PACIFICORP

Pacific Power |
Rocky Mountain Power
825 NE Multnomah, Suite 1800
Portland, Oregon 97232

CONFIDENTIAL INFORMATION NOTICE

Electronically filed September 13, 2018

eFile:	Kimberly D. Bose, Secretary Via eLibrary at www.ferc.gov	**eMail:**	Evan Williams, FERC Evan.Williams@ferc.gov

Subject: Weber Hydroelectric Project (FERC No. 1744)
Response to June 28, 2018 Request for Additional Information

Attached is a filing from PacifiCorp containing public and security-classified documents. The following table displays each document's title and its confidential classification as defined in 18CFR§388.112. When a document is classified as *Privileged (CUI//PRIV)*, *Protected*, or *CUI//CEII*, please ensure there is no unauthorized disclosure.

Encl:	Confidential Information Notice – Public
	Letter – Public
	Response to FERC's June 28, 2018 Request for Additional Information – Public
	Revised Exhibit A of the Final License Application – Public
	Revised Exhibit F of the Final License Application – CUI//CEII

Thank you for your attention to this request. If you have any questions concerning the classifications of these documents, please contact those cited in the letter.

The security classification of each enclosed document is identified in the Enclosure Table.
If identified as *Privileged (CUI//PRIV)*, *Protected,* or *Critical Energy Infrastructure Information (CUI//CEII)*,
DO NOT RELEASE.

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CUI//CEII

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Electronically filed on September 13, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
825 First Street, N.E.
Washington D.C. 20426

Subject: Weber Hydroelectric Project (FERC No. 1744)
Response to June 28, 2018 Request for Additional Information

Dear Ms. Bose:

On May 30, 2018, pursuant to the Federal Energy Regulatory Commission (FERC) regulations for the Alternative Licensing Process (ALP; 18 CFR § 4.34(i)), PacifiCorp submitted the Final License Application (FLA) for Major Project—Existing Dam for the Weber Hydroelectric Project (Project), located on the Weber River in northern Utah. On June 28, 2018, FERC requested additional environmental and engineering information needed to complete their evaluation of the license application for the Project. More specifically, FERC requested additional information on the following license application sections:

- Exhibit A, *Project Description*
- Exhibit E, Applicant-Prepared Environmental Assessment (APEA), *Introduction*
- Exhibit E, APEA, *Existing Project Facilities*
- Exhibit E, APEA, *Botanical and Terrestrial Resources*
- Exhibit E, APEA, *Recreation*

This letter and its enclosures provide PacifiCorp's full response to FERC's Request for Additional Information including the information included in the errata sheet to the APEA. The requested information is also included in revised versions of Exhibits A and F, filed with this response.

This letter and its enclosures have been filed electronically along with our Confidential Information Notice. The security classification of each component in this packet is shown in the enclosure tables. If you have any questions concerning these documents, please contact Eve Davies, Weber Relicensing Program Manager, at eve.davies@pacificorp.com or 801-220-2245.

Sincerely,

Mark A. Sturtevant
Managing Director, Renewable Resources

MAS: EFD: BB

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If identified as *Privileged (CUI//PRIV)*, *Protected,* or *Critical Energy Infrastructure Information (CUI//CEII)*,
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eFile:	Kimberly D. Bose, Secretary Via eLibrary at www.ferc.gov	**eMail:**	Evan Williams, FERC Evan.Williams@ferc.gov

WEBER HYDROELECTRIC PROJECT
(FERC PROJECT NO. 1744)

RESPONSE TO JUNE 28, 2018
REQUEST FOR ADDITIONAL INFORMATION

SEPTEMBER 2018

WEBER HYDROELECTRIC PROJECT (FERC PROJECT NO. 1744)

RESPONSE TO JUNE 28, 2018 REQUEST FOR ADDITIONAL INFORMATION

On June 28, 2018, the Federal Energy Regulatory Commission (FERC) provided PacifiCorp with an acceptance letter and request for additional information regarding PacifiCorp's Final License Application for relicensing of the Weber Hydroelectric Project (FERC Project No. 1744). The request included comments on Exhibit A (Project Description) and Exhibit E (Applicant Prepared Environmental Assessment [APEA]). After further discussions with FERC, PacifiCorp prepared and submits the following response which includes errata to address the comments on Exhibit E. Resubmittal of Exhibits A and F in their entirety are included as attachments to this document. FERC's comments are given, followed by PacifiCorp's response. New and/or revised text is shown in **bold** font to easily distinguish additional information.

EXHIBIT A

FERC Comment on Exhibit A - Project Description

Description of Project
Section 2.1.7.3 *Bypass Reach and Tailrace* in Exhibit A does not provide a description of the project's tailrace structure, which is also absent from the list of project facilities in Table 3 in Exhibit A, and section 2.1.2 in Exhibit E. Please provide a detailed description of the tailrace structure, including its location, dimensions, and construction materials.

Resolution of FERC Comment on Exhibit A

The following description of the Weber Project tailrace has been added to Section 2.1.7.3 and appropriate detail was added to Table 3 of Exhibit A; the same information is summarized in the APEA/Exhibit E errata below.

The bypass reach terminates where the **diverted** water enters the powerhouse downstream and is returned to the Weber River **through the tailrace discharge**. The discharge area is approximately 16 feet wide.

The Weber Plant tailrace is located at the foundation below the generating floor. The tailrace receives water from the twin discharge turbine draft tubes. The tailwater level is within the foundation area and discharges directly into the Weber River through a control weir that makes up the lower wall of the arched opening on the south side of the building (see Photo 5). The fixed control weir wall establishes hydraulic submergence for the discharge of the two draft tubes at approximately 19 feet below the centerline of the horizontal generator and separates the foundation tailrace from the Weber River. The dimensions of the tailrace chamber are 22 feet wide (east-west axis) by 30 feet deep (north-south axis) by 29 feet high. The tailrace can be reached via an access door in the generating

floor located adjacent to the south (river-ward) wall of the powerhouse, which leads to a ladder down to the tailrace water below, or via the river itself (PacifiCorp accessed this area during fisheries studies by both boat and with divers from the river). The arched opening from the tailrace to the river is approximately 16 feet wide and 20.5 feet high, although the weir is built at the bottom of the opening and extends approximately 8.5 feet up, reducing the opening above the weir (the 'open' space) to approximately 12 feet in height.

EXHIBIT E - ERRATA

These errata concern Exhibit E, the final APEA. Below PacifiCorp restates each of FERC's individual APEA-related comments in the order in which they were provided by FERC. Each FERC comment is followed by a detailed PacifiCorp response; new text for inclusion in the Final APEA is in **bold** to distinguish from existing text.

FERC Comment 1 on Introduction

Section 1.4.3 *Endangered Species Act (ESA)* of the final APEA states that you have sought concurrence from the U.S. Fish and Wildlife Service (FWS) that formal consultation is not needed given no federally listed species occur in the project area. Appendix H does not include any correspondence documenting ESA section 7 consultation with FWS. If available, please file with the Commission any correspondence with FWS documenting ESA Section 7 consultation including official letters and species lists from FWS indicating which listed species and designated critical habitat potentially occur in the vicinity of the project.

Resolution, Correction, or Addition for FERC Comment 1 on Introduction

On July 9, 2018, Mr. Larry Crist, the FWS Utah Field Supervisor, provided PacifiCorp with a concurrence stamp on a letter sent to FWS from PacifiCorp on August 23, 2017; his office also noted informally in their 2018 response that they generally do not provide concurrence, but agreed to do so in this case due to FERC's Request for Additional Information. FERC's Evan Williams was provided a courtesy copy of PacifiCorp's original August 2017 letter to FWS. PacifiCorp's 2017 letter sought concurrence from FWS that formal consultation and preparation of a Biological Assessment (BA) under the Endangered Species Act (ESA) are not necessary for the relicensing of the Weber Hydroelectric Project by FERC. Please see attached correspondence (Attachment 1) between PacifiCorp and FWS, which includes the 2018-dated concurrence stamp from Mr. Crist.

FERC Comment 1 on Existing Project Facilities

Dimensions of project structures differ in various parts of the final license application. Section 2.1.2 Existing Project Facilities, of the final APEA states that the Weber diversion dam consists of a 79-foot-long concrete section. Section 2.1 General in Exhibit F states that the dam consists of a 71-foot-long gated section. Section 2.4 Project Facilities in Exhibit F further states that the dam contains a 79-foot-long gated spillway section. Please provide the correct length of the gated section and its height from the streambed to the top of the spillway gates. Also, please specify the correct dimensions of the intake structure, and describe its exact location in relation to the main diversion dam structure.

Resolution, Correction, or Addition for FERC Comment 1 on Existing Project Facilities

Sections 2.1 and 2.4 of Exhibit F, Appendix A are amended to indicate that the correct dimension is a 79-foot-long gated section. This dimension is correct in the Final APEA. Additional edits were made in Exhibit F, Appendix A and Attachment 1 of Appendix A to ensure correct and consistent dimensions throughout. The first paragraph in Section 2.1.2 in the Final APEA should read as follows (new text in bold):

"The Weber Hydroelectric Project is a run-of-river operation consisting of the following facilities: 1) a diversion dam with an overall length of 114 feet and spillway crest elevation of 4,789.**18** feet (NAVD-88) consisting of a **16.7**-foot-high **(as measured from the downstream water surface to the top of the spillway gates)**, 79-foot-long **gated** concrete section, two radial gates (one referred to as the north gate and the other referred to as the south gate) approximately **30** feet long **and 10 feet high**, and a 35-foot-**wide** intake structure **located at the left abutment which contains a 22-foot wide by 31-foot long by 19-foot tall concrete intake box**; 2) a 3-foot by 18-foot non-operative fish passage structure that is used to pass minimum flows through a calibrated slide gate opening; 3) a forebay with a surface area of 8.4 acres at elevation 4,797.88 NAVD88 (at the top of the spillway gates) and total water storage capacity of approximately 42 acre-feet; 4) a 9,1**10**-foot-long, **66-inch** to **76-inch** diameter steel penstock partially encased in concrete beginning at the intake and terminating at the powerhouse on the Weber River; 5) a powerhouse with one 3,850 kilowatt (kW) generating unit (5,000 horsepower) operating under a head of 185 feet and producing a **30**-year average annual energy output of 16,926 MWh (average monthly generation is 1,411 MWh, estimated dependable capacity is 1,420 kW utilizing the entire 96-year period of record, but 594 kW utilizing the most recent 30-year period of record; see Section 3.3.3.1 for discussion of the difference in flows between the two periods); 6) a **reinforced concrete tailrace, 30 feet deep (north-south axis) by 22 feet wide (east-west axis) and 29 feet high, located underneath the powerhouse floor with water discharged directly into the Weber River over a weir on the south side of the powerhouse**; and 7) a 77-foot-long, 46-kilovolt (kV) transmission line which connects to the Weber substation (substation is not part of the Weber Hydroelectric Project). The locations of existing Project facilities are depicted in Figure 3."

FERC Comment 1 on Botanical and Terrestrial Resources

The final (APEA) provides insufficient information about non-native, invasive plant species as it does not include a list of the species known to occur, or that could potentially occur, in the project area or within the project boundary. Please provide this information, including the impact classification/rating for each species, as designated by county, Forest Service, state resource agency, or other relevant organizations. In addition, table 9 in section 2.1.5, Existing Environmental Protection, Mitigation, and Enhancement Measures lists annual weed control around several project facilities as one of the botanical measures, but does not indicate which weed species are controlled. Please summarize the weed species that are routinely controlled

around existing project facilities including the control methods used. In addition, please provide information on how weed species are monitored, including the frequency of monitoring.

Resolution, Correction, or Addition for FERC Comment 1 on Botanical and Terrestrial Resources

The Final APEA should include the following subsection at the end of Section 3.3.5.1 (new text in bold, summarized from the Botanical and Terrestrial Resources Technical Report [SWCA 2017b]):

"*Noxious Weeds*

Field surveys in August 2015 documented nine noxious weed species in and near the FERC Project Boundary (SWCA 2017b). Eight of the documented weed species are state-listed and one is a Morgan County noxious weed. Areas of documented weed occurrence are generally in locations of pre-existing disturbance (in many cases decades old) and in areas where PacifiCorp does not have the ability to influence activities on the surface. These areas include the I-84 corridor and the I-84 rest area east of the diversion dam and recreation site. Weed occurrences are typically patchy with 1 to 5 percent density and largely occur outside of the Project Boundary. Documented noxious weed species in the Project Area are listed below along with information concerning each species' impact classification according to the Utah Noxious Weed Act (Rule R68-9).

Common Name	**Scientific Name**	**Classification**
Spotted knapweed	***Centaurea maculosa***	**Class A**
Dalmatian toadflax	***Linaria dalmatica***	**Class B**
Musk thistle	***Carduus nutans***	**Class B**
Dyer's woad	***Isatis tinctoria***	**Class B**
Field bindweed	***Convolvulus arvensis; C.* species**	**Class C**
Canada thistle	***Cirsium arvense***	**Class C**
Houndstongue	***Cynoglossum officianale***	**Class C**
Saltcedar	***Tamarix ramosissima***	**Class C**
Lesser burdock	***Arctium minus***	**Morgan County listed noxious weed**

Noxious weed classes are defined in Rule R68-9 as follows:

- **Class A: (Early Detection Rapid Response [EDRR]) Declared noxious weeds not native to the state of Utah that pose a serious threat to the state and should be considered as a very high priority.**
- **Class B: (Control) Declared noxious weeds not native to the state of Utah that pose a threat to the state and should be considered a high priority for control.**
- **Class C: (Containment) Declared noxious weeds not native to the state of Utah that are widely spread but pose a threat to the agricultural industry and agricultural products with a focus on stopping expansion."**

The following citation should be inserted into the references list in alphabetical order:

SWCA. 2017b. Weber Hydroelectric Project Terrestrial, Threatened, Endangered, and Sensitive Species and Noxious Weeds Technical Report. SWCA Environmental Consultants. June 30, 2017.

The text in Table 9 should read as follows (new text in bold):

"Annual **and as-needed** weed control**—targeting broadleaf weed species such as field bindweed, thistle species, sweet clover, and dandelion—**around the Project recreation site, dam and flowline intake, and powerhouse/cottage area **consisting primarily of application of landowner-approved common herbicides according to manufacturer specifications, with some pulling or other manual removal and disposal of weeds, and installation of weed barriers in gravel area. Noxious weed monitoring occurs on an informal basis via ongoing operator observations of facilities.**"

FERC Comment 2 on Botanical and Terrestrial Resources

In staff's comments on the draft license application, we requested that you provide additional information on proposed environmental measures including the best management practices (BMPs) used to control the introduction and spread of weed species. Section 5.0 Conclusions and Recommendations, Botanical Resources of the final APEA states that BMPs are proposed to control weed species, but provides no further information as to what the BMPs entail. As described, this measure lacks the detail needed for staff to evaluate its adequacy to protect botanical and terrestrial resources. Therefore, please provide an outline that describes each proposed BMP including, if relevant, the timing of implementation (e.g. clean equipment off-site prior to proposed action), how each measure would control the potential introduction and spread of weed species, and measures to evaluate their effectiveness (e.g. post-construction monitoring).

