PRE-APPLICATION DOCUMENT Ashton Hydroelectric Project FERC Project No. 2381



Volume 1 of 3: Public

Submitted by:



June 2022

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LIST OF ACRONYMS AND ABBREVIATIONS

7Q10	Lowest 7-day average flow
°C	degrees Celsius
°F	degrees Fahrenheit
ADA	Americans with Disability Act
BLM	U.S. Bureau of Land Management
CEII	Critical Energy Infrastructure Information
cfs	cubic feet per second
CFR	Code of Federal Regulations
Commission	Federal Energy Regulatory Commission
CRP	Conservation Reserve Program
DHAC	(FERC) Division of Hydropower Administration and Compliance
DO	dissolved oxygen
EPA	U.S. Environmental Protection Agency
EPRI	Electric Power Research Institute
EPT	mayflies (<i>Ephemeroptera</i>), stoneflies (<i>Plecoptera</i>), and caddisflies (<i>Trichoptera</i>)
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
FWS	U.S. Fish and Wildlife Service
HFF	Henry's Fork Foundation
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
INHD	Idaho Natural Heritage Database
IPaC	(FWS) Information for Planning and Consultation
ISHPO	Idaho State Historic Preservation Office
kV	kilovolts
kW	kilowatts
mg/L	milligrams per liter
mm	millimeter
MW	megawatts
MWh	megawatt hours
National Register	National Register of Historic Places

NOC	Notice of Commencement
NOI	Notice of Intent
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
PAD	Pre-application Document
PGA	peak ground acceleration
PLC	programmable logic controller
PSD	Proportional size distribution
RCC	roller-compacted concrete
Reclamation	U.S. Bureau of Reclamation
SHPO	Idaho State Historic Preservation Office
TLP	Traditional Licensing Process
TMDL	total maximum daily load
USC	United States Code
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
WEP	Wildlife Enhancement Plan

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1.0 INTRODUCTION

PacifiCorp, the owner and operator of the Ashton Hydroelectric Project (Project; FERC No. 2381), intends to file a new application for relicense with the Federal Energy Regulatory Commission (FERC or Commission) for continued operation of the Project.. The Project is located on the Henry's Fork of the Snake River (Henry's Fork) in Fremont County, near the City of Ashton, Idaho. The current license for the Project was issued by the Commission on August 3, 1987 (effective date January 1, 1988), for a 40 year term. A new license application must be filed no later than two years before the current license expires, or no later than December 31, 2025.

PacifiCorp is filing a Notice of Intent (NOI) with the Commission to relicense the existing Project, which generally consists of (1) a 56-foot-high, 222-foot-long earth and rock-filled dam covered with roller-compacted concrete (RCC) on the downstream slope and a crest elevation of 5,156.6 feet¹; (2) an 82-foot-long reinforced concrete spillway that has six, 10-foot-high radial gates; (3) a reservoir that has a gross storage capacity of 6,080 acre-feet and a surface area of 392.9 acres at a normal maximum water surface elevation of 5,155.9 feet; (4) a reinforced concrete powerhouse that contains (a) two turbine-generator units rated at 2,000 kilowatts (kW), and (b) one turbine-generator unit rated at 2,700 kW; (5) a tailrace; (6) a 46/2.3-kilovolt (kV) step-up transformer; (7) a 133-foot long, 46-kV transmission line; and (8) appurtenant facilities.

Accompanying the NOI, is PacifiCorp's request to use FERC's Traditional Licensing Process (TLP) to relicense the Project. As required by FERC regulations (18 Code of Federal Regulations [CFR] §5.3), this Pre-application Document (PAD) is filed with the NOI and request to use the TLP. The NOI, request to use the TLP, and this PAD will be distributed to federal and state resource agencies, local governments, Indian Tribes, and members of the public likely to be interested in the licensing proceeding.

The filing of the NOI and PAD commences the FERC relicensing process for the Project. The PAD is a tool for providing engineering, operational, socioeconomic, historical, and environmental information relevant to the Project that is reasonably available at the time the NOI is filed. The PAD supplies information to help identify and evaluate existing effects and resource issues, as well as potential information needs to inform a meaningful analysis of the Project's effect on the total environment that may occur from continued operation. This environmental effects evaluation will be provided in the final license application to be filed with FERC either on or before December 31, 2025.

In an exercise of due diligence to provide the content of the PAD specified by 18 CFR §5.3(d)(3), PacifiCorp distributed a questionnaire to relevant state and federal resource agencies, Indian Tribes, and other interested public parties who may be concerned with the Project's effect on the Henry's Fork of the Snake River (Appendix A). PacifiCorp's questionnaire solicited any relevant information, studies, and data on the existing environment, such as water quality,

¹ All elevations are in PacifiCorp's local datum, unless otherwise noted. To convert to the North American Vertical Datum of 1988, add 2.972 feet.

fisheries, wetlands, wildlife, recreation, and cultural resources. Appendix B contains the complete record of stakeholder outreach related to the preparation of this PAD.

As set forth in 18 CFR §5.8, the Commission will issue a public notice and comment on the NOI, PAD, and TLP request within 30 days of PacifiCorp's filing of this PAD. Then, no later than 60 days following filing of the NOI, PAD, and TLP request, the Commission will issue a Notice of Commencement (NOC) and approve or deny PacifiCorp's request to use the TLP to license the Project. If the Commission approves PacifiCorp's request to use the TLP, a site visit and public meeting will be held 30 to 60 days following the Commission's issuance of an NOC and TLP approval. The site visit and public meeting will allow stakeholders an opportunity to better understand the Project, the licensing process and schedule, and to engage in a question and answer session with PacifiCorp.

In accordance with 18 CFR 5.6(d)(2)(i), the exact name, business address, and telephone number of each person authorized to act as an agent for the Licensee are:

Mark Stenberg PacifiCorp License Program Manager 822 Grace Power Plant Road Grace, ID 83241 208-339-9552 mark.stenberg@pacificorp.com

and

Todd Olson PacifiCorp Director, Licensing & Compliance 825 NE Multnomah Street, Suite 1800 Portland, OR 97232 503-813-6657 <u>Todd.Olson@PacifiCorp.com</u>

The information contained in this PAD follows the requirements set forth in 18 CFR §5.6(c), (d) and (e). The PAD is organized as follows:

- Section 1.0 Introduction
- Section 2.0 Process Plan and Schedule (18 CFR §5.6(d)(1))
- Section 3.0 Project Location, Facilities, and Operations (18 CFR §5.6(d)(2))
- Section 4.0 Description of the Existing Environment and Resource Impacts (18 CFR§5.6(d)(3))
- Section 5.0 Preliminary Issues and Studies List (18 CFR §5.6(d)(4))

- Section 6.0 Summary of Contacts and Consultation (18 CFR §5.6(d)(5))
- Section 7.0 Public Utility Regulatory Policy Act Benefit
- Section 8.0 Literature Cited (18 CFR §5.6(c)(2))
- Appendices:
 - o Appendix A Contacts Solicited for Information to Prepare the PAD
 - Appendix B Stakeholder Outreach and Responses
 - Appendix C Current FERC License Project Boundary
 - o Appendix D Current FERC License and License Amendments
 - o Appendix E Wildlife Species with the Potential to Occur in the Project Vicinity
 - Appendix F Wildlife Enhancement Plan
 - Appendix G US Fish and Wildlife Service Official Species Lists

2.0 PROCESS PLAN AND SCHEDULE (18 CFR §5.6(d)(1))

By filing the NOI and this PAD with FERC, PacifiCorp is initiating the FERC relicensing process for its Ashton Hydroelectric Project. Pursuant to 18 CFR § 5.3, 5.5, and 5.6, the filing of the NOI and PAD initiates the schedule for licensing activities. Along with the filing of the NOI and this PAD, and in accordance with 18 CFR §5.3, PacifiCorp is requesting approval from the Commission to use the TLP to relicense the Project rather than the default Integrated Licensing Process. The TLP is a three-stage process, as detailed in 18 CFR § 16.8 for relicensing proceedings. PacifiCorp's reasons for requesting the TLP are provided in the TLP request letter filed with the Commission concurrently with the NOI and this PAD.

Insofar as the Commission approves PacifiCorp's request to use the TLP, PacifiCorp has developed a process plan and schedule to relicense the Project. For this proceeding, PacifiCorp intends to provide adequate opportunities to involve all parties and individuals who may have an interest in the relicensing. PacifiCorp will carefully document the relicensing process, including any information received from the interested parties and communication records. PacifiCorp will maintain records of licensing and other information that is publicly available. The process plan and schedule is based on actions by the Commission, PacifiCorp, and stakeholders from the filing of the NOI forward to the Commission's Tender Notice of the Application Filing. PacifiCorp plans early and frequent coordination with FERC, resource agencies, and other parties to identify potential issues and study needs early in the process. PacifiCorp will adopt an efficient and timely schedule for consultation with the stakeholders and for document production. Below is PacifiCorp's plan for communication, document distribution, handling of sensitive information, scheduling, and meetings during the pre-filing portion of the relicensing.

2.1 Communications and Stakeholder List

PacifiCorp is proposing a communication protocol to establish guidelines for effective participation and communication in the Project's relicensing process. The primary means of communication will be meetings, formal documents, email, and telephone. To establish the consultation record, all formal correspondence requires adequate documentation. Communication will occur among PacifiCorp, PacifiCorp's agents, FERC and stakeholders.

Throughout the pre-filing process, PacifiCorp will maintain a list of those who have an interest in the Project and/or its relicensing. The stakeholder list will include those interested parties, such as individuals, Indian Tribes, governmental agencies (local, state, federal), and non-government organizations. The list will include mailing addresses and available email addresses for distributing notices and documents for public review. Appendix A identifies all parties that PacifiCorp has identified that may have an interest in the relicensing process.

2.2 Document Distribution

PacifiCorp or its agent will distribute, whenever possible, all documents electronically, but may distribute hard copies of some documents for convenience or by request. PacifiCorp will distribute primary licensing documents via email with a link to its relicensing website or via attachments to emails. The website for the Ashton Project relicensing is: <u>https://www.pacificorp.com/energy/hydro/ashton.html</u>. Documents filed with the Commission will also be available from FERC's eLibrary at <u>https://elibrary.ferc.gov/eLibrary/search</u> by

searching under Docket "P-2381." Requests for hard copies of relicensing documents should be sent to the contact provided in Section 1.0 above, and should clearly indicate the document name, publication date (if known), and FERC Project No. 2381.

If possible, the licensee prefers to receive all documents electronically, in an appropriate format. Email electronic documents to PacifiCorp at the above contact identified in section 1. Hard copy documents may be mailed to the above address as well. All documents received, either electronically or by mail, will become part of the consultation record and be available for distribution to the public.

In addition, to being available on the Project's relicensing website and FERC's eLibrary, the NOI, TLP, and this PAD are available for public inspection and reproduction during normal business hours at:

Ashton Branch Fremont Library District 925 Main Street Ashton, ID 83420

2.3 Sensitive Information

Certain Project-related documents and information are considered to be Critical Energy Infrastructure Information (CEII) or Privileged. These documents are restricted from public viewing in accordance with section 388 of the Commission's regulations, 18 CFR § 388.113 and 18 CFR § 388.112. This information relates to the design and safety of the dams and appurtenant facilities, as well as information considered commercially sensitive. Anyone seeking information protected as CEII from the Commission must file a CEII request. FERC's website at: <u>https://www.ferc.gov/resources/guides/filing-guide/ceii-request.asp</u> contains additional details related to CEII. PacifiCorp will allow limited access to documents containing sensitive information regarding specific cultural and/or protected environmental resources to authorized entities.

2.4 Meetings

PacifiCorp recognizes a number of agencies, Indian Tribes, groups, and individuals may want to participate in the Project's relicensing process. PacifiCorp will work with all interested parties to develop meeting schedules that include locations and times that accommodate the majority of participants. PacifiCorp will follow the notification procedures for meetings as required by FERC regulations. PacifiCorp may schedule additional meetings to enhance the consultation process, as necessary. For public meetings, PacifiCorp will obtain either audio recordings or written transcripts of the meeting for the Project record.

For planning purposes, the proposed date for the joint meeting and site visit is any day between Wednesday, September 28, 2022, and Friday, October 28, 2022, with an exact date, time, and venue to be named later. PacifiCorp anticipates the venue location to be either in Ashton, St. Anthony, or Rexburg, Idaho.

2.5 Schedule

Table 2-1 provides an initial relicensing process plan and schedule for the Project. The process plan and schedule provide time frames for pre-filing consultation and information gathering and studies. The process plan and schedule may reflect deadlines that fall on weekend days (Saturday or Sunday) or federal holidays. As such, weekend or holiday deadlines will default to the following Monday or business day in accordance with FERC regulations. The process plan and schedule were developed in accordance with the regulations and incorporate the time frames set forth in 18 CFR §16.8.

Comments on the request to use the TLP are due within 30 days of filing the NOI, making them due on or before Monday, August 1, 2022. PacifiCorp's request to use the TLP will then be approved or denied by FERC on or before Monday, August 29, 2022, through an NOC and TLP approval. Between 30 to 60 days following the NOC and TLP approval, PacifiCorp will hold the joint meeting, a public meeting with stakeholders including agencies, Tribes, and the public, along with a site visit. Depending on the date the Commission issues the NOC and TLP approval letter, licensing participant availability, and venue availability, PacifiCorp anticipates the meeting and site visit will occur any day between Wednesday, September 28, 2022, and Friday, October 28, 2022, with the specific, date, time, and venue to be named at a later date.

Additionally, depending on consultation with resource agencies, PacifiCorp intends to distribute to resources agencies and Tribes a draft license application sometime during the spring to early-summer of 2025. PacifiCorp will then file a final license application with the Commission on or before December 31, 2025.

Regulation (18 CFR)	Activity	Responsible Party	Time Frame	Deadline
16.6(c)(1)	NOI and PAD, request use of TLP is filed with the Commission	PacifiCorp	5 to 5 ¹ / ₂ years before current license expiration (December 31, 2027)	Thursday, June 30, 2022 (earliest date, but no later than December 31, 2022)
5.3(d)(1)	Comments, if any, on TLP request are due to be filed with the Commission	Stakeholders ^a	Within 30 days of the TLP request filing	Monday, August 1, 2022 ^b
5.8(a)	Commission issuance of NOI to File License Application, Filing of PAD, and Approving Use of the TLP (i.e., NOC)	FERC	Within 60 days of NOI filing	Monday, August 29, 2022
16.8(b)(3)(i)(B)	Notification provided to the Commission and stakeholders of joint meeting and site visit	PacifiCorp	At least 15 days prior to the meeting	Anytime between Tuesday, September 13, 2022, and Thursday, October 13, 2022
16.8(i)(1)	Publish a public notice of the joint meeting and site visit in a daily or weekly newspaper	PacifiCorp	At least 14 days prior to the meeting	Anytime between Tuesday, September 12, 2022, and Thursday, October 12, 2022
16.8(b)(3)(ii)(B)	Joint meeting and site visit with stakeholders	PacifiCorp, Stakeholders	30 to 60 days after NOC and TLP approval issuance	Anytime between Wednesday, September 28, 2022, and Friday, October 28, 2022

Table 2-1.	Proposed Asl	nton Hydroelectric	Project relicen	sing process	plan and schedule.
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Regulation (18 CFR)	Activity	Responsible Party	Time Frame	Deadline
16.8(b)(5)	Comments and study requests	Stakeholders	No later than 60 days after the joint meeting and site visit	Anytime between Monday, November 28, 2022, and Tuesday, December 27, 2022
_	Study plan development	PacifiCorp, Stakeholders	Following receipt of comments and study requests from stakeholders	Anytime between Thursday, April 27, 2023, and, May 26, 2023
16.8(c)(1)	Perform field studies	PacifiCorp	_	Spring, summer, and fall of 2023 and 2024
_	Circulate Draft Study Reports and Solicit Comments	PacifiCorp, Stakeholders	After completion of field studies	Spring, early-summer 2024
16.8(c)(4)	Prepare and distribute draft license application with study reports	PacifiCorp	Produced concurrently with previous activities and following conclusion of field studies	Thursday, July 3, 2025
16.8(c)(5)	Review and provide comments on the draft license application	Resource Agencies and Tribes	No later than 90 days after receipt of the draft license application	Thursday, October 2, 2025
16.9(d)(1)	Prepare and file final license application	PacifiCorp	At least 2 years prior to license expiration	Wednesday, December 31, 2025
5.19(a)	FERC Issues Notice of Application Tendered for Filing, Solicits Additional Study Requests, and Establishes Procedural Schedule and Deadline for Amendments	FERC	Within 14 days of the final license application filing date	Wednesday, January 14, 2026

Regulation (18 CFR)	Activity	Responsible Party	Time Frame	Deadline
_	FERC license expires	FERC	_	Friday, December 31, 2027

a

Stakeholders here mean resource agencies, Indian Tribes, and members of the public likely to be interested in the proceeding. If the end of any time period falls on weekend day, or other day the Commission is closed, the filing is due the next business day (Rule 2007; § 385.2007). b

3.0 PROJECT LOCATION, FACILITIES, AND OPERATION (18 CFR §5.6(d)(2))

3.1 **Project Location**

The Project is situated on the Henry's Fork, a tributary of the Snake River, approximately 2 miles west of the City of Ashton, in Fremont County, Idaho (figure 3-1). The Project is located at the third dam on the Henry's Fork at river mile 46.5, approximately 6.0 river miles upstream of the Chester Dam Hydroelectric Project (FERC No. 11879) and 46.1 river miles downstream of the Buffalo River Project (FERC No. 1413).² The next upstream hydroelectric project on the Henry's Fork is the Island Park Hydroelectric Project (FERC No. 2973), which is 0.3 river miles upstream of the Henry's Fork's confluence with the Buffalo River. From its confluence with the Snake River, the Project is the third hydroelectric project on the Henry's Fork (figure 3-1). The two downstream hydroelectric projects are Chester Dam and St. Anthony (FERC No. 14552). The latitude and longitude for the Project are 44.0785 and -111.4969 decimal degrees, respectively. Table 3-1 lists the other hydroelectric projects and dams on the Henry's Fork, and figure 3-1 shows their respective location in relation to the Project.

² Although it does not impound waters of the Henry's Fork, the Buffalo River Project is located at the confluence of the Henry's Fork and Buffalo River and discharges directly into the Henry's Fork.

Dam/ Project Name	FERC Project No. (if applicable)	Dam Height (feet) ¹	Storage (acre-feet) ^a	Surface Area (acre) ^a	River Mile ^b	Primary Purposes ^a	Capacity (MW)	Note/Comment
Henry's Lake	_	25.2	58,700	6,050	121.2	Other	_	_
Island Park	2973	93.4	169,646	8,680	92.9	Irrigation	4.8	FERC Licensed
Buffalo River ^c	1413	12.0	60	5	92.6	Hydropower	0.25	FERC Licensed
Ashton	2381	56.0	9,900	404	46.5	Irrigation; Hydropower	6.85	FERC Licensed
Chester	11879	17.5	250	35	40.0	Irrigation	3.3	FERC Licensed
St. Anthony	14552	6.5	500	50	33.6	Irrigation; Hydropower	0.5	FERC Licensed

Table 3-1.Hydroelectric projects and dams on the mainstem of the Henry's Fork.

^a Information retrieved from the National Inventory of Dams (USACE, 2020).

^b Calculated from the Henry's Fork confluence with the Snake River proceeding upstream.

^c Impounds the Buffalo River and discharges into the Henry's Fork at its confluence.



Figure 3-1. Hydroelectric projects and dams on the Henry's Fork.

3.2 Facilities

The Project is defined as all project works and all lands and waters necessary for operation and maintenance and special purposes, such as recreation, shoreline control, or protection of environmental resources. Principal project works consists of (1) a 56-foot-high, 222-foot-long earth and rock-filled dam covered with roller-compacted concrete (RCC) on the downstream slope and a crest elevation of 5156.6 feet³; (2) an 82-foot-long reinforced concrete spillway that has six, 10-foot high radial gates; (3) a reservoir that has a gross storage capacity of 6,080 acrefeet and a surface area of 392.9 acres at a normal maximum water surface elevation of 5,155.9 feet; (4) a reinforced concrete powerhouse that contains, (a) two turbine-generator units rated at 2,000 kW, and (b) one turbine-generator unit rated at 2,700 kW; (5) a tailrace; (6) a 46/2.3- kV step-up transformer; (7) a 133-foot long, 46-kV transmission line; and (8) appurtenant facilities. Other facilities at the Project are related to recreation and include a boat ramp facility near the upper extent of the reservoir and downstream angler access. These facilities are discussed in detail below, and their locations are shown on figure 3-2.

3.2.1 Dam

Ashton Dam is a zoned earth- and rock-fill embankment dam that has a maximum height of 56 feet, a length of 222 feet, and a crest at elevation 5,156.6 feet. The crest of the dam consists of a reinforced concrete crest slab 50 feet wide by 3.5 feet thick and a 10-foot-deep concrete cutoff wall on the upstream edge. The downstream face of the earth- and rock-fill embankment is protected with RCC to accommodate passage of the probable maximum flood (overflow spillway). The upstream rock fill has an upstream slope of 4 horizontal to 1 vertical. The earth- and rock-fill embankment was reconstructed in 2012 and comprises (upstream to downstream) a rock-fill buttress, a granular transition/bedding zone, a compacted silt core, and a three-stage filter zone placed against the original rock-fill embankment. The upstream side of the original rock-fill embankment is inclined at a slope of 1 horizontal to 1 vertical. A foundation transition zone was placed beneath the silt core footprint.

The foundation contact beneath the embankment generally occurs between elevation 5,104 and 5,100 feet and consists of dense to very dense alluvial deposits of sands, gravels, and cobbles that range from 3 to 6 inches in diameter, and the interstitial spaces are tightly filled by the well-graded dense to very dense sands and gravels. A 2.5-foot-thick concrete core wall with a top at elevation 5,110.0 feet is located approximately 100 feet upstream from the centerline of the concrete crest slab and extends the full valley width.

The left abutment contact for the embankment dam consists of basalt rock that was treated during the 2012 modifications. The right abutment contact for the embankment dam consists of a 50-foot-high reinforced concrete retaining headrace wall founded on top of the abandoned (concrete filled) low-level conduits extending upstream from the powerhouse 50 feet.

³ All elevations are in PacifiCorp's local datum, unless otherwise noted. To convert to the North American Vertical Datum of 1988 add 2.972 feet.



Figure 3-2. Ashton Hydroelectric Project facilities.

A 280-foot-long, 15-foot-high diversion tunnel is located through the right abutment. The tunnel walls and arched roof are shotcrete lined and supported by steel sets, rock bolts, cable bolts, and spiling. The floor is reinforced concrete. The intake consists of a reinforced concrete control structure, two 7.5-foot-wide by 15-foot-tall stainless steel slide gates with an invert at elevation 5,110.0 feet with electrically powered gate actuators, steel trash racks and a single removable bulkhead gate. The maximum invert to the approach channel to the intake control structure is at elevation 5,114.0 feet. The exit portal is located approximately 100 feet downstream of the powerhouse and has an invert at elevation 5,107.8 feet. Figure 3-3 shows a representative photograph of the Project dam and diversion tunnel.



Figure 3-3. Project dam and diversion tunnel.

3.2.2 Spillway

The 82-foot-wide gated spillway is located on the left abutment and separated from the damcrest-overflow spillway by a reinforced concrete training wall. The reinforced concrete spillway gate piers are 2 feet wide and are anchored to the bedrock at the heel with eight 3/4-inch bars embedded 2 feet into rock. The six 10-foot-high by 12-foot-wide radial spillway gates are set on a sill at elevation 5,146.6 feet, and their top is at elevation 5,155.9 feet. The approach channel and spillway chute are excavated into bedrock. The spillway gates are operated using the single movable, electric hoist or the single hand-operated, overhead chain hoist. Figure 3-4 is a photograph of the gated spillway section of the Project dam.

The RCC overflow spillway located on the downstream side of the earth- and rock-fill embankment is 222 feet wide and 12 to 20 feet thick and has an effective slope of 1 vertical to 1.5 horizontal with 2-foot-high by 3-foot-wide steps. The overflow transition section consists of a short ogee section from the concrete crest slab to the RCC. An RCC apron extends approximately 40 feet downstream from the toe of the embankment toe with a top at elevation 5,100 feet. Three levels of horizontal drains are located at elevations 5,101, 5,110, and 5,120 feet. The RCC overflow spillway extends the full width of the downstream slope by the reinforced concrete slab varying in width from 14 to 19 feet, adjacent to the powerhouse. Figure 3-5 is a photograph of the overflow section of the Project dam.



Figure 3-4. Gated spillway section of the Project dam.



Figure 3-5. Overflow section of the Project dam.

3.2.3 Reservoir

The normal maximum water surface area of Ashton Reservoir is 388 acres at a maximum full pool elevation of 5,155.9 feet. The gross storage capacity of the reservoir is 6,119 acre-feet. Figure 3-6 is a photograph of the Project reservoir.



Figure 3-6. Project reservoir upstream of the Project dam.

3.2.4 Powerhouse

Figure 3-7 presents a photograph of the Project powerhouse. The powerhouse is a reinforced concrete structure that is 71 feet wide in the cross-canyon direction extending 65 feet, 8 inches in the upstream-downstream direction, including the buttress slab. It is founded on a reinforced concrete slab with an average thickness of 2 feet and a base elevation of 5,094.0 feet. A 2.5-foot-thick concrete armoring layer was placed on the downstream side of the powerhouse from elevation 5,114 to 5,150 feet in 2012. There is also a small, 16-foot by 27-foot office/equipment structure attached to the west end of the building (formerly the bus room). Located within the powerhouse is an electrically operated 20-ton traveling crane.

The powerhouse contains three vertical Francis turbine-generator units having a combined generating capacity of 6.7 megawatts (MW). Integral to the powerhouse are three intakes for all three generating units. Unit 1 has a vertical shaft and no spiral case (open flume) with three intake gates, 5 feet 4 inches wide by 8 feet high. Unit 1 has a nameplate capacity of 3,000 kVA (2,700 kW at 0.9 power factor) and a hydraulic capacity of 875 cubic feet per second (cfs). Units 2 and 3 are identical, and have nameplate capacities of 2,500 kVA (2,000 kW at 0.8 power factor). Both have intake spiral cases and three intake gates that are 5 feet, 4 inches wide by 11 feet, 5 inches high. Units 2 and 3 have hydraulic capacities of 850 cfs. Therefore, the maximum hydraulic capacity of the three turbine units is 2,575 cfs.

A 42-inch bypass valve was installed in the Unit 1 turbine pit as part of the 1991-1992 upgrade work on the Unit 1. The valve centerline is at elevation 5,123.0 feet, and the hydraulic operator (with manual backup) for the valve is located on the generator floor. In the event of a plant trip or loss of station service power an alarm is tripped and the valve is opened with DC battery power. When open the valve passes 300 cfs downstream.



Figure 3-7. Project powerhouse.

