequate for continued use and consultation with SHPO (personal email correspondence between Lindsey Kester, SWCA, and Chris Hansen, SHPO on July 2, 2015). PacifiCorp will follow the standards and procedures outlined in the plan in coordination with SHPO for continued operation and maintenance as well as any new proposed construction, and may update the document if warranted.

There are no tribal lands or tribal claims within or immediately adjacent to the Project Area. However, tribal concerns about confidentiality could preclude a site-specific inventory of traditional cultural places. The following Native American Indian Tribes are associated with the larger region where the Project is located:

- Northwestern Band of Shoshone Nation
- Shoshone-Bannock Tribes
- Ute Indian Tribe
- Skull Valley Band of Goshute
- Confederated Tribe of Goshute
- Paiute Tribes of Utah

FERC will consult with each of the potentially affected tribes to discuss any concerns they may have about potential effects of continued operation of the Project on traditional places and resources.

3.3 Area of Potential Effects (APE)

Section 106 of the NHPA requires the lead federal agency to define the APE for cultural resources for the Project in consultation with those parties defined in 36 Code of Federal Regulations (CFR) 800.2. For the cultural resource surveys proposed here, this study plan assumes that the Project Area defined in section 2.0 is identical to the APE.

3.4 Methods

All tasks will be conducted in accordance with Utah SHPO and U-W-CNF standards; further, all cultural resource work will be conducted under the supervision of archaeologists who

- meet the Secretary of the Interior's Professional Qualifications Standards for Archaeology and Historic Architecture, *and*
- hold a Principal Investigator Permit from the State of Utah's Public Lands Policy and Coordination Office.

3.4.1 Pre-field File Search and Permitting

During a desktop assessment conducted for the PAD, a search of project, site, and preservation files at the UDSH was conducted on February 23, 2015. In addition, GLO plat maps and several GIS layers were examined for potential cultural resources. These layers, available from state and federal agencies, include the NRHP properties, Utah historic trails, Utah historic districts, historic topographic maps, and other historic aerial imagery. The results from this file search and data review will be used to develop a cultural context and inform the field survey. The cultural context will help form an opinion on the NRHP eligibility of any new cultural resources sites that are discovered during the field survey.

Prior to conducting field surveys, archaeologists will obtain a permit and notice to proceed for archaeological investigations on U-W-CNF land from the U-W-CNF Heritage archaeologist. An additional file search will be conducted at the U-W-CNF office at the time of permitting.

3.4.2 Field Survey

The cultural field survey is expected to occur between the months of July and September. Cultural resource inventories are not seasonally restricted, but rather are limited by visibility constraints from snow cover; however, snow cover is not expected at the time these inventories are proposed to be conducted.

Under direction of a qualified crew leader, and under authority of all necessary permits and fieldwork authorizations, a qualified archaeologist will conduct a Class III inventory of the APE. To accurately navigate the APE, archaeologists will be supplied with large-format planning maps and all necessary data on handheld global positioning system (GPS) units, including shapefiles of previously identified sites in the APE. The crew lead will ensure that data collection and documentation are accurate and consistent, and follow SHPO and U-W-CNF specifications.

Survey transects will be spaced no more than 15 meters apart and will provide, depending on terrain and vegetation cover constraints, complete coverage of the APE. Portions of the APE with slopes greater than 30 degrees will not be surveyed by foot for safety reasons, but will be visually inspected for cultural resources from the closest safe distance.

Archaeologists will record all newly discovered prehistoric and historic cultural resource sites in the survey area. Per Utah SHPO requirements, all cultural resources meeting the agency definition of a "site" will be fully recorded on standard Intermountain Antiquities Computer System (IMACS) site forms. The full extent of sites that extend beyond the survey area will be documented pending landowner permission and absent extenuating access issues. All linear sites that bisect the survey area will be recorded according to Utah's linear sites guidelines. Post-processed Trimble GPS files will be exported to Environmental Systems Research Institute (ESRI) ArcMap shapefiles and used to record the location of all site boundaries and datums. The placement of permanent datums will be determined through consultation with each authorizing agency. IMACS site forms will be generated for each site using SWCA's proprietary IMACS database. All sites recorded during the survey will be evaluated for NRHP eligibility in accordance with the criteria for eligibility detailed in 36 CFR 60.1 et seq.