Resolution, Correction, or Addition for FERC Comment 2 on Botanical and Terrestrial Resources

The final paragraph under the heading Botanical Resources in Section 5.1 in the Final APEA should read as follows (new text in bold):

"There are no proposed PM&E measures beyond BOT-1 and BOT-2 to address botanical resources because no additional measures are necessary based on the analysis. Annual consultation with the USFS under BOT-1 would result in reporting and actions to protect botanical resources that are specific to planned maintenance and other activities at the Project in any given year (such as a potential need for ground disturbance and subsequent revegetation related to penstock access for maintenance). Weed control activities under BOT-2 have historically consisted of pulling and disposal of weeds, application of landowner-approved herbicides according to manufacturer specifications, and installation of weed barriers to prevent weed establishment. These weed control activities are expected to continue into the future and be expanded in the area of the user-created trail to the riverbank just west of the Weber Recreation

Site. **In addition to the weed control activities identified above, BMPs to control the introduction and spread of weeds would include the following measures:**

- **Clean construction and other equipment prior to entering the site and prior to leaving the site following work activities,**
- **Using weed-free staging areas as practicable,**
- **As practicable conduct activities in weed-free areas before conducting activities in areas of weed infestation,**
- **Maintain stockpiled, un-infested material in a weed-free condition,**
- **Retain native vegetation in and around activity areas to the maximum extent possible,**
- **Minimize soil disturbance as practicable, and**
- **Revegetate disturbed soil to optimize desirable plant establishment and reduce the potential for weed establishment (although most of the area affected by proposed construction would not be re-vegetated and would instead be covered by the proposed fish ladder and would therefore not be available for colonization by weed species).**

These measures would control the introduction and spread of weed species by limiting contact with areas of known weed infestation, removing weed seed that may be on construction and other equipment before it enters and leaves the site, and minimizing areas of surface disturbance that weeds tend to preferentially colonize. The effectiveness of these measures would be measured through ongoing informal monitoring."

FERC Comment 1 on Recreation

Section 3.3.7.2 Recreation Use and Demand of the final APEA presents recreational use data from in-person surveys and trail camera photographs, and describes current estimated recreational use by several user groups; however, it does not address the estimated future use of project recreational facilities and future whitewater boating use within the bypass reach. Considering that implementation of PM&E measures REC-1 through REC-9 would improve recreational amenities and encourage recreational use associated with the project, please provide information to describe estimated future use of project recreational facilities and future whitewater boating use in the bypass reach.

Resolution, Correction, or Addition for FERC Comment 1 on Recreation

Section 3.3.7.2 in the Final APEA should include the following paragraph at the end of the section (new text in bold):

"Implementation of PM&E measures REC-1 through REC-9, HYD-1, and FISH-1 through FISH-4 would improve recreational amenities and as a result could encourage recreational use associated with the Project. To the extent that improved recreational amenities encourage recreational use of the area, this is expected to be primarily amongst

the group of recreationists already familiar with and using the site for all applicable recreation activities—walking, fishing, whitewater boating, etc. In other words, improved recreational amenities would encourage existing users of the area to continue to do so. However, future, increased recreational use of the area beyond the group of existing users is estimated to be roughly proportional with future population growth (i.e., at a similar rate of growth of the surrounding areas and population centers). The implementation of PM&E measures that improve recreational amenities at the Project is not expected to result in an increase in use of the area greater than that which would be proportional to population growth because the Project is surrounded by areas rich with a variety of recreational opportunities, including the same types of opportunities provided at the Project. For recreation use of the area to increase at a greater rate than population growth, recreationists would need to preferentially choose to use the Project's recreation amenities over those provided on surrounding lands. Given the large abundance and high quality of recreation amenities on surrounding lands (largely USFS lands) it is unlikely that recreationists would preferentially choose to use the Project's recreation amenities over recreation amenities on surrounding lands. Whitewater boating use already occurs in the Project Area, but only as flows are available. Whitewater boating use also occurs seasonally at the nearby (less than 10 miles) Ogden City whitewater play park. In very dry years, the proposed whitewater flows (per PM&E measure REC-9) would increase opportunities for boaters in the area by up to four 4-hour occasions. However, this is unlikely to generate new whitewater users given that the Project can only contribute up to 320 cfs by curtailing generation. The whitewater study (ERM-West, Inc. 2016 contained as an appendix to Cirrus 2017) indicates that users prefer a minimum flow of 450 cfs. As a result, REC-9 would mostly augment flows, not necessarily create new opportunities, although the predictable schedule may be beneficial."

FERC Comment 2 on Recreation

Section 3.3.7.2 Recreation Use and Demand of the final APEA, and Table 37, state that a total of 1,012 individual recreational users, from six use types, were counted with the trail camera. You then describe and provide user numbers for each recreational use type that was identified in the trail camera data, the sum of which equals 1,001 recreational users. Please clarify this apparent discrepancy.

Resolution, Correction, or Addition for FERC Comment 2 on Recreation

The correct total number of individual recreational users counted with the trail camera is 1,001. The following sentence in Section 3.3.7.2 in the Final APEA in the paragraph following Table 36 is corrected to read as follows (new text in bold):

"Of the **1,001** total users counted with the trail camera from March to September 2016, 617 (61 percent) were fishing."

FERC Comment 3 on Recreation

Section 3.3.7.2 Recreation Use and Demand of the final APEA describes 2015 and 2016 internet survey results for whitewater boating use in the bypass reach; however, you fail to describe the internet survey. Please provide a description of the survey, survey methods, and a citation.

Resolution, Correction, or Addition for FERC Comment 3 on Recreation

The second and third paragraphs under Table 37 in Section 3.3.7.2 in the Final APEA should read as follows (new text in bold, summarized from the Whitewater Recreation Study Technical Report [ERM-West Inc. 2016] contained as an appendix to the Weber Hydroelectric Project Recreation Technical Report [Cirrus 2017]):

"A whitewater boating-specific study **(ERM-West Inc. 2016, contained as an appendix to Cirrus 2017)** was conducted to better ascertain whitewater boating use and demand related to the bypassed reach of the Weber River. **Internet surveys, starting March 24, 2016 and remaining active for 102 days, were a key component of this study. Participation in the internet survey was solicited electronically by advertising on PacifiCorp's Project website and by forwarding the survey link to members of the boating community along the Wasatch Front, including individuals representing American Whitewater in the relicensing process. The internet survey (see ERM-West Inc. 2016, contained as an appendix to Cirrus 2017) was posted using Survey Monkey and consisted of 30 questions ranging from basic demographic information (e.g., age and gender) to specific questions concerning how many days the survey participant spends whitewater boating per year, what type of watercraft is typically used, skill level, and the types of flows preferred. Nine of the 30 questions dealt specifically with access to the Weber River. The whitewater boating-specific** study indicates that the current minimum acceptable flow for whitewater boating use of the bypassed reach is 450 cfs. Some use occurs at lower flows, mostly confined to the Horseshoe Bend rapid. Historically (when access was allowed from I-84) the minimum acceptable flow was as low as 140 cfs. At that time boaters would only paddle the Horseshoe Bend rapid and avoid paddling further downstream because 140 cfs was too low for Ledges 1, 2, and 3 at Triple Drop. Horseshoe Bend at 140 cfs offered a technical slalom boating opportunity. The current access restrictions require a higher minimum acceptable flow because more water is needed to navigate Triple Drop (450 cfs minimum acceptable flow) and the 1.2-mile Hell-or-Highwater section downstream (300 cfs minimum acceptable flow) to egress this reach of the river now. While the current minimum acceptable flow for the bypassed reach is generally 450 cfs, it is higher for boaters travelling longer distances (e.g., from outside the local Ogden area) to this reach of the Weber River. The optimal flow range, according to the whitewater boating study results, is 600 to 1,000 cfs (900 cfs is the most acceptable within this range).

Whitewater boating use in the bypassed reach typically occurs during the spring months, corresponding with the melting of lower-elevation snowpack and therefore higher flows in the river. **Results from the internet survey referred to above (ERM-West, Inc. 2016, contained as an appendix to Cirrus 2017)** indicate that in 2015 boaters made 22 visits to the bypassed reach. Most of these visits occurred in May and June though some occurred as late as September.

Internet survey results **further** indicated that in 2016 11 trips were made mostly in April (1 late June trip was reported)."

The following citation should be inserted into the references list in alphabetical order:

ERM-West, Inc. 2016. Whitewater Recreation Study Technical Report. Prepared for: PacifiCorp, Salt Lake City, Utah. Prepared by: ERM-West, Inc. Bigfork, Montana. August 2016.

ATTACHMENT 1

FWS CONCURRENCE LETTER

PACIFICORP
A BERKSHIRE HATHAWAY ENERGY COMPANY

Pacific Power |
Rocky Mountain Power
825 NE Multnomah
Portland, OR 97232

August 23, 2017

Larry Crist, Utah Field Supervisor
Ecological Services
U.S. Fish and Wildlife Service
2369 West Orton Circle, Ste. 50
West Valley City, Utah 84119

Subject: Weber Hydroelectric Project Federal Energy Regulatory Commission Relicensing Process Endangered Species Act Consultation

Dear Mr. Crist:

This correspondence is to request concurrence from the U.S. Fish and Wildlife Service (FWS) that formal consultation and preparation of a Biological Assessment (BA) under the Endangered Species Act (ESA) is not necessary at this time for the relicensing of the Weber Hydroelectric Project by the Federal Energy Regulatory Commission (FERC). Formal consultation and preparation of a BA is not needed because no ESA listed or candidate species, or their critical habitats, would be affected (adversely or otherwise) by the Weber Hydroelectric Project.

On May 29, 2015, PacifiCorp filed with FERC a Pre-Application Document (PAD) and Notice of Intent (NOI) to seek a new license for the Weber Hydroelectric Project (FERC Project No. 1744). In its NOI PacifiCorp also submitted a request to FERC to use the Alternative Licensing Process (ALP). FERC approved the use of the ALP on August 13, 2015. The regulations at 18 CFR §4.34 (i) and FERC Order No. 596 allow license applicants, subject to FERC approval, to use FERC's ALP where circumstances are appropriate. The ALP process is designed to "improve communication among affected entities and to be flexible and tailored to the facts and circumstances of the particular proceeding" (FERC Order No. 596). The ALP process allows applicants to combine pre-filing consultation and environmental review processes under the National Environmental Policy Act (NEPA) into a single process as well as allowing for the preparation of an Applicant Prepared Environmental Assessment (APEA). FWS has been engaged in the ALP for the Weber Hydroelectric Project since the relicensing process began in spring 2015. Section 7 of the ESA requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species.

Based on desktop analysis and field surveys conducted by PacifiCorp and SWCA Environmental Consultants in 2015, 2016, and 2017, no federally listed endangered or threatened species are known to occur in the vicinity of the Weber Hydroelectric Project. Further, in the APEA the analysis of environmental consequences of relicensing the Weber Hydroelectric Project with proposed environmental Protection, Mitigation, and Enhancement (PM&E) measures indicates that no ESA listed or candidate species, or their critical habitats, would be affected by the Weber Hydroelectric Project. Additional details concerning desktop analyses and field surveys are provided in the following documents:

- Final Technical Reports, Weber Hydroelectric Project Relicensing, FERC Project No. 1744, June 30, 2017 (available at: http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Weber/2017-Weber-ALP-Final-Tech-Rpts.pdf).
- Memo reporting results of 2017 Ute ladies'-tresses surveys (attached).
- Weber Hydroelectric Project Applicant Prepared Environmental Assessment for Hydropower Relicense (distribution of administrative draft APEA to stakeholder group for initial review anticipated approximately September 1, 2017).

Thank you in advance for your time and attention to this matter. If you would like to discuss this request or any of the information contained or referred to herein please contact me via email or telephone.

Sincerely,

Eve Davies

Eve Davies, Principal Scientist
PacifiCorp Renewable Resources
Suite 120A
1407 W. North Temple
Salt Lake City, UT 84116

Cc:
Jamie Gough, U.S.D.A Forest Service
Evan Williams, Federal Energy Regulatory Commission
George Weekly, U.S Fish and Wildlife Service

☒ Concur No Effect
Species: Ute Ladies-tresses
☐ Concur Not Likely to Adversely Affect
Species:
☐ No Comment

U.S. FWS Utah Field Supervisor

Date 7/9/18

PACIFICORP

MEMORANDUM

TO:

FROM:

DATE:

RE: 2017 Ute ladies'-tresses Survey Results for the Weber Hydroelectric Project

PacifiCorp's Weber Hydroelectric Project Area was first evaluated in 2015 for the presence of any potential Ute ladies'-tresses habitat. Small patches of suitable habitat for Ute ladies'-tresses were documented in the Project Area along the northern bank of the Weber River west of the Weber Diversion Dam. Surveys to identify the presence of Ute ladies'-tresses within potential habitat were conducted by qualified personnel in compliance with U.S. Fish and Wildlife Service (USFWS) protocols in 2015, 2016, and 2017. In 2017, researchers from SWCA Environmental Consultants (SWCA) conducted the Ute ladies'-tresses surveys during the flowering period (as verified by the Utah USFWS species lead, Rita Reisor) and focused on suitable habitat along the northern bank of the Weber River west of the Weber Diversion Dam. On August 3, 2017, SWCA botanist Travis Taylor surveyed the area of suitable habitat along the northern bank of the Weber River west of the Weber Diversion Dam by walking or otherwise closely scrutinizing areas looking for flowering stalks. Some of the previously documented suitable habitat contained standing water during the 2017 survey. No Ute ladies'-tresses individuals were observed during the survey.

West view of Ute ladies'-tresses suitable habitat flooded with high channel conveying flow along the toe of the north bank.

Northeast view of high channel draining through Ute ladies'-tresses suitable habitat from east end of habitat line and Riparian community on steep north slope.

WEBER HYDROELECTRIC PROJECT
(FERC PROJECT NO. 1744)

FINAL APPLICATION FOR NEW LICENSE
FOR MAJOR CONSTRUCTED PROJECT LESS THAN 5MW

EXHIBIT A (REVISED)

PROJECT DESCRIPTION

AND

APPENDIX A: DETAILED PROJECT LOCATION MAPS

SEPTEMBER 2018

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FOR MAJOR CONSTRUCTED PROJECT LESS THAN 5 MW

WEBER HYDROELECTRIC PROJECT
(FERC NO. 1744)

PACIFICORP

EXHIBIT A
PROJECT DESCRIPTION § 4.61 (C)

1.0 PROJECT LOCATION

PacifiCorp, a subsidiary of Berkshire Hathaway Energy, is the Licensee for the Weber Hydroelectric Project (FERC No. 1744) (Project). The Project is located in the northern portion of the State of Utah in a small area of Weber, Morgan, and Davis counties, approximately nine miles from the City of Ogden on the Weber River. The Project is partially located on lands managed by the Uinta-Wasatch-Cache National Forest, and partially on lands owned by the Union Pacific Railroad Company. There are no Tribal reservations in the Federal Energy Regulatory Commission (FERC) Project Boundary. The U.S. Department of Agriculture Forest Service (USFS) manages approximately 15 acres within the proposed Project Boundary.

The exact names, addresses, telephone numbers, and email addresses of the Licensee's representatives are:

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For the purposes of this document, the Project Boundary is defined as all lands and waters within the FERC Project Boundary (whether existing or proposed) for the Weber Hydroelectric Project No. 1744, as denoted by 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. Where

appropriate, the Area of Potential Effect (APE) is defined by resource as the lands and waters within a given vicinity, often an additional one-mile buffer, around the Project Area.

The location of the Project is shown in Figure 1. Detailed maps showing lands and waters both within the Project Boundary and the Project Area, land ownership, and Project facilities are provided in Appendix A.