3.2.5 Tailrace

The tailrace, which is the river channel situated at the downstream end of the powerhouse between the river right abutment and the overflow spillway, receives the discharges from the three hydraulic turbines. The tailrace is approximately 80 feet wide, 80 feet long, and 20 feet deep. Figure 3-8 shows a photograph of the tailrace area.



Figure 3-8. Project tailrace area.

3.2.6 Step-up Transformer

A single, 46/2.3 kV step-up transformers is located just outside the powerhouse on a concrete pad, approximately 15 feet wide by 17 feet long.

3.2.7 Transmission Line

A single, 133-foot-long, 46-kV overhead transmission line takes the power produced by the Project from the step-up transformer to the substation adjacent to the powerhouse.

3.2.8 Appurtenant Facilities

Other items related to operation of the Project are: (1) three generator breakers; (2) one threephase station service transformer; (3) one three-single phase station service back-up transformer; (4) two DC battery banks; (5) one 75-kW emergency generator, and (6) other storage, maintenance, and garage buildings.

3.2.9 Recreation Sites

Reservoir Access

Reservoir access is provided to the public at the Ashton Boat Launch. This site has two boat ramps—one for drift boats and the other for powerboats; both ramps have docks. The Ashton Boat Launch has an asphalt parking area with two parking spaces that comply with the

Americans with Disability Act (ADA), 19 single parking spaces, and ADA-compliant toilet facilities. A gravel parking area can accommodate up to 26 vehicles with trailers. A day use area is also present at the site with four picnic tables and fire pits. Figure 3-9 is a photograph of the Ashton Boat Launch recreation area.



Figure 3-9. Photograph of Ashton Boat Launch recreation area.

Tailwater Access

The tailwater access area is immediately downstream of the dam and is accessible by a 550-footlong access path and bridge. The island has one picnic table; an asphalt parking area that can accommodate approximately 10 vehicles is at the entrance of the access path. Figure 3-10 shows a photograph of the tailwater access area.


Figure 3-10. Tailwater access area.

3.3 **Project Lands and Waters**

Collectively, the Project boundary encloses and consists of all lands and waters necessary for operation, maintenance, and special purposes, such as recreation, shoreline control, or protection of environmental resources. The area of lands and waters that comprise the Project is 813.07 acres, which includes 15.6 acres of federal lands administered by the U.S. Bureau of Land Management (BLM), and 301.39 acres of wetland conservation easements.⁴ No Tribal lands are within the Project boundary. The Project boundary is described by metes and bounds, and elevation contour along the reservoir's maximum full pool elevation of 5,155.9 feet. Figure 3-11 presents a general depiction of the Project boundary and federal lands within and around the Project. By order dated July 19, 2016,⁵ the Commission approved the current Project boundary. Appendix C presents the Project boundary approved by the Commission. PacifiCorp owns in simple fee or holds easements to all lands and waters within the Project boundary.

⁴ Throughout this PAD the wetland conservation easements are referred to as the "wetland complex."

⁵ See FERC Accession No. 20160719-3014.



Figure 3-11. General depiction of the Project boundary and BLM lands within and around the Project boundary.

3.4 Current Project Operations

The Project is operated as a run-of-river hydropower facility, as required by current FERC license Article 401. Run-of-river operation is assured by releasing from the Project a discharge that approximates the total reservoir inflow. Under normal conditions, run-of-river operation is accomplished by a Load Control System that adjusts the turbine discharge using all available water while maintaining a near-constant reservoir water surface level. A programmable logic controller (PLC), located in the powerhouse, adjusts the aperture of the wicket gates at the powerhouse that controls the flow to the turbines. The PLC responds to input from water level sensors on the upstream face of the dam and reacts to changes in reservoir elevations that exceed +/- 0.15 feet of a target elevation that is set in the program. The target reservoir elevation level is set to 5,155.5 feet in the summer and 5,155.0 feet in the winter.

When needed, the generators can be operated manually by an on-site operator through an operator interface terminal. Plant functions also can be monitored remotely over the supervisory control and data acquisition network by control operators at PacifiCorp's Hydro Control Center. If the plant trips (an emergency situation that automatically halts generation and closes the wicket gates to stop flow through the turbines), a 42-inch emergency bypass valve (bypass valve) automatically opens to provide 300 cfs of flow to the river downstream of the dam. This emergency bypass valve was installed as a voluntarily measure to ensure that flow is always maintained to the river downstream of the dam. An additional voluntary flow maintenance measure was implemented in 2021 through the automation of one spill gate to open and make up the approximate difference between the 300 cfs from the bypass valve and instream flow. The gate can automatically operate when the PLC is in manual or auto mode. The automated gate cannot operate if station electrical service is down or during winter ice conditions.

3.5 **Proposed Project Operations**

PacifiCorp proposes to continue to operate the Project in run-of-river mode, but proposes to set the PLC to adjust Project discharges when the reservoir water surface elevation exceeds +/-0.25 feet (+/- 3.0 inches) of the summer or winter target reservoir elevations. PacifiCorp proposes to implement this +/- 0.25-foot operating band year round. This additional +/-0.1 feet (+/- 1.2 inches) would allow the PLC to minimize plant trips and downtime caused by the existing +/- 0.15 foot operating band. PacifiCorp anticipates this proposed change would result in a downstream flow regime that is more protective of instream resources.

3.6 Current License Requirements

The current license for the Project was issued by the Commission on August 3, 1987 (effective date January 1, 1988), for a 40-year term. At the time of the license issuance, the Project was one development of the larger Ashton-St. Anthony Hydroelectric Project; the other development was the St. Anthony Hydroelectric Project. By Order Amending License dated September 13, 2013, the Commission removed from the current license the St. Anthony development; Articles 403, 407, and 409, which were germane only to the St. Anthony development; and modified Article 201 and 404. Table 3-2 describes the current license articles specific to the Project, as amended over the license term. In addition, the Project is subject to the articles set forth in the Form L-1 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Lands of the United States." Appendix D contains a copy of the current license and amendments.

Table 3-2. Summary descriptions of the current license article requirer

License Requirement	Date of Requirement
Article 201 : Requires the licensee of the Project pay to the United States annual charges for (1) reimbursing the United States the cost of administering Part I of the Federal Power Act (FPA) a reasonable amount based on authorized installed capacity (6,850 kW); and (2) recompensing the United States of the use, occupancy, and enjoyment of its lands (15.6 acres).	Order: 8/3/1987 Amended: 2/2/1990 Amended: 1/22/1992 Amended: 11/26/1993 Amended: 9/13/2013 Amended: 7/19/2016
Article 202 : Requires the licensee of the Project establish and maintain amortization reserves, pursuant to Section 10(d) of the FPA, until further order of the Commission.	Order: 8/3/1987
Article 203 : Reservation by the Commission of authority to order upon its own motion or upon the recommendation of federal or state fish and wildlife agencies or affected Indian tribes, alterations of project structures and operations to take into account to the fullest extent practicable the regional fish and wildlife program developed pursuant to the Pacific Northwest Electric Power Planning and Conservation Act.	Order: 8/3/1987
Article 301 : Requires the licensee of the Project commence construction of the modifications to the project within two years from the effective date of the license (January 1, 1988) and shall complete construction of the project within four years from the effective date of the license.	Order: 8/3/1987
Article 302 : Requires the licensee of the Project, at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections, of the final contract drawings and specifications for pertinent features of the modifications to the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.	Order: 8/3/1987 Filed: 12/19/1990
Article 303 : Requires the licensee of the Project review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction of the modifications to the project and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall submit to the Commission's Regional Director and Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and the letter(s) of approval.	Order: 8/3/1987 Filed: 12/19/1990
Article 304 : Requires the licensee of the Project file within 90 days of construction completion file revised Exhibit A, F, and G.	Order: 8/3/1987 Filed: 9/30/1992 Filed: 7/8/1993 Amended: 11/16/1993

License Requirement	Date of Requirement
Article 401 : Requires the licensee of the Project operate the Project in an instantaneous run-of-river mode for the protection of fish and wildlife resources in the Henry's Fork. The licensee, in operating the Project in an instantaneous run-of-river mode, shall at all times act to minimize the fluctuation of the reservoir surface elevation, i.e., maintain a discharge from the development so that flow in the Henry's Fork, as measured immediately downstream from the powerhouse tailrace, approximates the instantaneous sum of inflow to the project reservoir. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee and the Idaho Department of Fish and Game (IDFG).	Order: 8/3/1987
Article 402 : The following part of the Report on Fish, Wildlife and Botanical Resources, filed on December 31, 1984, as Section 3 of Exhibit E (the Environmental Report), is approved: pages E-26 to E-37 pertaining to the fishery mitigative plan for the Ashton Reservoir.	Order: 8/3/1987 Filed: 11/15/1995 Approved: 1/26/1999
Article 404: The licensee, after consultation with the IDFG and the U.S. Fish and Wildlife Service (FWS), shall develop a monitoring plan to evaluate turbine induced injury and mortality to fish resources at the Ashton Project. Within six months from the effective date of this license, the licensee shall file a copy of the monitoring plan, along with any comments from the above agencies on the plan, and a schedule for filing the results of the monitoring program. The Commission reserves the right to require modifications to the plan and the schedule. The results of the monitoring shall be submitted to the Commission according to the approved schedule, along with any comments from the consulted agencies.	Order: 8/3/1987 Filed: 6/30/1988 Approved: 9/29/1988 Filed: 10/1/1990
Article 405 : The licensee of the Project shall, after consultation with FWS and IDFG, within 18 months from the effective date of the license (January 1, 1988), file for Commission approval, a wildlife report that includes a series of maps and drawings indicating the final locations and design specifications of the 15 goose nesting structures, 10 raptor perch structures, 10 osprey nesting platforms, the bald eagle nesting platform, the cattle enclosure fence, the wetlands protected by preservation easements, and the restored grassland habitat. The report also shall include a plan for monitoring the effectiveness of the various enhancement measures and maintaining the aforementioned facilities, a schedule for filing annual monitoring reports with the Commission, FWS, and IDFG, and an implementation schedule. Agency comments on the adequacy of the wildlife report shall be included with the wildlife report. The Commission reserves the right to order changes in the final designs and in the monitoring program.	Order: 8/3/1987 Filed: 6/28/1990 Approved: 8/15/1990 Filed: 10/1/1990 Approved: 3/13/1991 Filed: 12/26/1995 Approved: 9/10/1996 Filed: 12/28/2005 Amended: 4/18/2006 Filed: 7/17/2015 Amended: 10/23/2015 Filed: 9/22/2016 Amended: 2/23/2017 Last Report: 3/21/2021
Article 406 : Requires the licensee of the Project, within one year from the effective date of this license, shall implement the plan described in the Report on Recreational Resources, filed December 31, 1984, as Section 5 of the Exhibit E (Environmental Report), pages E-49 through E-59, which provides for improved recreational facilities and operation and maintenance of a boat ramp and dock area at the Ashton Project.	Order: 8/3/1987 Filed: 12/20/1988 Approved: 5/21/1990 Filed: 9/29/2011 Filed: 9/6/2018 Filed: 10/26/2018 Amended: 10/31/2018

License Requirement	Date of Requirement
Article 408 : Requires the licensee of the Project to implement the cultural resource management plan for the Project dated July 22, 1985 to mitigate for potential effects associated with rehabilitation or replacement of Unit No. 1, and file with the Commission a report that (1) documents the turbine historical significance; (2) a plan for preserving the turbine if it is removed; (3) copies of letters from Idaho State Historic Preservation Office (SHPO) and National Park Service that provide comments on items (1) and (2) or copies of letter to Idaho SHPO and the National Park Service affording them 60 days for review and comment. Within six years of the effective date of the license (January 1, 1988), file with the Commission documentation that the turbine has been preserved or recorded in manner consisted with the plan in the report. The filing shall also provide documentation from Idaho SHPO indicating the turbine has been protected or a letter indicating that Idaho SHPO has been afford 60 days to comment and provide such a letter. Reasonable funds shall also be allocated to accomplish the above work. If any previously unidentified archaeological or historical sites are uncovered during any construction of development activity at the Project, the licensee shall stop work and consult with a qualified cultural specialist and Idaho SHPO regarding mitigation measures. The Commission reserves the right to require the licensee to perform any necessary work.	Order: 8/3/1987 Filed: 10/30/1991 Approved: 2/28/1992
Article 410 : Gives permission to the licensee of the Project to grant certain types of use, occupancies, and conveyances of project lands and waters, excluding lands within the project boundary that are lands of the United States. A reports of the certain types of conveyances are to be filed with the Commission no later than the January 31 for those granted the previous year. In addition, the licensee for the Project must consult with resource agencies and Idaho SHPO for certain types of conveyances.	Order: 8/3/1987 Last Report: 1/30/2020

3.7 Summary of Project Generation, Outflow and Dependable Capacity

At full capacity, with inflow equaling the maximum station discharge of 2,575 cfs, the Project has the capability of producing 6.7 MW of electricity. Table 3-3 provides the monthly, annual, average monthly, and average annual energy production at the Project from 2017 through 2021.⁶ From 2017 through 2021, the five-year average annual generation was 36,011 megawatt-hours (MWh), and the average monthly energy production ranged from 2,087 to 4,435 MWh.

Table 3-4 provides monthly Project outflow records for the past five years (2017 through 2021) based on flows recorded at U.S. Geological Survey (USGS) Gage No. 13046000 Henry's Fork near Ashton, Idaho. These flow records were not prorated to account for the intervening drainage at the gage because the gage is about 1.0 river mile downstream of the Project dam. There are no tributaries between the Project dam and the gage, and the drainage area upstream of the Project dam represents 99.93 percent of the drainage area at the gage.⁷ Therefore, unadjusted flows recorded at the gage are likely representative of Project outflow. Over the five-year period of flow records analyzed, the average annual outflow at the Project ranged from 1,191 to 1,570 cfs and averaged 1,437 cfs. Average monthly flows were slightly lower than the average annual flows. Average monthly flows ranged from 1,026 to 2,243 cfs. The lowest and highest flow recorded over the five-year period were 300 and 4,900 cfs, respectively. Based on mean and median monthly flows, the lowest and highest flow are typically observed in November and May, respectively.

Dependable capacity is the amount of power a project can reliably produce at any point in time should the need arise. Given that the Project is operated in run-of-river mode, generation depends on inflow. According to the outflow records described above, flows in the Henry's Fork are typically lowest during the month of November; thus, November would be the time of year when the amount of power the Project can reliably produce would be most limited. As shown in table 3-3, the average amount of energy produced by the Project during November was 2,087 MWh. Therefore, the dependable capacity of the Project is approximately 2.9 MW.⁸ The average annual plant factor is about 61.4 percent.⁹

⁶ Excludes November 2021 and December 2021.

⁷ The drainage area at the USGS Gage No. 13046000 Henry's Fork near Ashton, Idaho, is 1,097 square miles, and the drainage area at the Project dam is 1,096.2 square miles.

⁸ Equals 2,087 MWh divided by 720 (number of hours in the month of November).

⁹ Annual plant factor is the ratio of the electricity produced by a generating facility during one year to the electricity the generating facility could have produced if it had been operated at its rated capacity throughout the same year. The average annual plant factor is calculated as the average annual generation divided by the nameplate capacity multiplied by 8,760 hours per year.

	Generation (MWh)							
Month	2017	2018	2019	2020	2021	Average		
January	1,550	2,893	2,747	2,827	2,296	2,463		
February	1,588	2,430	2,628	2,569	2,118	2,267		
March	2,569	2,900	3,182	2,866	2,367	2,777		
April	4,470	3,827	4,016	3,426	2,864	3,721		
May	4,782	4,909	4,932	4,326	3,225	4,435		
June	3,849	3,856	4,085	3,406	3,416	3,722		
July	3,147	3,871	3,777	4,214	4,062	3,814		
August	3,232	3,246	3,308	3,274	2,806	3,173		
September	3,163	2,957	3,135	2,599	2,235	2,818		
October	2,855	2,410	2,769	1,976	1,504	2,303		
November	2,762	2,149	2,260	1,850	1,414	2,087		
December	2,883	2,600	2,750	2,206	1,721	2,432		
Total	36,850	38,048	39,589	35,539	30,028	36,011		

Table 3-3.Monthly, annual, average monthly, and average annual energy production at
the Project, 2017–2021.

Month/			Fl (cf	OW fs) ^a		
Year/ Statistic	Minimum	25th Percentile	Mean	Median	75th Percentile	Maximum
			Monthly			
January	356	1,020	1,117	1,170	1,250	3,290
February	319	1,030	1,130	1,170	1,250	1,580
March	386	1,150	1,246	1,250	1,350	2,110
April	748	1,380	1,896	1,700	2,310	4,900
May	743	1,850	2,243	2,200	2,700	3,790
June	352	1,590	1,766	1,740	1,940	2,740
July	300	1,560	1,773	1,750	1,980	3,060
August	532	1,420	1,522	1,500	1,660	2,130
September	753	1,210	1,316	1,310	1,440	2,000
October	426	993	1,084	1,120	1,220	1,530
November	658	956	1,026	1,060	1,150	1,490
December	326	991	1,089	1,160	1,230	1,550
Maximum	753	1,850	2,243	2,200	2,700	4,900
Minimum	300	956	1,026	1,060	1,150	1,490
Average	492	1,263	1,434	1,428	1,623	2,514
			Annual		-	
2017	344	1,160	1,473	1,360	1,650	3,570
2018	326	1,180	1,516	1,310	1,700	4,140
2019	300	1,240	1,570	1,420	1,780	3,470
2020	356	1,150	1,433	1,290	1,650	4,900
2021	319	860	1,191	1,150	1,390	2,780
Maximum	356	1,240	1,570	1,420	1,780	4,900
Minimum	300	860	1,191	1,150	1,390	2,780
Average	329	1,118	1,437	1,306	1,634	3,772

Table 3-4.Monthly and annual summaries of Project outflow for calendar years 2017–
2021.

Source: USGS (2022), as modified by PacifiCorp

^a Calculated from 15-minute flow measurements record at USGS Gage No. 13046000 Henry's Fork near Ashton, Idaho.

3.8 Single-Line Diagram

A single-line diagram that shows the transfer of electricity from the Project to the transmission grid is included as figures 3-12 and 3-13. However, single-line diagrams are considered to be Critical Energy/Electric Infrastructure Information; therefore, these figures are not included in the PAD and has been filed separately within Volume 2.

[Filed separately within Volume 2 as CEII]

Figure 3-12. The Ashton Hydroelectric Project's powerhouse single-line diagram.

[Filed separately within Volume 2 as CEII]

Figure 3-13. The Ashton Hydroelectric Project's substation single-line diagram.

3.9 Current Net Investment

The Federal Power Act (FPA) generally defines a licensee's net investment in a project as the original cost of the Project, plus additions and betterments, minus depreciation and other amounts (16 United States Code [USC] § 796 (13)). As of December 31, 2021, the net investment is \$18,571,717.19 for the Project.

3.10 Summary of Compliance History

Compliance entails a licensee's adherence with the requirements, terms, and conditions specified in its license orders, approved plans, and with Commission rules and regulations. Examples of non-compliance issues at licensed hydropower projects typically involve deviations from minimum flow requirements, reservoir water levels, water quality, and fish passage facility operations (FERC, 2015).

The Project record indicates there was one violation of Article 401 and one allegation of a violation of Article 401 since license issuance. The violation to Article 401 occurred on March 21, 1991, when planned work at the downstream St. Anthony Development required Project discharges be reduced to 300 cfs, as agreed by PacifiCorp and the Idaho Department of Fish and Game (IDFG). As a result, the Project reservoir was lowered by 3 feet, and flows downstream of the Project were reduced to 150 cfs for about five hours. The result was a fish kill. An investigation attributed the violation to a misinterpretation of performance curves that relate unit output to turbine discharge. The Commission assessed a penalty of \$10,000 to fund IDFG for fishery management activities on the Project reservoir and the Henry's Fork of the Snake River downstream of the Project dam. By letter dated March 28, 1996, the Commission acknowledged that the IDFG received the funds in full, fulfilling the mitigation requirement.

The allegation of a potential violation of Article 401 of the license was made to the Commission on September 20, 2001. The allegation surrounded flow fluctuations downstream of the Project dam that did not appear to be related to inflow. The Commission requested operation and inflow data from PacifiCorp and concluded the Project was compliant with Article 401. The Commission attributed the flow fluctuation to diurnal effects from ungaged tributaries upstream of the Project.

Issues of non-compliance also include a licensee's failure to adhere to the filing requirements of license articles (FERC, 2015). Examples of these non-compliance issues include not filing plans or reports by the due date set in the associated license article. A review of the Project record indicates that over the term of the current license, all plans and reports were filed with the Commission in a timely manner.

The FERC's Division of Hydropower Administration and Compliance (DHAC) also conducts environmental inspections of licensed and exempted projects to evaluate and assess compliance with the environmental and public use requirements of a license. Environmental inspectors look specifically at a licensee's or exemptee's compliance with license or exemption requirements for the protection and enhancement of environmental resources at the project as well as with the project's public safety plan. Since the current license was issued, DHAC staff performed an environmental inspection at the Project in 1992, 1997, and 2018. DHAC concluded, based on these inspections, that PacifiCorp has operated and maintained the Project consistent with the license. DHAC staff also noted during the inspections that PacifiCorp needs to follow-up on some updates to signage, improvements to bird nesting boxes, updates to the Project's public safety plan, and other general maintenance activities. The project record indicates that PacifiCorp promptly resolved the issues noted by DHAC's inspection staff.

3.11 Proposed New Facilities, Components to be Constructed, Plans for Future Development or Rehabilitation, and Changes in Project Operation

PacifiCorp proposes to rehabilitate generator Units 2 and 3 to improve their efficiency and increase their nameplate capacities. PacifiCorp also proposes to replace the existing turbine runners (of Units 2 and 3) with new vertical Francis runners that are also more efficient (e.g., optimized number of wicket gates, gate thickness, number of runner blades and blade angles). The new Francis runners would match the existing draft tube configuration and have hydraulic capacities within the same range as the current hydraulic turbines. These proposed upgrades would occur within the existing footprint of the existing powerhouse. With the proposed changes to turbine-generator Units 2 and 3, PacifiCorp estimates the Project could attain a maximum output of 7.5 MW under the existing and proposed run-of-river operations (see sections 3.4, *Current Project Operations*, and 3.5, *Proposed Project Operations*). Anticipated specifications for the upgraded turbine generator units would be provided in the draft license application or at the latest in the final license application.

At this time, PacifiCorp is not proposing the development or construction of new facilities or other components. PacifiCorp is not proposing to change Project operation. PacifiCorp intends to relicense the Project as it is currently licensed (see sections 3.3, *Current Project Operations*, and 3.4, *Proposed Project Operations*), using the same flow releases and head provided by the dam.

4.0 DESCRIPTION OF EXISTING ENVIRONMENT AND RESOURCE IMPACTS (18 CFR §5.6(d)(3))

4.1 General Description of the River Basin (18 CFR §5.6(d)(3)(xiii))

4.1.1 Overview

The Henry's Fork of the Snake River (Henry's Fork) is a 127-mile-long tributary of the Snake River in eastern Idaho. The river begins at the outlet of Henry's Lake in northeastern Idaho and flows in a south-southwesterly direction to its confluence with the Snake River, approximately 20 miles northeast of Idaho Falls, Idaho. The Henry's Fork drainage basin is a part of Snake River Plain and is approximately 3,330 square miles in area (figure 4.1-1; NHD, 2021). The basin is composed of the Upper Henry's Fork, Lower Henry's Fork, and Teton subbasins. The Upper Henry's Fork subbasin includes the headwaters of the Henry's Fork and Ashton Reservoir, and drains 1,095 square miles. The Lower Henry's Fork subbasin drains a slightly larger area of 1,125 square miles. The Teton subbasin includes the largest tributary to the Henry's Fork, the Teton River, and drains an area of 1,113 square miles (figure 4.1-2; NHD, 2021).



Source: NHD (2021)

Figure 4.1-1. Henry's Fork basin, subbasins, and tributaries.



Source: NHD (2021)

Figure 4.1-2. Henry's Fork basin ecoregions.

4.1.2 Dams and Diversions

Forty dams are within the Henry's Fork basin. Henry's Fork has four dams and five diversion structures on its mainstem. Figure 4.1-3 shows the location of these dams and diversions relative to the Project. The primary purpose of these mainstem dams is hydropower generation or irrigation. From upstream to downstream, the dams are: (1) Henry's Lake; (2) Island Park; (3) Buffalo River; (4) Ashton; (4) Chester; and (5) St. Anthony. Table 3-1 lists these facilities and their main characteristics. The diversions on the mainstem include the, Farmer's Friend Canals, St. Anthony Union Canal, Salem Union Canal, and the Consolidated Farmers Canal (figure 4.1-3; NHD, 2021; IDWR, 2018).



Source: NHD (2021); IDWR (2018)

Figure 4.1-3. Hydroelectric dams and diversions on the mainstem of Henry's Fork.

4.1.3 Drainage Basin's Tributary Streams

There are several perennial and intermittent named and unnamed tributaries in the Henry's Fork basin (figure 4.1-3). The 11-mile-long Buffalo River and the 39.1-mile-long Warm River are two major Henry's Fork tributaries upstream of the Project. The 65.1-mile-long Fall River and the 95.9-mile-long Teton River are the first major tributaries to the Henry's Fork downstream of the Project (figure 4.1-3; NHD, 2021).

The Upper Henry's Fork subbasin includes the headwaters of the Henry's Fork and the Project, and it drains 1,095 square miles. In total, there are about 450 miles of rivers and perennial streams and 25 square miles of lakes, reservoir, and ponds within the Upper Henry's subbasin.

4.1.4 Major Land and Water Uses

The Henry's Fork basin resides in two distinct ecoregions: the Snake River Plain and Middle Rockies (figure 4.1-2). The Project itself resides in the Dissected Plateaus and Teton Basin of the Snake River Plain ecoregion (McGrath et al., 2002). This ecoregion is used as cropland and rangeland, with sprinkler irrigation supporting agricultural practices. Natural vegetation is mostly sagebrush steppe and unforested, unlike the West Yellowstone Plateau of the Upper Henry's Fork subbasin, which is a part of the Middle Rockies ecoregion. The West Yellowstone Plateau is coniferous forest-shrubland mosaic dominated by Douglas-fir, lodgepole pine, and aspen. Recreation is an important land use, but mining, grazing, and logging also occur (McGrath et al., 2002). Water uses in the basin also include storage, hydropower, and recreation in addition to irrigation.

4.1.5 Climate

Average air temperature and precipitation within the river basin vary greatly due to the mountain ranges to the north and east. Colder air temperatures are typically observed near the headwaters of the Henry's Fork compared to those at its confluence with the Snake River. The average minimum air temperature at the headwaters is typically 22 degrees Fahrenheit (°F), while at the confluence, it is closer to 30°F. The average maximum temperature at the headwaters is typically 52°F, compared to 57°F at the confluence. Precipitation is also higher in the headwaters area, with an average of 43 inches of precipitation annually compared to the 14 inches near the conflux (U.S. Department of the Interior, 2015).