No site testing or artifact collection will occur during the inventory.

3.4.3 Reporting

Results of the cultural inventory will be presented in a technical report that will include the following:

- A summary of the file search
- Details of the methods used for the survey
- A summary of the cultural history and historical context based on the file search
- Survey results
- Recommendations regarding the eligibility of cultural resources identified in the APE for the NRHP
- A SHPO cover sheet and U-W-CNF summary report form

A draft report will be made available for 30-day stakeholder review and comment by November 7, 2015. Comments on the draft report will be addressed, and the report will be finalized and submitted to FERC for their 106 consultation.

3.5 Level of Effort and Cost

Archaeologists will obtain a permit and notice to proceed for archaeological investigations on U-W-CNF land and will conduct a file search at the U-W-CNF office in late July or early August, 2015. A crew of two archaeologists will perform the Class III pedestrian inventory of the APE in August or September, 2015. There is a very low likelihood of encountering new sites, therefore only one day of survey is expected. The draft report of the survey results will be prepared following the field effort in a two-day period. Stakeholder and agency comments will be addressed for a final report in a two-day period following the comment review period. The estimated cost for permitting, field surveys, reporting and project management is \$6,300.

4.0 REFERENCES

- 1871 Township No. 5 North - Range No. 1 East – Salt Lake Meridian. Originally published in 1871 by the General Land Office, Salt Lake City, Utah. Available online at http://www.ut.blm.gov/LandRecords/viewimage.cfm?/LandRecords/Survey_Plats/Slm_Archive/Ne//ut260050n0010e0-c0263.tif. Accessed February 20, 2015.
- 2003 *Utah: The Right Place*. Second Revised ed. Gibbs Smith, Salt Lake City, Utah.
- Community Trees. Available at: <http://histfam.familysearch.org//getperson.php?personID=I684&tree=HintonGosHuteIndians>. Last accessed: April 15, 2015.
- Ferron, A. D. 1871 Township No. 5 North - Range No. 1 West – Salt Lake Meridian. Originally published in 1871 by the General Land Office, Salt Lake City, Utah. Available online at http://www.ut.blm.gov/LandRecords/viewimage.cfm?/LandRecords/Survey_Plats/Slm_Archive/Nw//ut260050n0010w0-c0264a.tif. Accessed February 20, 2015.
- Hittman, Michael. 2013 *Great Basin Indians: An Encyclopedic History*. University of Nevada Press, Reno, Nevada.
- Idaho State Historical Society 1970. Idaho State Historical Society Reference Series: Shoshoni and Northern Paiute Indians in Idaho: Number 484. Available at: <http://history.idaho.gov/sites/default/files/uploads/reference-series/0484.pdf>. Accessed February 24, 2015.
- Roberts, Richard C. and Richard W. Sadler. 1997. *A History of Weber County*. Utah Centennial County History Series. Utah State Historical Society, Salt Lake City.
- Salomon, Otto E. 1891 Township No. 5 North - Range No. 1 East – Salt Lake Meridian. Originally published in 1891 by the General Land Office, Salt Lake City, Utah. Available online at: http://www.ut.blm.gov/LandRecords/viewimage.cfm?/LandRecords/Survey_Plats/Slm_Archive/Ne//ut260050n0010e0-c0263a.tif. Accessed February 20, 2015.
- Thomas, David H., Lorann S. A. Pendleton and Stephen C. Cappannari. 1986. Western Shoshone. In *Great Basin*, edited by Warren L. d'Azevedo, pp. 262–283. *Handbook of North American Indians*, Vol. 11 William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C