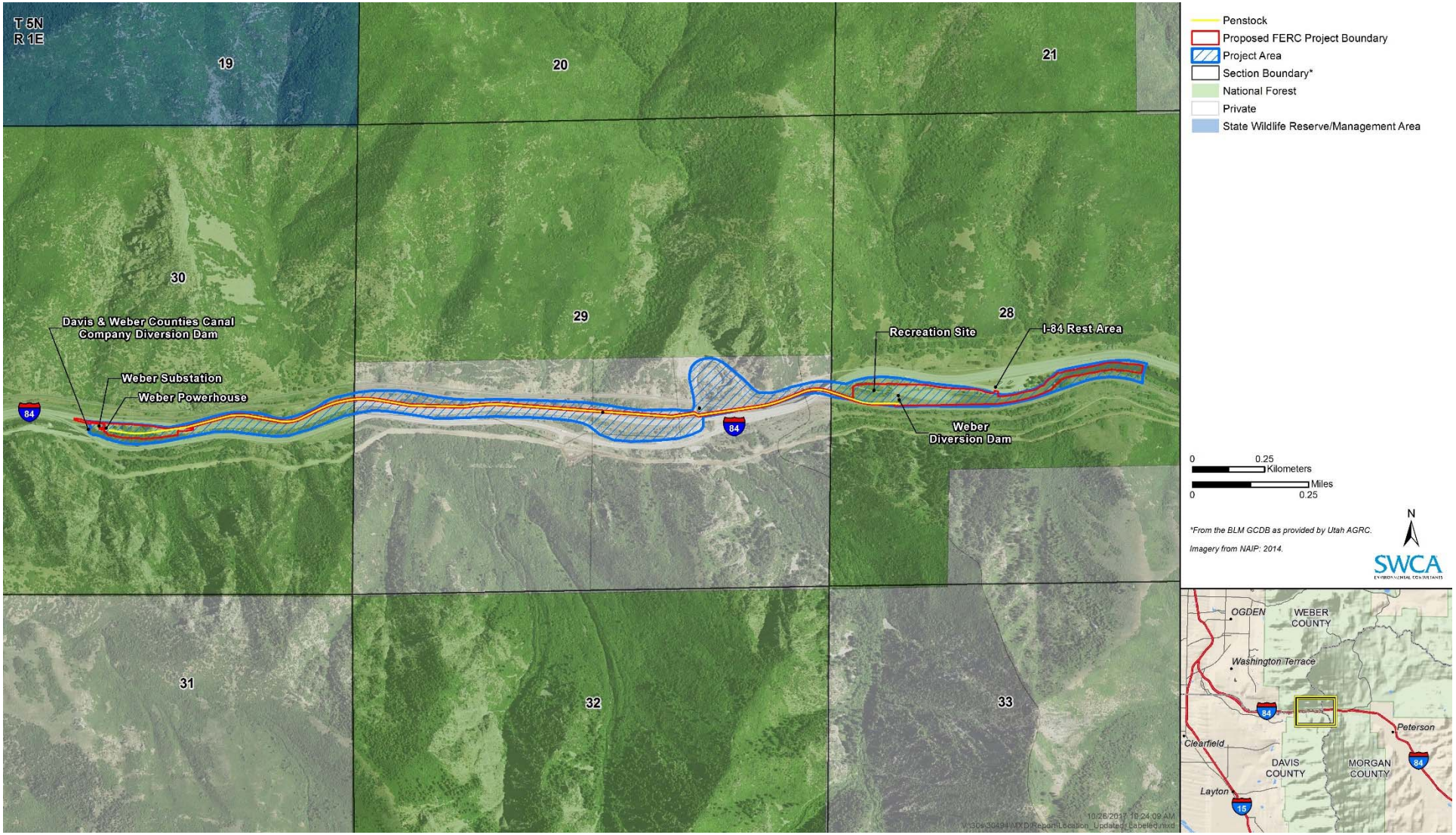


Figure 1. Project Location Map

2.0 DESCRIPTION OF PROJECT § 4.61 (C)(1)

The Project was initially constructed in 1910 by Utah Light and Railway Company, which was acquired by a predecessor company and became part of Rocky Mountain Power and PacifiCorp (then Utah Power and Light) in 1915. The Project has a generating capacity of 3.85 megawatts (MW). The original license was made effective January 1, 1938 and expired June 30, 1970. Subsequently a FERC operating license was issued annually for a period from June 30, 1970 to June 28, 1990, due to a dispute with a nearby municipality that wanted to acquire the Weber Project. After a follow-up relicensing process with FERC, the current license was issued on June 28, 1990. It expires on May 31, 2020.

2.1 PROJECT FEATURES

The existing Project consists of a concrete diversion dam, two radial gates, a low-level outlet gate, an intake structure, a steel pipeline (encased in concrete for the first approximately 125 feet of its length), a powerhouse with one generating unit, a discharge pipe, a transmission line, and a fish passage structure (historic and non-operational), hereafter referred to as the 'ice chute.'

2.1.1 Turbine Type § 4.61 (c)(1)(i-ii)

The Project is operated through a single Horizontal Francis turbine with 5,000 horse-power.

2.1.2 Description of Project Operation § 4.61 (c)(1)(iii)

The Project is a run-of-river operation and is not used for daily peaking of generation. The current operating license was issued by FERC in 1990 with a 30-year license term, expiring May 31, 2020. The license does not specify any daily/seasonal ramping rates, flushing flows, reservoir operations, or flood control operations. Prior to 1993, the Project was manually operated locally. Following the installation of an automated control system in 1993, the Weber Project is now designed to be capable of unmanned semi-automatic operation and is controlled by a programmable logic controller. Two local operators are located nearby in Ogden, Utah, and visit the Project daily and as dispatched by PacifiCorp's Hydro Control Center located in Ariel, Washington. However, the plant may at times be unattended. The Hydro Control Center monitors the Project operations remotely and notifies the local operators when an issue arises. In addition to standard local generator protection equipment and alarms, the penstock pressure, generator load, forebay level, and circuit breaker status at the Weber Project are monitored by a hydro control operator at the Hydro Control Center. The Weber flowline can divert up to approximately 365 cubic feet per second (cfs) at the Project dam; the bypass reach is approximately 1.7 miles long.

Downstream of the Weber diversion dam, the current license mandates a continuous minimum stream flow of 34 cfs or inflow, whichever is less, from October 1 - March 31 annually; and, a continuous minimum flow of 34-50 cfs (range dependent on the annual runoff forecast), or inflow, whichever is less, from April 1 - September 30 annually.

Annual maintenance is routinely conducted each year and involves vegetation management (including landscaping areas) on Project lands, recreation area maintenance and

management (including seasonal portable restroom facilities), limited road maintenance activities, as-needed maintenance on the water conveyance system and generating unit, and non-routine forebay dredging. The timing and scope of annual maintenance activities are coordinated with the Wasatch-Cache National Forest during required annual consultation and as the need arises, as provided in the 1990 Weber license articles and in the Special-Use Permit issued for the Project by the USFS.

2.1.2.1 LOW FLOW OPERATIONS

The Weber Project functions in run-of-river mode under all operational conditions, but particularly during low flow operations when the forebay is emptied and the river channel carries water directly to and through the low-level outlet in the Weber dam (and spillway gates, as required). If the forebay falls four inches below the top of the spillway gate, turbine flows are reduced via automated pond level control. Flows are continually reduced until the unit shuts down, at which point all flow is passed through the minimum flow gate/ice chute (and spillway gates, as required). During winter months, the pond level controls are set to maintain a low water set point up to 12 inches below the normal pond level. For operation of the proposed future fish ladder, at times when the forebay elevation is lower than the inverted opening of the proposed fish ladder intake (or conditions exist that prevent the required 20 cfs flow into the proposed fish ladder), PacifiCorp has committed to keep the low-level gate operational, subject to operational constraints and requirements such as extreme winter icing conditions (PacifiCorp will undertake periodic maintenance as required to ensure operation). If the low-level gate is inoperable for 10 days or more due to extreme temperature or flow conditions, PacifiCorp will consult the specified members of the Fisheries Working Group (FWG) as required by the October 11, 2017 Memorandum of Agreement (MOA) regarding Proposed Protection, Mitigation and Enhancement (PM&E) measures and open the low-level gate as soon as possible (also see Appendix A of Exhibit E of this Final License Application).

2.1.2.2 PROPOSED PROJECT OPERATIONS

The Project will continue to operate as a run-of-the-river facility with new PM&E measures for potential recreation (boating) flows and a new proposed fish ladder slightly modifying the manner, but not the timing, of flow releases into the bypass reach. PacifiCorp proposes to continue the existing minimum flow regime (34-50 cfs, depending on season and annual runoff forecast), although the minimum flow will be released through both the proposed fish ladder (20 cfs) as well as the existing ice chute structure that would underlie the new fish ladder and release the remainder of the minimum flow (14-30 cfs).

The proposed fishway at the Project is a vertical slot fish ladder, with a design flow of 20 cfs. Any remaining minimum flows will be passed via the existing minimum flow gate/ice chute. The 20 cfs through the fishway would remain constant with the existing minimum flow gate being used to provide the flow adjustment required to accommodate the varying minimum flow requirement (34-50 cfs). To ensure that supplemental attraction flows through the ice chute provide the necessary attraction flow for fish passage, when needed, the south radial gate would be opened rather than the north radial gate (currently the north radial gate is opened; this change would require a new motor and controls on the south radial gate). In addition, in the event of a prolonged Project outage, PacifiCorp would keep the forebay full, if possible, to ensure continued fish ladder operation and consult with the specified members of the FWG as noted in the October 11, 2017 MOA regarding the Proposed PM&E measures.

The proposed recreation-related PM&E measure deals with supporting whitewater boating use of the bypass reach. If a safe and legal egress site is identified by the boating community, and agreed to by the USFS and PacifiCorp, PacifiCorp would provide boater flows to the bypass reach by curtailing generation (up to 320 cfs or inflow) for 4-hour segments on four Saturdays prior to July 15 annually. If undertaken, the exact schedule of this provision of boater flows would be determined in conjunction with American Whitewater and coordinated with the USFS and Davis and Weber Counties Canal Company (DWCCC). Boater flows in the future may be subject to minimum boater use.

In all other respects, the Project operations described in this section would remain the same under the proposed action.

2.1.2.3 ANNUAL GENERATION § 4.61 (C)(1)(IV)

The Project has an existing installed generating capacity of 3.85 MW. The average annual generation is 16,926 megawatt-hours (MWh). The average monthly generation is 1,411 MWh. PacifiCorp began collecting electronic records of Project generation and water outflow in 1966. Therefore, approximately 50 years of data (1966-2016) were used to calculate the values in Table 1, below. The table provides the average monthly generation rate (MWh) and turbine discharge (cfs) based on hourly data. The daily average generation and turbine discharge is highest in June (65.4 MWh/day, 1,961 MWh/30 days, 303 cfs) and lowest in November (20.4 MWh/day, 613 MWh/30 days, 95 cfs). Winter flows and associated generation are affected by the seasonal diversion of water away from the lower Weber River resulting from the 1938 and 1965 Bureau of Reclamation contracts that can provide storage water to Deer Creek (and subsequently Jordanelle) and Echo Reservoirs during winter months. These contracts result in an average annual power generation increase of 5,246 additional MWh from the generation at the Bureau of Reclamation's Deer Creek Hydroelectric Facility during the time that water is diverted away from the Weber Hydroelectric Project, for a total average annual generation of 22,307 MWh credited to the Weber Project. Table 2 shows generation data for the Weber Project during the most recent 10-year period.

Table 1. 1966 – 2016 Average Monthly Generation Rate and Turbine Discharge[1]

Month	Generation (MWh)	Discharge (cfs)
January	838	125
February	883	145
March	1,430	214
April	1,742	269
May	1,981	296
June	1,961	303
July	1,982	296
August	1,954	292
September	1,754	271
October	1,095	164
November	613	95
December	692	103

[1]These averages include the approximate three-year period (1983 – 1985) that the Weber plant was offline due to a fire; the average annual generation with those years excluded is 750 MWh higher than shown above.

Table 2. Historical Monthly Generation Totals at the Weber Hydroelectric Project 2007-2016 (MWh)

Month	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	AVERAGE
January	559	157	212	35	903	1,042	(15)[1]	(14)	(14)	-	287
February	628	301	307	85	1,846	391	(11)	(12)	(12)	71	359
March	1,743	1,210	1,489	508	2,200	1,657	285	(11)	(11)	1,221	1,029
April	2,069	1,875	2,051	1,661	2,193	2,024	744	(10)	334	1,956	1,490
May	2,069	2,240	1,322	2,210	2,277	2,057	1,864	(9)	1,814	2,254	1,810
June	2,196	2,254	2,157	2,263	2,230	2,123	1,748	(6)	1,635	2,090	1,869
July	2,122	2,318	2,307	2,276	2,283	2,152	1,688	1,237	2,021	2,115	2,052
August	2,133	2,252	2,329	2,254	2,253	1,702	1,431	2,011	1,930	1,934	2,023
September	1,800	2,212	2,129	2,037	2,188	1,351	1,152	1,768	1,822	1,440	1,790
October	999	1,294	700	1,069	2,176	601	46	100	422	501	791
November	97	179	111	160	1,246	13	(11)	(11)	(7)	44	182
December	68	178	40	758	2,071	(13)	(13)	(12)	(8)	-	307
Total Annual	16,483	16,470	15,154	15,316	23,866	15,100	8,908	5,031	9,926	13,626	13,989

[1] *Negative values shown in parentheses*

2.1.3 Average Head § 4.61 (c)(1)(v)

The estimated average head on the plant is 185 feet. There is no storage reservoir as the Project is operated as a run-of-river Project. The forebay area within the Project Boundary is 8.86 acres with a water surface area of 8.4 acres. The storage volume of the reservoir is 42 acre-feet.

2.1.4 Reservoir Surface Area and Storage Capacity § 4.61 (c)(1)(vi)

The normal maximum water surface area and normal maximum water surface elevation (North American Vertical Datum of 1988 [NAVD88]), and gross storage capacity of the Project impoundment (forebay) are:

Area	8.4 acres, maximum
Elevation	4,797.88 feet (top of spillway gates)
Storage	Approximately 42 acre-feet

2.1.5 Hydraulic Capacity § 4.61 (c)(1)(vii)

Minimum Hydraulic Capacity: The turbine can be operated to 9.0 kilowatts (kW)/1 cfs with either standard (automated mode) or manual operation.

Maximum Hydraulic Capacity: The Weber flowline can divert up to approximately 320 cfs (up to 365 cfs instantaneously) at the Project dam.[1]

Estimated Dependable Capacity: 1,160 kW using the most recent 30-year period of record. For the purpose of this document, dependable capacity is based on the annual energy production during the driest year, 2002, of the 30-year period of record. The dependable capacity was based on the 2002 annual energy production divided by the number of hours per year.

[1] 1938 and 1965 agreements and existing water rights: 35-8061—365 cfs flow right, 35-8062—100 af storage, 35-8741— af storage in Echo.

Drainage Area: The Weber River Basin drains an area of 2,476 square miles in Summit, Morgan, Weber, and Davis Counties, Utah, and part of Uinta County, Wyoming. The primary drainage of the basin, the Weber River, begins its journey near Reids Peak (11,708 feet) in the Uinta Mountains, flows west to Oakley, Utah, and then flows in a northwesterly direction to its terminus at Great Salt Lake. The Weber River is approximately 125 miles long, and within its drainage there are approximately 968 miles of perennial streams and 1,254 miles of intermittent streams (Utah Water Atlas 2015). Flows in the Weber River Basin are regulated by seven major reservoirs. Echo and Rockport Reservoirs are located on the mainstem of the Weber River, whereas Pineview, Causey, East Canyon, Lost Creek, and Smith & Morehouse Reservoirs are located on tributaries.

Flow duration curves can be found below in Figures 2, 3, and 4.