In the Project area, annual precipitation is typically near 20 inches. Summers are typically dry with monthly precipitation averaging 0.6 to 2.0 inches (table 4.1-1). December, January, May, and June are generally the wettest months. Winters are snowy, with the most snow accumulation occurring in December and January. Annually, total snowfall is typically around 70 inches. Mean monthly average air temperatures range from about 21°F to 67°F. Typical mean maximum air temperatures are above 80°F during the summer and mean low air temperatures are below 13°F (table 4.1-1).

Table 4.1-1.	Normal precipitation totals, snowfall totals, and air temperatures statistics for
	Ashton, Idaho, 1991–2020.

Month	Total Precipitation Normal (inches)	Total Normal Snowfall (inches)	Mean Max Temperature Normal (°F)	Mean Min Temperature Normal (°F)	Mean Avg Temperature Normal (°F)
January	2.31	19.8	28.9	13.4	21.1
February	1.53	10.7	32.6	16.8	24.7
March	1.29	5.3	42.3	24.5	33.4
April	1.70	2.0	53.8	31.4	42.6
May	2.24	0.0	65.3	39.7	52.5
June	2.15	0.0	73.1	45.7	59.4
July	0.64	0.0	82.6	50.9	66.7
August	0.85	0.0	82.7	48.5	65.6
September	1.17	0.0	72.5	41.8	57.1
October	1.63	1.6	57.1	32.2	44.6
November	1.90	10.5	40.1	22.7	31.4
December	2.26	20.2	29.2	14.6	21.9
Annual	19.67	70.1	55.0	31.9	43.4

Source: NOAA (no date)

4.2 Geology, Topography, and Soils (18 CFR § 5.6(d)(3)(ii))

4.2.1 Geology

The Project is near the outer edge of the Yellowstone Plateau volcanic field. The original extent of the plateau was nearly 660 square miles, including much of what is now Yellowstone National Park and a large area west of the park (Christiansen, 2001). The plateau and surrounding areas were covered during three volcanic cycles that produced granitic magma (primarily rhyolite with some basalt), ash-flow sheets, and other volcanic rock. This activity occurred over a period of approximately 2 million years during the late Pliocene and Pleistocene epochs (Hamilton, 1965).

Several large calderas located near the Project contribute to bedrock geology in the area.¹⁰ The Island Park Caldera formed during the first volcanic cycle approximately 2.1 million years ago (Christiansen, 2001). It covers an area extending from Island Park on the west to Yellowstone Lake on the east (Stelten, 2021). Ash flow from the caldera included nearly 600 cubic miles of material that formed the Huckleberry Ridge Tuff (National Research Council, 1984; Newhall and Dzurisin, 1988). This formation underlays the Project area, as shown in figure 4.2-1 (Christiansen, 2001).

¹⁰ A caldera is a large depression created by collapse of a magma dome that hardens over a volcano when it ceases to erupt (Leet et al., 1982).



Source: Lewis et al. (2012)

Figure 4.2-1. Bedrock geology of the Project vicinity.

Tuff is characterized as a relatively soft volcanic rock formed from consolidated volcanic ash (i.e., fragments generally less than 0.2 inches in diameter; Ross and Smith, 1961). The Huckleberry Ridge Tuff is a phenocryst-rich, rhyolitic ash-flow sheet. It was formed during a series of ash-flow events that were welded together by compaction and temperature to form a single bedrock feature. In the Project area, the formation is exposed at the edge of small escarpments around Ashton Reservoir and along the Henry's Fork downstream of the Project (figure 4.2-2).



Source: Cirrus (2021)

Figure 4.2-2. Rock outcropping along the Ashton Reservoir shoreline associated with the Huckleberry Ridge Tuff formation.

The Henry's Fork Caldera formed approximately 0.6 million years ago along the west boundary of the Island Park Caldera during the third volcanic cycle, which formed the Yellowstone Plateau (Christiansen, 2001). The caldera produced lava flows and cinder cones of olivine tholeiite basalt that covered southern and eastern portions of the Project area where the wetland complex is located (figure 4.2-1; Lewis et al., 2012). This geologic feature is known as the Falls River Basalt formation (Christiansen, 2001).

The Falls River Basalt formation is moderately gray in color and contains sparse crystals of plagioclase, approximately one-quarter to one-half inch across. This formation is characterized by dense, relatively thin flows with vesicular tops (Christiansen and Blank, 1972). The formation

is not exposed in the Project area because it is typically covered by 3 to 10 feet of loess (Lewis et al., 2012).¹¹

Glacial alluvium deposits are found east of the Project's wetland complex, scoured during the Pinedale and Bull Lake glaciations (figure 4.2-1; Hamilton, 1965). Over time, some of this material may have moved into the area during periods of erosion.

Active Faults and Seismicity

Historically, earthquake activity in most of the Snake River Plain has been very low (Idaho Geological Survey, 2011). However, the Project is located near the Yellowstone Tectonic Parabola formed by the juncture of the Intermountain Seismic Belt (oriented north-south) and the Central Idaho Seismic Zone (oriented east-west; Idaho Geological Survey, 2018). These two seismic features make the area east of the Project one of the most seismically active regions in Idaho. The nearest fault is located along the south border of the Island Park Caldera, approximately 4 miles north of the Project (figure 4.2-1; Lewis et al., 2012).

Seismic risk can be quantified by the motions, such as shaking, experienced at the ground surface or by structures during a given earthquake in terms of g, acceleration as a percent of gravity. According to FERC (2020), a peak-ground acceleration (PGA) of 10 percent g (0.1 g) is generally considered the minimum threshold for damage to older structures or structures not constructed to resist earthquakes. For the Project area, the USGS National Seismic Hazard Probability Mapping shows that, within a 50-year period, there is a 2 percent probability of an earthquake with an effective PGA of 20 to 30 percent g being exceeded. Similarly, within a 50-year period, there is 10 percent probability of an earthquake with a PGA of 10 to 15 percent g being exceeded (USGS, 2018a).

Based on the Richter Scale, which is a measure of the size of the earthquake at its source, the largest earthquakes to affect the region in recorded history occurred in 1959 at Hegben Lake, Montana (magnitude 7.3), 1983 at Borah Peak, Idaho (magnitude 6.9), and 2020 at Stanley, Idaho (magnitude 6.5; Idaho Geological Survey, 2018; USGS, 2020). No damage was reported during inspections of hydropower facilities or infrastructure at the Project following these earthquakes. The Project dam was inspected for cracks and other signs of earthquake damage during the rehabilitation work completed in 2013, and no impacts were observed.

4.2.2 Topography

The Project area is located at the northeast end of the Snake River Plain, which crosses the lower third of Idaho from east to west. Prominent topographic features in the region include the Rocky Mountain Range and remnants of volcanic activity that formed the Yellowstone Plateau. The Yellowstone Plateau now forms the continental divide between the northern and middle Rocky Mountains (Christiansen, 2001).

Big Bend Ridge, a prominent topographic feature near the Project, is located immediately north of the Project reservoir (figure 4.2-3). This feature is the south rim of the Island Park and

¹¹ Loess are windblown deposits.

Henry's Fork Calderas. It stands about 1,200 feet above the plain below. The slope below the caldera ridge drops to the northwest shoreline of Ashton Reservoir, divided by several canyons, including Cedar Hollow, Box Canyon, Kerr Canyon, and a canyon that contains Rattlesnake Creek.

Surface elevations in the Project area range from roughly 5,200 feet (mean sea level) near the upstream end of the reservoir shoreline and around the wetland complex ponds to about 5,100 feet at the river's edge immediately downstream of Ashton Dam. From that point, the Henry's Fork travels through a canyon and past small peaks for approximately 2.5 miles before entering a wider river valley. The valley is bordered on the south by Baldy Knoll and Canyon Creek Butte and on the north by sand dunes and the South Juniper Mountains.

The Henry's Fork joins the Snake River roughly 35 miles southwest of the Project near Menan Buttes, two of the world's largest tuff volcanic cones, created approximately 10,000 years ago (Wood and Kienle, 1992). The buttes rise 800 feet above the Snake River Plain.



Source: ESRI (2022)

Figure 4.2-3. Topography of the Project area.

4.2.3 Soils

Formation

The Fremont County, Idaho, Western Part soil survey completed by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) defined all soil types on private land in and around the Project (NRCS, 1993). Additional data are available on the nation-wide Soil Survey Geographic Data (NRCS, 2017). NRCS updates the data annually as new areas are mapped or additional analysis is completed (NRCS, 2020). Soil resources in the Project area are described from information in these two resources.

Soil in and around the Project has formed from alluvial (i.e., deposited by water), eolian (i.e., deposited by wind), glacial, and residual parent material. Alluvial parent material, primarily basalt cobbles and stones, is found on the outwash plain bordering the Henry's Fork and on south-facing slopes of Big Bend Ridge. The lower end of these slopes form tributary drainages on the north and west sides of Ashton Reservoir. Eolian deposits (identified as loess) comprise most soils east of the Henry's Fork, including the Project's wetland complex area and large areas to the south and west of Ashton Reservoir. The source of these deposits is the upper Snake River Plains. Soils adjacent to the Project's wetland complex on the east are primarily of glacial origin. Layers of glacial drift (up to 5 feet thick) are found in the area at elevations above 5,200 feet. Basalt plains (including rhyolite tuff and olivine basalt) located south and west of the Island Park Caldera are residual parent material for soil around Ashton Reservoir (NRCS, 1993).

Classification

Soil mapping is used in the sources cited above to separate the landscape into areas that have similar use and management requirements. A soil map unit represents an area dominated by one or more major kinds of soil defined by taxonomic classification of soil properties. Thirteen map units occur in the Project area, including mapped areas of water (table 4.2-1; figure 4.2-4). Soil map units cover 408.1 acres, roughly 50 percent of the Project area. The other 50 percent is designated as water.

Мар		Area		Erodibility K-factor ^a	
Unit Symbol	Map Unit Name	Acres	Percent	(Whole Soil)	Erosion Potential ^b
35	Haploxerolls-Rock outcrop complex, very steep	20.0	2.5	0.10	Low
50	Kucera-Lostine silt loams, 2–4% slopes	110.4	13.6	0.37	Moderate
51	Kucera-Lostine silt loams, 4–8% slopes	3.8	0.5	0.37	Moderate
53	Kucera-Sarilda very fine sandy loams, 1–4% slopes	0.1	<0.1	0.32	Moderate

Table 4.2-1.	Soils series, their total area,	and erodibility within t	he Project boundary.
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Мар		Area		Erodibility K-factor ^a	
Unit Symbol	Map Unit Name	Acres	Percent	(Whole Soil)	Erosion Potential ^b
54	Kucera-Sarilda silt loams, 2–6% slopes	150.7	18.5	0.37	Moderate
69	Marotz silt loam, 1–4% slopes	14.7	1.8	0.37	Moderate
70	Marotz silt loam, 4–8% slopes	6.5	0.8	0.37	Moderate
103	Rock outcrop-Sadorus complex, 4–50% slopes	93.2	11.5	0.17	Low
106	Sadorus-Kucera complex, 1–6% slopes	2.9	0.4	0.24	Moderate
108	Sarilda-Rock outcrop complex, 1–6% slopes	4.1	0.5	0.43	High
121	St. Anthony gravelly sandy loam, 0–4% slopes	1.6	0.2	0.05	Low
145	Vadnais-Sadorus-Rock outcrop complex, 2–8% slopes	0.1	<0.1	0.37	Moderate
160	Water	405.4	49.8	—	_
	TOTAL	813.5	100	_	_

Source: NRCS (2021), as modified by PacifiCorp

^a K-factor is an index value that ranges from 0.02 to 0.69 which indicates the susceptibility of a soil to sheet and rill erosion; the higher the value, the more susceptible the soil is to erosion.

^b Follows Michigan State University, Institute of Water Research (2002), such that K-factor values that range between 0.05 to 0.2 are low, 0.25 to 0.4 are moderate, and those > 0.4 have high erosion potential.

^c "-" indicates the soil map unit has no K-factor.



Source: NRCS (2021), as modified by PacifiCorp Figure 4.2-4. Soils of the Project area.

Most soil map units in the Project area have properties of silt loam or a variation of sandy loam (i.e., very fine sandy loam or gravelly sandy loam). The remaining units are a combination of two or more major soils, rock outcrops, and other areas without vegetation. These units are called complexes because of the intricate patterns they form on the landscape that prevent mapping them separately. Each of these groupings is discussed below.

Map units 51, 69, 70, and 106 are silt loam soils adjacent to the shoreline around the Project reservoir (table 4.2-1; figure 4.2-4). They occur along the base of slopes near the confluence of the reservoir and Willow Creek. Map unit 121 is a gravelly sandy loam found on the west shoreline of the reservoir, approximately 1 mile upstream of the dam. Each map unit covers less than 1 percent of the Project area, with the exception of map unit 69 (1.8 percent) (table 4.2-1; figure 4.2-4). A small portion of the Project area (< 0.1 percent) due west of the reservoir is covered by soil map unit 53 (table 4.2-1; figure 4.2-4).

The Project reservoir is primarily bordered by soil map units with a rock outcrop complex, including units 35, 103, 108, and 145 (table 4.2-1; figure 4.2-4). Unit 35 borders both sides of the reservoir downstream of the Highway 20 bridge and the east shoreline just upstream of the dam. Unit 103 borders most of the mid-reservoir areas on the east and west shores. The other two soil map units with rock outcrop complexes, 108 and 145, are found on the west side of the reservoir between the dam and Cedar Hollow.

Around the Project's wetland complex, Unit 54 covers 150.7 acres, more area than any other soil map unit (table 4.2-1; figure 4.2-4). Unit 50 covers the remainder of the wetland complex area (figure 4.2-4).

<u>Chemistry</u>

The ability of soil to hold and release nutrients and other chemicals important to plant growth and other biological, chemical, and physical processes is primarily due to the ionic charge of soil particles–the soil pH. Clay and organic matter in soils have a net negative charge, which allow them to attract and hold positively charged particles (i.e., cations) (Brady and Weil, 2002).

Soil pH in the Project area is generally neutral but can be mild to moderately alkaline (i.e., basic) in some areas, especially around the wetland complex, where higher levels of soil microbial activity occur. Most soils in the Project area have a clay content of 5 to 20 percent and organic matter of 1 to 5 percent that supports plant requirements for range and agricultural use (NRCS, 1993). Soil near the wetland complex has similar levels of clay and slightly higher amounts of organic matter compared to those around the Project reservoir.

<u>Stability</u>

Soil survey descriptions of soil map units include erodibility and hazard of water erosion. Erodibility, denoted as K-factor, is rated on a scale from 0.02 to 0.69 and indicates the inherent susceptibility to erosion of the whole soil (including rock fragments) from sheet and rill

erosion.¹² In general, the larger the number, the more susceptible the soil is to sheet and rill erosion by water (NRCS, 2021). The potential for erosion is based on soil properties that indicate erosion potential (e.g., texture) and landscape factors (e.g., slope and location) that are conducive to erosion by water. Most soil map units in the Project have a moderate potential of erosion (table 4.2-1). Only one soil map unit (108) has a high potential for erosion. This soil occurs along the reservoir shoreline for about 0.5 miles upstream of the Project dam (figure 4.2-4).

Potential for mass movement by soil or any surface material in the Project is primarily a function of gravity and slope. No soil units are inherently prone to movement or instability. Landslide coverage in Idaho has been recently updated (Lifton et al., 2021). This database was reviewed, and no features were identified in or near the Project. Therefore, the potential for mass soil movement in the Project area is likely very low.

Management Factors

Management factors for Project soil units include primarily agricultural concerns such as depth to bedrock, rock outcrops, cobbles and boulders, permeability, short growing season, and erosion by wind and water. With the exception of erosion, no factors were identified that could be addressed by land management within the Project. Recommendations for managing erosion include proper application of irrigation and maintaining vegetation cover.

4.2.4 Reservoir Shoreline and Streambanks

Shorelines extend for roughly17 miles around the Project reservoir and 9 miles around ponds in the wetland complex. Reservoir shorelines are generally defined by one of two bank forms, either an abrupt edge bordered by a rock outcropping with slopes 100 percent or greater, or banks with a moderate-to-low slope less than 50 percent. These two bank forms roughly correspond to the soil map units discussed above that include either soil/rock outcrop complexes or silt loam/sandy loam soil types, respectively.

Shorelines with rocky outcrops are generally found near the far upstream end of the reservoir or along the middle to lower downstream end. The remaining reservoir shorelines, as well as shorelines around ponds in the wetland complex, are composed primarily of silt or sandy-loam soils with moderate or low surface slopes.

Bank forms at the reservoir and the wetland complex typically have a consistent slope away from the water without undercuts or other eroded features. This shape is due in part to reservoir management. The Project reservoir is managed as run-of-river, resulting in a water surface that varies seasonally but stays consistent in the short term (i.e., daily or weekly). Therefore, reservoir shoreline areas typically do not experience erosive forces created by fluctuating water levels.

¹² Sheet erosion is the relatively uniform removal of soil from the surface by water resulting from precipitation. Rill erosion, follows sheet erosion, and is initiated when water concentrates in small channels as it runs off the soil surface.

A single shoreline segment approximately 150 feet long, located on the north side of the reservoir between the confluence of Willow Creek Canyon and Rattlesnake Creek, exhibits potential for erosion (figure 4.2-5). The main current through the reservoir takes a right-angle turn to the southwest at this location. This change, along with the southern exposure and occasional boating activity, could direct waves to the north shoreline, resulting in limited erosion at this site. The extent of this feature is stable and has not changed over time, and vegetation is becoming established on bare soil surfaces (personal communication, M. Stenberg, Project Manager, PacifiCorp, and E. Duffin, Cirrus, Logan, UT, October 5, 2021).



Source: Cirrus (2021)

Figure 4.2-5. Eroded shoreline segment on the north side of Ashton Reservoir between the confluence of Willow Creek Canyon and Rattlesnake Creek.

Where soil extends to the water's edge the shorelines typically support grass cover (figure 4.2-6). At some locations, agriculture (i.e., crops or grazing) or recreation affect vegetation cover, and native vegetation is not present. Shoreline cover types around the reservoir and wetland complex ponds are described in section 4.6. Upland vegetation (i.e., shrubs and grass) with moderate rooting depth (i.e., greater than 6 inches) covers the ground surface in most areas near the reservoir, Some reservoir shoreline areas are covered by rocks with limited vegetation growing in cracks. Vegetation around the wetland complex ponds is primarily emergent (e.g., cattails and bulrush) and scrub shrub (e.g., willow) wetland, as discussed in detail in section 4.6.



Source: Cirrus (2021)

Figure 4.2-6. Perennial grass shoreline located on the east side of Ashton Reservoir.

Bank stability is high in shoreline areas around the Project reservoir and the wetland complex. Stability is maintained by consistent vegetation cover and rock outcrops. Existing run-of-river operation also helps maintain soil stability by minimizing water surface fluctuations.

4.3 Water Resources (18 CFR §5.6(d)(3)(iii))

4.3.1 Water Quantity

Hydrology and Streamflow

Hydrology in the Henry's Fork is driven by a combination of snowmelt runoff, groundwater discharge and recharge, tributary inflow, and irrigation return flow. Collectively, these processes and the interactions among them have changed over time from water management and use practices (Reclamation, 2012). Effects from these practices are manifested by a decrease in annual reach gain. Reach gain in the lower Henry's Fork averaged 247,677 acre-feet/year from 1978 through 2000, and 34,108 acre-feet/year since that time (Van Kirk, 2020).

The Henry's Fork drains two major watersheds—the Upper Henry's Fork (HUC17040202) and the Lower Henry's Fork/Teton River (HUC17040203; figure 4.3-1). Together these watersheds make up the Henry's Fork basin, covering a total area of 3,333 square miles. The Upper Henry's Fork and the Lower Henry's Fork/Teton River basins are 1,095 square miles and 2,238 square miles in area, respectively. The Project dam is the point along the Henry's Fork that defines the Upper Henry's Fork boundary.



Figure 4.3-1. Contributing tributaries to Ashton Reservoir and USGS gage location in the vicinity of the Project.

The total surface water supply for the Henry's Fork basin is approximately 2.5 million acre-feet per year. Contributions from the Upper Henry's Fork basin are roughly 48 percent of the total volume, or 1.2 million acre-feet. Tributary flow contributions to the Henry's Fork from the Fall River and Teton River (downstream of Ashton Reservoir) are approximately 28 percent and 24 percent of the total water surface supply, respectively (Reclamation, 2012).

Several USGS gages along the mainstem of the Henry's Fork and its tributaries monitor streamflow in the Henry's Fork basin. The nearest gage relative to the Project is USGS Gage No. 13046000 Henrys Fork near Ashton, Idaho, located roughly 1 mile downstream of the Project dam (figure 4.3-1). This gage records stage height in feet and discharge in cubic feet per second continuously at 15-minute intervals and has a period of record from October 1, 1993, to the present. The gage record of daily average flow extends back to April 1, 1890. The gage is currently operated and maintained by the USGS Idaho Water Science Center. The drainage area at the gage is 1,097 square miles.

There are no bypassed reaches, perennial tributaries, or other major inflow or outflow sources between the Project dam and the gage. The intervening drainage between the Project dam and gage is approximately 0.2 percent of the drainage area at the gage. Therefore, unadjusted (i.e., not prorated) flows recorded by the gage are likely representative of Project outflow.

Table 4.3-1 presents unadjusted mean monthly and annual mean, median, maximum, minimum flows at the USGS gage downstream of the Project based on water years 1992 through 2021. In addition, table 4.3-1 presents the instantaneous maximum and minimum flows for water years 1993 through 2021. Mean monthly flows over the period of record analyzed range from 1,091 cfs in November to 2,522 cfs in May. Flows increase in April and peak in May in response to spring snowmelt then steadily decrease over the rest of the summer.

]	Daily Averag	Instantaneo	us ^a (1993-2021)		
Month/ Time period	Mean (cfs)	Median (cfs)	Maximum (cfs)	Minimu m (cfs)	Maximum (cfs)	Minimum (cfs)
January	1,143	1,130	2,260	629	3,290	258
February	1,141	1,125	1,980	571	2,580	171
March	1,183	1,140	2,070	679	3,080	266
April	1,694	1,530	4,950	755	5,810	298
May	2,522	2,150	6,090	1,150	7,030	357
June	2,139	1,940	6,550	1,090	7,280	352
July	2,023	2,040	3,070	1,230	3,770	300
August	1,815	1,810	2,540	1,090	3,190	426

Table 4.3-1.Monthly and annual flow statistics measured at USGS gage 13046000, Henrys
Fork Near Ashton, Idaho.

	Daily Average (1992-2001)				Instantaneous ^a (1993-2021)	
Month/ Time period	Mean (cfs)	Median (cfs)	Maximum (cfs)	Minimu m (cfs)	Maximum (cfs)	Minimum (cfs)
September	1,464	1,440	2,570	769	3,440	367
October	1,165	1,110	2,040	533	2,120	234
November	1,091	1,030	1,980	532	2,180	307
December	1,119	1,110	1,900	525	2,270	298
Annual	1,544	1,400	6,550	525	7280	171

Source: USGS (2021)

^a Maximum and minimum values are based on 15-minute data collected 1993 through 2021 because the period of record for instantaneous flows is from October 1993 to present.

The annual flow duration curve at the Project is presented in figure 4.3-2. Monthly flow duration curves in figures 4.3-3 through 4.3-6 show the percent of time that specified discharges at the USGS gage downstream of the Project were equaled or exceeded during each month. These curves indicate that, except for spring runoff (April through June), flows through the Project are relatively consistent. However, the summary of flow records presented in table 4.3-1 indicates that November is the month when flow in the Henry's Fork is typically the lowest. Therefore, November flows would be used to estimate the Project's dependable capacity (see section 3.7, *Summary of Project Generation, Outflow and Dependable Capacity*).

The 7-day, 10-year low flow statistic (7Q10) is the lowest 7-day average flow that occurs, on average, once every 10 years. USGS estimates the 7Q10 statistic at the stream gage downstream of the Project to be 533 cfs (USGS, n.d.). The 7Q10 flow at the Project dam is equaled or exceeded approximately 99.9 percent of the time on an annual basis.



Source: USGS (2021)

Figure 4.3-2. Annual flow duration curve based on continuous flow measurements (1991–2020) at USGS gage 13046000, Henry's Fork near Ashton, Idaho.


Source: USGS (2021)

Figure 4.3-3. January, February, and March flow duration curves based on continuous flow measurements (1991–2020) at USGS gage 13046000, Henry's Fork near Ashton, Idaho.



Source: USGS (2021)

Figure 4.3-4. April, May, and June flow duration curves based on continuous flow measurements (1991–2020) at USGS gage 13046000, Henry's Fork near Ashton, Idaho.



Source: USGS (2021)

Figure 4.3-5. July, August, and September flow duration curves based on continuous flow measurements (1991–2020) at USGS gage 13046000, Henry's Fork near Ashton, Idaho.



Source: USGS (2021)

Figure 4.3-6. October, November, and December flow duration curves based on continuous flow measurements (1991–2020) at USGS gage 13046000, Henry's Fork near Ashton, Idaho.

Project Reservoir

The Project reservoir is roughly 4.2 miles long (see figure 3-2). At the normal maximum water surface elevation of 5,155.9 feet, the surface area of the reservoir is approximately 388 acres, and the gross storage capacity is 6,119 acre-feet (Cirrus and ERI, 2010). At the lowest mean monthly flow of 1,091 cfs (November), the flushing rate of the reservoir would be about 2.8 days, whereas the flushing rate at the highest mean monthly flow of 2,522 cfs (May) would be approximately 1.2 days (table 4.3-1). The shoreline around the reservoir is approximately 17 miles long. A bathymetric survey of the reservoir performed in 2010, indicates the average depth of the reservoir ranges from 20 to 25 feet, and the maximum depth is approximately 60 feet (Cirrus and ERI, 2010). Figure 4.3-7 is presents a bathymetric map of the Project reservoir. Figure 4.3-8 presents average reservoir water surface elevations from 2017 through 2021.

As required by Article 401 of the current license, the reservoir is managed in an instantaneous run-of-river mode. This requirement is met by maintaining a near constant reservoir water level through the use water-level sensors installed on the upstream face of the dam that are programmed to trigger a PLC to adjust generation if reservoir elevations exceed +/-0.15 feet of a set target elevation. Currently, there are two target elevations: 5,155.5 feet during the summer, and 5,155.0 feet during the winter (PacifiCorp, 2019). When triggered, the PLC adjusts the flow through the turbines to maintain the reservoir water surface elevation with +/-0.15 feet of the target elevation. If inflow exceeds the capacity of the Project, spill gates can be manually opened to pass flows in excess of plant capacity.

Project Tailwaters

The Project tailwaters are located on the Henry's Fork between the dam and the downstream FERC Project boundary (figure 3-2). In total, the tailwater is approximately 2.2 acres. Discharge from the powerhouse enters a deep pool, then flows south through a narrow canyon approximately 400 feet to the Project boundary (figure 3-2). The normal water surface elevation of the Project tailwater is 5,093.4 feet.



Source: Cirrus and ERI (2010)

Figure 4.3-7. Bathymetric map of Ashton Reservoir.