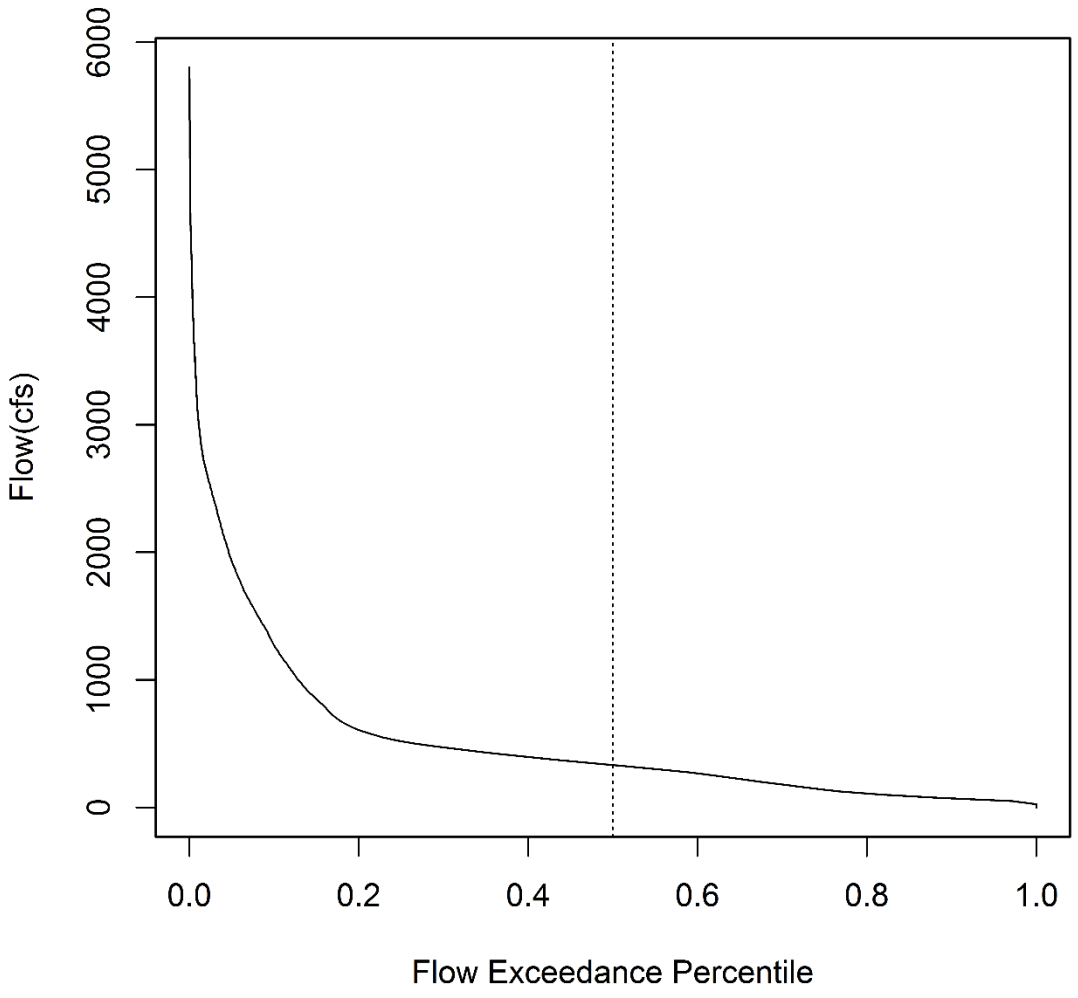


Figure 2. Daily Flow Duration Curve - Weber River at Gateway (Inflow Gage). Data from 1966 - 2016.

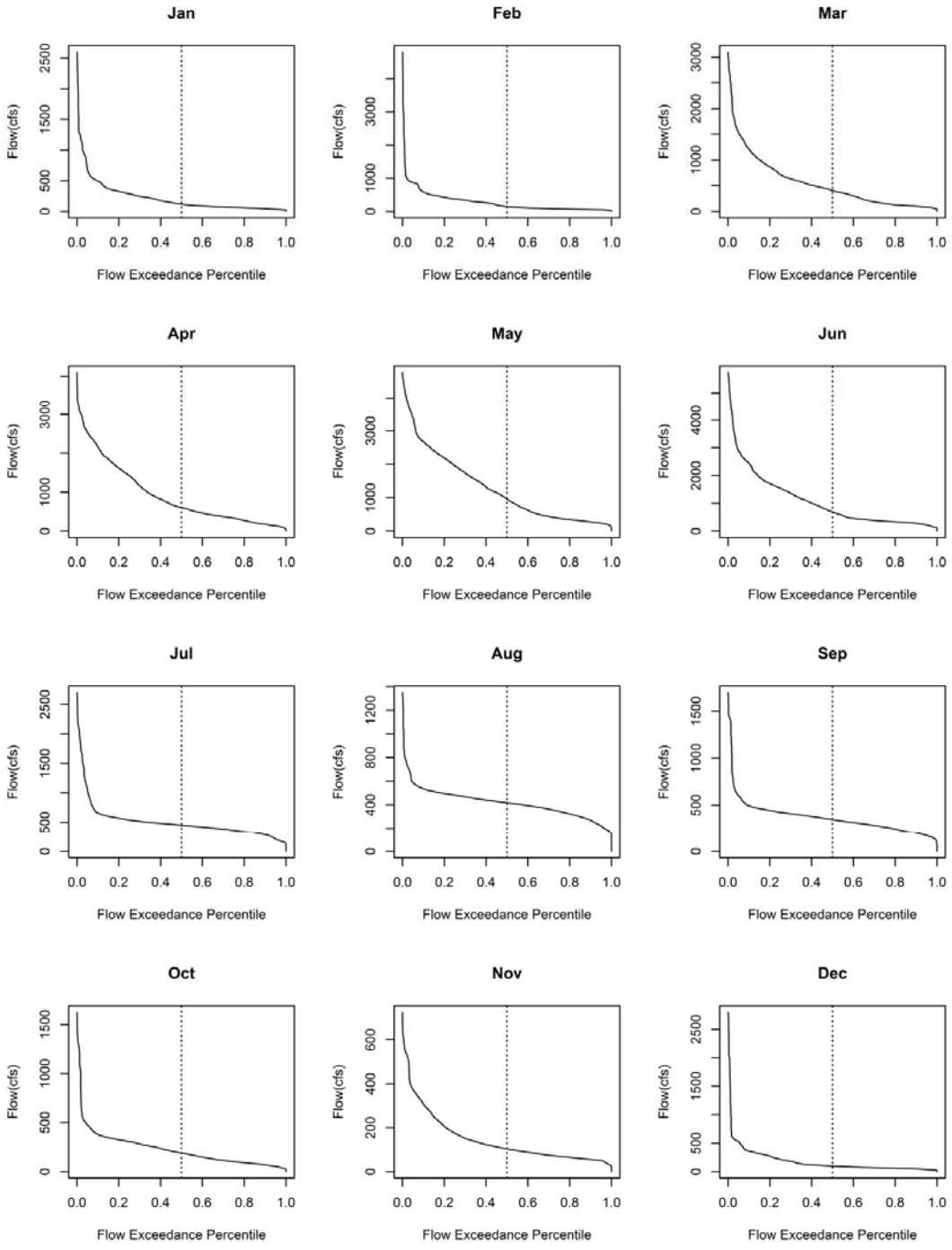


Figure 3. Monthly Flow Duration Curves - Weber River at Gateway (inflow gage). Note that the maximum flow on each axis is the maximum observed daily average flow for that month. Data from January 1, 1966 through December 31, 2016.

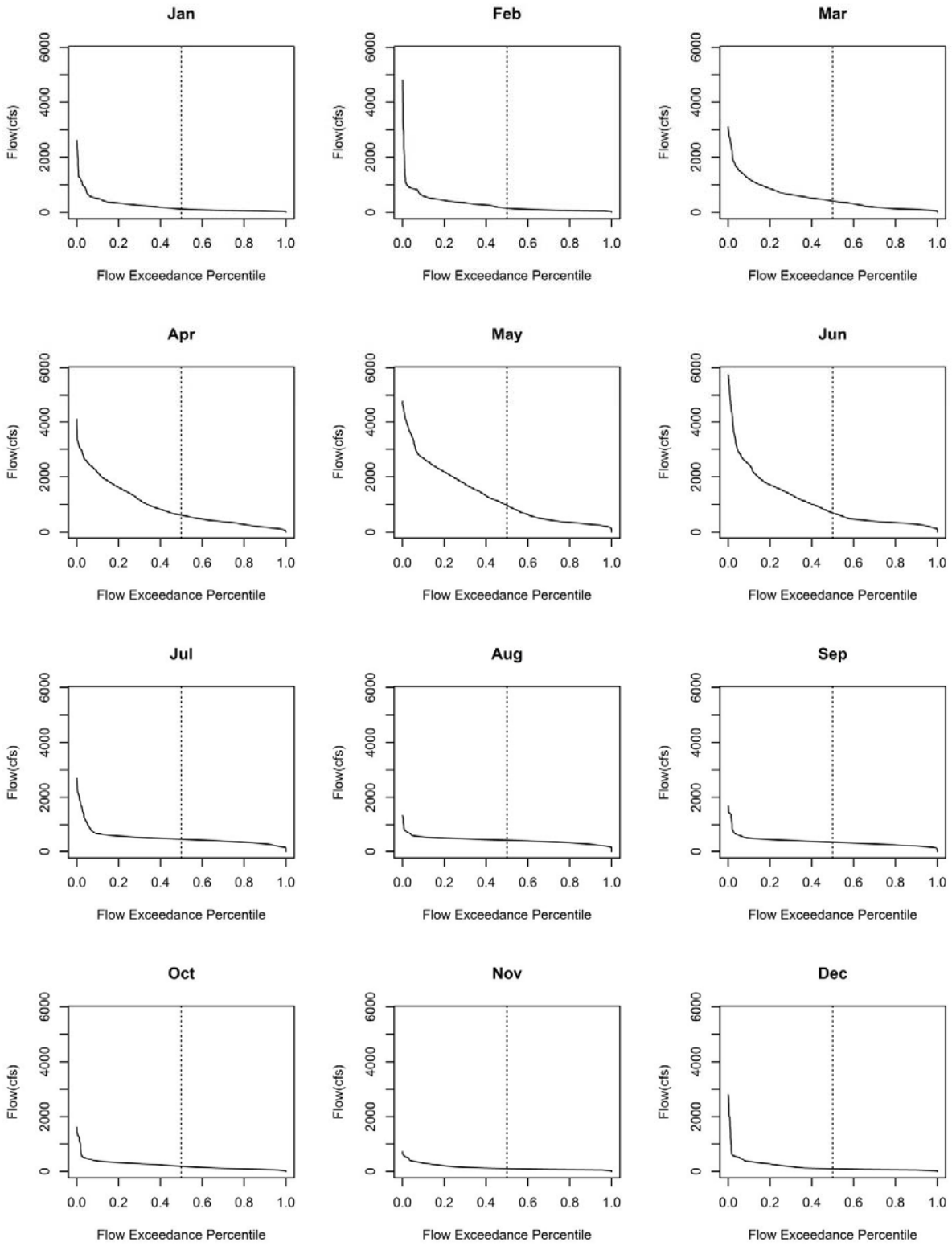


Figure 4. Alternative Monthly Flow Duration with Identical Axis for all Months

2.1.6 Size, Capacity & Construction Materials of Structures § 4.61 (c)(1)(viii)

Table 3 details size and construction material information of Weber Project structures.

Table 3. Size, Capacity & Construction Materials of Structures

Equipment/Structure	Dimensions	Capacity	Construction Materials
Diversion Dam	27 ft. high by 79 ft. wide by 114 feet long; top of spillway gate elevation of 4,797.88 ft. (NAVD88)	42 acre-feet	Concrete
Radial Gates (2)	29 ft. wide	N/A	Steel-original
Intake Structure	20 ft. wide by 27 ft. long	N/A	Concrete and wood building
Trash Racks	18.6 ft. wide by 14.6 ft. high with 2-inch clear spacing	N/A	Steel
Pipeline	9,110 ft. long by 5.5 ft. to 6.3 ft. diameter	N/A	Steel and steel encased in concrete
Fish Passage Structure (non-operational)	3 ft. wide by 18 ft. long	N/A	Concrete
Generator	Rated at 1.0 power factor, 360 rpm, three-phase, 60 cycles, and 2,300 volts, under 185-ft head.	3,850 kW	Steel
Powerhouse	73.5 ft. long by 56.4 ft. wide	3.85 MW	Brick and concrete
Tailrace	Chamber under powerhouse; 22 ft. wide (east-west axis) by 30 ft. deep (north-south axis) by 29 ft. high.	N/A	Reinforced concrete
Turbine	N/A	3,850 kW generating unit (5,000 HP) operating under a head of 185 ft.	Steel
Discharge Pipeline (Draft tube)	N/A	N/A	Steel
Transmission Line	77 ft. long	46 kilovolts (kV)	Steel tower and wire

2.1.7 Project Photos

2.1.7.1 DIVERSION DAM

The diversion dam is constructed of concrete and is 27 feet high and 114 feet long (Photos 1 and 2).

Photo 1. Diversion Dam

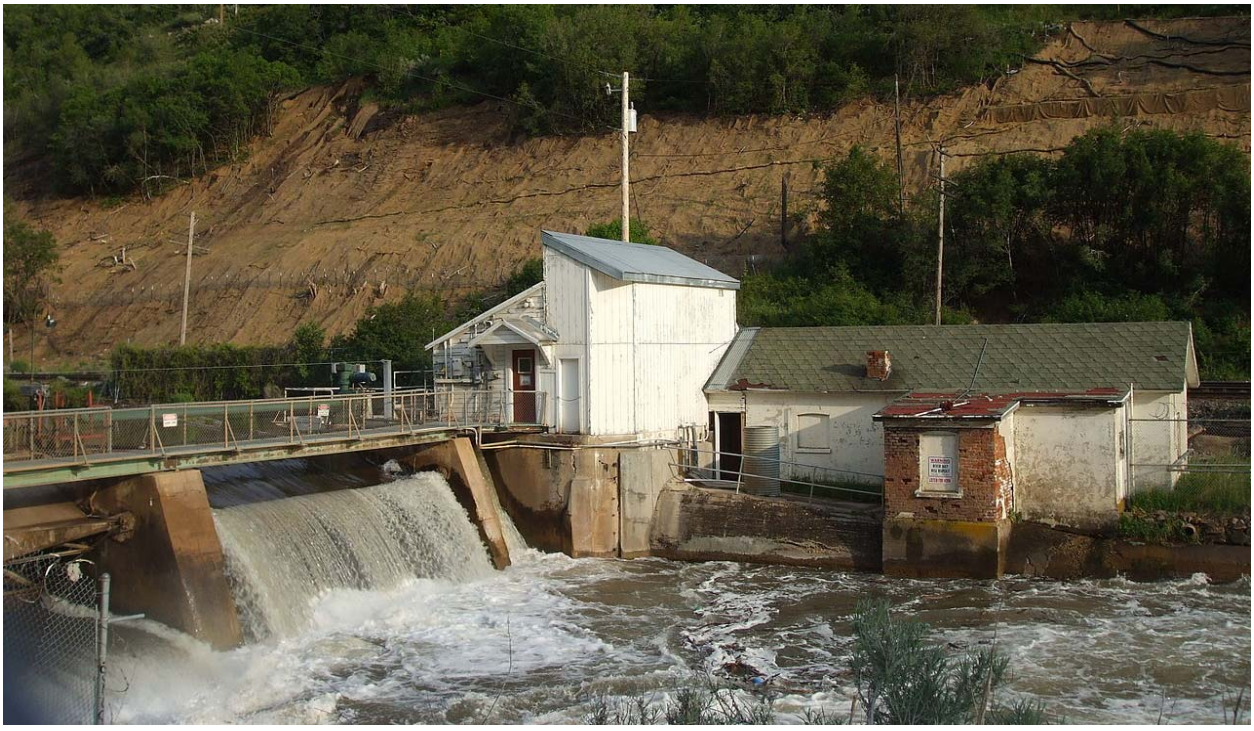


Photo 2. Diversion Dam and Intake Street Level View

The intake structure, located in the white building shown in Photo 2, measures approximately 27 feet long and 20 feet wide. Trash racks are located slightly upstream of the intake to ensure debris does not enter the pipeline. Water is diverted from the Weber River into the intake structure and continues down the pipeline. The approximately 1.7-mile-long pipeline (approximately 9,110 feet long) is located partially on land owned by the Union Pacific Railroad, and partially on land managed by the USFS. The pipeline is constructed of concrete and steel (Photo 3). The width ranges from 5.5 to 6.3 feet. The intake structure is located on the dam between the low-level gate and the south buttress wall, housed in a small wood frame intake house. A one-story wood-frame watchman's house (currently unused and proposed for removal as part of the potential intake modernization project listed in Table 4) is located just downstream from the intake house, and is joined to the intake house. The intake diverts flow into a 74-inch-diameter reinforced concrete pipe for the first 125 feet, transitioning to a welded steel pipe. This replaced 2,000 feet of concrete pipe and 7,075 feet of wood stave pipe in 1949. The pipeline is buried along most of its length. It crosses the river on a 99-foot-span riveted steel Howe truss bridge made by the American Bridge Company downstream from the dam.

Photo 3. Pipeline

2.1.7.2 POWERHOUSE

The powerhouse, associated cottages, and diversion dam occupy land managed by the USFS. The 46-kV transmission line is approximately 77 feet long. The dam is located approximately 1.7 miles upstream from the powerhouse. The powerhouse discharges into the Weber River, as shown in Photo 4. The powerhouse (Photo 4 and Photo 5) is approximately 73.5 feet long by 56.4 feet wide, and 29 feet in height to the top of the concrete parapet wall (does not include the height of the stepped roof detail). The powerhouse is a rectangular brick building with a gabled concrete roof supported by riveted steel Fink trusses. The end walls are five bays wide with stepped parapets at the gables. Original window openings have been bricked in. Side elevations are three bays wide, also with infilled window openings. The structure sits on a concrete foundation. Because of its location above the river and next to Interstate 84, it is more visible than the diversion dam and other developed components of the Project Area.

The powerhouse contains a generating unit with a rated capacity of 3,850 kW operating under a head of 185 feet producing a 50-year average annual energy output of 16,926 MWh. The generating unit was manufactured in 1909-1910.

Photo 4. Aerial View of Powerhouse and Substation (Substation is not part of the Project)

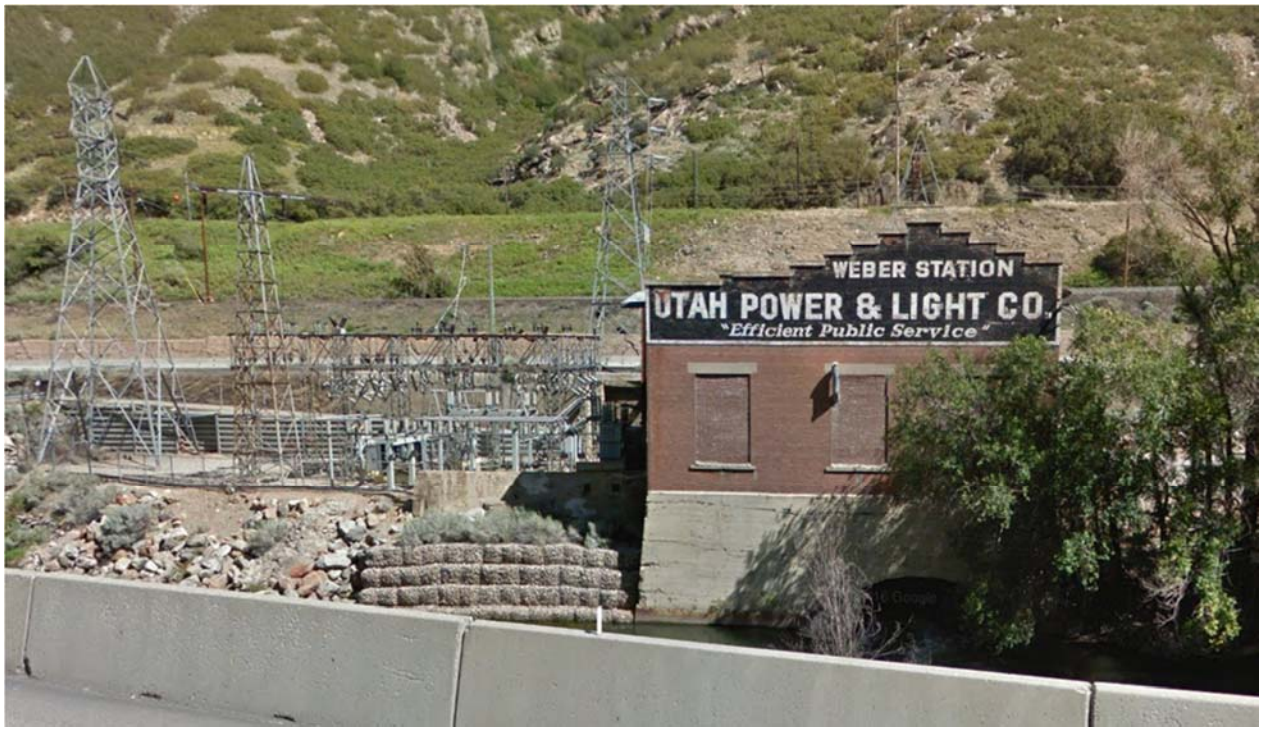


Photo 5. Street Level View of Weber Substation (Not part of the Project) and Powerhouse

2.1.7.3 BYPASS REACH AND TAILRACE

The bypass reach is the portion of the Weber River where water is removed from the river between the diversion dam and powerhouse. (Photo 6). The Project bypass reach is approximately two miles long and the upper portion is frequently used by anglers. The bypass reach terminates where the diverted water enters the powerhouse downstream and is returned to the Weber River through the tailrace discharge. The discharge area is approximately 16 feet wide.

Photo 6. Bypass Reach to Powerhouse

The Weber Plant tailrace is located at the foundation below the generating floor. The tailrace receives water from the twin discharge turbine draft tubes. The tailwater level is within the foundation area and discharges directly into the Weber River through a control weir that makes up the lower wall of the arched opening on the south side of the building (see Photo 5). The fixed control weir wall establishes hydraulic submergence for the discharge of the two draft tubes at approximately 19 feet below the centerline of the horizontal generator and separates the foundation tailrace from the Weber River. The dimensions of the tailrace chamber are 22 feet wide (east-west axis) by 30 feet deep (north-south axis) by 29 feet high. The tailrace can be reached via an access door in the generating floor located adjacent to the south (river-ward) wall of the powerhouse, which leads to a ladder down to the tailrace water below, or via the river itself (PacifiCorp accessed this area during fisheries studies by both boat and with divers from the river). The arched opening from the tailrace to the river is approximately 16 feet wide and 20.5 feet high, although the weir is built at the bottom of the opening and extends approximately 8.5 feet up, reducing the opening above the weir (the ‘open’ space) to approximately 12 feet in height.

2.1.7.4 APPURTENANT FACILITIES AND EQUIPMENT

Plant operators’ cottages were built near the Weber powerhouse approximately 1.7 miles downstream of the Weber diversion dam. The entire area, including the plant powerhouse, associated substation, cottages, and associated outbuildings is listed on the National Register of Historic Places as an historic district. Originally known as Devil’s Gate (Register No. 89000276), it is now known as the Weber Hydroelectric Plant District.

One section of the flowline, near the Weber powerhouse, was subsequently placed in a three-sided concrete box culvert under the westbound lanes of Interstate 84 when the freeway was constructed in the 1960s.

2.2 PROJECT COSTS § 4.61 (C)(1)(IX)

Table 4. Estimated Capital and Operation and Maintenance (O&M) Costs for Potential Project Upgrades

Year	Upgrades	Capital	O&M
2021	Weber Intake Modernization	$1,768,000	n/a
2022-2025	Owner's Dam Safety Program Analysis and Implementation	$115,000	$50,000 periodically; $400,000 life-of-license total
2022	Weber Butterfly Valve and Penstock Section	$640,000	n/a
2022	Weber Penstock Support Structure Upgrade (aka Trestle Work)	$219,000	n/a
2022	Weber Pipeline River Crossing Recoat	$186,000	n/a
2024	Weber #2 House Removal	$28,000	n/a
2025	Cathodic Protection	$691,000	n/a
2029	Weber Penstock and Gate Painting	$430,000	n/a
2030	Weber Journal Bearing Re-rabbiting	$59,000	n/a
2030	Weber Flow Monitor Replacement	$323,000	n/a
2034	Weber Powerhouse Roof Replacement	$86,000	n/a
2034	Weber Relay Replacement	$323,000	n/a
Annual	Operations and Maintenance		$274,000/year $12,039,000 life-of-license total
Various	Small Projects	$288,000	n/a

2.3 CAPITAL COSTS AND ESTIMATED O&M COSTS OF PROPOSED ENVIRONMENTAL MEASURES § 4.61 (C)(1)(X)

2.3.1 Protection, Mitigation, and Enhancement Measures (PM&E)

PacifiCorp's Proposed PM&E strategies focus on preserving areas in the watershed that are ecologically important. In situations where habitat impacts are unavoidable and cannot be recovered, PacifiCorp's mitigation strategies have been employed to offset the losses. In cases when a change to the environment occurs, enhancement can help alleviate the effects. Table 5 describes PacifiCorp's current PM&E measures.

Table 5. Existing PM&E Measures

Resource	Environmental Measure	License Article or Other Reference	Compliance History
Fisheries and Aquatic Resources	Maintain required 34-50 cfs minimum stream flow for the bypass reach of the river affected by the Project.	Article 401	Variances average less than once/year, reported to FERC as they have occurred
	Operational measures to reduce impacts to aquatic resources, such as minimizing sediment release during forebay elevation changes, and not flushing sediment from the Project forebay.	Voluntary	Full compliance
Botanical Resources	Annual consultation with the USFS regarding any planned maintenance or operational measures that would involve ground-disturbing activities.	Article 104	Full compliance
	Annual weed control around the Project recreation site, dam and flowline intake, and powerhouse/cottage area.	Voluntary	Full compliance
Terrestrial Wildlife Resources	Annual consultation with the USFS regarding any planned maintenance or operational measures that could impact wildlife habitat.	Article 104	Full compliance
Cultural Resources	Implementation of a Cultural Resources Management Plan.	Article 403	Full compliance
Recreation Resources	Construction (completed in 1992) and maintenance of the existing recreation site consisting of the following: a paved parking area, five picnic tables, a grassy area, fishing access to the Weber River downstream of the dam, fishing access to the forebay with a handicapped-accessible platform, and a portable toilet that is available on a seasonal basis.	Article 405	Full compliance

Table 6 details proposed PM&E measures under the new License. All existing PM&E measures (those shown in Table 5) are also part of the proposed mitigation measures. Table 7 details the costs of both the existing and proposed mitigation measures. All Weber relicensing stakeholders signed a Memorandum of Agreement regarding the Proposed PM&E measures, with the exception of the Utah Department of Environmental Quality - Division of Water Quality (UDWQ), who instead sent a letter of support for the proposed PM&E measures (also see Exhibit E, Appendix A).

Table 6. Proposed PM&E Measures

Resource	Proposed PM&E Measure
Geology and Soils	None.
Water Resources (Hydrology)	**HYD-1:** Continue existing seasonally-adjusted minimum stream flows (34-50 cfs). Implement annual change, if needed, in required minimum streamflow within 10 days of the final Weber River runoff forecast from Natural Resources Conservation Service (NRCS), using the current formula.
Water Resources (Water Rights)	No PM&E measure is proposed because existing 1938 and 1965 agreements and existing water rights [35-8061—365 cfs flow right, 35-8062—100 af storage, 35-8741—af storage in Echo] will remain unchanged.
Water Resources (Water Quality)	No PM&E measure is proposed because adherence to existing O&M practices is protective of the resource (state water quality standards are being met).
Fisheries and Aquatic Resources	**FISH-1:** Continue to provide minimum stream flow for the bypassed reach of the river affected by the Weber Project (identical to HYD-1, above). **FISH-2:** Construct, operate, and maintain a fish ladder suitable for upstream passage of both Bonneville Cutthroat Trout (BCT) and Bluehead Sucker, including a fish trap operated by Utah Division of Wildlife Resources (UDWR) and Trout Unlimited (TU) and maintained by PacifiCorp. PacifiCorp will consult annually with UDWR, TU, and USFS related to fish ladder and trap operation and maintenance according to a Communication Plan developed between UDWR, TU, USFS, U.S. Fish and Wildlife Service (FWS) and PacifiCorp. The Communication Plan will also specify group contacts, alternates, and contact methods over the life of the license. **FISH-3:** Keep the low-level gate operational when forebay is dewatered subject to operational constraints and requirements such as extreme winter icing conditions (undertake periodic maintenance as required to ensure operation). If the forebay is dewatered and the low-level gate is inoperable for more than 10 days due to extreme temperature or flow conditions, PacifiCorp will consult with UDWR, TU, FWS, Utah Division of Water Quality (UDWQ), and USFS (per the Communication Plan methods) and open the low-level gate as soon as possible. **FISH-4:** In the event of a prolonged Project outage, keep forebay full if possible to ensure fish ladder operation; PacifiCorp will consult with UDWR, TU, FWS, UDWQ, and USFS (per the Communication Plan methods) to discuss fishway operation during any interim periods exceeding 10 days when neither the low-level gate nor the fishway are operable.
Botanical Resources	**BOT-1:** Continue existing annual USFS consultation. **BOT-2:** Conduct weed control per historic practice, adding the area abutting improved Project river access point in riparian habitat (see REC-8, below), subject to landowner weed control requirements and constraints.
Terrestrial Wildlife Resources	**WL-1:** Continue existing annual USFS consultation.
Cultural and Tribal Resources	**CULT-1:** Finalize and implement the Historic Properties Management Plan (HPMP) (formerly approved as the Cultural Resources Management Plan [CRMP]).
Recreation Resources	**REC-1**: Continue to maintain the existing Weber Recreation Site, but with modifications outlined below. **REC-2**: Coordinate with USFS, UDWR, TU, UDWQ, FWS, and American Whitewater (AW) on improved interpretive signage; include potential for improved technology to include a code that is scan-able and that links to flow information (REC-3). Install signage instructing visitors on dog waste protocol and provide dog waste bags for disposal. **REC-3**: Create a webpage hosted and maintained by PacifiCorp (linked on both the Corporate website and the Project website) indicating approximate bypass reach flows (program subtracts generation flow from U.S. Geological Survey (USGS) gage site flow and posts it to website)—when minimum streamflow only, the calculated number will be replaced by the phrase "minimum streamflow of approximately 50 cfs or inflow" to eliminate the risk of showing a calculated flow that could be less than the minimum for that period. **REC-4**: Install and maintain a year-round permanent vault Americans with Disabilities Act (ADA)/Architectural Barriers Act (ABA)-compliant toilet facility (flush bathrooms are available at the Utah Department of Transportation (UDOT) rest stop upstream).