Source: PacifiCorp (2021)



Water Uses

Water development in the Henry's Fork watersheds includes three large storage reservoirs, five hydroelectric powerplants, and numerous irrigation diversions (Reclamation, 2012). Each of these facilities influences flow in the Henry's Fork during certain times of the year. Their influence is greater during dry years when streamflow is less (Reclamation, 2004).

Water use by the Project is primarily for power generation. The Project is operated in run-ofriver mode and does not store water in the Project reservoir. A small amount of water is diverted to irrigate pastures in the wetland complex.

Minidoka Project

The Project is located within the upper portion, but not a facility of, Reclamation's Minidoka Project. The Minidoka Project is composed of several large water developments that begins in northwest Wyoming and extends downstream for more than 300 miles. The purpose of the Minidoka Project is to store flows later to be released for irrigation, flood control, and hydroelectric generation. The only Minidoka project development that is upstream of the Project is the Island Park Dam facility. The Island Park Dam facility captures and stores flow of the Henry's Fork and later releases them primarily for irrigation purposes (Stene, 1997). As a result, the timing and volume of inflow to the Project is largely regulated according Island Park Dam operations (Reclamation, 2012).

Park Reservoir has a storage capacity of 135,000 acre-feet with an annual fill target of April. Reservoir discharge is managed during the irrigation season to maintain 1,200 cfs at St. Anthony (USGS gage 13050500) except for low runoff years when an operating target of 1,000 cfs is maintained at Rexburg (USGS gage 13056500). This practice accounts for the relatively constant inflow to Ashton Reservoir. Winter discharge from Island Park Reservoir is determined in October or November of each year, based on carryover storage and fall inflow (Reclamation, 2012). The Fremont-Madison Irrigation District currently manages Minidoka Project operations in Fremont County and other areas of the eastern Snake River Plain.

Water Discharges

Section 402 of the Clean Water Act established the National Pollutant Discharge Elimination System program to limit pollutant discharges into streams, rivers, and bays. In Idaho, IDEQ administers the program as the Idaho Pollutant Discharge Elimination System. IDEQ issues permits for all point source discharges to surface waters, except on Tribal lands, and issues three types of permits: municipal, industrial, and general permits. IDEQ maintains a list of permit holders. This list was reviewed for active permits that show discharge to the Henry's Fork.

Ashton City maintains a three-cell lagoon system that is used to discharge to a tributary flowing into Ashton Reservoir during the non-growing season. Wastewater from the lagoon was land-applied during the growing season (IDEQ, 2014). Beginning in early 2019, the facility was updated to 100 percent re-use (personal communication, J. McDermott, IDEQ, Duffin, E., Cirrus, March 14, 2022). Land application occurs on up to 77 acres of land adjacent to the wetland complex and 1.2 miles east of the Project reservoir. No surface runoff is permitted from this area. No permits that discharge to the Henry's Fork were identified above Ashton Reservoir. The town of St. Anthony discharges to the Henry's Fork about 14 miles downstream of Ashton Reservoir.

Water Withdrawals and Water Rights

The Idaho Water Resource Board holds minimum streamflow water rights on the Henry's Fork. These water rights are junior to the U.S. Bureau of Reclamation's (Reclamation) operation of Island Park Dam (Reclamation, 2012). No flow agreements are in place with upstream or downstream developments or stakeholders that affect management of the Project reservoir (PacifiCorp, 2019).

PacifiCorp holds non-consumptive water rights in the Henry's Fork that are beneficially used for power generation at the Project. Table 4.3-2 shows water rights in the Project area, including those held by PacifiCorp associated with the Project and a water right held with the Madison-Freemont Irrigation District. The irrigation water right allows PacifiCorp to apply 6 acre-feet of water annually, diverted from the Farmer's Own Ditch to pasture areas in the wetland complex. The points of diversion for water rights in or immediately adjacent to the Project area are shown in figure 4.3-9.

Water Right	Rate (cfs)	Volu me (acre -ft)	Period of Use	Туре	Priority
21-10635	-	1.4	Storage Jan 1–Dec 31	Decree	7/1/1900

Table 4.3-2.	Water rights in the	Ashton Project area.
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Water Right	Rate (cfs)	Volu me (acre -ft)	Period of Use	Туре	Priority
21-10906	0.4		Apr 1–Oct 31	Decree	10/31/1950
21-11165	3.26		Apr 1–Oct 31	Decree	4/1/1934
21-12157	0.02		Jan 1–Dec 31	Decree	6/28/1934
21-12158	0.02		Jan 1–Dec 31	Decree	6/28/1934
21-12948	0.32		Apr 1–Oct 31	Decree	6/23/1978
21-12965	1.6		Apr 1–Oct 31	Decree	6/1/1890
21-12966	0.4		Apr 1–Oct 31	Decree	6/1/1890
21-13067	0.01	0.7	Apr 1–Nov 1	License	4/12/1991
21-13108	2.98		Apr 1–Oct 31	Decree	6/1/1890
21-13109	0.02		Apr 1–Oct 31	Decree	6/1/1890
21-170	4.14		Apr 1–Oct 31	Decree	6/1/1893
21-171	2.5		Apr 1–Oct 31	Decree	6/1/1947
21-172	2.5		Apr 1–Oct 31	Decree	4/1/1957
21-2123	1.36		Apr 1–Oct 31	Decree	9/7/1961
21-4026	0.02		Jan 1–Dec 31	Decree	11/19/1956
21-48	34		Apr 1–Oct 31	Decree	4/5/1896
21-49	12		Apr 1–Oct 31	Decree	5/1/1904
21-7153A	0.35		Apr 1–Oct 31	Decree	6/23/1978
21-7167	1	198	Apr 1–Oct 31	Decree	4/19/1979
21-7214	-	49	Storage Jan 1–Dec 31, Irrigation Apr 1–Oct 31	Decree	11/10/1980
21-7278	-	19	Storage Jan 1–Dec 31, Irrigation Apr 1–Nov 1	Decree	5/7/1981
21-73B	4		Apr 1–Oct 31	Decree	11/5/1895
21-73D	4		Apr 1–Oct 31	Decree	11/5/1895
21-73F	3.92		Apr 1–Oct 31	Decree	11/5/1895
21-73J	317.66		Apr 1–Oct 31	Decree	11/5/1895
21-7363ª	75	6,119	Jan 1–Dec 31	License	Jul 22, 1985
21-12915ª	1,000	_	Jan 1–Dec 31	Decree	Mar 7, 1924

Pre-Application Document

Water Right	Rate (cfs)	Volu me (acre -ft)	Period of Use	Туре	Priority
21-12916 ^a	500	-	Jan 1–Dec 31	Decree	Nov 1, 1915
21-12917 ^a	1,000	-	Jan 1–Dec 31	Decree	Jan 16, 1913
Freemont-Madison shares ^a	-	6	Jan 1–Dec 31	License	Jul 22, 1985
21-75	3	-	Apr 1–Oct 31	Decree	6/1/1894

Source: PacifiCorp (2022b); IDWR (2022) ^a Water rights held by PacifiCorp.



Figure 4.3-9. Points of diversion for water rights in the project area.

4.3.2 Projected Future Uses of Project Waters

According to Idaho Water Resources Board (2012), Idaho's power demand is expected to increase substantially over the next several decades as the population of the state continues to grow. Although most cost effective and flexible sites have been developed, there will be opportunities to increase hydroelectric generating capacity while preserving environmental protection. These include enhancing incremental capacity at existing sites through new technologies that yield greater energy efficiency, adding generation capacity at existing dams, and developing generation capacity in conjunction with the construction of new water storage projects. It is reasonable to expect that, as the population continues to grow, technologies develop, and demand for renewable energy production increases, the addition of generation capacity and improvement of generation efficiency at the Project and other hydropower projects and developments within the Henry's Fork basin would be explored.

In addition, future land use in Fremont County will likely follow existing trends of increased urban development and associated decreases in agricultural land use (Fremont County, 2008). This change could affect the operation of dams upstream of the Project, including a need to release more water from reservoirs (Reclamation, 2012). For instance, irrigated lands in Fremont County have experienced water shortages during periods of drought, ranging from 20 to 80 percent. Drought strategies are in place to mitigate economic harm caused by future water shortages. These measures include increasing spring crops, crop rotation (e.g., spring grain and seed potatoes), and rotational fallow or dryland pasture. Projections of climate change indicate an expanded growing season that would start earlier and end later. As such, the amount of water withdrawn from the Henry's Fork upstream of the Project may vary in response to the needs of the water-right holders around the Project.

4.3.3 Water Quality

Surface Water Quality Standards

Pursuant to Sections 39-105 and 39-3601 et seq., Idaho Code, the Director of IDEQ is to formulate and recommend to the Idaho Board of Environmental Quality such rules, regulations and standards as may be necessary to deal with problems related to water pollution, with the purpose of safeguarding the quality of the waters of the state. This is accomplished through the administration and enforcement of water quality standards. Water quality standards define the designated beneficial uses of a water body and the quality of the water (i.e., criteria) necessary to support those uses.

Idaho surface water quality standards include three elements:

- Beneficial Uses: Uses of the waterbody (e.g., recreation, water supply, aquatic life, agriculture, etc.).
- Criteria: The level of water quality needed to protect beneficial uses (e.g., numeric concentrations and narrative requirements).
- Antidegradation: A policy to maintain and protect existing uses and high-quality waters.

Waterbodies are designated in Idaho to protect water quality for existing or designated uses. Wherever attainable, the designated beneficial uses for which the surface waters of the state are to be protected include aquatic life, recreation, water supply, wildlife habitats, and aesthetics. Beneficial uses are designated according to water body unit unless designated otherwise. Use designations are made for each water body or segment whether or not they are being attained or are fully supported at the time of designation.

In the vicinity of the Project there are two waterbody units, also termed assessment units. These two assessment units are within the Upper and Lower Henry's Fork subbasin, respectively, and are separated by the Project dam (figure 4-1). The upper basin assessment unit, (ID17040202SK001_06) extends 10.9 river miles from the Henry's Fork confluence with the Warm River to the Project dam. This unit differentiates the river section from the Project reservoir with a designation of (ID17040202SK001_06L). The lower basin assessment unit (ID17040203SK012_06) extends 6.3 river miles from the Project dam to the Henry's Fork confluence with the Falls River.

Both assessment units have "COLD/SS," "PCR," and "DWS" beneficial use designations. The "COLD/SS" designation is for aquatic life, meaning it is a cold body of water supporting salmonid (i.e., trout) spawning. The "PCR" designation is for recreation and means the water body is to support primary contact recreation, such as swimming, and is to include the beneficial uses of secondary contact recreation, such as fishing and boating. Likewise, the "DWS" designation indicates the assessment unit is to support domestic water supply, such that the water quality is appropriate for use as untreated raw water. Table 4.3-3 lists and describes applicable criteria for the designated uses of the two assessment units that encompass the Project.

Table 4.3-3.Applicable water quality standard criteria for the designated uses of the assessments units that encompasses the
Project.

Criteria	Administrative Code (58.01.02-)	Numeric and/or Narrative Description	Location in Project Area	Time of Year
Floating, suspended or submerged matter	200.05	Surface waters of the state shall be free from floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses	All areas	All year
Excess nutrients	200.06	Surface waters of the state shall be free from excess nutrients that can cause visible slime growths or other nuisance aquatic growths impairing designated beneficial uses	All areas	All year
рН	250.01.a	Between 6.5 and 9.0	All areas	All year
Total dissolved gas	250.01.b	Not to exceed 110% of saturation at atmospheric pressure at the point of collection	All areas	All year
	250.02.a.i through iii	Shall exceed 6.0 milligrams/liter (mg/L) at all times. This standard does not apply to the bottom 20% of the water column in lakes and reservoir where depths are 25- m or less or waters of the hypolimnion of stratified lakes and reservoirs	Reservoir	All year except during salmonid spawning and incubation
Dissolved oxygen	250.02.f.i(1)(a) through (b)	The intergravel oxygen one day minimum shall not be less than 5.0 mg/L and the seven day average mean shall not be less than 6.0 mg/L	All areas	Salmonid spawning and incubation ^a
	250.02.f.i(2)(a)	One day minimum not less than 6.0 mg/L or 90% saturation, whichever is greater	All areas	Salmonid spawning and incubation ^a
	276.02	A 30-day mean no less than 6.0 mg/L, a 7-day mean minimum, no less than 4.7 mg/L, and an instantaneous minimum no less than 3.5 mg/L	Downstream of Ashton dam where all	June 15 – October 15

Criteria	Administrative Code (58.01.02-)	Numeric and/or Narrative Description	Location in Project Area	Time of Year
			waters combine and mix	
Water 250.02.b		22 degrees Celsius (°C) or less with a maximum daily average of no greater than 19°C	Reservoir	All year except during salmonid spawning and incubation
r	250.02.f.ii	13°C or less with a maximum daily average no greater than 9°C	All areas	Salmonid spawning and incubation ^a
	250.02.e	Below any applicable mixing zone set by the IDEQ, shall not exceed background turbidity by more than 50 NTU instantaneously or more than 25 NTU for more than 10 consecutive days	All areas, except the location of a public water intake	All year
Turbidity	252.01.b(1)	As measured at any public water intake, shall not be greater than 5 NTU above background when background is 50 NTU or less, or no greater than 10% above background when background is greater than 50 NTU and less than 250 NTU, or no greater than 25 NTU above background when background is 250 NTU or greater	Public water intake	All year
<i>E-coli</i> bacteria	251.01.a	Not to contain concentrations exceeding a geometric mean of 126 organisms per 100 mL based on five samples taken every three to seven days over a 30 day period	All areas	All year
	251.01.b.ii and iii	If a single sample has 406 organisms per 100 mL then sample pursuant to 251.01.a	All areas	All year

^a The salmonid spawning and incubation period is determined by IDEQ.

Clean Water Act Section 303(d) Listing of Impaired Waters, and Section 305(d) Assessment and Reporting

Under section 303(d) of the Clean Water Act, and in adherence with federal water quality planning and management regulations (40 CFR Part 130), all states are required to develop lists of impaired waters, commonly referred to as the 303(d) list. The list includes lakes, ponds, rivers, and streams whose water quality does not meet state-defined water quality standards. Each state's list must be updated every 2 years and submitted to the United States Environmental Protection Agency (EPA) for approval.

The Clean Water Act requires a Total Maximum Daily Load plan (TMDL) to be developed for waters on the list and to provide a schedule for TMDL completion. A TMDL is a regulatory term of the Clean Water Act that describes a plan for bringing impaired waters into compliance with approved water quality standards and designated uses. TMDLs specify the maximum amount of a pollutant a waterbody can receive while still attaining the approved water quality standards and designated uses.

IDEQ is the state agency responsible for water monitoring, water quality assessments, and state water regulations. IDEQ created a categorical classification to determine whether a waterbody or waterbody segment attains all water quality standards and applicable designated uses. Each waterbody or waterbody segment may be listed in the following categories or subcategories:

- Category 1 Waters are wholly within a designated wilderness or 2008 Idaho Roadless Rule "Wild Land Recreation" area and are presumed to be fully supporting all beneficial uses.
- Category 2 Waters are fully supporting those beneficial uses that have been assessed. The use attainment of the remaining beneficial uses has not been determined due to insufficient (or no) data and information.
- Category 3 Waters have insufficient (or no) data and information to determine if beneficial uses are being attained or impaired. Category 3 has an additional subcategory:
 - 3t Waters are wholly or partially on Indian reservations and are not subject to the state's § 305(b)/§ 303(d) reporting requirements. Beneficial use attainment is not determined or reported for these waters.
- Category 4 Waters do not support one or more beneficial uses, but they do not require development of a TMDL. Category 4 has three subcategories:
 - \circ 4a Waters have a TMDL completed and approved by EPA.
 - 4b Waters have had pollution control requirements other than a TMDL placed on them, and these waters are reasonably expected to attain the water quality standard within a reasonable period of time.
 - 4c Waters failing to meet applicable water quality standards due to other types of pollution (e.g., flow alteration), not a pollutant.

• Category 5 – Waters do not meet applicable water quality standards for one or more beneficial uses due to one or more pollutants; therefore, an EPA-approved TMDL is needed. Category 5 water bodies make up the § 303(d) list.

2018/2020 Integrated Report

In compliance with §§ 305(b), 314, and 303(d) of the CWA, IDEQ prepared the 2018/2020 Integrated Report (IR) to describe its ongoing efforts to monitor, assess, track, and restore the chemical, physical, and biological integrity of the state's surface waters. The primary objective of the IR is to describe the attainment status of Idaho's surface waters relative to their beneficial uses. To achieve this, all state waters are placed into at least one of five primary reporting categories listed and defined above, based on the amount of information known about their water quality, whether or not their beneficial uses are supported, and the types of impairments preventing beneficial use support.

For assessment and reporting purposes, IDEQ subdivides Idaho's waters into assessment units. As stated above, the two assessment units in the vicinity of the Project are the Upper and lower Henry's Fork subbasin, assessment units ID17040202SK001_06 and ID17040203SK012_06, respectively. A new integrated report for the state, with a new 303(d) list, will be released in 2022.

The Upper Henry's Fork subbasin ID17040202SK001_06L, the sub-assessment unit for the Project reservoir, has a Category 3 designation. Insufficient data has been collected to determine whether the Reservoir is fully supporting. The upper Henry's Fork assessment unit (ID17040202SK001_06) is currently designated as a Category 2 waterbody and is fully supporting. In preparation for the 2022 Integrated Report (not yet published), the upper Henry's Fork assessment unit from Ashton Dam to the Warm River will remain Category 2, fully supporting for cold water aquatic life. However the designation for spawning criteria will change to a Category 5, not supporting for temperature (IDEQ, 2022).

The Lower Henry's Fork assessment unit (ID17040203SK012_06) from Ashton Dam to the Fall River is currently a Category 2 fully supporting water for cold water aquatic life/spawning. Draft assessments for the 2022 Integrated Report indicate the assessment will change to a Category 5, not supporting for temperature for both cold water aquatic life and spawning criteria (IDEQ, 2022).

Total Maximum Daily Load

The IDEQ prepared a TMDL for the Upper Henry's Fork subbasin in 1998 following a lengthy court battle between the EPA and environmental groups over approval of the 1992 303(d) list of impaired waters. Based on this TDML, IDEQ concluded that water quality in the upper basin is generally good and supports assigned beneficial uses.

In 2010, an addendum to the 1998 TMDL was produced for the Upper and Lower Henry's Fork subbasins based on the 2008 integrated report. Fourteen waterbodies and their associated assessment units were placed on the 303(d) list. These listings were primarily for temperature due to lack of streambank shade or sediment from bank erosion. The mainstem of the Henry's Fork was not included on the 303(d) list (IDEQ, 2010).

Existing Water Quality

Since the issuance of the current license, water quality data has been periodically collected upstream, downstream, and within the reservoir. Recent data collection for temperature and dissolved oxygen (DO) has been more systematic. These data were collected by PaciCorp and the Henry's Fork Foundation (HFF). Some turbidity data has also been collected, particularly in association with dam rehabilitation work from 2010 through 2012, but it does not represent the normal relationship between upstream and downstream conditions. Nutrient data predates the current license.

Past assessments of water quality in the Henry's Fork watershed, have identified temperature as the primary parameter of concern. DO levels typically correlate with temperature, and these two parameters have been the focus of most water quality monitoring in Henry's Fork. No issues with other parameters listed in table 4.3-3 have been identified.

Ashton Reservoir

Water temperature and DO data within the Ashton Reservoir was last collected in 2013 (Cirrus and ERI, 2013). These data consisted of monthly vertical profiles, from May through October, for both parameters.

Water Temperature

Water temperature vertical profiles indicate that the water temperatures throughout the water column range approximately between 7 and 19 °C over a time period when water temperatures would be limiting to salmonid species (figure 4.3-10). As such, the profiles demonstrate that sometimes the acute water quality standard of 13°C for salmonid spawning can be exceeded in the reservoir. However, no readings approached the non-spawning acute standard of 22 degrees Celsius (°C). During the month July water temperatures through the water column were generally uniform, but in August a relatively weak thermocline was present. During this stratification period, the epilimnion extended from the water surface to a depth of approximately 4 meters, the metalimnion occurred between 4 and 6 meters, and the hypolimnion went from a depth of 6 meters to the reservoir bottom. By the next vertical profile sampling event in September, the reservoir began to demonstrate turnover. The short-term thermal stratification demonstrates the ability of the reservoir to potentially stratify when prevailing weather conditions permit.

Dissolved Oxygen

Dissolved oxygen vertical profiles were also collected over the same monthly sampling interval in 2013 as water temperature (figure 4.3-11). These vertical profiles show that during warmer periods, DO concentrations decreased with depth, and in August decreased below the salmonid spawning standard of 6.0 milligrams per liter (mg/L) within the upper 80 percent of the water column. However, average DO concentration remained above the 6.0 mg/L standard during all other sampling periods.



Source: Cirrus and ERI (2013)





Source: Cirrus and ERI (2013)

Figure 4.3-11. Dissolved oxygen profiles in the Project reservoir from May through October, 2013.

Henry's Fork

Water temperature and DO have been continuously monitored in the Henry's Fork upstream and downstream of the Project reservoir since 2010. PacifiCorp monitored these parameters upstream, at the Highway 20 bridge, and downstream of Project dam, just upstream of the Ora Bridge from 2010 to 2013. These monitoring efforts were in association with dam rehabilitation (2010 through 2012) and to collect information to support a Low Impact Hydro Institute certification (2013) for the Project. HFF had also monitored these parameters upstream on the Henry's Fork, at the Marysville site, and downstream of the Project dam, downstream of the Ora Bridge, from 2014 until present. These monitoring sites are shown in figure 4.3-12.



Figure 4.3-12. Water quality monitoring sites and monitored years.

Water Temperature

Temporal patterns of average daily water temperatures upstream of the Project reservoir from 2010 through 2021 are depicted in figures 4.3-13 and 4.3-14. The patterns were similar from year to year, with average daily winter water temperatures typically less than 3°C, dropping as low as 0°C. Summer water temperatures reached 20°C in early July and then declined. Generally, water temperatures rose gradually starting in late-February, peaked in early July, and then declined more rapidly to typical winter water temperatures by November. The more rapid autumn decline was due largely to ambient air temperatures, which tend to rise more slowly in the spring than they subside in the fall.

IDEQ views salmonid spawning as a subcategory of cold-water aquatic life and sets chronic temperature standards for all self-propagating salmonid fish in Idaho. Numeric water temperature standards for spawning address specific water temperature criteria for egg incubation. As indicated above in table 4.3-3, the chronic water temperature standards for Henry's Fork are an average of 9°C during the salmonid spawning period (October 1 through July 15) and an average of 19°C for the remainder of the year. The 9°C standard was typically exceeded from mid-April through early July, when the standard changes to 19°C, then again briefly after October 1, when the standard drops back to 9°C. The 19°C chronic standard for the non-spawning period was often exceeded briefly in July before summer ambient water temperatures gradually declined.

Average daily water temperatures downstream of the Project followed similar temporal trends as upstream, but were slightly warmer (figures 4.3-15 and 4.3-16). The slightly warmers water temperature were potential due to the waters residence time within the Project reservoir. A comparison of the monthly average water temperatures upstream and downstream of the Project reservoir indicates that summer water temperatures are approximately 1°C warmer downstream of the Project dam relative to those upstream (table 4.3-4). The slightly warmer average water temperatures downstream likely result from slower diel warming and cooling patterns in the Project reservoir. The same exceedances of the chronic standards occurred and were slightly greater in magnitude downstream of the Project dam. However, because the exceedances were also observed upstream of the influence of the Project reservoir, these data underscore that Project reservoir is likely not contributing driver of the exceedance.

Maximum daily water temperatures rather than averages were used to assess compliance with the 13°C acute standard during the salmonid spawning period (October 1 through July 15) and the 22°C acute standard in place during the remainder of the year. Temporal patterns for the Henry's Fork upstream and downstream of the Project Reservoir from 2010 through 2021 are depicted in figures 4.3-17 and 4.3-18 and in figures 4.3-19 and 4.3-20, respectively. Patterns were similar between years, with maximum daily winter water temperatures typically not exceeding 5°C and lows dropping down to 1°C. Maximum summer water temperatures typically reached 22°C in July under extreme ambient water temperatures. As expected, maximum water temperatures were more variable than averages.

The recorded water temperatures typically exceeded the acute standard of 13°C from early May until the standard changed in mid-July at both upstream and downstream sites that were monitored. There were few instances when water temperature exceeded the 22°C acute standard upstream and downstream of the Project during periods of high ambient summer air temperatures.

		Year							
Month	2016	2017	2018	2019	2020	2021			
Jan	-0.5					-0.7			
Feb	-0.5	0.2				-0.5			
Mar	-0.5	-0.5	-0.3	1.9	-0.1	-0.6			
Apr	0.4	0.3	0.4	0.4	0.3	-0.3			
May	0.5	-0.1	0.5	0.3	0.7	0.7			
Jun	0.7	0.8	0.5	0.7	1.0	0.5			
Jul	0.7	0.9	1.0	1.0	0.7	1.0			
Aug	0.8	1.1	0.9	1.0	1.1	1.2			
Sep	0.9	-1.1	0.9	1.7	0.6	1.1			
Oct	0.4	0.4	0.4	0.7	0.6	0.3			
Nov	0.6	-0.2	1.2		0.1	0.2			
Dec					-0.3				

Table 4.3-4.Monthly average water temperature differences upstream and downstream of
the Project dam.

Note: negative numbers represent conditions when the temperature downstream of the dam is colder than upstream monitoring station.

Source: HFF (2021)



Source: Cirrus and ERI (2013)

Figure 4.3-13. Average daily water temperatures relative to chronic standard in the Henry's Fork upstream of the Project reservoir at the Highway 20 site.



Source: HFF (2021)

Figure 4.3-14. Average daily water temperature relative to chronic standard in the Henry's Fork upstream of the Project reservoir at Marysville site.



Source: Cirrus and ERI (2013)

Figure 4.3-15. Average daily water temperature relative to chronic standard in the Henry's Fork downstream the Project reservoir at Ora site.



Source: HFF (2021)

Figure 4.3-16. Average daily water temperature relative to chronic standard in the Henry's Fork downstream the Project reservoir at Ora site.



Source: Cirrus and ERI (2013)

Figure 4.3-17. Maximum daily water temperature relative to acute standard in the Henry's Fork above the Project reservoir at Highway 20 site.



Source: HFF (2021)

Figure 4.3-18. Maximum daily water temperature relative to acute standard in the Henry's Fork above the Project reservoir at Marysville site.



Source: Cirrus and ERI (2013)

Figure 4.3-19. Maximum daily water temperature relative to acute standard in the Henry's Fork below the Project reservoir at Ora site.



Source: HFF (2021)

Figure 4.3-20. Maximum daily water temperature relative to acute standard in the Henry's Fork below the Project reservoir at Ora site.