Resource	Proposed PM&E Measure
	REC-5: Consult with USFS to create a new ADA/ABA-compliant accessible picnic site on flat lawn area closest to parking lot (consisting of a concrete pad, a grill, and an accessible picnic table), or to modify the existing site per USFS standards. **REC-6**: Maintain/repave access road to Weber Recreation Site and existing asphalt path in picnic area. **REC-7**: Reconfigure former sandbox area fencing to remove south, east, and west portions (retain north portion to partition recreation site from I-84). **REC-8**: Improve two existing user-created trails located in and outside the Weber FERC Project Boundary: a. In the Project Boundary, improve (construct steps) the existing dirt river access trail at the west end of the recreation site; b. Outside the Project Boundary, provide $30,000 through an off-license agreement with TU to fund cooperative effort to improve pedestrian river access (with concurrence from UDOT and the underlying land owner) at the under-freeway user-created trail extending west from the Weber Recreation Site. Proposed improvements would involve breaking up the existing large-boulder surface or backfilling this surface to create a navigable path of smaller rock with minimal width (no paving). Funds provided through the off-license agreement may be used by TU to provide another habitat benefit in the watershed in the event that improving pedestrian river access in the indicated location is infeasible or requires less funding than provided through the agreement. **REC-9**: Support whitewater boating use of bypass reach: If AW can identify access which it believes to be safe and legal, the USFS and Davis and Weber Counties Canal Company (DWCCC) agree to review the proposed access and the items and improvements needed for safe use, such as but not limited to signage, steps for the portage area, and hazard mitigation. If the USFS agrees, in its sole discretion, that the proposed access is appropriate for public use, PacifiCorp will annually provide boater flows to the bypass reach by curtailing generation (up to 320 cfs or inflow) for 4-hour segments on four Saturdays prior to July 15. Flow schedule and notice to be determined in conjunction with AW, and in coordination with DWCCC and USFS, with the provision that boater flows in the future may be subject to minimum boater use (fewer than a minimum threshold of boaters may result in suspension of boater flows). Specific use triggers and related release changes to be determined[1].
Land Use	None.
Aesthetic Resources	None.
Socioeconomic Resources	None.

[1] See Exhibit E, Section 1.5.3 for clarifications related to REC-9 associated with comments submitted by American Whitewater on the preliminary Draft License Application.

Table 7. Existing and Proposed PM&E Measure Costs. Values are in 2017 dollars

Resource Area	Existing PM&E	Proposed PM&E	Capital Costs of Proposed PM&E	O&M Costs of Proposed PM&E
Water Resources and Hydrology	**Bypass Reach Minimum Flow**			
	Continuous minimum stream flow of 34 cfs or inflow, whichever is less, from October 1-March 31 annually; and, a continuous minimum flow of 34-50 cfs (range dependent on the annual runoff forecast), or inflow, whichever is less, from April 1-September 30 annually.	**HYD-1 and FISH-1:** Continue existing seasonally-adjusted minimum stream flows (34-50 cfs). Implement annual change, if needed, in required minimum streamflow within 10 days of the final Weber River runoff forecast from NRCS, using the current formula.	N/A	$129,000 annually; valued at $5,440,000 total over the life of the new license. Levelized cost of this lost generation is $6.04/MWh
Fisheries and Aquatic Resources	**Upstream Fish Ladder**			
	N/A	**FISH-2:** Construct, operate, and maintain a fish ladder suitable for upstream passage of both BCT and Bluehead Sucker, including a fish trap operated by UDWR and TU and maintained by PacifiCorp. PacifiCorp will consult annually with UDWR, TU, and USFS related to fish ladder and trap operation and maintenance according to a Communication Plan developed between UDWR, TU, USFS, FWS and PacifiCorp. The Communication Plan will also specify group contacts, alternates, and contact methods over the life of the license.	$2,889,000	$5,000 annually for facility maintenance; $185,000 total over the life of the license
	Low Level Gate Operation			
	This measure is in effect when forebay is dewatered to allow fish passage.	**FISH-3:** Keep the low-level gate operational to allow fish passage when forebay is dewatered, subject to operational constraints and requirements such as extreme winter icing conditions (undertake periodic maintenance as required to ensure operation). If the forebay is dewatered and the low-level gate is inoperable for more than 10 days due to extreme temperature or flow conditions, PacifiCorp will consult with UDWR, TU, FWS, UDWQ, and	$65,000	$40,000 periodically; $160,000 total over the life of the license

Resource Area	Existing PM&E	Proposed PM&E	Capital Costs of Proposed PM&E	O&M Costs of Proposed PM&E
Fisheries and Aquatic Resources (continued)		USFS and open the low-level gate as soon as possible.		
	Project Operation During Prolonged Outages			
	N/A	**FISH-4:** In the event of a prolonged Project outage, keep forebay full if possible to ensure fish ladder operation; PacifiCorp will consult with UDWR, TU, FWS, UDWQ, and USFS (per the Communication Plan methods) to discuss fishway operation during any interim periods exceeding 10 days when neither the low-level gate nor the fishway are operable.	$0	$1,000 annually; $44,000 total over the life of the license
Vegetation and Botanical Resources	**Annual Consultation**			
	Meet each year with the USFS to review any planned maintenance or operational measures that would involve ground-disturbing activities.	**BOT-1:** Continue existing annual USFS consultation	$0	$2,000 annually; $78,000 total over the life of the (includes costs for WL-1, below)
	Annual Weed Control			
	Complete weed management activities around the Project recreation site, dam and flowline intake, and powerhouse/cottage area.	**BOT-2:** Conduct weed control per historic practice, adding the area abutting improved Project river access point in riparian habitat (see REC-8, below), subject to landowner weed control requirements and constraints.	$0	$2,000 annually; $76,000 total over the life of the license
Terrestrial and Wildlife Resources	**Annual Consultation**			
	Meet each year with the USFS to review any planned maintenance or operational measures that could impact wildlife habitat.	**WL-1:** Continue existing annual USFS consultation.	$0	$0 additional (included as part of BOT-1, above)
Cultural and Tribal Resources	**Cultural Resources Management Plan (CRMP)**			
	Plan currently serves to identify, evaluate, document, register, and establish basic information about known and discovered cultural resources so that proper planning can take place to protect cultural	**CULT-1:** Finalize and implement the updated HPMP (formerly approved as the CRMP).	$6,000	$15,000 total over the life of the license

Resource Area	Existing PM&E	Proposed PM&E	Capital Costs of Proposed PM&E	O&M Costs of Proposed PM&E
	and historic resources and provide stewardship to these resources.			
Recreational Resources	**Day-Use Site**			
	Construction (completed in 1992) and maintenance of the existing recreation site consisting of the following: a paved parking area, five picnic tables, a grassy area, fishing access to the Weber River downstream of the dam, fishing access to the forebay with a handicapped-accessible platform, and a portable toilet that is available on a seasonal basis	**REC-1:** Continue to maintain the existing Weber Recreation Site, but with modifications outlined below.	$0	Included in O&M costs in Table 4, above
	Interpretive Signs at Recreation Site			
	Signs are posted and include required FERC Form 80 signage, site rules and regulations, and some additional interpretive signage.	**REC-2:** Coordinate with USFS, UDWR, TU, UDWQ, FWS, and AW on improved interpretive signage; include potential for improved technology to include a code that is scan-able and that links to flow information (REC-3). Install signage instructing visitors on dog waste protocol and provide dog waste bags for disposal.	$15,000	$25,000
	Website Outreach			
	N/A	**REC-3:** Create a webpage hosted and maintained by PacifiCorp (linked on both the Corporate web site and the Project web site) indicating approximate bypass reach flows (program subtracts generation flow from USGS gage site flow and posts it to website)—when minimum streamflow only, the calculated number will be replaced by the phrase "minimum streamflow of approximately 50 cfs or inflow" to eliminate the risk of showing a calculated flow that could be less than the minimum for that period.	$20,000	$0

Resource Area	Existing PM&E	Proposed PM&E	Capital Costs of Proposed PM&E	O&M Costs of Proposed PM&E
Recreational Resources (continued)				
	Restroom			
	Maintain seasonal restroom facilities (currently these are portable restrooms) at Weber Recreation Site.	**REC-4:** Install and maintain a year-round permanent vault ADA/ABA-compliant toilet facility (flush bathrooms are available at the UDOT rest stop upstream).	$64,000	Included in O&M costs in Table 4, above
	ADA-Compliant Access			
	Some ADA access provided at Weber Recreation Site, although standards have changed since 1992 installation.	**REC-5:** Consult with USFS to create a new ADA/ABA-compliant accessible picnic site on flat lawn area closest to parking lot (consisting of a concrete pad, a grill, and an accessible picnic table), or to modify the existing site per current USFS standards.	$20,000	$0 (maintained with overall recreation site)
	Access Road and Path			
	This PM&E measure was implemented as part of original recreation site construction in 1992.	**REC-6:** Maintain/repave access road to Weber Recreation Site and existing asphalt path in picnic area.	$100,000	As needed; $44,000 total over the life of the license
	Recreation Site Fencing			
	Fencing was installed during original recreation site construction in 1992, but modifications are proposed as part of the current relicensing.	**REC-7:** Reconfigure former sandbox area fencing to remove south, east, and west portions (retain north portion to partition recreation site from I-84).	$12,000	$2,000 periodically; $20,000 over the life of the license
	Pedestrian River Access			
	N/A	**REC-8:** Improve two existing user-created trails located in and outside the Weber FERC Project Boundary: a. In the Project Boundary, improve (construct steps) the existing dirt river access trail at the west end of the recreation site; b. Outside the Project Boundary, provide $30,000 through an off-license agreement with TU to fund cooperative effort to improve pedestrian river access (with concurrence from UDOT and the	 a. $22,000 b. $50,000	Included in REC O&M cost above $0

Resource Area	Existing PM&E	Proposed PM&E	Capital Costs of Proposed PM&E	O&M Costs of Proposed PM&E
Recreational Resources (continued)		underlying land owner) at the under-freeway user-created trail extending west from the Weber Recreation Site—proposed improvements would involve breaking up the existing large-boulder surface or backfilling this surface to create a navigable path of smaller rock with minimal width (no paving). Funds provided through the off-license agreement may be used by TU to provide another habitat benefit in the watershed in the event that improving pedestrian river access in the indicated location is infeasible or requires less funding than provided through the agreement.		
	Boating Use of Bypass Reach			
	N/A	**REC-9:** Support whitewater boating use of bypass reach: If AW can identify access which it believes to be safe and legal, the USFS and DWCCC agree to review the proposed access and the items and improvements needed for safe use, such as but not limited to signage, steps for the portage area, and hazard mitigation. If the USFS agrees, in its sole discretion, that the proposed access is appropriate for public use, PacifiCorp will annually provide boater flows to the bypass reach by curtailing generation (up to 320 cfs or inflow) for 4-hour segments on four Saturdays prior to July 15. Flow schedule and notice to be determined in conjunction with AW, and in coordination with DWCCC and USFS, with the provision that boater flows in the future may be subject to minimum boater use (fewer than a minimum threshold of boaters may result	$10,000	$4,000 annually; $166,000 total over the life of the license.

Resource Area	Existing PM&E	Proposed PM&E	Capital Costs of Proposed PM&E	O&M Costs of Proposed PM&E
		in suspension of boater flows). Specific use triggers and related release changes to be determined.1		

[1] See Exhibit E, Section 1.5.3 for clarifications related to REC-9 associated with comments submitted by American Whitewater on the preliminary Draft License Application.

3.0 PROJECT PURPOSE § 4.61 (C)(2)

FERC, when issuing a new license for the Project, requires that PacifiCorp undertake appropriate measures to promote both the development (power) and non-development uses (e.g., scenic, recreational, environmental) of the waterway. These public interest uses, identified by FERC in its licensing orders, constitute the "project purpose." The Project is owned and operated by PacifiCorp to provide electricity to its customers. The Project lands enclose only the lands necessary to operate and maintain the Project and for other purposes such as recreation, shoreline control, or protection of environmental resources.

The Project Boundary is an administrative marker that clearly delineates those lands necessary for the operation and maintenance of the Project and for other Project purposes. These lands are determined through Exhibit G (Project Boundary maps) reflecting the inclusion or exclusion of certain lands.

Continued operation of the Project as proposed under a new license would provide affordable renewable hydroelectric generation to meet a portion of local power requirements, resource diversity, and capacity needs in the northern Utah region of PacifiCorp's service territory.

4.0 APPLICATION DEVELOPMENT COSTS § 4.61 (C)(3)

The current budget estimate for the development of the new license application and associated materials is currently $1,099,000.

5.0 ON-PEAK AND OFF-PEAK VALUES OF PROJECT § 4.61 (C)(4)

The Project is only operated in run-of-river mode, and therefore, estimated values of on- and off-peak Project power are not required.

6.0 ESTIMATED CHANGE IN PROJECT GENERATION § 4.61 (C)(5)

The Project will continue to operate as a run-of-river facility, with new PM&E efforts for recreation (boating) flows and a new proposed fishway modifying the manner, but not the timing nor the volume, of minimum flows in the bypass reach.

The recreation-related PM&E measure deals with supporting potential whitewater boating use of the bypass reach. In the event that a safe and legal egress site is identified by the boating community and agreed to by the USFS and PacifiCorp, PacifiCorp would provide boater flows to the bypass reach by curtailing generation (up to 320 cfs or inflow) for 4-hour segments on four Saturdays prior to July 15 annually, for a total of up to 16 hours (48 MWh) annually of potential lost generation. The exact schedule of this provision of boater flows would be determined in conjunction with AW and coordinated with the USFS and DWCCC. Boater flows in the future may be subject to minimum boater use. The Project operations described in this section would remain the same under the proposed action. Therefore, the value of power due to Project changes is expected to change minimally (up to 48 MWh annually, if approved) under the new license.

7.0 UNDEPRECIATED NET INVESTMENT (BOOK VALUE) OF THE PROJECT § 4.61 (C)(6)

As of December 31, 2016, PacifiCorp had incurred an Original Cost Investment of $4,554,002, Accumulated Depreciation of $3,201,688, and a Net Book Value of $1,352,314 for the Project.

8.0 ESTIMATED ANNUAL COST OF THE PROJECT § 4.61 (C)(7)

Project costs were calculated using rate-based methodology that incorporates existing net investment, routine hydro operations O&M, property and income taxes, depreciation and amortization, deferred taxes, and rate of return (PacifiCorp is self-insured).

The total Project forecast period is 44 years[2], from 2017 to 2060. Period of analysis is based on PacifiCorp's financial model duration. The annual inflation rate estimate is 2.53%. PacifiCorp's discount rate of 6.59% is based on the after-tax, weighted average cost of capital.

Property taxes paid on the Project were 1.51% of the 2016 net book value, or $20,409, in 2016 (2016 is the last year calculated at the time of this analysis). PacifiCorp's corporate tax rate is 37.951%. See Tables 8 and 9 for additional information regarding analysis period capital expenses.

Table 8. Project's Capitalized Expenses for Period of 44 Years

Item	44-year Total (2016 $s, Millions of $s)	Present Value Cost (2016 $s, Millions of $s)
Property Taxes	1,869	694
Book Depreciation	48,189	6,414
Rate of Return @7.56%	10,872	4,121
Current and Deferred Income Taxes	4,420	1,680
Total	**$66,349**	**$12,909**

Table 9. Project's Capitalized Expenses for Period of 44 Years With Inflation

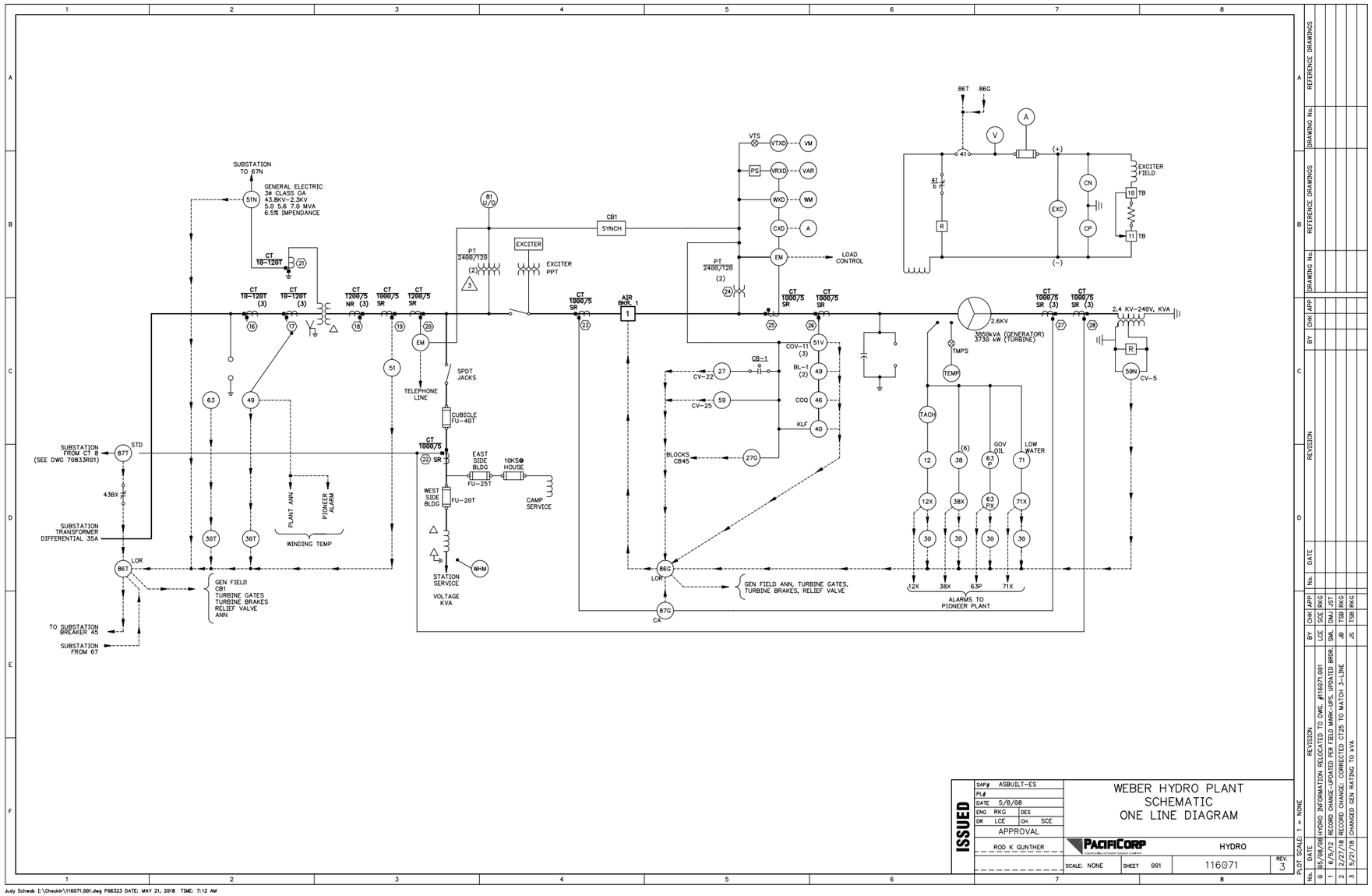
Item	44-year Total (2016 $s, Millions of $s)	Present Value Cost (2016 $s, Millions of $s)
Routine O&M	12,039	5,421
Dam Safety	400	176
Impoundment Dredging/Maintenance	160	69
1965 Contract	(401)	(181)
Implementation O&M	345	141
Total	**$12,543**	**$5,626**

O&M estimates can vary significantly from year to year. PacifiCorp estimates are based on historical data as well as budget forecast estimates. Annual Project routine O&M costs were $273,619 in 2016 dollars, totaling $12 million over the 44-year analysis period. This estimate is

[2]PacifiCorp uses a financial model that considers the future 44-year period. It is expected that the analysis outcome for a 50-year analysis period (PacifiCorp is proposing a 50-year license period) is not significantly different than a 44-year period, due to the time-value of money nearing the end of the forecast period, and the additional level of uncertainty and risk injected into the analysis. This uncertainty, specifically affecting the analysis of the rate of inflation and the forward power cost price curve, has the effect of making the forecasted differences between the 44- and a 50-year mark meaningless. It is expected that a 50-year license would slightly improve the net customer benefit calculated in the current 44-year analysis from the generation benefit of a zero-fuel cost generating asset while adding no additional insight from a financial analysis perspective.

based on the average of the prior three years of FERC Form 1 costs directly attributable to the Project reduced by relicensing implementation expenses. Table 9 shows the projected expenses to operate the Project for 44 years, unadjusted for inflation. The far-right column shows the total 44-year inflated costs, on a 2016 present value basis discounted at 6.59%.

9.0 SINGLE LINE ELECTRICAL DIAGRAM § 4.61 (C)(8)



10.0 MEASURES TO ENSURE SAFE MANAGEMENT § 4.61 (C)(9)

Per Section 10(c) of the Federal Power Action (FPA), FERC is authorized to establish regulations requiring licensees to operate and properly maintain their projects for the protection of life, health, and property. The Weber Project dam is classified as a low hazard rating with a regulatory inspection frequency of every three years; however, several measures are taken to ensure safe management of the Project, as described in the following sections.

10.1 OWNER'S DAM SAFETY PROGRAM

The purpose of the Owner's Dam Safety Program (ODSP) is to define the procedures and actions that are to be taken by its employees and representatives to ensure that all dams and related water retaining structures are designed, constructed, maintained and operated in a manner sufficient to protect the public and its employees from the consequences of an unplanned event that could result in the uncontrolled release of water. On December 18, 2013, PacifiCorp filed a new ODSP with FERC. On February 24, 2015, FERC requested additional information and provided comments on the 2013 ODSP. On February 10, 2017, PacifiCorp filed a revised final of the 2013 ODSP. Several elements specific to the Weber Hydroelectric Project are currently planned for implementation in 2022. The Public Safety Program Elements of this ODSP consist of Emergency Action Plans (EAPs), Public Safety Plans (PSPs) and Security Plans. These are utilized to protect the public and provide notification to Emergency Management Agencies and/or the public if a course of events could or are leading to the uncontrolled release of water from a dam.

10.1.1 Emergency Action Plan

The EAP is a formal document that identifies potential emergency conditions at a dam and specifies a preplanned set of actions to be followed to minimize the notification time to the public and enable emergency management authorities to facilitate evacuations in the event of a failure. The Weber Project has been granted annual exemptions from the requirement of filing an EAP. As required by 18 CFR 12.21, PacifiCorp conducts annual comprehensive reviews of circumstances upstream and downstream of this Project to determine if there are changes that would endanger life, health, or property. Upon completion of these reviews, annual EAP exemptions are requested.

10.1.2 Public Safety Plan

A Public Safety Plan (PSP) is a formal document that identifies the location of specific safety features intended to provide the public with information about potentially hazardous conditions and areas restricted from public access, in and around PacifiCorp's dams and related facilities.

FERC requested that PacifiCorp submit a PSP for the Project on January 26, 1993. PacifiCorp subsequently filed the new PSP on April 28, 1993. PSPs are updated periodically and on December 18, 2014, PacifiCorp submitted a revised Project PSP. Another revision to PSP Figures 5-7 was submitted on December 6, 2017.

10.1.3 Site Security

PacifiCorp's Weber Project security consists of specific physical security measures such as locked gates, locked powerhouse doors, security fences and gates (some with razor wire to discourage unauthorized access), alarms, 24/7 electronic monitoring, and the potential for 24/7 access by the plant operators. These have been implemented to prevent an attack on the dam or other Project features that could result in an emergency condition leading to the potential uncontrolled release of water or a threat to public safety.

10.1.4 Continuous Improvement

Continuous improvement requires an organizational environment that enables identification and learning of relevant information to improve both the content and execution of PacifiCorp's ODSP on a continual basis. PacifiCorp formally maintains a "Plan/Execute/Measure/Correct" management system in order to ensure this cycle of continuous improvement. The most important role in ensuring the continued safe and efficient operation of PacifiCorp's dams belongs to PacifiCorp personnel. Efficient paths of communication have been established between all segments of PacifiCorp's organization including open sharing and distribution of information upward and downward within the organization. Implementation of the system, including annual training, places an emphasis on the importance of information sharing amongst PacifiCorp personnel. The results of assessments and audits of this ODSP are shared within the PacifiCorp organization as lessons identified become available. Where applicable, company procedures for "root cause" and "significant event report" type analyses are utilized to investigate events.

10.2 ENVIRONMENTAL INSPECTION REPORT

On May 15, 2017, FERC notified PacifiCorp that Environmental Inspections would be conducted at the project site on June 13, 2017 and June 14, 2017. On June 23, 2017, FERC issued the results of the 2017 Environmental Inspection. PacifiCorp completed the action items noted below on/before July 21, 2017.

Table 10. Environmental Inspection Action Items 2017

Action Item	Status
Trim the vegetation at the entrance to the accessible fishing pier upstream of the Weber Diversion Dam and report back on its completion within 30 days of the date of this letter.	Completed
Replace the missing grills and report back on their replacement within 30 days of the date of this letter	Completed
Boater warning signage upstream of the dam was obscured by overgrown willows. This vegetation should be trimmed to make the signage adequately visible to recreationists. [Suggested but not required.]	Completed
Barbed wire along the peak of the fence on the north side of the diversion dam had been cut, and should be repaired. [Suggested but not required.]	Completed
Sizable gap under the southwest gate to the powerhouse switchyard. This gap should be closed to prevent unauthorized access to the switchyard. [Suggested but not required.]	Completed

Based on file reviews, discussions, and field observations made during that inspection, the Project was in compliance with the license articles related to fish and wildlife, recreation,

public safety, and cultural resources.[3] Follow-up items needing action were noted during inspections of the Project, however as noted above, these items have since been completed.

[3] Article 104 requires the Licensee to consult with the Forest Service annually with regard to measures needed to ensure protection and development of the natural resources values of the project area. Article 401 requires minimum flow releases of 34 cfs or inflow (whichever is less) from Oct. 1 to Mar. 31; and 50 cfs or inflow (whichever is less from Apr.1 to Sep. 31. Article 402 requires the licensee to install and maintain streamflow gages in the Weber River to monitor flows of Article 401. Part 8 requires recreational signage and postings. Article 405 requires the Licensee to develop a day-use area near the UDOT rest stop and file associated activities with Phase II and III of the recreation plan. Article 406 authorizes the Licensee to grant permission for certain types of land use and occupancy on the Project lands and waters prior to Commission approval. Article 403 requires the Licensee to consult with the SHPO prior to any future land disturbing activities within the Project Boundary. Article 404 requires the Licensee to consult with the SHPO before starting any land disturbing activities and conduct a CRMP. 18 CFR Part 12 requires the Licensee to maintain facilities and measures to ensure public safety.

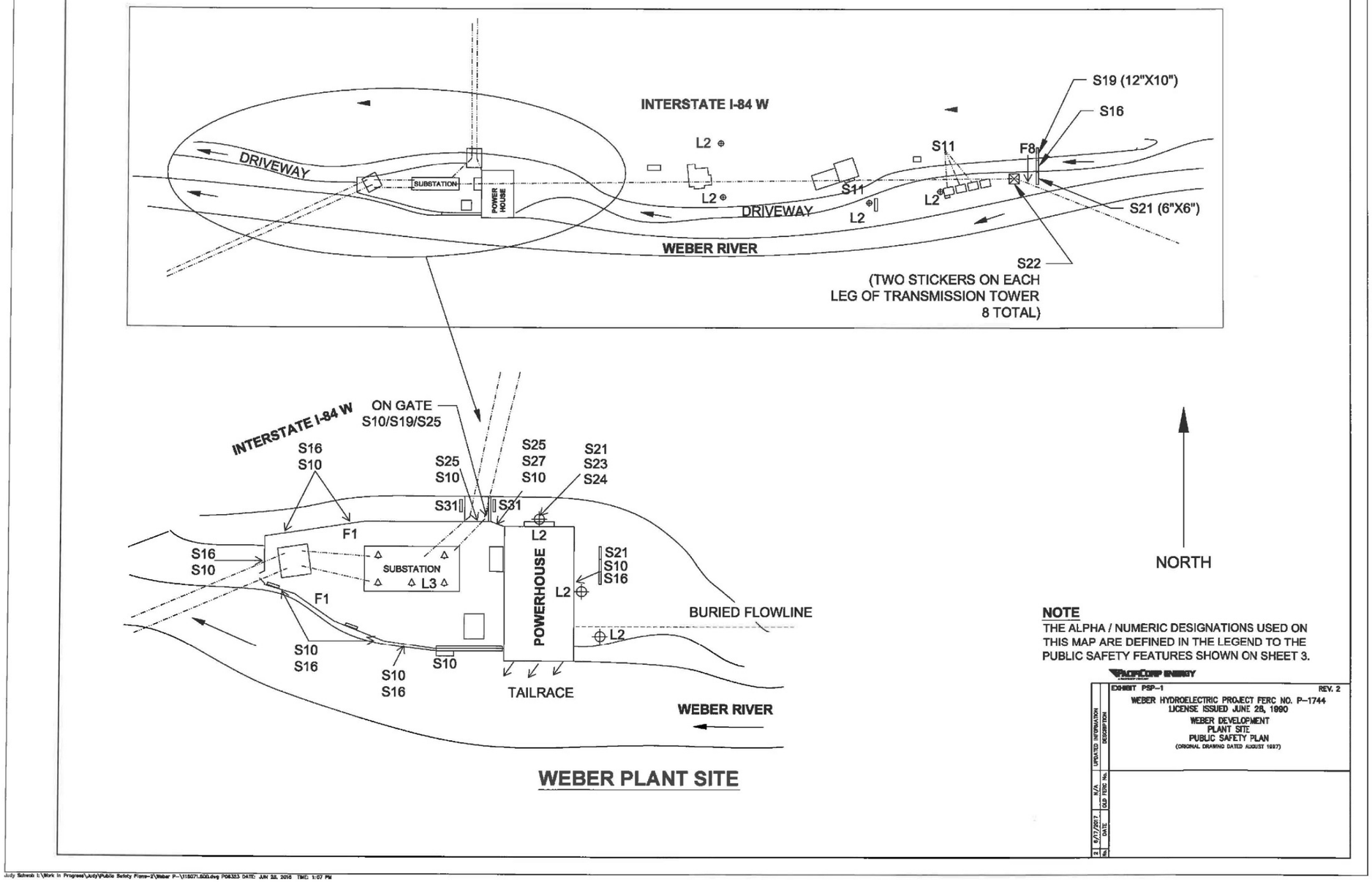


Figure 5. Weber Project Current Public Safety Plan Part 12 Signage (Powerhouse)