Dissolved Oxygen

Continuous daily minimum DO concentrations from 2010 through 2021, for all years data were collected upstream and downstream of the Project reservoir, are plotted in figures 4.3-21 to 4.3-22 and figures 4.3-23 to 4.3-24, respectively. These daily minimum DO concentrations were greater than the instantaneous standard of 6 mg/L for the entire period, except for a very brief instances in 2011 and 2012. Typically, daily minimum DO concentrations ranged between 6.0 and 12.0 mg/L.

Daily minimum DO concentrations upstream of the Project reservoir were likely more pronounced than patterns immediately downstream from the reservoir. Moving downstream of the dam, diel patterns likely balanced with distance from the dam, and increased river productivity. The hampered fluctuation immediately downstream of the dam are discharges of waters near the Project intakes that are not susceptible to surface mixing.



Source: Cirrus and ERI (2013)

Figure 4.3-21. Daily minimum dissolved oxygen in Henry's Fork upstream of the Project reservoir at Highway 20 site.



Source: HFF (2021)

Figure 4.3-22. Daily minimum dissolved oxygen in Henry's Fork upstream of the Project reservoir at Marysville site.



Source: Cirrus and ERI (2013)

Figure 4.3-23. Daily minimum dissolved oxygen in Henry's Fork downstream of the Project reservoir at Ora site.



Source: HFF (2021)

Figure 4.3-24. Daily minimum dissolved oxygen in Henry's Fork below the Project reservoir at Ora site.

Reservoir Sediments

Bottom substrate is highly variable in the Project reservoir. Near the dam, sediments are finer and classified as silt and clay. Moving upstream of the Project dam, sediments transition from silt to fine sand, and then from fine and large sands to small gravels within the Henry's Fork arm of the reservoir. Near the Ashton Reservoir boat launch substrate consists of gravels and cobbles.

Sedimentation rates are low in the Project reservoir primarily as a result of the reservoir's location higher in the watershed. Survey estimates from 2010 indicate that approximately 795 acre-feet of sediment have been deposited in the reservoir, at rates of approximately 0.3 inch per year (Cirrus and ERI, 2010).

4.4 Fish and Aquatic Resources (18 CFR §5.6(d)(3)(iv))

4.4.1 Fish Community and Aquatic Habitat

From its headwaters approximately 60 river miles upstream at Henry's Lake to St. Anthony, Idaho, the Henry's Fork supports a renowned non-native wild rainbow trout (*Oncorhynchus mykiss*) and brown trout (*Salmo trutta*) fishery (Idaho Department of Commerce and Tourism, n.d.).¹³ These trout species provide angling opportunities where native fish no longer persist in sufficient abundance. Fisheries including the Henry's Fork have gained international recognition based on the high-quality self-sustaining non-native trout fishery (IDFGa 2019).

In addition to being a highly regarded rainbow and brown trout fishery, the river supports a variety of other resident game and non-game species: mountain whitefish (*Prosopium williamsoni*), cutthroat trout (*Oncorhynchus clarki*), Utah chub (*Gila atraria*), Utah sucker (*Catastomus ardens*), longnose dace (*Rhinichthys cataractae*), mottled sculpin (*Cottus bairdi*), kokanee (*Oncorhynchus nerka*), redside shiner (*Richardsonius balteatus*), brook trout (*Salvelinus fontinalis*), and yellow perch (*Perca flavescens*). Rainbow trout, brown trout, and mountain whitefish are the principal game species in the Henry's Fork, and dominate the biomass in the river system. The cutthroat trout is the only native trout species present in the Henry's Fork.

The Henry's Fork upstream and downstream of the Project is periodically monitored by IDFG to track fish health and populations. IDFG management goals upstream and downstream of the Project reservoir are to maintain a wild trout fishery (IDFGa 2019). The Stonebridge management section is the upstream reach of the Project; the Ora management section is the downstream reach (figure 4.4-1). The existing fish community and aquatic habitats within these two IDFG management sections and the Project reservoir are described below.

Stonebridge Management Section (Henry's Fork Upstream of the Project)

Fish Community

The Stonebridge management section is 2.9 river miles long, beginning about 2 miles downstream of the Henry's Fork confluence with Warm River and ending at the upper end of Project reservoir near the Highway 20 crossing (figure 4.4.1-1). In 2019, IDFG surveyed the reach using boat electrofishing to monitor the populations of rainbow trout, brown trout, and mountain whitefish (Heckel et al., 2020). All fish were measured (except mountain whitefish), marked, and recaptured at a later date.

In 2019, IDFG collected 1,157 trout and 917 mountain whitefish (43 percent of total catch rainbow trout, 13 percent brown trout, and 44 percent whitefish) in this section over two days of electrofishing. The length of rainbow trout ranged from 100 to 455 millimeters (mm), with a mean size of 285 mm and a median size of 351 mm (table 4.4-1). Collected brown trout were slightly larger, with lengths ranging from 125 mm to 576 mm, a mean of 345 mm, and a median

¹³ The term 'wild' here means the population can reproduce and sustain itself.

of 351 mm (table 4.4-1). A length-frequency histogram for rainbow and brown trout is presented in figure 4.4-2, which indicates that multiple year-classes are present for both species.



Figure 4.4-1. IDFG fish management sections in the Project vicinity.

Table 4.4-1.Total length (mm), proportional size distribution (PSD) of rainbow trout and
brown trout collected in the Stonebridge section of the Henry's Fork in 2019.

Species	Mean TL (mm ±95% C.I.)	Median TL (mm)	PSD ₃₀₀ ^a	PSD ₄₀₀ ^a	PSD ₅₀₀ ^{a,b}
Rainbow trout	285 (± 125)	351	49	5	0
Brown trout	345 (± 181)	351	74	33	5

Source: Heckel and High (2020), as modified by PacifiCorp

^a Proportional size distribution (PSD) is the percent of individuals in the collection greater than a certain length divided by the number of individuals greater than a certain length (usually what is termed the stock length)¹⁴ multiplied by a hundred. Here, PSD was calculated as the number of individuals (by species) \geq 300 mm, 400 mm and 500 mm divided by the number of individuals \geq 200 mm multiplied by 100.

^b Visually estimated by examining the length-frequency histogram (figure 4.4.1-2).



Source: Heckel and High (2020)

Figure 4.4-2. Length-frequency distribution of rainbow trout and brown trout captured with electrofishing in the Stonebridge management section of the Henry's Fork during spring of 2019.

Using mark-recapture data, IDFG estimated about 4,435 rainbow trout, 1,298 brown trout, and 13,757 mountain white fish that are greater than 150 mm in length occupy the Stonebridge

¹⁴ The stock length has been variously defined as the approximate length at maturity, minimum length effectively captured by the gear type, or the minimum length that provides recreational value.

section (table 4.4-2). Collectively, these population estimates indicate there are approximately 964, 282, and 2,991 rainbow trout, brown trout and mountain whitefish per river kilometer in the section, respectively (table 4.4-2; figure 4.4-3). Based on the intrinsic rate of population growth, IDFG determined the populations of rainbow and brown trout within the Stonebridge reach are stable (Heckel and High, 2020).

Table 4.4-2.Population estimates of rainbow trout, brown trout, and mountain whitefish
 ≥ 150 mm in total length in the Stonebridge management section of the
Henry's Fork, 2019.

Species	No. Marked	No. Captured	No. Recaptured	Population Estimate (95% C.I.)	Density (no./rkm)
Rainbow trout	629	302	44	4,435 (± 604)	964
Brown trout	199	95	24	1,298 (± 282)	282
Mountain whitefish	601	336	20	13,757 (±3,651)	2,991

Source: Heckel and High (2020), as modified by PacifiCorp



Source: Heckel and High (2020)

Figure 4.4-3. Abundance estimates for rainbow (RBT) and brown (BNT) trout in the Stonebridge management section of the Henry's Fork from 2002 through 2019.

IDFG also sampled the Stonebridge section for mountain whitefish in 2004 (Garren and Fredericks, 2006). In total, 296 mountain whitefish were collected during a one-day electrofishing survey. These fish had a mean and median length of 287 mm, with no fish longer than 500 mm (figure 4.4-4). Otoliths were collected from all captured whitefish, aged, and used to derive mean length-at-age (table 4.4-3). Overall, 12 year-classes were present in the collection.

Age	N	Mean Length (mm)
1	30	173
2	44	239
3	60	271
4	44	299
5	19	312
6	40	324
7	10	343
8	14	340
9	10	373
10	10	364
11	4	393
12	7	382

Table 4.4-3.Mean length-at-age for mountain whitefish collected in the Stonebridge
management section of the Henry's Fork by IDFG in 2004.

Source: Garren and Fredericks (2006), as modified by PacifiCorp


Source: Garren and Fredericks (2006)

Figure 4.4-4. Length frequency distribution for mountain whitefish collected in the Stonebridge management section of the Henry's Fork in 2004.

Aquatic Habitat

The Henry's Fork upstream of the Project reservoir is a combination of complex riffles, glides, and pools. Substrate is characterized as cobble and gravel with areas of boulder and bedrock, providing a variety of structural habitats. Long glides with laminar flow may have dense pockets of macrophyte growth, providing additional cover or pocket waters with low-flow refugia. Average channel width is approximately 225 feet, with a typical depth of 3 to 4 feet.

Project Reservoir

Fish Community

Gill net surveys were conducted in the Project reservoir by IDFG, most recently in 2008 and 2021 (Schoby et al., 2010; Vincent, 2021).

In 2008, six experimental gill nets were used to assess the fish population and relative abundance in the Project reservoir. In total, this sampling resulted in 580 individuals collected over five netnights. The catch rate was highest for Utah chub and Utah sucker at 86.6 and 18.2 fish per netnight, respectively. Species composition was dominated by Utah chub (75 percent of the catch) and Utah sucker (16 percent) in the Project reservoir, while rainbow trout (6 percent), brown trout (2 percent), and yellow perch (1 percent) comprised the remaining 9 percent of the total catch (table 4.1-4). Rainbow trout ranged from 245 to 588 mm in length (mean of 331 mm) and brown trout ranged from 331 to 680 mm (mean of 446 mm). Yellow perch ranged from 181 to 318 mm (mean of 281 mm).

IDFG also examined the size structure of rainbow trout, brown trout, and yellow perch by calculating the proportional size distribution (PSD), the number of fish over a given length, typically "quality" fish, divided by the stock length multiplied by 100.¹⁵ Approximately 57, 100, and 88 percent of "quality" rainbow trout, brown trout, and yellow perch catch, respectively, were greater than stock length (Schoby et al., 2010).

In 2021, IDFG again sampled the Project reservoir using a combination of gill netting and nighttime boat electrofishing along the reservoir shoreline (Vincent, 2021). In total, 1,683 individuals representing eight different species were caught. These species included Utah chub, Utah sucker, yellow perch, redside shiner, brown trout, rainbow trout, longnose dace, and kokanee.¹⁶ Combined results of the two methods indicated that Utah chub and Utah sucker comprised 89 percent of the catch. Species composition for the 2021 Project reservoir sampling are presented in table 4.4-4.

		2008	2021		
Species	Ν	Percent Composition	CPUE ^a	N	Percent Composition
Utah Chub	433	75.0	86.6	774	46.0
Utah Sucker	91	16.0	18.2	404	24.0
Rainbow Trout	34	6.0	6.8	34	2.0
Brown Trout	13	2.0	2.6	34	2.0
Kokanee	_b	_	_	3	0.2
Yellow Perch	8	1.0	1.2	370	22.0
Redside Shiner	_	_	_	50	3.0
Longnose Dace	_	_	_	10	0.6

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Source: Schoby et al. (2010)and Vincent (2021), as modified by PacifiCorp

^a CPUE is catch per unit effort, expressed here as the number of fish captured per net night.

¹⁶ Kokanee is a landlocked form of sockeye salmon.

^b "-" indicates the species was not collected.

¹⁵ The stock length has been variously defined as the approximate length at maturity, minimum length effectively captured by the gear type, or the minimum length that provides recreational value. For rainbow and brown trout, the stock length used by IDFG was 200 mm, while the stock length for yellow perch was 130 mm.

IDFG also reported fish average fish length by gear type. These data showed that the average length of fish collected by the boat electrofishing effort were smaller than the average fish length for those fish collected by gill netting (table 4.4-2).

Aquatic Habitat

A bathymetric survey of the Project reservoir performed in 2010 indicates the average depth of the reservoir is 25 feet and the maximum depth is approximately 60 feet (Cirrus and ERI, 2010) (see figure 4.3-7 for a bathymetric map of the reservoir). A distinct thalweg, with side slopes ranging from near vertical to gently sloping, runs the length of the reservoir. This thalweg represents the main channel of the Henry's Fork prior to impoundment. Substrate of the main reservoir is predominantly silt bottom with clay sized particles more prevalent near the dam.

Areas in the Henry's Fork arm and other arms off the upper portion of the reservoir are generally shallow, with varying bank margins ranging from deeper areas along cliffs to submerged marshlike habitats that provide good refugia for small and rearing fish. In the lower third, the reservoir deepens, with limited, shallow margins along the thalweg. The steep walls and deep water provide good foraging habitat for larger fish.

Ora and Vernon Management Sections (Henry's Fork Downstream of the Project)

Fish Community

The Ora management section is 1.9 river miles long, beginning approximately 0.9 miles downstream of the Project dam at Ora Bridge and ending 2.8 miles downstream at Vernon Bridge (figure 4.4-1). The Vernon management section begins at the downstream end of the Ora section and extends 2.8 river miles to the Chester Hydroelectric Project (figure 4.4-1).

The Ora management section was sampled in 2004 by IDFG (Garren and Fredericks, 2006). IDFG employed a similar method as described above for the Stonebridge section. Unlike the Stonebridge section, however, IDFG only targeted trout, not mountain whitefish, collecting total length and mark-recapture data. In total, 556 trout were collected in the Ora section. Fish length results are summarized in table 4.4-5, and population estimates are shown in table 4.4-6.

Species composition was 94 percent rainbow trout, 6 percent brown trout, and < 1 percent brook trout.¹⁷ Rainbow trout and brown trout stock density indices were high, with PSD₄₀₀ of 83 percent for rainbow trout and 77 percent for brown trout. Mean and median length of rainbow trout was 384 mm and 436 mm, respectively, with an PSD₅₀₀ of 5 percent. Mean and median lengths of brown trout were 415 mm and 468 mm, respectively, with an PSD₅₀₀ of 39 percent. The total population size for all trout longer than 150 mm was estimated to be 3,572, which equates to about 1,190 fish per kilometer.

Only two brown trout were recaptured, so IDFG estimated abundances for all trout combined, and proportioned individual species population size based on species composition ratios.

¹⁷ Garren and Fredericks (2006) did not report measurements or counts for brook trout.

Rainbow trout density estimates were 3,358 for the 3-kilometer section (1,119 fish per kilometer), while brown trout were estimated at 214 fish (71 fish per kilometer).

The Vernon management section was sampled again in 2015 (Flinders et al., 2016). Like other IDFG fish surveys on the Henry's Fork, total lengths were collected and population estimates were derived from mark-recapture data, targeting only trout. In this reach, IDFG collected 245 trout over two days of boat electrofishing. Species composition was 71 percent rainbow trout, 27 percent brown trout, and 2 percent brook trout.¹⁸ Fish length results are summarized in table 4.4-5, and population estimates are reported in table 4.4-6.

Table 4.4-5.Total length (mm), proportional size distribution (PSD) of rainbow trout and
brown trout collected in the Ora and Vernon management sections of the
Henry's Fork in 2004 and 2019.

Species	Mean TL (mm ±95% C.I.)	Median TL (mm)	PSD ₃₀₀	PSD ₄₀₀	PSD ₅₀₀				
Ora Management Section ^a									
Rainbow trout	384 ^b	436	_c	83	5				
Brown trout	415 ^b	468	_	77	39				
Vernon Management Section ^d									
Rainbow trout	383 (±18.5)	419	88	70	24				
Brown trout	368 (±33.9)	423	86	75	28				

Source: Garren and Fredericks (2006); Flinders et al. (2016), as modified by PacifiCorp

^a Sample year was 2004.

^b 95 % confidence intervals not reported.

^c "-"indicates the metric was not reported.

^d Sample year was 2019.

Table 4.4-6.Population estimates of rainbow trout, brown trout, and mountain whitefish \geq
150 mm in total length in the Ora and Vernon management sections of the
Henry's Fork.

Species	No. Marked	No.No.CapturedRecaptured		Population Estimate (95% C.I.)	Density (no./rkm)		
Ora Management Section ^a							
Rainbow trout	629	302	44	2,908 () ^b	1,119		

¹⁸ Flinders et al. (2016) did not report measurements or counts for brook trout.

Species	No. Marked	No. Captured	No. Recaptured	Population Estimate (95% C.I.)	Density (no./rkm)
Brown trout	199	95	24	186 ()	71
All trout spp.	261	235	19	3,572 (±1,099)	1,190
		Vernon N	/Ianagement Se	ection ^c	
Rainbow trout	81	96	7	2,688 (±1,577)	358
Brown trout	28	40	6	192 (±104)	44
Brook trout	5	0	0	_d	_

Source: Garren and Fredericks (2006); Flinders et al. (2016), as modified by PacifiCorp

^a Sample year was 2004.

^b "—" 95 % confidence intervals not reported.

^c Sample year was 2019.

^d "–" indicates the metric was not reported.

Rainbow trout ranged from 107 mm to 585 mm, with mean and median lengths of 383 mm and 419 mm, respectively. Figure 4.4-5 presents length-frequency histograms for rainbow and brown trout collected in the reach, which indicate multiple year-classes are present. Rainbow trout PSD₂₀₀ and PSD₄₀₀ values were 88 and 70 percent, respectively. IDFG estimated 2,688 rainbow trout longer than 150 mm were present in the reach, or, about 358 per kilometer (table 4.4-6). Brown trout ranged between 130 mm and 615 mm with a mean and median total length of 368 mm and 423 mm, respectively. Brown trout PSD₂₀₀ and PSD₄₀₀ were 86 and 75 percent, respectively. The population estimate for brown trout longer than 150 mm was 192 for the reach, which equals 44 brown trout per kilometer. The abundance of brown trout had increased 2.4 percent per year since 2005 (Flinders et al., 2016).



Source: Flinders et al. (2016)

Figure 4.4-5. Length frequency of rainbow trout and brown trout in the Vernon management section of the Henry's Fork during spring of 2015.

Aquatic Habitat

In 2005, FERC requested a rainbow trout spawning survey between Chester and Ashton Dams to fulfill a request from IDFG during the Chester Hydroelectric Project licensing process. This survey was completed in March and April of 2006 and indicated 85 percent of the redds occur within a 1-mile reach downstream of Ashton Dam (figure 4.4-6; Symbiotics, 2006). This

concentration of redds is likely due to the number of gravel bars and islands immediately downstream of the dam. At these redd locations, water depth and flow average 1.6 feet and 1.5 fps, respectively (Symbiotics, 2006). These complex habitats likely retain more gravels and smaller cobbles suitable for spawning than the more embedded downstream areas in this section of the river.

The channel morphology of the Henry's Fork downstream of the Project is unique in that much of the river has incised through hard basalt flows, forming a box-like channel that is very flat. However, sections of river have irregular banks features that provide refugia for young-of-the-year trout. Similar to upstream of the Project reservoir, the downstream reach is also a combination of complex riffles, glides, and pool with cobble, gravel, boulder, and bedrock substrates. Some long glides with laminar flow they may have dense pockets of macrophyte vegetation are also present. Figure 4.4-7 is a representative photograph of the aquatic habitat immediately downstream of the Project dam. The water surface slope between the Project tailrace and the USGS streamflow gage (Gage No. 13046000 Henrys Fork near Ashton, ID), approximately 5,025 feet downstream of the Project, is less than 1 percent.



Source: Symbotics (2006), as modified by PacifiCorp

Figure 4.4-6. Location of rainbow trout spawning redds within a 1-mile reach downstream of the Project dam.



Source: Cirrus (2021)

Figure 4.4-7. The Henry's Fork immediately downstream of the Project dam, with deep pool below the powerhouse on the right abutment forming the thalweg along the river-right edge of the channel.

4.4.2 Fish Stocking

Article 402 of the current license required PacifiCorp to develop a fish enhancement plan for the Project reservoir. That plan initiated several studies (limnology, habitat, and turbine mortality)¹⁹ to determine appropriate mitigative measures to enhance the reservoir trout fishery. This program resulted in an experimental stocking program to determine what level of rainbow trout stocking would produce a catch rate of about one fish per hour. In order to achieve the desired catch rate, PacifiCorp, beginning in the year 1996 and ending in 2028, will increase the initial 5-year period annual stocking rate of 22,000 rainbow trout by 25 percent for each successive 5-year period, until a 70 percent increase occurs, or 37,400 fish per year are stocked, as described in table 4.4-7.

Schedule	Stocking Numbers
1991-1995	22,000
1996-2000	27,500
2001-2005	34,375
2006-2010	37,400
2011-2015	37,400
2016-2020	37,400
2021-2025	37,400
2026-2028	37,400

Table 4.4-7.Project reservoir rainbow trout stocking schedule.

Source: FERC (1999)

In accordance with the approved fish stocking plan, IDFG implements the stocking program at the Project reservoir with funds allocated by PacifiCorp. Table 4.4-8 indicates the actual number of rainbow trout stocked since license issuance and approval of the fish stocking plan. These data show stocked numbers have varied above and below those indicated in the plan (see table 4.4-7) but have generally met the percent increase requirements.

¹⁹ Maiolie (1987) and ERI (1990)

Stocking Year	No. Rainbow Trout	Stocking Year ¹	No. Rainbow Trout
1987	14,897	2005	34,385
1988	10,119	2006	34,527
1989	3,467	2007	34,377
1992	13,432	2008	34,402
1993	22,008	2009	35,649
1994	21,995	2010	32,168
1995	22,004	2013	40,955
1996	27,434	2014	42,171
1997	29,581	2015	38,750
1998	27,292	2016	38,773
1999	28,051	2017	38,751
2000	27,504	2018	38,751
2001	27,509	2019	40,081
2002	27,517	2020	39,608
2003	34,337	2021	38,777
2004	34,425	2022	_

Table 4.4-8.Quantity of rainbow trout stocked in the Project reservoir since license
issuance.

Source: IDFG (2021), as modified by PacifiCorp

¹In 2011 and 2012, fish stocking was suspended during the rehabilitation of Ashton Dam; the funding intended for stocking was diverted to IDFG for hatchery improvements.

4.4.3 Fish Entrainment and Turbine Mortality

Entrainment and passage through hydroelectric turbines is a potential source of mortality for the fish species present in the Project reservoir. Article 404 of the current license requires PacifiCorp to conduct a turbine mortality study at the Project, specifically on trout species present in the Project reservoir. This was accomplished through a literature review of relevant turbine mortality studies that examined turbine-induced mortality of salmonids at other hydroelectric projects with similar hydraulic turbines as the Project (ERI, 1990).

The study concluded that, based on their design, Units 2 and 3 have a less than 12 percent mortality rate, and Unit 1, which was replaced in 1995, has an estimated mortality rate of less than 16 percent. Therefore, turbine passage survival for trout species at the Project ranges from 84 to 88 percent (ERI, 1990). By Order dated January 26, 1999, FERC concluded that PacifiCorp's fish stocking plan would mitigate fishery-related impacts of the Project, including those related to turbine entrainment and mortality (FERC, 1999).

Since the cited Ecosystems Research Institute (ERI) study, turbine entrainment and mortality has been extensively studied at hydropower projects. Many of these studies and their results are included in an entrainment and turbine mortality database developed by the Electric Power Research Institute (EPRI) (1997), which was later summarized in a review by Winchell et al. (2000). That review found that approximately 70 percent of fish susceptible to entrainment were less than 4 inches in length, with little apparent trend in relation to trashrack clear spacing (table 4.4-9). Furthermore, the review underscored that more than 93 percent of fish entrained at hydroelectric projects are less than 8 inches in length (table 4.4-9). Winchell et al. (2000) also presented empirical fish survival rates for representative fish sizes passing through radial-flow (Francis) turbines (table 4.4-10). These data show that fish less than 8 inches in length that pass through a Francis turbine with a runner speed less than 250 rpm and hydraulic capacity between 370 to 1,600 cfs have an average probability of survival that ranges between 92 and 94 percent immediately after passage and 88 to 90 percent 48 hours after passage (table 4.4-10).

Table 4.4-11 presents characteristics identified in EPRI (1997) specific to the Project turbines that may affect rates of turbine entrainment and mortality at the Project. In comparing these characteristics with the summary analyses performed by Winchell et al. (2000), the turbine passage survival estimated by ERI (1990) for the Project may be low; estimated survival is likely to be greater than 88 percent.

	1							
Clear	No. of Studies in	Average Composition by Size Class (percent) ^a						
(inches)	EPRI (1997)	0-4 (in)	48 (in)	8–15 (in)	15 -3 0 (in)	> 30 (in)		
1	3	61.5	32.2	5.5	0.9	0.0		
1.5 - 1.8	10	64.6	27.5	7.5	0.5	0.0		
2.0 - 2.75	2	73.7	20.6	5.4	0.3	0.0		
3.0 - 10.0	14	67.9	24.9	6.4	0.7	0.0		
All	39	68.4	24.8	6.3	0.5	0.0		

Table 4.4-9.Summary of fish size composition of entrainment catch by trashrack spacing
reported in EPRI (1997).

Source: Winchell et al. (2000), as modified by PacifiCorp

^a For all species except clupeids and American eel.

Table 4.4-10.Empirical fish survival rates for representative fish sizes passing Francis
turbines with runner speeds less than 250 revolutions per minute reported in
EPRI (1997).

Hydraulic	Fish Size	No. of	Su	nt)	
Capacity (cfs)	(in)	Turbines	Minimum	Maximum	Mean
		Immediate			
440 - 1,600	< 4	13	86.9	100.3ª	93.9
370 - 1,160	4 - 8	19	74.8	100.0	91.6
440 - 2,450	8-12	18	59.0	100.0	86.9
440 - 1,600	> 12	14	36.1	100.0	73.2
		After 48-hrs			
440 - 1,600	< 4	11	80.9	101.4	90.4
370 - 2,450	4 - 8	17	73.7	101.8	87.8
440 - 2,450	8-12	15	47.4	96.4	80.4
440 - 1,600	> 12	13	33.8	94.1	66.8

Source: Winchell et al. (2000), as modified by PacifiCorp.

^a Indicates the survival of the treatment groups were higher than the control groups.

Characteristic	Unit 1	Unit 2	Unit 3			
Bar spacing (inches)		1.375				
Approach velocity (fps)	3.4					
Туре	Vertical Francis					
Net head (feet)	47 48 48					
Runner speed (rpm)	220 180 180					
Rated power (MW)	3.1 2.3 2.3					
Hydraulic capacity (cfs)	890	750	750			

Table 4.4-11.Current Project's trash rack and turbine characteristics.

4.4.4 Migratory Fish

The Snake River Basin, of which the Henry's Fork is a part, has historically supported anadromous stocks of Pacific salmon, steelhead, Pacific lamprey, and white sturgeon. In Idaho, anadromous steelhead, chinook, and sockeye salmon are present. However, Shoshone Falls is a natural barrier to anadromous fish in the Snake River, and marks the upper limit of any historical migrations. The falls are located about 225 miles downstream of the Project.

4.4.5 Essential Fish Habitat

Review of the National Marine Fisheries Service online Essential Fish Habitat Mapping Tool (https://www.habitat.noaa.gov/application/efhmapper/index.html), indicates that no essential fish habitat designated under the Magnuson-Stevens Fishery Conservation and Management Act or established by the National Marine Fisheries Service is located in the Project vicinity.

4.4.6 Benthic Macroinvertebrates

HFF implemented a long-term monitoring program for macroinvertebrates in 2015 (Van Kirk, 2021). Most of the monitoring sites are located near Island Park, above Mesa Falls, and two are downstream of the falls. One of these sites is immediately above the Project reservoir (Ashton site), and the other is near St. Anthony (St. Anthony site), approximately 13 miles downstream from the Project. In 2019, an additional site was added near Ora Bridge, approximately 0.9 miles below the Project dam (Ora site).

Macroinvertebrate monitoring sites upstream and downstream of the Project were most recently sampled by HFF in 2021. Comparing collections between 2019 and 2021, the mean density of macroinvertebrates upstream of the Project at the Ashton site remained similar, while downstream at the Ora site densities declined by 53 percent, as noted in figure 4.4-8 (Van Kirk, 2022).

The Hilsenhoff biotic index is a widely used method of evaluating the abundance of arthropod fauna in stream ecosystems to estimate water quality based on the predetermined pollution tolerances of the observed taxa. The Hilsenhoff biotic index at the Ashton site remained good to

very good, while downstream at the Ora site the Hilsenhoff biotic index was slightly lower, from fair to good (figure 4.4-9).

Percent EPT is the percent of the invertebrates at a site that are less tolerant to pollution. These include mayflies (*Ephemeroptera*), stoneflies (*Plecoptera*), and caddisflies (*Trichoptera*). EPT percent remained stable between 2019 and 2021 for both the Ashton and Ora sites (figure 4.4-10).

4.4.7 Aquatic Invasive Species

Idaho's Strategic Action Plan for Invasive Species is a statewide effort to limit the introduction and spread of invasive species. Invasive species are plants and animals that are not native to an area and have the potential to spread uncontrollably. Aquatic nuisance species are invasive plants and animals that depend on aquatic and riparian ecosystems. Within the Upper Henry's Fork subbasin, one aquatic nuisance species is identified, the New Zealand mudsnail (*Potamopyrgus antipodarum*) (Idaho Invasive Species Council Technical Committee, 2007).

The New Zealand mudsnail was introduced in Idaho 1987 and has spread though all major drainage basins in the state. The IDEQ Beneficial Use Reconnaissance Project has one monitoring location upstream of the Project in Robinson Creek, where samples collected in 2017 included specimens of New Zealand mudsnail (personal communication from Alex Bell, IDEQ, on March 10, 2022). Additionally, HFF confirms the presence of New Zealand mudsnail in the Henry's Fork (personal communication from Matt Hively, HFF, on March 10, 2022).



Source: HFF (2022)

Figure 4.4-8. Mean abundance of macroinvertebrates at sample sites on the Henry's Fork, 2019 to 2021.



Source: HFF (2022)

Figure 4.4-9. Hilsenhoff biotic index for macroinvertebrate sites on the Henry's Fork, 2019 to 2021.



Source: HFF (2022)

Figure 4.4-10. Percent EPT in the Henry's Fork, 2019 to 2021.

4.5 Wildlife and Botanical Resources (18 CFR §5.6(d)(3)(v))

4.5.1 Upland Habitats

The Project is in the Dissected Plateaus and Teton Basin ecoregion of the Snake River Plain. The dominant vegetation community of this ecoregion is sagebrush steppe, and in the Project vicinity, there are seven upland habitat types, including sagebrush steppe, which are described and discussed in the following section. Dominant plant species and representative wildlife species associated with each habitat type are also identified. Wetland, riparian, and littoral habitats are discussed in section 4.6, *Wetlands, Riparian, and Littoral Habitat*.

Appendix E lists list all the mammal, amphibian, reptile, and bird species potentially occurring in the Project vicinity, either permanently or as seasonal transients.

Sagebrush-Juniper

The sagebrush-juniper type extends from the Project reservoir shoreline up, primarily on the west side of the reservoir (figure 4.5-1). Dominant/co-dominant plant species include sagebrush (*Artemisia tridentata ssp. vaseyana*) and juniper (*Juniperus osteosperma*). Tree density varies from open to more dense woodland stands. Sagebrush density is also variable. Other species that may be present in this habitat type include Idaho fescue *Festuca idahoensis*); sandburg bluegrass (*Poa secunda*); slender wheatgrass (*Elymus trachycaulus*); and various forbs, such as dandelion (*Taraxacum officinale*) and yarrow (*Achillea millifolium*).

The ongoing decline in sagebrush habitat across the western United States has been coupled with a significant expansion of juniper into sagebrush communities. While some wildlife species readily use juniper, other sagebrush-obligate species have seen population declines concurrent with the declining sagebrush habitat quality and extent (Rowland et al., 2008). Within the Project vicinity, juniper encroachment is occurring along parts of the northwestern shoreline.

The sagebrush and scattered junipers provide habitat for species such as sage thrasher (*Oreoscoptes montanus*), sagebrush sparrow (*Artemisiospiza nevadensis*), and Brewer's sparrow (*Spizella breweri*). In areas with rocky soil, utilization by species that burrow or tunnel below the sagebrush, such as northern pocket gopher (*Thomomys talpoides*), is limited.



Source: Cirrus (2021)

Figure 4.5-1. Rocky sagebrush-juniper habitat adjacent to the western reservoir shoreline.

Sagebrush Steppe

Sagebrush steppe habitat occurs along the eastern shoreline of the reservoir, typically in smaller patches between cultivated land and the shoreline (figure 4.5-2). Sparse juniper occurs in some areas, and the vegetation composition is similar to sagebrush-juniper habitat. The primary difference between sagebrush steppe and sagebrush-juniper habitat is the relative density of the sagebrush and juniper. Sagebrush steppe has lower sagebrush density and more widely scattered juniper, typically corresponding to higher density of grasses and forbs.

The presence of grasses and forbs mixed with the sagebrush provides high-quality habitat for many sagebrush-obligate wildlife species that use grass for forage and cover, including those listed above for the sagebrush-juniper type. When combined with soils suitable for burrowing, this habitat type can support many wildlife species that the rocky sagebrush-juniper habitat cannot, such as Wyoming ground squirrels (*Urocitellus elegans*). Non-burrowing species may also use the grassy habitat among the sagebrush, including greater sage-grouse (*Centrocercus urophasianus*).



Source: Cirrus (2021)

Figure 4.5-2. Sagebrush steppe habitat adjacent to the eastern reservoir shoreline.

Perennial Grassland

Perennial grassland habitat occurs primarily on the east side of the Project reservoir and is dominated by graminoid species.²⁰ The extent of this habitat type is small and often mosaiced with sagebrush steppe (figure 4.5-3). It is distinct from sagebrush-juniper and sagebrush steppe habitats due to the absence of woody species. Perennial grasses in this habitat type include Idaho fescue, intermediate wheatgrass, Kentucky bluegrass (*Poa pratensis*), creeping bentgrass

²⁰ Herbaceous plants with a grass-like morphology.

(Agrostis stolonifera), and redtop (Agrostis gigantea). Forbs may also be present, including clover (*Trifolium spp.*), dandelion, and yarrow.

Perennial grassland habitat near the reservoir includes larger pastures that may be grazed by livestock and narrow strips between cultivated land and the reservoir. Wildlife foraging may occur in both the pastures and the narrow strips. The narrow strips provide a limited amount of habitat for wildlife species but could provide temporary cover as wildlife move along the reservoir.

Wildlife species that could use this habitat include black-tailed jackrabbits (*Lepus californicus*), blue-winged teal (*Anas discors*), Canada geese (*Branta canadensis*), northern pintail (*Anas acuta*), black-crowned night-herons (*Nycticorax nycticorax*), mallards (*Anas platyrhynchos*), and spotted sandpipers (*Actitis macularia*).



Source: Cirrus (2021)

Figure 4.5-3. Perennial grassland adjacent to the eastern reservoir shoreline.

Grassy Shoreline

The grassy shoreline habitat found in the Project vicinity is adjacent to plowed or grazed fields, occurring mostly in narrow strips along the shoreline in areas less likely to be plowed or grazed (figure 4.5-4). Dominant plant species could include Kentucky bluegrass, redtop, and tufted hairgrass (*Deschampsia cespitosa*.

Given its narrow, sparse distribution along the shoreline, this habitat type provides a limited amount of habitat for wildlife species but could be used as wildlife move along the reservoir. Species that are typically observed in this habitat type include: black-crowned night-herons (*Nycticorax nycticorax*), mallards (*Anas platyrhynchos*), and spotted sandpipers (*Actitis macularia*).



Source: Cirrus (2021)

Figure 4.5-4. Grassy shoreline habitat adjacent to the eastern reservoir shoreline.

Eroded Bank

The eroded bank habitat type is very limited in the Project vicinity, with only a section about 150-feet long on the north shoreline (figure 4.5-5). This segment appears stable with no signs of active erosion. Vegetation is generally not present except for the toe of the slope where vegetation is colonizing eroded soil deposits. Given the lack of vegetation, this area's habitat value is limited, supporting habitat specialists such as bank swallows (*Riparia riparia*).



Source: Cirrus (2021)

Figure 4.5-5. Eroded bank habitat on the northern reservoir shoreline.

Rocky Cliff

Rocky cliff habitat is present near the dam and in scattered locations along the reservoir shoreline (figures 4.5-6 and 4.5-7). This habitat type is typically used by rock and cliff specialists. The plant species that do become established grow in the rock cervices and on ledges and may include shrubs such as skunkbrush (*Rhus trilobata*) and yellow current (*Ribes aureum*).

Wildlife species expected to use this habitat type include cliff swallows (*Petrochelidon pyrrhonota*) and western small-footed myotis (*Myotis ciliolabrum*). The cliffs are likely too short and accessible to provide suitable nesting habitat for larger cliff nesting species such as golden eagles (*Aquila chrysaetos*) or peregrine falcons (*Falco peregrinus anatum*).



Source: Cirrus (2021)

Figure 4.5-6. Rocky cliff habitat below the dam.



Source: Cirrus (2021)

Figure 4.5-7. Rocky cliff habitat along the northern reservoir shoreline.

Cultivated Land

Cultivated land includes fields that are used for crop production and are typically worked as part of farming operations in the Project vicinity (figure 4.5-8). Cultivated lands are located near the reservoir edge where private land abuts the Project boundary. Cultivated land also comprises much of the Project vicinity on the east side of the reservoir. A variety of crops are grown on cultivated lands, including wheat, potatoes, alfalfa, grass hay, and pasture.

These cultivated lands can provide elements of habitat for wildlife species, including greater white-fronted geese (*Anser albifrons*) and loggerhead shrikes (*Lanius ludovicianus*).



Source: Cirrus (2021)

Figure 4.5-8. Cultivated land adjacent to the western shoreline of the reservoir.

Developed Lands

Developed lands include recreational access and day use areas, private home sites, PacifiCorp facilities near the Project dam, and roads. These areas occur around the Project dam, partly along the southern shoreline, and the northwest area of the reservoir. This habitat type may provide wildlife habitat in the form of large, deciduous trees, including cottonwood (*Populus* spp.), willow (*Salix* spp.), and box elder (*Acer negundo*), and mowed grasses (figure 4.5-9).

The large trees provide habitat elements that are not widely available in the Project vicinity, including valuable raptor perches for species such as bald eagles (*Haliaeetus leucocephalus*),

merlins (*Falco columbarius*), and ospreys (*Pandion haliaetus*). Additionally, large trees are often selected as nesting habitat for many migratory bird species, including black-billed magpies (*Pica hudsonia*), calliope hummingbirds (*Selasphorus calliope*), and evening grosbeaks (*Coccothraustes vepertinus*), and they may provide roosting habitat for a variety of bat species. Some mammal species have become adept at using park-like habitat, including northern raccoons (*Procyon lotor*) and western spotted skunks (*Spilogale gracilis*).



Source: Cirrus (2021)

Figure 4.5-9. Developed land habitat at the Ashton Reservoir boat launch.

4.5.2 Bald and Golden Eagles

Bald eagles and golden eagles are protected by the Bald and Golden Eagle Protection Act of 1940, which prohibits the possession, selling, or hunting of bald or golden eagles. Both species have been observed near the Project upstream and downstream of the reservoir. Bald eagle sightings are more common than golden eagle sightings (INHD, 2021).

4.5.3 Invasive Species and Noxious Weeds

Idaho statute 22-2402 defines a noxious weed as "any plant having the potential to cause injury to public health, crops, livestock, land or other property; and which is designated as noxious by the director."²¹

PacifiCorp maintains a noxious weed control program as part of its site operations at the Project. Within the Project boundary, three noxious weeds of concern have been reported: leafy spurge (*Euphorbia esula*), Canadian thistle (*Cirsium arvense*), and plumeless thistle (*Caardus acanthoides*). A small population of leafy spurge occurs on the north side of the reservoir, near the boat launch site. Canada thistle primarily occurs in the mesic grass areas on the south side of the reservoir. Plumeless thistle primarily occurs in the wetland complex area south of the reservoir in pastures that are managed with livestock grazing.

PacifiCorp undertakes annual control operations with herbicides, targeting populations of noxious weeds and preventing them from establishing more extensively in the Project area. Overall, noxious weed concerns are not extensive in the Project area.

4.5.4 Commercially, Recreationally, and Culturally Important Species

Commercially important species in the Project area are agricultural crops, both field and pasture types. As discussed in section 4.12.1, *Socioeconomics*, 92 percent of the private land in Fremont County supports some form of agriculture, and cultivated land is one of the major habitat types in the Project vicinity. Other habitats in the Project vicinity are also used for livestock grazing. The crop production season is generally from June through September, and grazing occurs in some areas from April through October.

The recreationally important species in the Project area are primarily associated with the Henry's Fork trout fishery rather than terrestrial wildlife. However, waterfowl and upland game birds are hunted within the Project area. Section 4.8, *Recreation and Land Use*, describes hunting in more detail.

There are no other notable culturally important species in the Project vicinity.

4.5.5 Wildlife Enhancement Plan

Pursuant to Article 405 of the current license and in consultation with U.S. Fish and Wildlife Service (FWS) and IDFG, PacifiCorp developed a Wildlife Enhancement Plan (WEP) in 1990. The original plan sought to enhance raptor and goose nesting, protect wetland resources, restore grassland habitats, and monitor the effectiveness of these efforts. Since the original 1990 WEP, PacifiCorp proposed, and FERC approved, various amendments to the WEP. Table 3-2 provides a history of the various filings, WEP amendments, and license orders.

²¹ See https://invasivespecies.idaho.gov/laws-and-rules.

The most recent version of the WEP was approved by the FERC by Order Approving Updated Wildlife Enhancement Plan Under Article 405 dated February 23, 2017.²² The current plan includes: (1) fencing to control cattle grazing on the reservoir shoreline and wetland complex, (2) installation of waterfowl nesting structures, (3) provision and maintenance of 15 raptor perches and 11 osprey nest platforms around Ashton Reservoir, (4) preservation and conservation easements at the wetland complex, (5) preservation of the north end of Ashton wetland complex through leasing grazing rights, (6) obtaining temporary conservation easement for 23 acres of shoreline and perpetual conservation, and (8) annual control of noxious weeds. These components of the WEP are discussed in the following section, and a copy of the current WEP is provided in Appendix F.

Fencing

To protect riparian habitat and reservoir shoreline, PacifiCorp installed 2.2 miles of cattle exclusion fencing around the Project reservoir and 2.6 miles at the wetland complex (figure 4.5-10). All fences are inspected annually and repaired as needed. According to the most recent 5-year monitoring report, all reservoir shoreline fences are in good condition, and all fences associated with the wetland complex are in acceptable condition (PacifiCorp, 2021).



Source: Cirrus (2021)

²² See FERC Accession No. 20170223-3018

Figure 4.5-10. Cattle exclusion fencing at the wetland complex.

Nesting Enhancements

Nesting platforms for bald eagles, osprey, and swans were constructed around the Project reservoir to provide suitable nesting sites (figure 4.5-11). The 11 osprey nesting platforms and two floating swan nesting platforms are repaired as needed and monitored annually for occupancy and brood success. At least four osprey platforms have been occupied each year since 2016. PacifiCorp is currently in the process of assessing, repairing, and replacing structures as needed in 2022 and 2023 (PacifiCorp, 2021).

An additional 35 cavity-nesting boxes were installed over 7 years (figure 4.5-12). Thus far, 5 nest boxes have been used, 11 have been unoccupied, and 4 are damaged or missing (PacifiCorp, 2021). The nest boxes are inspected for occupancy and brood success and maintained annually, with repairs finished before the nesting season each year.



Source: PacifiCorp (2021)





Source: Cirrus (2021)

Figure 4.5-12. A nesting platform (left) and cavity-nest box (right).

Raptor Perches

PacifiCorp constructed 15 raptor perches around the reservoir to provide perching opportunities for raptors such as bald eagles and osprey (figure 4.5-13). Rocky Mountain Power installed three additional perches. Each perch is inspected annually before the nesting season and repaired as needed. According to the most recent 5-year monitoring report, no maintenance needs were identified (PacifiCorp, 2021).



Source: Cirrus, 2021

Figure 4.5-13. A raptor perch north of the Project reservoir.

Wetland and Shoreline Preservation and Conservation Easements

Wetland conservation and preservation easements protect wildlife habitat values at the wetland complex and on the Project reservoir shoreline by "preventing current and future landowners from taking any actions that will diminish the functioning of these wetlands" (PacifiCorp, 2016). The management focus of these areas is to provide and maintain habitat for waterfowl and other wildlife.

PacifiCorp acquired conservation and preservation easements on 252.8 acres at the wetland complex and 4.05 acres along the reservoir shoreline (table 4.5-1). The wetland complex easements have varied easement conditions. The Cordingly and Marshal easements are best characterized as no-development- open-space easements where agricultural use is not limited. In addition, the Cordingly easement is overlain with an additional grazing-right easement around portions of the margins of Cordingly pond. The Baum conservation easement in Table 4.5-1 was established in 2015 with PacifiCorp extinguishing previous no-development easements and grazing-right leases to be replaced by a perpetual conservation easement with riparian protection buffers to be held by Teton Regional Land Trust. The reservoir shoreline easement (Jenkins) does preclude development and grazing (PacifiCorp, 2016).

Name	Acreage
Cordingly Preservation Easement (Wetland Complex held by PacifiCorp)	112.7
Cordingly Wetland Wildlife Habitat Easement (Wetland Complex grazing rights in buffer around portions of Cordingly Pond, held by PacifiCorp overlays the 112.7 acres)	7.3 ^a
Marshal Preservation Easement (Wetland Complex held by PacifiCorp)	78.1
Baum Conservation Easement (Wetland Complex held by Teton Regional Land Trust)	62.0
Jenkins Conservation Easement (Reservoir shoreline held by PacifiCorp)	4.05
Total	256.9

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Source: PacifiCorp (2016)

^a Not included in the total acreage.

For monitoring purposes, PacifiCorp provides annual documentation to ensure that the habitat values described in these wetland preservation and conservation easements are being protected. This documentation is based on walk-through visits, on-the-ground photo documentation, and a review of aerial photography every 5 years. Results are compared to baseline conditions in 1993 for the Cordingly and Marshal easements and to 2016 for the Jenkins easement. Any changes that are detected are discussed with FWS and IDFG (PacifiCorp, 2016). According to the most recent 5-Year Monitoring Report, annual monitoring, fence maintenance and noxious weed control was completed each year (PacifiCorp, 2021).

The Baum conservation easement is held by the Teton Regional Land Trust and has a different monitoring program. Instead of conducting its own annual inspection, PacifiCorp reviews the annual monitoring report produced by the land trust. Any changes that are evident in these reports are discussed with the land trust (PacifiCorp, 2016). The Teton Regional Land Trust's annual monitoring reports were reviewed, and the organization was found to be diligent in their administration of the conservation easement (PacifiCorp, 2021).

Wetland Preservation Lease

Wetland preservation leases "maintain or enhance riparian and upland wildlife habitat values within the wetland complex" (PacifiCorp, 2016). The management focus of these areas is to provide habitat for waterfowl and other wildlife. PacifiCorp acquired a preservation lease for grazing rights on 10.8 acres within the wetland complex, at the north end of Cordingly Pond. This lease has a renewal provision that extends through 2027. Monitoring requirements are the same as described above for the Cordingly and Marshal easements (PacifiCorp, 2016).

According to the most recent 5-Year Monitoring Report, annual monitoring, fence maintenance and noxious weed control was completed each year (PacifiCorp, 2021).

Temporary Shoreline Term Conservation Easement

A temporary conservation easement is intended to "maintain or enhance riparian and upland wildlife habitat values along the reservoir" (PacifiCorp, 2016). The management focus of these areas is to provide habitat for waterfowl and other wildlife. PacifiCorp acquired a temporary conservation easement that excludes grazing on 23 acres of shoreline for the remaining term of the hydro license. Monitoring requirements are the same as described above for the Jenkins easement (PacifiCorp, 2016). According to the most recent 5-Year Monitoring Report, annual walk-through monitoring, noxious weed control, maintenance of fences, and the installation of boundary marker posts was completed each year (PacifiCorp, 2021).

PacifiCorp Fee-Title Properties

PacifiCorp fee-title properties at the wetland complex and along the reservoir shoreline "maintain or enhance riparian and upland wildlife habitat values" (PacifiCorp, 2016). The management focus of these areas is to provide habitat for waterfowl and other wildlife. Since issuance of the current license, PacifiCorp acquired fee ownership of 45 acres at the PacifiCorp Pond property and 32.8 acres on the north shore of the reservoir (PacifiCorp, 2016).

For monitoring purposes, PacifiCorp provides annual documentation to ensure that the habitat values on the fee-title properties are being protected. The annual documentation is completed using annual walk-through visits, monitoring and maintaining exclusion fences, and semi-monthly trespass monitoring from June through October (PacifiCorp, 2016). According to the most recent 5-year monitoring report, annual monitoring, fence maintenance, and noxious weed control was completed each year (PacifiCorp, 2021).

Noxious Weed Control

PacifiCorp's weed control program is described in section 4.5.3.

4.6 Wetlands, Riparian and Littoral Habitat (18 CFR §5.6(d)(3)(vi))

The FWS classification scheme for wetlands serves as the national standard for wetland classification and is used to classify wetlands appearing in the National Wetlands Inventory (NWI; FWS, 2019). NWI coverage is developed from aerial photography, and FWS defines wetlands as:

...lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water. For the purpose of the classification, wetlands must have one or more of these three attributes: (1) at least periodically, the land must support predominantly wetland plants; (2) the substrate is predominantly undrained hydric soil; and (3) rocky, gravelly, or sandy areas that are saturated with or covered by shallow water at some time during the growing season.

The NWI uses a hierarchal classification system to describe wetlands, progressing from systems and subsystems at the most general levels to classes, subclasses, and dominance types, with special modifiers to describe wetlands and deepwater habitats that have been created or modified by humans or by beaver activity (FGDC, 2013). A synopsis of the NWI classification structure is provided in FGDC (2013).

NWI mapping was used to determine and describe the types of wetlands, riparian areas, and littoral habitats within the Project boundary. Overall, there are seven wetland classes within the Project boundary: five occur within the wetland complex and six occur within and around the Project reservoir (table 4.6-1; figure 4.6-1). These wetland classes are discussed in more detail in sections 4.6.1 through 4.6.7.

NWI Class	NWI Code	NWI Code Description	Area around Project Reservoir (acres)	Area within the Wetland Complex (acres)	Area within Project Boundary (acres)
Lacustrine Littoral Aquatic Bed	L2ABH	Littoral aquatic bed permanently flooded	0	22	22
	L2ABHh	Littoral aquatic bed permanently flooded Impounded	291	0	291
	Subtotal		291	22	313
Palustrine Aquatic Bed	PABF	Aquatic bed semi- permanently flooded	0	0.2	0.2
	PABH	Aquatic bed permanently flooded	0	30	30
	Subtotal		0	30.2	30.2

Table 4.6-1.	NWI wetlands in the current Project bounda	ry.			
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NWI Class	NWI Code	NWI Code Description	Area around Project Reservoir (acres)	Area within the Wetland Complex (acres)	Area within Project Boundary (acres)
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Palustrine Emergent	PEM1A	Emergent marsh persistent temporarily flooded	0.1	0	0.1
	PEM1C	Emergent marsh persistent seasonally flooded	4	2	6
	PEM1Ch	Emergent marsh persistent seasonally flooded impounded	1	0	1
	PEM1Cx	Emergent marsh persistent seasonally flooded excavated	0	1	1
	PEM1F	Emergent marsh persistent semi-permanently flooded	0	110	110
		Subtotal	5.1	113	118.1
Palustrine Forested	PFOA	Forested temporarily flooded	1	0	1
Palustrine Scrub-Shrub	PSSC	Palustrine scrub-shrub seasonally flooded	11	15	26
	PSSCh	Palustrine scrub-shrub seasonally flooded impounded	1	0	1
		Subtotal	13	15	28
Riverine Upper Perennial Rock/Unconso lidated Bottom	R3RBH	Upper perennial rock bottom permanently flooded	70	0	70
	R3UBH	Upper perennial unconsolidated bottom permanently flooded	3	0	3
		Subtotal	73	0	73
Riverine Intermittent Streambed	R4SBC	Intermittent streambed seasonally flooded	1	1	2
	R5UBH	Unknown perennial Unconsolidated bottom permanently flooded	0.4	0	0.4
		Subtotal	1.4	1	2.4
Total Wetland Area			383.5	181.2	564.7

Source: FWS (2022a), as modified by PacifiCorp





Figure 4.6-1. NWI classes that occur in the Project boundary.

4.6.1 Lacustrine Littoral Aquatic Bed

Lacustrine littoral aquatic bed wetlands are those associated with lakes. The lacustrine system includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses, or lichens with 30 percent or greater areal coverage; and (3) total area of at least 20 acres. The littoral subsystem includes all wetland habitats in the lacustrine system and extends from the shoreward boundary of the system to a depth of 8.2 feet below low water, or to the maximum extent of nonpersistent emergent vegetation if these grow at depths greater than 8.2 feet (FGDC, 2013).

Lacustrine habitat in the reservoir and various inlets provides foraging and resting habitat for a variety of wildlife species (figure 4.6-2). In the Project area, lacustrine habitat is generally void of vegetation but may support some floating species or rooted vegetation under the water. Open water adjacent to emergent and shoreline vegetation provides foraging and resting habitat for many species of waterbirds, including northern shovelers (*Anas clypeata*), ruddy ducks (*Oxyura jamaicensis*), trumpeter swans (*Cygnus buccinator*), and western grebes (*Aechmophorus occidentalis*).