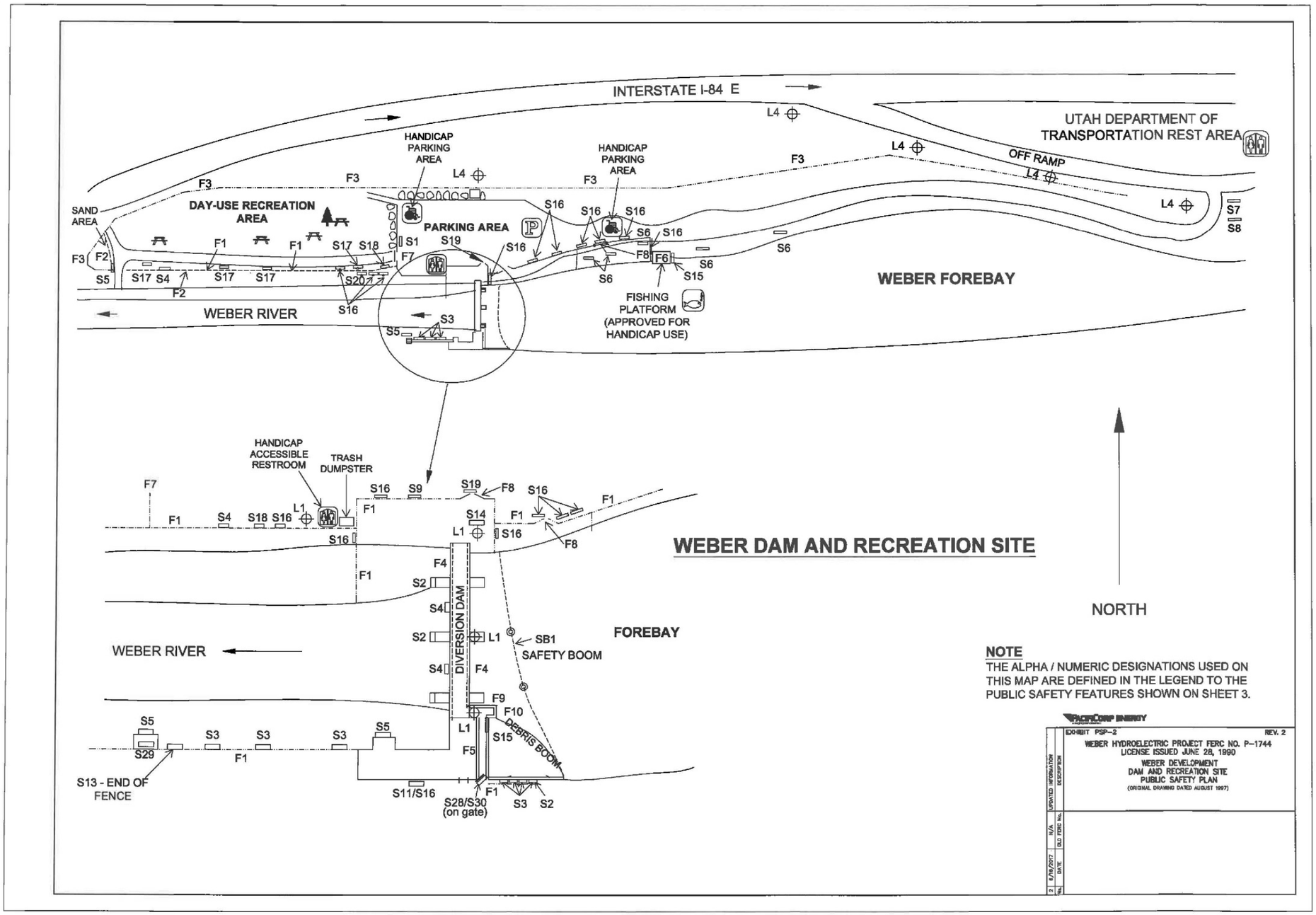


Figure 6. Weber Project Current Public Safety Plan Part 12 Signage (Dam and Recreation Site)

LEGEND TO PUBLIC SAFETY PLAN

S = SIGNS

S1 -WEBER HYDROELECTRIC PROJECT
Licensed by
Federal Energy Regulatory Commission
Department of Energy
Project No. 1744
Further information may be obtained by calling:
PACIFICORP 801-220-2245

DAY-USE RULES

S2 -DANGER
KEEP OFF (10"x14")

S3 -UP&L
PRIVATE PROPERTY
NO TRESPASSING (10"x14")

S4 -DANGER
RIVER SUBJECT TO RAPID RIVER
FLUCTUATION (10"x14")

S5 -WARNING
RIVER MAY RISE RAPIDLY
STAY OUT / STAY ALIVE
LISTEN FOR HORN (20"x24")

S6 -WARNING - HAZARDOUS WATER CONDITIONS
NO SWIMMING / STAY OUT / STAY ALIVE
(15"X20")

S7 -STOP SIGN (2'x2')

S8 -RIGHT TURN ONLY (20"x24')

S9 -CAUTION WEAR PROTECTIVE EQUIPMENT
(12"x18")

S10 -DANGER
HIGH VOLTAGE (10"x12")

S = SIGNS

S11 -CAUTION: This Building Is Alarmed (8"x6")
S12 -DANGER - Admittance By Authorized Personnel Only
(18"x14")
S13 -DANGER
Do Not Walk On Pipe (24"x24")
S14 -NO TRESPASSING
Closed To The Public (10"x14")
S15 -DANGER
DAM & SPILLWAY AHEAD (24"X36")
S16 -NO TRESPASSING OR LOITERING ON THIS PROPERTY
VIOLATORS WILL BE PROSECUTED (10"X14")
S17 -DANGER
RIVER RISES RAPIDLY LISTEN FOR HORN (15"X20")
S18 -NOTICE – Anglers Access 450 Feet (10"X14")
S19 -NOTICE - IN THE EVENT OF AN EMERGENCY INVOLVING
THIS SITE, PLEASE CALL HYDRO CONTROL CENTER
877-562-9928
S20 -NO TRESPASSING
S21 -NOTICE - THESE PREMISES PROTECTED BY ALARM
S22 -DANGER HIGH VOLTAGE ABOVE KEEP OFF
S23 -PACIFICORP A MIDAMERICAN ENERGY
COMPANY - WEBER PLANT
S24 -PACIFICORP A MIDAMERICAN ENERGY COMPANY - HYDRO
RESOURCES - NOTICE - AUTHORIZED PERSONNEL ONLY
- CAUTION WEAR PROTECTIVE EQUIPMENT
- DANGER HIGH VOLTAGE
- WEAR HEARING PROTECTION WHEN EQUIPMENT
IS OPERATING
S25 -ROCKY MOUNTAIN POWER - A DIVISION OF PACIFICORP
PRIVATE PROPERTY - NO TRESPASSING -
PROPIEDAD PRIVADA
- PROHIBIO EL PASO
S26 -WEBER SUBSTATION
S27 -ROCKY MOUNTAIN POWER - A DIVISION OF PACIFICORP
WEBER SUBSTATION OGDEN
S28 -NOT AN EXIT
S29 -CAUTION CONFINED SPACE KEEP OUT UNLESS
AUTHORIZED
S30-DANGER - RAILROAD CROSSING MUST CONTACT RAILWAY
BEFORE CROSSING (1-888-877-7267)
S31-CAUTION CLEARANCE (13'3")

F = FENCING / HANDRAILS

F1 -Diversion dam security fencing consist of a 7' high chain link fence with three strands of barbed wire and razor ribbon around the top.
F2 -Recreation fencing consist of 48" high chain link fencing with top rail.
F3 -Recreation fencing consist of 6' high chain link fencing with top rail.
F4 -Diversion dam has 36" high chain link fencing with top rail on both the upstream and downstream sides.
F5 -Intake handrails consist of 42" high pipe handrails located in front of the intake openings.
F6 -Fishing platform hand railing consist of 42" high steel handrails.
F7 -Maintenance road access barrier is a 1-1/2 link chain supported from 4' diameter poles cemented into the ground.
F8 -Steel access gate
F9 -6' long link chain
F10 -36" high pipe handrail

L = LIGHTING

L1 -Diversion dam lighting consist of three mounted spotlights.
L2 -Powerhouse lighting consist of building mounted incandescent lights and pole mounted mercury vapor lights.
L3 -Substation lighting consist of 5 incandescent lights mounted on the switch rack structure.
L4 -Access road lighting consists of four pole - mounted street lights.

S = SAFETY DEVICES

SB1 -There is a 140' long floating safety boom installed upstream of the dam and intake structure. 2 floats noting "NO SWIMMING" are equally spaced across the boom. The safety boom is typically installed each April following ice-off of the reservoir and removed in October prior toheavy snowfall.

PacifiCorp Energy

EXHIBIT PSP-3 REV. 2
WEBER HYDROELECTRIC PROJECT FERC NO. P-1744
LICENSE ISSUED JUNE 28, 1990
WEBER DEVELOPMENT
LEGEND
PUBLIC SAFETY PLAN
(ORIGINAL DRAWING DATED AUGUST 1987)

NO.	DATE	OLD FERC No.	UPDATED INFORMATION DESCRIPTION
2	8/15/2017	N/A	

Figure 7. Legend for Current Public Safety Plan

APPENDIX A: DETAILED PROJECT LOCATION MAPS

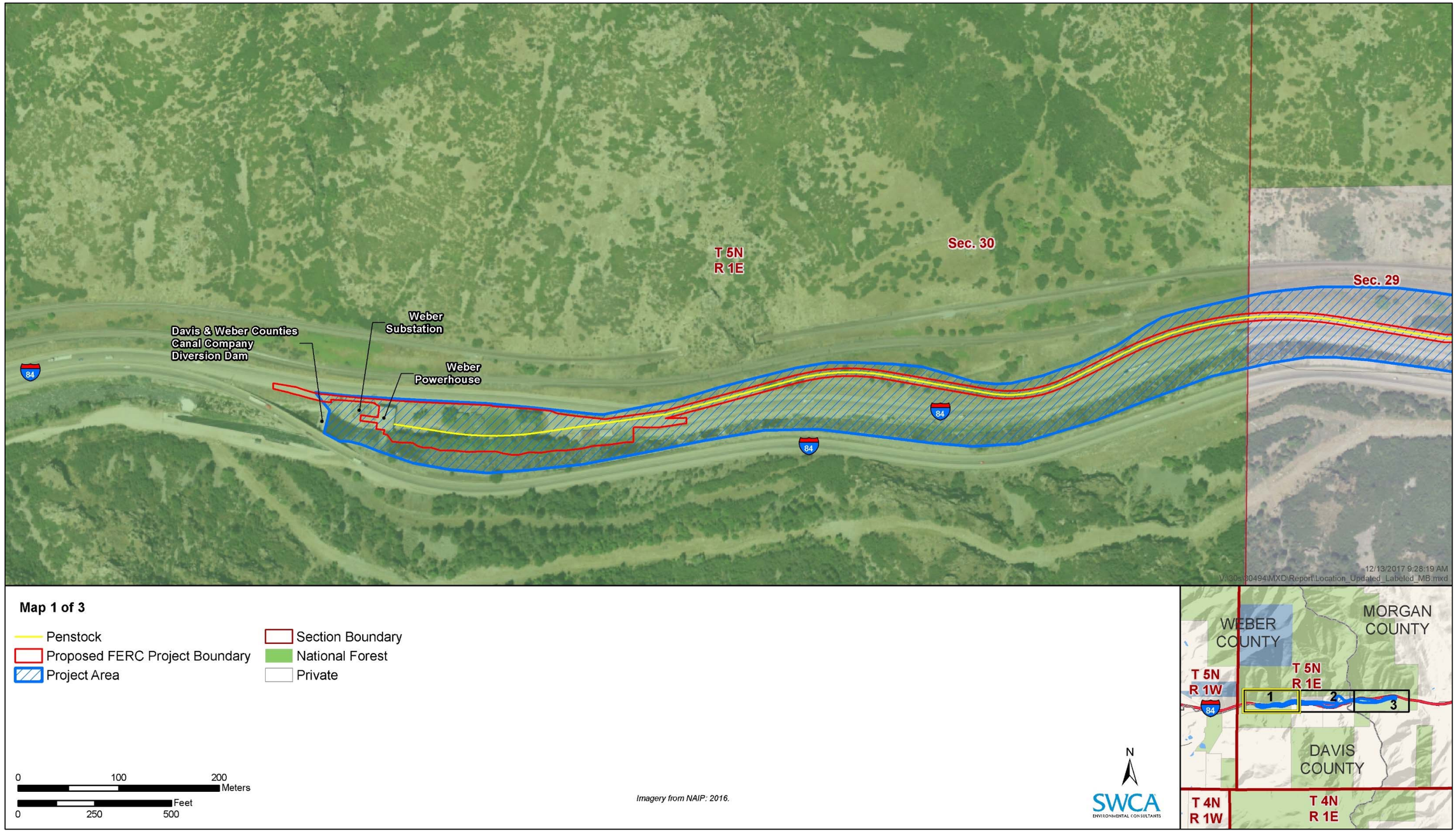


FIGURE A-1. DETAILED PROJECT LOCATION MAP (1 OF 3)

FIGURE A-2. DETAILED PROJECT LOCATION MAP (2 OF 3)

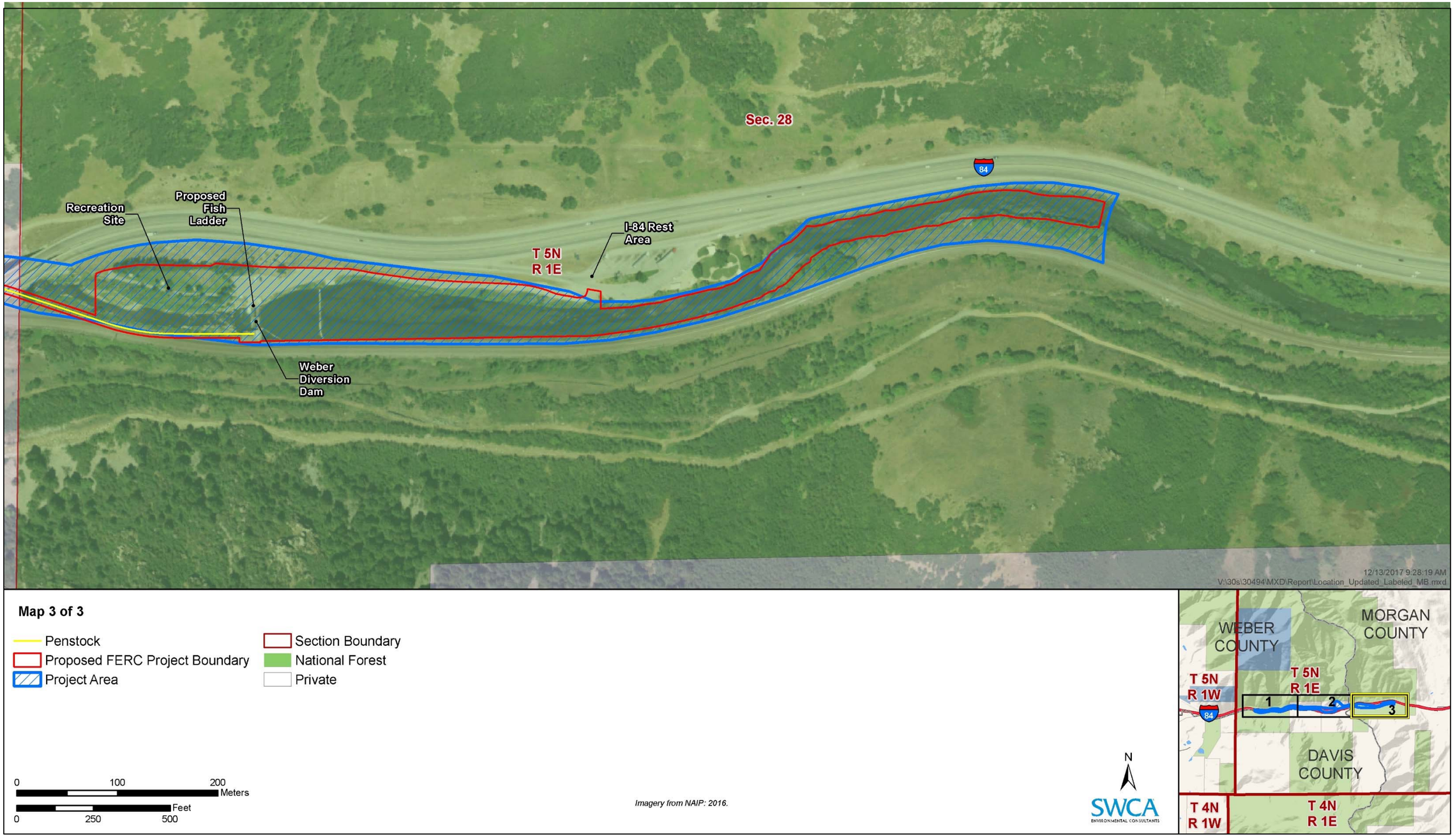


FIGURE A-3. DETAILED PROJECT LOCATION MAP (3 OF 3)

WEBER HYDROELECTRIC PROJECT
(FERC PROJECT NO. 1744)

FINAL APPLICATION FOR NEW LICENSE
FOR MAJOR CONSTRUCTED PROJECT LESS THAN 5MW

EXHIBIT F (REVISED)

WEBER PROJECT DESIGN DRAWINGS

AND

APPENDIX A – SUPPORTING DESIGN REPORT

SEPTEMBER 2018

This document is confidential and not for public distribution.