In total, there are 313 acres of lacustrine littoral aquatic bed wetland within the Project boundary. 291 acres within and around the Project reservoir, and 22 acres within the wetland complex (table 4.6-1; figure 4.6-1).



Source: Cirrus (2021)

Figure 4.6-2. Open-water habitat in the reservoir.

4.6.2 Palustrine Emergent Wetland

Palustrine emergent wetlands are nontidal wetlands dominated by emergent plants—i.e., erect, rooted, herbaceous hydrophytes, excluding mosses and lichens—with at least 30 percent areal coverage. The vegetation is present for most of the growing season in most years. Palustrine emergent marsh is typically located in shallow-water areas along the shoreline and is usually dominated by perennial plants (FGDC, 2013). Palustrine emergent wetlands within the Project boundary include cattail (*Typha latifolia*), common threesquare (*Schoenoplectus pungens*), and Olney's bullrushes (*Schoenoplectus americanus*).

Emergent vegetation provides hiding and foraging habitat for both aquatic and semi-aquatic species. The presence of emergent vegetation is often a critical factor in determining whether an area provides suitable nesting habitat for a variety of waterbirds. Species that use emergent wetland include cinnamon teal (*Anas cyanoptera*), marsh wrens (*Cistothorus palustris*), northern leopard frogs (*Lithobates pipiens*), and Virginia rails (*Rallus lomicola*).

Within the Project boundary, there are 118.1 acres of palustrine emergent wetlands, 5.1 acres around the reservoir and 113 acres in the wetland complex (table 4.6-1; figures 4.6-1 and 4.6-3).



Source: Cirrus (2021)

Figure 4.6-3. Palustrine emergent vegetation at the wetland complex.

4.6.3 Palustrine Aquatic Bed

Palustrine aquatic beds are nontidal wetlands dominated by plants that grow principally on or below the surface of the water (i.e., surface plants or submergents) with at least 30 percent areal cover (FGDC, 2013). Palustrine aquatic beds may appear in open water since most of the plant growth is in the water column. and generally include plant species such as duckweed (*Lemna* spp.) and pondweed (*Potamogeton* spp.).

This habitat type provides important resting and foraging habitat for a variety of waterfowl and other waterbirds. Typical species include mallards (*Anas platyrhynchos*) and Canada geese (*Branta canadensis*).

In the Project area, 30.2 acres of palustrine aquatic beds occur in the wetland complex ponds and zero around the Project reservoir (table 4.6-1; figure 4.6-4).



Source: Cirrus (2021)

Figure 4.6-4. Palustrine aquatic bed (backgound) and palustrine emergent marsh (foreground) at the wetland complex.

4.6.4 Palustrine Scrub-Shrub

Palustrine scrub-shrub systems are characterized by woody plants less than 20 feet tall with at least 30 percent areal coverage. The shrub life form includes true shrubs, young specimens of tree species that have not yet reached 20 feet in height, and woody plants (FGDC, 2013).

This wetland class is commonly dominated by willows (*Salix* spp.) in the Project area, and it provides dense cover as well as foraging opportunities for many wildlife species (figure 4.6-5). The extent of this riparian habitat type is typically limited to within 80 feet of the reservoir shoreline and various inlets.

Riparian habitats are considered high priority for migratory birds and support the greatest diversity of species compared to other habitat types (Idaho Partners in Flight, 2000). The extent of the riparian vegetation is typically limited to within 80 feet of the reservoir shoreline and various inlets. Examples of wildlife associated with woody riparian habitats include American bitterns (*Botaurus lentiginosus*), common muskrats (*Ondatra zibethicus*) warbling vireos (*Vireo gilvus*), willow flycatchers (*Empidonax traillii*), and yellow warblers (*Setophaga petechia*).

There are 26 acres of palustrine scrub-shrub habitat within the Project boundary, 11 acres around the Project reservoir and 15 acres within the wetland complex (table 4.6-1; figure 4.6-1).



Source: Cirrus, 2021

Figure 4.6-5. Palustrine scrub-shrub wetland habitat along the northern shoreline of the Project reservoir.

4.6.5 Riverine Upper Perennial Rock/Unconsolidated Bottom

In the Project boundary, riverine upper perennial/unconsolidated bottom wetland class is represented by impounded river channel at the upper end of the reservoir, with an additional small amount below the Project dam. The substrate includes rock, cobbles, or gravel with occasional patches of sand and vegetation comprising less than 30 percent of the cover. It is continuous with the lacustrine littoral classification that comprises the majority of the reservoir, and it supports similar plant and wildlife species. Approximately 73 acres of this wetland is present in the Project boundary (table 4.6-1; figure 4.6-6).



Source: Cirrus, 2021

Figure 4.6-6. Riverine upper perennial rock/unconsolidated bottom habitat at the upper end of Ashton Reservoir.

4.6.6 Riverine Intermittent Streambed

Riverine intermittent streambed is a minor classification in the Project boundary, comprising less than 2 acres around the reservoir and approximately 1 acre in the wetland complex (table 4.6-1; figure 4.6-1). It corresponds to intermittent streams around the reservoir and short segments of ditches in the wetland complex. Given its narrow, linear form, this wetland type generally supports similar plant and wildlife species as adjacent habitat.

4.6.7 Palustrine Forested

Palustrine forested wetlands are characterized by trees, defined as woody plants taller than 20 feet and with at least 30 percent cover (FGDC, 2013). Forested wetlands are a minor type in the Project boundary, representing approximately 1 acre at the Ashton Reservoir boat launch (table 4.6-1; figure 4.6-7).

Examples of associated tree species include willows (*Salix spp.*) and cottonwoods (*Populus spp*). Wildlife species associated with this type include yellow warbler (*Setophaga petechia*) and Bullock's oriole (*Icterus bullockii*).



Source: Cirrus (2021)

Figure 4.6-7. Palustrine forested habitat at the Ashton Reservoir boat launch.

4.6.8 Invasive Species

Within the Project boundary, three invasive noxious weeds are present: (1) leafy spurge (*Euphorbia esula*), (2) Canadian thistle (*Cirsium arvense*), and (3) plumeless thistle (*Caardus acanthoides*). A small patch of leafy spurge occurs on the north side of the reservoir, near the boat launch site. Canadian thistle primarily occurs in the mesic grass areas on the south side of the reservoir. Plumeless thistle primarily occurs in the wetland complex area south of the reservoir in pastures that are managed with livestock grazing.

Incorporated into its current WEP, PacifiCorp undertakes annual control operations with herbicides, targeting patches of these invasive noxious weeds to prevent their spread and potential establishment elsewhere. Overall, noxious weed concerns are not extensive in the Project area.

4.7 Rare, Threatened, and Endangered Species (18 CFR §5.6(d)(3)(vii))

4.7.1 Federal Species

FWS maintains a list of all candidate, threatened, experimental non-essential, and endangered species designated under the Endangered Species Act. On March 11, 2022, an official list of current designated species was obtained from the FWS's Information for Planning and Consultation (IPaC) on-line tool using the current Project boundary as the search area (FWS, 2022b). A copy of the FWS official species list that names the designated species that have the potential to occur in the Project area is provided in appendix G. The official species list identifies three species, two threatened and one candidate species, that have the potential to occur in the Project area: the grizzly bear, Ute ladies'- tresses, and monarch butterfly. In addition and according to the Idaho Natural Heritage Program, these three species have been reported within a 10-mile radius around the Project (INHD, 2021). Although not identified by the FWS IPaC system of having the potential occur in the Project area, sightings of the Canada lynx, a federal protected species, were reported within a 10-mile radius of the Project by the Idaho Natural Heritage Program (INHD, 2021). These four species are discussed below and their occurrence near the Project is summarized in table 4.7-1.

Species name	Federal Designation	FWS IPaC ^a	Records Near Project Area ^b	Habitat Found in Project Vicinity ^c	Habitat Requirements ^d	
	Invertebrates					
Monarch butterfly (Danaus plexippus)	Candidate	Yes	Yes	Yes	Summer breeding habitat includes anywhere that patches of milkweed occur.	
Mammals						
Canada lynx (Lynx canadensis)	Threatened	No	Yes	No	Occurs in boreal and montane regions with coniferous or mixed- conifer forest with dense undergrowth for foraging and denning. Denning typically occurs in mature or old growth stands with a high density of logs.	
Grizzly bear (Ursus arctos)	Threatened	Yes	Yes	No	Often found in montane forests where food is abundant with little development and few roads.	
Plants						
Ute ladies'- tresses	Threatened	Yes	Yes	Yes	Occurs under early- to mid-seral, lower elevation, moist to wet conditions where competition for	

Table 4.7-1.	Rare, threatened, endangered species with potential to occur in the Project
	Area.

Species name	Federal Designation	FWS IPaC ^a	Records Near Project Area ^b	Habitat Found in Project Vicinity ^c	Habitat Requirements ^d
					light, space, water, and other resources is normally kept low by periodic or recent disturbance events.

^a FWS (2022b)

^b INHD (2021)

^c Based on habitat found within 0.25 miles of the Project boundary

^d NatureServe (2021)

Monarch Butterfly

Monarch butterflies have distinct winter and summer habitat needs. They are present in Idaho during the summer, when they forage on nectar-producing flowers wherever they are available, including fields, meadows, and urban plantings. Milkweed (*Asclepias sp.*) is required for reproduction because eggs are only placed on milkweed plants throughout the butterfly's breeding range. The primary threats to the monarch's biological status include loss of critical wintering habitat in Mexico and coastal California, loss of milkweed due to habitat conversion, and herbicides (NatureServe, 2021).

After a thorough review of the best available scientific and commercial information, FWS found that listing the monarch butterfly as an endangered or threatened species is warranted but precluded by higher priority actions, thus maintaining the butterfly's status as a candidate species (FWS, 2020).

The Idaho Natural Heritage Database (INHD) identified monarch butterfly sightings both north and south of the Project (INHD, 2021). While the presence of milkweed is necessary as breeding habitat, this species travels great distances to reach suitable habitat and could potentially be found in a variety of habitat types within the Project vicinity.

A special status assessment for the butterfly was prepared by FWS in 2020 (FWS, 2020). There is no recovery plan for the species. There is only one Biological Opinion (BO) for the species (FWS, 2020). There is no recovery plan for the monarch butterfly (FWS, n.d.).

Canada Lynx

Canada lynx typically occur in high-elevation coniferous forest with cold, snowy winters. Denning habitat is characterized by mature forest and large woody debris (Ruediger et al. 2000). While this habitat is not found within the Project boundary, Canada lynx can travel long distances through sub-optimal habitat in search of suitable habitat.

FWS currently designates Canada lynx as threatened (2022b), largely due to habitat loss, alteration, and fragmentation as well as competition from other predators and trapping.

There is no designated critical habitat in the Project area; the nearest designated critical habitat is in the State of Wyoming. (FWS, n.d.). The nearest critical habitat is located to the east of the Project in Wyoming. Additionally, there are no linkage areas within 10 miles of the Project (FWS, 2014); the nearest linkage area is northeast of the Project. The INHD identified three Canada lynx sightings within 10 miles of the Project: two to the west of the Project reservoir in the foothills and one to the north, near Big Bend Ridge. All three records are from 1986 and 1987, predating the current license.

A special status assessment for the lynx was prepared by the FWS in 2017 (FWS, 2017). There is no recovery plan for the species. There are also numerous BO's, but none were issue for activities near the Project (FWS, n.d.)

Grizzly Bear

Grizzly bears are considered habitat generalists, but suitable habitat typically includes forested environments, grasslands, shrublands, and riparian areas. They prefer to inhabit areas with low levels of disturbance and road densities (FWS, 2021).

FWS currently designates grizzly bears in Idaho as threatened due to habitat loss, increased road densities, and human-caused mortality. There is no designated critical habitat for grizzly bears (FWS, 2019). However, the Project area is adjacent to the Greater Yellowstone Ecosystem Recovery Zone, one of six recovery zones in the lower 48 states (FWS, 2021).

The INHD identified two grizzly bear sightings within 10 miles of the Project: one downstream of the Project reservoir in 2019, and the other northeast of the reservoir near Hale Canyon in 2016. Grizzly bears have recently been expanding their range due to conservation efforts. More sightings are expected in the future given continued protections.

A special status assessment for the bear was prepared by FWS in 2022 (FWS, 2022). There are also several supplements to the existing recovery plan for the species in place, but germane to the Project, is the supplement for the Grizzly Bear Recovery Plan (FWS, 2017). There are also numerous BOs, but none were issued for activities near the Project (FWS, n.d.)

Ute Ladies'-tresses Orchid

FWS lists Ute ladies'-tresses as endangered. There is no designated critical habitat for this species. Ute ladies'-tresses is endemic to moist soils in mesic or wet meadows near springs, lakes, and perennial streams. The elevation range of known habitat is 700 to 7,000 feet. Most occurrences are along riparian edges, gravel bars, old oxbows, and moist to wet meadows along perennial streams and rivers, although some are near freshwater lakes or springs.

Ute ladies'-tresses appears to be well adapted to disturbances caused by water movement through floodplains over time. The species occurs primarily in areas where the vegetation is relatively open and not very dense. It often grows on point bars and other recently created riparian habitat. The orchid appears to require permanent subirrigation, with the water table holding steady throughout the growing season and into late summer and early autumn. This species is considered a general riparian species (FWS, 1995).

There is a known population of Ute ladies-tresses on the Henry's Fork near Ora Bridge, approximately a mile below Ashton Dam. In fact, FWS issued a Biological Opinion for the Federal Highways Administration's Ora Bridge replacement project (FWS, 2017). There is no special status report for the species, but a draft recovery plan is being implemented (FWS, 1995).

4.7.2 State Species

IDFG lists the global and state rank of each wildlife and plant species in Idaho and provides a range map of where each species is found in the state (IDFG, 2017). Eighty-eight wildlife species have an overlapping range with the Project, suitable habitat within the Project boundary, and one or a combination of the following:

- an Idaho state rank that is critically imperiled (S1), imperiled (S2), or rare or uncommon (S3);
- are listed in the State Wildlife Action Plan;
- or are listed as an Idaho Partners in Flight high priority species.

These 88 species (3 amphibians, 68 birds, 6 invertebrates, and 11 mammals) are listed in table 1 in appendix E with a short description of habitat requirements and whether they have been reported within a 10-mile radius around the Project. Species that have a state rank of S4 or S5 and are not listed in either the State Wildlife Action Plan or Idaho Partners in Flight are identified in tables 2 through 5 in appendix E.

4.8 Recreation and Land Use (18 CFR §5.6 (d)(3)(viii))

4.8.1 Regional Recreation Resources

Outdoor recreation is an important economic and social aspect of life in Fremont County and in Idaho as a whole. The Idaho Statewide Comprehensive Outdoor Recreation Plan (SCORP) (Idaho Department of Parks and Recreation, 2018) states that "79 percent of Idaho residents participate in outdoor recreation, ranking the state third behind Alaska and Montana" nationally. Economically, outdoor recreation generates \$7.8 billion in annual consumer spending statewide and more than \$50 million on fishing in Fremont County (see section 4.12; Idaho Department of Parks and Recreation, 2018; Fremont County, 2008). The current Idaho SCORP identifies that more outdoor more hiking trails, mountain biking trails, and multi-use trails (both paved and unpaved, motorized and unmotorized) are needed, as current supply exceeds the demand (Idaho Department of Parks and Recreation, 2018).

Fremont County lies within the Greater Yellowstone Ecosystem and is therefore connected to a number of recreational areas around its borders (Fremont County, 2008). Areas such as Mesa Falls, other national forest recreation areas, and the BLM St. Anthony Sand Dunes are managed for public recreation and include various recreational facilities. The Idaho Department of Parks and Recreation manages Harriman and Henry's Lake State Parks, and IDFG manages Sand Creek Wildlife Management Area.

The Snake River corridor, from southeastern Idaho to southwestern Wyoming, draws thousands of recreationists every year and is especially renowned for its trout fishing. Put-in locations along the Henry's Fork provide starting points for popular fishing float trips. Approximately 20 percent of surveyed anglers used a guide service while fishing in the reach above the Project reservoir (HFF, 2005). The boat ramp at the reservoir, described below, serves as the take-out point for most guided and unguided float trips on this reach.

The Henry's Fork provides fishing opportunities both upstream and downstream of the Project. Angling occurs at public access points (e.g., Jumpoff Canyon and Ora Bridge), along the shoreline, or from watercraft (HFF, 2022). Drift boats, skiffs, and rafts are popular watercraft for use on the Henry's Fork for anglers and recreationalists upstream and downstream of the Project.

4.8.2 **Project Recreation Facilities**

Two public recreation facilities are within the Project boundary (figure 4.8-1). The first is known as the Ashton Reservoir boat launch and is located where the Henry's Fork meets the reservoir (figure 4.8-2). PacifiCorp and Fremont County share ownership of the parcels that the site occupies, and, by agreement, Fremont County is responsible for day-to-day maintenance of the site (PacifiCorp, 2010; Fremont County, 2016). Fremont County and IDFG initiated and completed improvements to the site, which were included in an amendment to the Recreation Area Improvement Plan in 2018 (FERC, 2018).

Recreation amenities provided at the boat launch include:

- a motorized boat launch ramp with floating courtesy dock (figure 4.8-3);
- a non-motorized boater take-out ramp with floating courtesy dock (figure 4.8. -3);

- a vault toilet with two stalls (figure 4.8-4);
- two ADA-designated parking spaces, one at the vault toilet and one at the boat launch;
- paved parking with designated striping for 17 vehicles (figure 4.8-4);
- gravel parking for approximately 26 vehicles with trailers (figure 4.8-5)
- picnic area with four concrete picnic tables on concrete pads (Figure 4.8-2); and
- trashcans and signs.

Summer hours for the boat launch are from April 1 through September 30 from 5:00 a.m. to 10:00 p.m. Winter hours are from October 1 through March 31 from 7:00 a.m. to 6:00 p.m. No overnight camping is allowed. Facility access is often blocked in the winter by snow on the access road and in the parking areas.



Figure 4.8-1. Recreation facilities and amenities within the Project boundary.



Source: PacifiCorp, 2018a

Figure 4.8-2. As-built plans for the Ashton Reservoir boat launch.



Figure 4.8-3. The Ashton Reservoir boat launch, showing the non-motorized boat ramp and floating dock in the foreground and motorized boat ramp and floating dock with the FERC Part 8 sign in the background.



Source: Cirrus (2021)

Figure 4.8-4. The Ashton Reservoir boat launch, showing the vault toilet and portion of the paved parking lot.



Figure 4.8-5. The Ashton Reservoir boat launch, showing a portion of the gravel parking lot and signage.

The second Project recreation facility is known as the Fisherman's Access site. The site provides direct, walk-in access to the spillway, tailrace, and the river downstream from within the Project boundary (figures 4.8-1, 4.8-6, 4.8-7, 4.8-8). This facility was originally developed in 1991 to provide construction access for improvements to the downstream dam face. Once the improvements were complete, the facility became a popular recreation amenity. In 2018, the Commission approved PacifiCorp's amendment to the Recreation Area Improvement Plan, which included this new public recreation facility (FERC, 2018).

Vehicle parking is provided in a 60-by-100-foot asphalt parking lot at the top of a gated path that leads down into the canyon near the river's edge (figure 4.8-6). A footbridge across the spillway extends access to the small island in the tailrace, and there is a picnic table on the island (figure 4.8-7). The hours of operation for the Fisherman's Access site are the same as the boat launch site. Access is often precluded by winter conditions.



Source: PacifiCorp (2018a)

Figure 4.8-6. As-built plans for the Fisherman's Access site.

Pre-Application Document



Source: Cirrus (2021)

Figure 4.8-7. The Fisherman's Access site from the top of Ashton Dam, showing picnic table and bridge.



Source: Cirrus (2021)

Figure 4.8-8. The Fisherman's Access site, showing the gravel path, bridge, and picnic table.

4.8.3 **Project Recreation Use**

The Project area serves as a popular fishing, boating, picnicking, hunting, and day use area. As outlined in section 4.8.2, the reservoir provides recreational facilities for these uses, but demand may exceed capacity. A total of 35,241 people (15,803 peak season [Friday before Memorial Day through Labor Day] and 19,438 off season) visited the boat launch facility in 2014, based on the most current available data (PacifiCorp, 2015a,b). PacifiCorp's analysis concludes that demand for picnic sites and parking stalls at the boat launch exceeds the capacity of the site (by 100 percent and 104 percent, respectively; PacifiCorp, 2015a). However, anecdotal data suggest that the 12 parking stalls at the Fisherman's Access site are only 25 percent utilized during the peak season (PacifiCorp, 2015a).

In 2021, HFF, a non-profit organization that works to conserve, protect, and restore fish, wildlife, and aesthetic values of the Henry's Fork and its watershed, conducted a recreation use study of float trips on the section of the Henry's Fork immediately upstream of the Project. HFF reported approximately 15,000 recreationists, primarily anglers, floated the section above the Project between Memorial Day and Labor Day in 2021 (personal communication from Matt Hively, HFF, on March 10, 2022).

Fishing is popular at the reservoir from the fishing docks at the boat launch, the shoreline, and watercraft. Game fish within the reservoir include yellow perch, brown trout, and rainbow trout. Under Article 402 of the current Project license, which addresses fishery enhancement, PacifiCorp supports IDFG in stocking rainbow trout in the reservoir each year in an effort to increase the catch rate to approximately one fish per hour (see section 4.4.2).

Hunting is allowed on PacifiCorp lands around the Project reservoir in accordance with state hunting regulations. Waterfowl and upland game hunting in particular occurs on the reservoir. The wetland complex easements are private property, so PacifiCorp has no control over hunting access on these parcels. Hunting is not allowed on PacifiCorp's ownership (PacifiCorp Pond) in the wetland complex (see section 4.5.5). The discharge of firearms/hunting is prohibited within or near recreation sites and Project facilities

The Project lands around the reservoir are available for other public recreation such as hiking, picnicking, and wildlife viewing. The Project boundary includes two small pieces of BLM-managed land that are open to the public for recreation.

4.8.4 Shoreline Management Policy and Shoreline Buffer Zones

PacifiCorp administers a permit program that allows landowners with property adjacent to the Project to construct private docks on the reservoir. The permit program is a FERC license article requirement that applies to any land use activity within the FERC Project Boundary. Private docks must either be above the ordinary high-water mark or be seasonal floating docks. Dock permits are in effect until they reach their expiration date, which is assigned during the permit application phase. No permit extends beyond the end of the current FERC license unless approved in writing by PacifiCorp. No commercial use of the docks is allowed. PacifiCorp regularly inspects the docks for consistency with their permits (PacifiCorp, 2018b). No shoreline buffer zones have been established at the Project.

4.8.5 Wild and Scenic River

Idaho has approximately 107,651 miles of river, of which 891 miles are designated as wild and scenic. The Henry's Fork that encompasses the Project, however, is not designated as a part of, or under study for inclusion in the National Wild and Scenic River System (National Wild and Scenic Rivers System, 2022).

4.8.6 Nationwide Rivers Inventory

The National Rivers Inventory is a list of the free-flowing river segments in the United States that possess one or more outstandingly remarkable values (NPS, 2022). The Henry's Fork within the Project boundary is not listed on the National Rivers Inventory. However, the Henry's Fork upstream of its confluence with the Warm River is listed. The Henry's Fork-Warm River confluence is about 11 river miles upstream of the Project dam. There are no National Rivers Inventory segments downriver of the Project to the confluence with the Snake River.

4.8.7 National Trails System and Wilderness Areas

Two National Trails System trails pass through Fremont County. The first is the Nez Perce Nee Me Poo National Historic Trail, which is about 20 miles north of the Project near Island Park Reservoir. The second trail is the Continental Divide National Scenic Trail, which is more than 30 miles north of the Project near Henry's Lake (National Park Service, 2021b). There are no wilderness areas in Fremont County (Forest Service, 2021b).

4.8.8 State-Protected River Segments

The Idaho Comprehensive State Water Plan, developed by Idaho's Water Resource Board, describes the designation of selected waterways in Idaho as protected rivers. The Idaho Water Resource Board has consistently recognized the value of waterways by designating and protecting specific streams and rivers as natural or recreational rivers (Idaho Water Resources Board, 2012). The Henry's Fork downstream of the Project dam for 6.44 river miles (Ashton Dam to Falls River), and upstream of the upper extent of the Project reservoir for 8.0 river miles are state-protect segments, designated for their recreation value. Within these segments the following activities are prohibited:

- Construction of new hydropower projects;
- Construction of new or expansion of existing dams or impoundments;
- Dredge or placer mining; and,
- Mineral or sand and gravel extraction within the streambed.

Other streambed alterations or the construction of water diversion works are allow, but require Idaho Water Resources Board approval (Idaho Water Resources Board, 2012).

4.8.9 Land Use

Recreational and non-recreational activities occur within the Project boundary and on adjacent land. Non-recreational uses include grazing, farming, conservation activities, and residential uses (e.g., private docks) (table 4.8-1; figure 4.8-1).

Grazing occurs within the Project boundary, and fencing is in place for habitat protection along reservoir shorelines and surrounding the wetland complex (see section 4.5.5). Approximately 105 acres of irrigated and dryland crops are grown within the Project boundary, including potatoes, alfalfa, and grains (NASS, 2021; PacifiCorp, 2016). Additional information on agriculture in Fremont County is provided in section 4.12.

Adjacent to the Project, recreational land use is similar, including hunting, fishing, and boating. Wetlands adjacent to the Project provide waterfowl hunting opportunities, and the BLM-managed land north of the reservoir provides public land access within Game Management Unit 60 (IDFGb, 2019).



Source: NASS (2021)



Land Use	Use Description	Area (acres)	Area (percent)
Agriculture	Irrigated and dry-land crops	105	13
Developed	Docks, bridges, parking areas, dam, spillway, transmission	5	< 1
Pasture	Grazing areas	11	1
Conservation	Wetland Complex	135	16
Open water	Reservoir	388	47
Other	Shrubland, forest, riparian habitat	169	23

Table 4 8-1	Land use within the	e Project boundary
1000 4.0 1.	Land use within the	c i roject boundary.

Source: NASS, 2021

4.9 Aesthetics and Visual Resources (18 CFR §5.6(d)(3)(ix))

In 2008, Fremont County completed a visual sensitivity assessment to provide a basis for county zoning and regulations to preserve the integrity of the county's visual resources while accommodating the inevitable incremental conversion of farm and ranch land to residential development. The following text from that analysis provides a good overview of the Project's visual setting:

Fremont County, Idaho is graced with some of the most varied and striking scenery in the West...

The southern half of the county [where the Ashton Project is located] is distinctly agrarian in character but also scenic. It is a patchwork of shrub steppe rangeland and remnant aspen stands on rolling hills, large and small fields of row crops, flooded pastures, grasslands withheld from farming through the USDA Conservation Reserve Program (CRP) and scattered farmsteads in wooded groves. Rivers and canals that emerge from the Yellowstone Plateau and flow across the valley floor are dominant visual features in this landscape...Various distant mountain backdrops comprise a significant part of the landscape character...

Much of this landscape is dominated by large field agriculture. However, several areas are composed of small farms and canal networks, which are visually important and culturally significant resources. The landscape interface between public and private lands, much of which is in CRP, creates some of the most compelling, intimate scale scenery in the county. Equally attractive scenery exists on private property where remnant aspen stands are interspersed with CRP grasslands...

High scenic quality is an integral part of Fremont County culture and an important economic resource for local business. As noted in previous planning documents, residents value the views from their homes, fields, communities, roads and rivers. Scenery is a primary factor in the rural character and sense of place they value so dearly... Tourists are attracted to Fremont County by the rich scenic experiences accessible from roadways, trails, waterways and recreation areas. Scenic quality is particularly important to thousands of anglers who come from all over the world to fish for wild trout in stunning landscape settings (Fremont County, 2008).

Figure 4.8.2-1 in the preceding recreation section shows the locations of key view corridors and points. The most frequent views of the Project itself are from Highway 20, which carried up to 10,500 vehicles per day during summer 2021 (IDOT, 2022), many of which were en route to Yellowstone National Park 55 road miles to the northeast. Because of the flat topography, only a narrow strip of the Project is visible where the highway crosses the Henry's Fork just above the reservoir, so these views are fleeting. The river is 200 to 300 feet wide at this point, with visible current flowing between low, rocky banks flanked by a border of riparian trees, sagebrush steppe, and grey rock outcrops. A few houses are nearby, outside the Project boundary, and Ashton Reservoir boat launch is visible from the highway bridge, about 2,000 feet downstream.

Longer views of the Project from a lower, more revealing perspective are available to visitors at the boat launch (figures 4.9-1 and 4.9-2). The river here is about 250 feet wide, and the rippling current is still evident. The recreation site itself is shaded by a number of large cottonwood trees,

and concrete footings mark the route of an old bridge crossing. From this river-level perspective, the natural riverbanks are visible in sharp relief, vegetated with riparian trees or sagebrush steppe, often punctuated with rock outcrops. Hay fields are visible above the steeper banks.

Another popular viewpoint is the Fisherman's Access site below the Project dam. Views from this recreation site upstream are of the dam, spillway, gates, outlet tunnel, powerhouse, transmission lines, substation and associated facilities (figure 4.9-3). The Project facilities are rectilinear in form and mostly grey, and they dominate the upstream view. Steep cliffs adjoin the dam across the river, providing a darker, more textured and natural visual counterpoint to the human-made structures. Below the cliffs, the water released from the powerhouse is fast-moving and white with foam. The trail down to the recreation site crosses the spillway, a steep, rocky channel that forms a whitewater cascade during higher-flow releases.

Downstream views from the recreation site include the spillway outfall in the foreground. Farther downstream, the river has a lower gradient, forming pools and riffles punctuated by willow islands and gravel bars. The banks are high, comprising grey cliffs and outcrops broken up by riverside willows and stringers of mountain brush. Sagebrush steppe tops the banks (figure 4.9-4). This portion of the Project is also visible from an east/west-running local road, E 1300 N, that crosses the river about 0.75 miles below the dam at Ora Bridge.

A summer-home development lies along the southwest portion of the reservoir, accessed by a local road called Cedar Lake Lane that parallels the shoreline. From this view corridor, the dominant view of the Project is of the reservoir and far shore. Reservoir width in this area ranges from about 300 to 900 feet. The far shoreline is generally vegetated with riparian trees and brush or sagebrush steppe. Emergent vegetation occurs in patches. Rock outcrops are less common along this shoreline. Banks are variable in height, and cultivated fields extend to the bank tops (figure 4.9-5).

The final Project viewpoint is the local road system that passes by the wetland complex (figure 4.9-6), particularly public roads N 3350 E and E 1425 N. Traffic volume on these roads is low, comprising mostly local residents. Open water is the focal point of most views from these roads. The ponds and sloughs are surrounded by cattails and other emergent vegetation, melding into lush riparian grassland grading away from the water. Some fences and other old agricultural infrastructure remain.

Fremont County designated the area around the Project as a priority viewing area. This classification is based on foreground views from the roadways described earlier in the text for areas around the dam, along the southern portion of the reservoir, and at the extreme northern end of the reservoir, as well as from the river and reservoir.



Figure 4.9-1. Upstream view from the Ashton Reservoir boat launch.



Source: Cirrus (2021)

Figure 4.9-2. Downstream view from the Ashton boat launch.



Source: Cirrus (2021)





Figure 4.9-4. Downstream view over the Fisherman's Access site.



Figure 4.9-5. View across Ashton Reservoir from Cedar Lake home tract.



Figure 4.9-6. View of the wetland complex from local road E 1425 N.

4.10 Cultural Resources (18 CFR § 5.6(d)(3)(x))

4.10.1 Project Cultural Resources Context

The Ashton Project is located in an area with a long and rich history of human occupation. Sites dating as far back as the Mountain Archaic Period (7,200 years before present to AD 500) have been documented in the Project boundary as well as on lands adjacent to the Project. Archaeological evidence suggests this occupation continued into the ethnographic period (i.e., the period immediately after initial contact with non-indigenous peoples and the beginning of written accounts of indigenous life). The present-day Shoshone–Bannock Tribe is the primary indigenous descendant group with traditional cultural ties to the general Project area.

The community of Ashton, Idaho, was settled in the early-1900s following the completion of two railroads through the area. The construction of the Ashton Project occurred several years later, in 1914 under the auspices of the Ashton & St. Anthony Power Company (Hovanes and Oliver, 2019). Through a series of mergers and sales, the Utah Power & Light Company (Utah P&L)— the predecessor of PacifiCorp—acquired the Project in 1924 or 1925. Utah P&L upgraded the hydroelectric plant with new generating units, improved the dam with larger intake gates, and repaired previous damage to the earthen dam (Hovanes and Oliver, 2019). The dam was upgraded again between 2009 and 2012. Throughout Utah P&L's ownership of the Project a residential village associated with the Project was constructed shortly after acquiring the facility. Additional buildings, including a shop, garages, and more cottages were added over the next several decades. Several of the buildings were removed sometime between 1984 and 2015. In 2019, three employee houses were removed. PacifiCorp acquired the Project in 1988 through a corporate merger between Utah P&L and Pacific Power.

4.10.2 Archaeological Resources

Three field inspections for archaeological sites have been conducted within the Project boundary (Hovanes and Oliver, 2019; Herzog et al., 2012; Fenner et al., 2013). These surveys occurred in 1991, 2011 to 2012, and 2019. In total, these surveys resulted in the inspection of 266 acres within the Project boundary for archaeological resources and 10 acres for historical buildings and structures. The 1991 survey inspected 2 acres near the dam for a proposed stabilization project. The 2011 to 2012 survey examined 264 acres through a combination of intensive-level and reconnaissance-level methods and focused on identifying archaeological sites with the drawdown zone around the reservoir. Upland areas were not surveyed as part of that inspection, and no other cultural resource surveys have occurred on those uplands around the reservoir. As such, the presence or absence of archaeological sites in those upland locations remains unknown. The 2019 survey examined historical buildings and structures around the dam, powerhouse, and residential complex.

The previous surveys in the Project boundary resulted in the identification of seven isolated occurrences, four archaeological sites (site numbers 10FM520, 10FM521, 10FM522, and

10FM523),²³ one historical bridge,²⁴ and the historical Ashton Hydroelectric Project Historic District.

Isolated Occurrences

The seven isolated occurrences consist of prehistoric and historic artifacts and one historic feature. Their respective locations are showing in figure 4.10-1 and further described in table 4.10-1.

Sites

The four archaeological sites documented in 2011 to 2012 were subjected to archaeological testing in 2012 to determine if buried artifacts or features (e.g., remains of hearths, structures, or burials) were present and could provide more information important to better understanding prehistoric peoples, technologies, and lifeways. The testing determined that such buried materials were present at the sites and that it averaged between 30 and 50 centimeters at three of the sites and exceeded 1 meter in one unit at the remaining site. Subsequent to the testing, the sites were determined eligible for inclusion into the National Register of Historic Places (National Register). Therefore, these sites qualify as historic properties and are subject to the requirements of Section 106 to avoid, minimize, or mitigate adverse effects to them from present and future Project operation and maintenance. The location of the four prehistoric sites are shown in figure 4.10-1.

Pursuant to Commission regulations (18 CFR § 388.112) all material that contains the location, character, and ownership information about cultural resources that is otherwise not in the public domain is considered privileged information. Therefore, table 4.10-1, figure 4.10-1. and other descriptive material related to the four prehistoric sits has been filed separately as Volume 3 – PRIVILEGED.

Ashton Hydroelectric Project Historic District

The Ashton Hydroelectric Project Historic District (District) consists of 24 historic and nonhistoric buildings and structures clustered around Henry's Fork of the Snake River (SWCA, 2019). The District's character is a mix of residential and industrial uses. The types of buildings, which encompass residences, shop buildings, and buildings and structures for the generation and transmission of hydroelectric power, reflect these uses. As a whole, the District represents an area of relatively dense development within the largely undeveloped rural landscape (figure 4.10-2).

²³ A site is defined as a location of purposeful prehistoric or historic human activity. An activity is considered to have been purposeful if it resulted in a deposit of cultural materials beyond the level of one or a few artifacts. Locations of human activity not classifiable as a site are isolated occurrences.

²⁴ The historical bridge was once a part of the U.S. Route 20, and replaced with current crossing by the Idaho Department of Transportation (IDOT) in 2003.
Section 106 Consultation

Section 106 consultation between PacifiCorp, the Idaho State Historic Preservation Office (ISHPO), and other parties resulted in the determinations that both the historical bridge and historic district are not eligible for listing on the National Register (ISHPO, 2012). The result of this consultation determined that neither site is subject to requirements for avoiding, minimizing, or mitigating adverse effects from present and future Project operation and maintenance activities (ISHPO, 2012).

4.10.3 Cultural Resource Management Plan

No cultural resource management plan or historic properties management plan exists for the Ashton Project. Rather, cultural resources are addressed under Article 408 of the existing licensing. These stipulations are limited and effectively require consultation with the Idaho SHPO and other parties as deemed necessary by PacifiCorp and consistent with the National Historic Preservation Act and its implementing regulations at 36 CFR 800 (i.e., the Section 106 process).

Table 4.10-1.Description of the isolated occurrences (IO) identified in the Project area.[Filed separately within Volume 3 as PRIVILEGED]

[Filed separately within Volume 3 as PRIVILEGED]

Figure 4.10-1. Locations of known cultural resources in the Project area.



Source: SWCA (2019), as modified by PacifiCorp.

Figure 4.10-2. The Ashton Hydroelectric Project Historic District

4.11 Tribal Resources (18 CFR §5.6(d)(3)(xii))

No Tribal resources are known to be present in the Project boundary. While Tribes typically ascribe cultural significance to most prehistoric sites, none of the known prehistoric sites in the Project boundary have been identified by any Tribal group as traditional cultural properties or sacred sites.

4.12 Socioeconomic Resources (18 CFR §5.6(d)(3)(xi))

4.12.1 Patterns of Land Use

Fremont County, Idaho, encompasses 1,867 square miles (approximately 1.2 million acres), with the majority of the land committed to uses with open-space values. These include public lands managed for multiple uses and private lands used primarily for agriculture. Recreation use is diverse, widespread, and growing.

More than 59 percent of land in the county is public, managed at the federal level by the U.S. Forest Service (Forest Service), BLM, the National Park Service, and Reclamation (table 4.12-1). The Caribou-Targhee National Forest manages most of the forest in the county, with some private forested land occurring along the boundaries of the national forest. Much of the harvestable timber on private land has already been cut, and the Forest Service manages ongoing timber harvest on public land. BLM authorizes livestock grazing on approximately 80 percent of the land it manages. National Park Service and Reclamation holdings are minor. Consistent with national trends, extractive uses of federal lands are diminishing as recreation becomes the primary commodity (Fremont County, 2008).

Land Ownership Type	Acres	Percent
Federal	708,023	59.3
Bureau of Land Management	141,969	11.9
Bureau of Reclamation	8,700	0.7
Forest Service	525,866	44.0
National Park Service	31,488	2.6
State	115,827	9.7
Endowment	85,659	7.2
IDFG	18,342	1.5
Idaho Department of Parks and Recreation	11,826	1.0
Private	370,316	30.1
County	486	0.04
Municipal	100	0.008
Total	1,194,752	100

Table 4.12-1.Land ownership in Fremont County in 2000.

Source: Fremont County (2008)

Agriculture is the major land use on private land in the county, with approximately 92 percent of private land assessed in some type of agricultural category, including crop agriculture and livestock grazing. Agricultural land totals approximately 600 square miles (384,000 acres) in the county (Freemont County, 2008).

Prime farmland and farmland of statewide importance occur in the Project area. USDA rates soil suitability for lands in the county that are used for agricultural crop production as "prime farmland" in its designation. State agencies also categorize soil types within the county used for agricultural production as "unique soils" or "farmland of statewide importance" (Fremont County, 2008). Prime farmland and farmland of statewide importance occur in the low-lying areas within the Project area and southward in the county. Therefore, access to irrigation water is essential for the success of agriculture and the agricultural community.

Livestock grazing occurs within the Project boundary, with some areas controlled by fencing. Fencing is also used to exclude livestock grazing in some areas around the reservoir and the wetland complex, particularly on the boundaries of conservation easements. Annual inspection and maintenance of fences occurs within and around the Project boundary.

Regionally and locally, open space and public-land recreation opportunities play an important role in area economies that are not natural resource-extraction based. A variety of recreational activities occur across public as well as private lands. A detailed discussion of recreation as it relates to the Project is found in section 4.8, above.

Wetland preservation and conservation easements (256.85 acres), reservoir shoreline temporary conservation easements (23 acres), and shoreline conservation easements (4.05 acres) have been established within the Project boundary, primarily as mitigation required under the 1990 WEP (see section 4.5.5). These easements were established to protect wildlife habitat values at the wetland complex and to maintain or enhance riparian and upland wildlife habitat values along the reservoir shoreline. PacifiCorp continues to manage these areas to maintain these functions (PacifiCorp, 2016).

4.12.2 Population

The 2020 census population density of Fremont County was slightly more than 7 persons per square mile of land area. The census population estimate for the county was 13,388 (in 2020) with a median household income of \$58,065 (in 2019 dollars; U.S. Census Bureau, 2020a). Comparatively, the median household income in Idaho was \$60,999 (U.S. Census Bureau, 2020b). The county population grew by 1 percent (146 people) since 2010 (U.S. Census Bureau, 2020a). The median household income one-year growth was 9 percent, and the median age was 37.6 years (DataUSA, 2021). The poverty rate in the county was 13 percent, and the three largest ethnic groups in the county in 2019 were White at 84.8 percent, Hispanic at 11.65 percent, and Other at 3.55 percent (DataUSA, 2021).

The U.S. Census Bureau classifies Fremont County as part of the Rexburg Micropolitan Statistical Area, which also includes Madison County. The population centers within a 25-mile radius of the Ashton Project are shown in table 4.12-2. Rexburg is the largest, with a 2020 population of 29,658, followed by St. Anthony, Sugar City, and Ashton.

City/Town	Distance from Project (miles)	Population
Ashton, Fremont County	2.5	1,042

Table 4.12-2.Population centers within a 25-mile radius of the Ashton Project.

Drummond, Fremont County	9.3	16
Island Park, Fremont County	24.7	260
Newdale, Fremont County	14.3	313
Parker, Fremont County	15.4	289
Rexburg, Madison County	22.8	29,658
St. Anthony, Fremont County	12.1	3,598
Sugar City, Madison County	18.9	1,510
Teton, Fremont County	15.8	747
Tetonia, Teton County	24.8	290
Warm River, Fremont County	9.1	3

Source: U.S. Census Bureau (2020b)

4.12.3 Sources of Employment

The total number of persons employed in Fremont County in 2019 was 5,356. The classification of workers in the county is shown in table 4.12-3. The majority of workers were employed by private companies (61.2 percent) and local, state, and federal governments (15.9 percent). Employment sources by industry in the county are shown in table 4.12-4, with the largest percentage (20.8 percent) found in the educational services and the health care and social assistance sectors.

The Henry's Fork provides anglers from around the world with renowned fishing opportunities (see section 4.8, *Recreation and Land Use*). Employment associated with fishing is part of the agriculture, forestry, fishing and hunting, and mining industry (table 4.12-4). Guided and private fly fishing for trout from drift boats on various reaches of the Henry's Fork is the most popular type of fishing. The boat ramp at Ashton Reservoir provides a take-out location for drift boats launching upstream near the Warm River confluence.

Sport fishing provides substantial support to the economy in the six-county region consisting of Freemont, Madison, Teton, Clark, Jefferson, and Bonneville Counties in Idaho. Anglers in this six-county region spend about \$41 million per year, of which about \$32.6 million was spent by nonresidents. These expenditures added a value of about \$17 million to the regional economy and supported 317 jobs in the six-county region. Part-year resident anglers pay an estimated \$14 million in annual property taxes in the region (Van Kirk et al., 2021).

Class of Worker	Percent
Employee of private company workers	61.2
Local, state and federal government workers	15.9
Self-employed in own not incorporated business workers and unpaid family workers	11.0

Table 4.12-3.Classification of workers in Fremont County, Idaho.

Private not-for-profit wage and salary workers	6.8
Self-employed in own incorporated business workers	5.2

Source: U.S. Census Bureau (2020b)

Table 4.12-4.	Employment	by industry	sector in I	Fremont Co	ounty, Idaho.
	1 V				

Industry	Percent
Agriculture, forestry, fishing and hunting, and mining	8.2
Construction	10.5
Manufacturing	9.9
Wholesale trade	2.0
Retail trade	11.6
Transportation and warehousing, and utilities	8.2
Information	1.2
Finance and insurance, and real estate and rental and leasing	2.0
Professional, scientific, and management, and administrative and waste management services	8.1
Educational services, and health care and social assistance	20.8
Arts, entertainment, and recreation, and accommodation and food services	7.4
Other services, except public administration	4.0
Public administration	6.0

Source: U.S. Census Bureau (2020b)

5.0 PRELIMINARY ISSUES AND STUDIES LIST (18 CFR §5.6(d)(4))

5.1 Issues Pertaining to the Identified Resources

5.1.1 Geology and Soils

In general, no geology or soils issues are associated with the Project or its current operations (section 4.2). The only exception is the potential of shoreline erosion along the single 150-foot tract between the reservoir's confluence with Willow Creek Canyon and Rattlesnake Creek. However, as discussed in section 4.2.4, *Reservoir Shoreline and Streambanks*, repeated observations of this area of potential erosion indicates the shoreline feature appears stable.

PacifiCorp's proposed turbine-generation efficiency upgrade and ± 0.1 -foot operating band increase are not anticipated to adversely affect geological and soil resources. The purposed turbine-generator upgrade would be confined to inside the powerhouse. The negligible increase in operational band from ± 0.15 -inches to ± 0.25 -inches would not have any anticipated adverse effects on geology or soils resources because the increase would allow PacifiCorp to reduce the frequency of plant trips that otherwise disrupt run-of-river operations. As a result, Project effects on geology and soil resources would likely reflect the existing condition as described in section 4.2 over the next license term. Therefore, PacifiCorp believes at this time there is no need for additional information gathering or study to inform the Commission's effects analysis.

5.1.2 Water Resources

The Project's run-of-river operations do not substantially affect Henry's Fork flows, hydrology, or the water supply the river provides. The single, relatively minor exception is the recurrent, temporary, interruption of Project discharge due to plant trips. Such plant trips occur when generation shuts down suddenly due to the lack of available capacity in the transmission system to deliver Project power to the grid. During all plant trips, the 42-inch bypass valve opens to restore 300 cfs as soon as the trip occurs. In months without ice, a spill gate is also programmed to open to restore an approximation of the remainder of instream flow (exception being when plant electrical service is not available). PacifiCorp's proposal to change the current ± 0.15 -foot operating band to a ± 0.25 -foot operating band would enable existing Project equipment to minimize trips, decrease downtime, and provide a flow regime downstream of the Project that is more protective of instream resources.

Continuous Instream monitoring of water temperature and dissolved oxygen in the Henry's Fork provides a robust dataset to examine conditions upstream and downstream of the Project reservoir. Less data is available on reservoir water quality. Vertical water quality profiles collected within the reservoir demonstrate that water temperature are typically uniform throughout the water column, but when weather conditions are favorable (i.e., during the hot, dry, and calm periods of some years), a weak thermocline may develop, albeit short in duration.. Thus, warmer water temperatures near the powerhouse and at depths closer to the intake elevations may result in marginally warmer waters being discharged downstream during summer periods.

While water quality conditions vary within and between years, water temperature and dissolved oxygen typically remain within IDEQ standards among Project-affected reaches of the Henry's Fork. Existing water temperature data show that exceedances of water temperature standards

upstream and downstream of the Project reservoir occur periodically during the warm season. These exceedances are observed above and below the Project reservoir with little difference between the two reaches, indicating that the Project is passing the warmer water downstream and not driving these exceedances (section 4.3.3).

Given that PacifiCorp is proposing to continue to operate the Project in run-of-river mode, no hange to the existing water quality conditions are anticipated. However, information is needed to determine the Project reservoir's effect on temperature dynamics downstream of the Project and assess consistent with current state surface water quality standards and designated uses. Therefore, PacifiCorp is proposing a baseline water quality monitoring study, as discussed in section 5.2.2, *Baseline Water Quality Monitoring Study*, below.

5.1.3 Fish and Aquatic Resources

There are no anadromous fish in the Project area; Shoshone Falls is a natural barrier that precludes those migratory species from reaching the Henry's Fork. As discussed in section 4.4, *Fish Community and Aquatic Habitat*, recent and sufficient information exists to describe the existing fish community and aquatic habitats in Project-effects reaches of the Henry's fork to infer what species and habitats may be affected by continued operation of the Project. Therefore, there is no need to collect additional information about what species and habitat may be impacted by continued operation of the Project.

The existing plant trips currently cause fluctuations in downstream water levels and discharges from the Project. This issue was addressed in a substantial way in 2021 with automation of a spill gate to open and restore instream flow during plant trips. Further refinements of the control equipment and providing an uninterrupted power supply to open the gate in the event of the loss of station service would enhance the improvements made in 2021.

PacifiCorp anticipates its proposal to change the current operating band to ± 0.25 feet will, provide enhanced protection of downstream fish and aquatic resources by reducing the potential exaggeration of upstream diurnal flow fluctuations. Therefore, there is no need to study or gather information to assess impacts of plant trips.

The reservoir fishery is currently managed to support a stocked rainbow trout population. Effects on the reservoir fishery would be limited to impingement, entrainment, and turbine mortality. Although PacifiCorp is proposing an upgrade to the existing runners of Units 2 and 3, the runner specifications are unknown at this time but are expected to be similar to existing runners; therefore, levels of entrainment and turbine mortality are expected to be similar, >84 percent. Should the turbine specifications be substantially different, sufficient information is available within the Project record, peer-reviewed, and grey literature to inform a desktop analysis of entrainment and turbine mortality. Therefore, additional information gathering or study germane to entrainment and turbine mortality is likely not warranted at this time.

Now present in the Henry's Fork, the New Zealand mudsnail is an invasive mollusk that has the potential to adversely impact salmonid fisheries through displacement of macroinvertebrate prey. Given that the mudsnail is ubiquitous throughout the State of Idaho, attempting to reduce the prevalence of them within the Project boundary may not be technically feasible. Therefore, there is no need to collect information or study the prevalence of the mudsnail in Project-affected reaches of the Henry's Fork.

5.1.4 Wildlife and Botanical Resources

The Project has been a formative element in development and preservation of wildlife habitat in and around the Project area. Project infrastructure and operations, as described above in section 3.0, would not be altered in any way that would affect wildlife and botanical resources. PacifiCorp's proposed turbine upgrades inside the powerhouse would not affect these resources. The negligible increase in operational band from 0.15-inches to 0.25-inches would not have any anticipated effects on wildlife or botanical resources. Otherwise, Project operations would continue as currently licensed. As a result, existing conditions in regard to upland wildlife and botanical resources would remain as described in section 4.5. Accordingly, PacifiCorp is not proposing any studies for upland wildlife and botanical resources.

5.1.5 Wetlands, Riparian, and Littoral Habitat

Relicensing would not result in infrastructure development that would impact wetland, riparian and littoral resources. PacifiCorp's continued run-of-river operations would retain the hydrology that maintains such habitats. As a result, current conditions would be maintained, and no issues requiring further study are anticipated.

5.1.6 Rare, Threatened, and Endangered Species

With the two possible exceptions noted below, Project infrastructure and operations, as described above in section 3.0, would not be altered in any way that would affect rare, threatened, and endangered species. PacifiCorp's proposed turbine upgrades inside the powerhouse would not affect these resources. Project operations would continue to occur within the parameters of the current license. As a result, the existing conditions regarding rare, threatened and endangered species would remain as described in section 4.7.

Under existing conditions, effects on monarch habitat, primarily to milkweed, would be confined to maintenance activity such as mowing and application of herbicides to control noxious weed species. Because this activity is existing and ongoing, milkweed likely has not become established in those areas, nor would it be expected to become established. Therefore, continued operation of the Project is not likely to impact the monarch butterfly.

Section 4.7 notes that a population of Ute ladies'-tresses orchid, a plant species federally listed as threatened, has been documented downstream of the Project at the nearby Ora Bridge area. However, no surveys for this species have been performed within the Project boundary. Given that mowing, herbicide application, recreation, grazing, and modifications of hydrology (conversion of wetland habitats through development, flood control, or de-watering),which are associated with the Project, are known threats to the species, a need exists to determine whether the threatened plant currently exists within the Project boundary, where, and at what densities. Therefore, PacifiCorp proposes to perform a survey for Ute ladies'-tresses within the Project boundary following approved survey protocols.

5.1.7 Recreation and Land Use

The Project provides popular recreation resources to the public at the boat ramp, on the reservoir and shorelines, and downstream at the tailrace fishing access (section 4.8). Recreation activities associated with the Project include the drift boat take-out at the boat launch for angler trips originating upriver as well as motor boating, fishing, hunting, kayaking, and contact-type

recreation in the reservoir and fishing and hand-launching small inflatables at the tailrace fishing site. PacifiCorp proposes to continue to operate the Project as run-of-river which would have negligible effect on the Henry's Fork's renowned recreational fishery downstream. Continued fish stocking would maintain the existing reservoir fishery.

No changes are proposed to project infrastructure or operations, as described in section 3.0, that pertain to recreation or land use in the Project area. However, based on the analysis presented in section 4.8.1.2, the existing facilities at the Ashton Reservoir boat launch appear to be over capacity. Therefore, a need exists to collect information pertaining to document current levels of recreation use and demand at the Project. As such, PacifiCorp proposes to conduct a recreation use survey and condition assessment to ensure Project recreation sites can meet anticipated demands for a future license.

5.1.8 Aesthetics and Visual Resources

The Project dam and reservoir are an established component of the local landscape that has been incorporated into the area culture and county planning to maintain scenic quality. Project infrastructure and operations would not be altered in any way that would affect aesthetic and visual resources. The only infrastructural changes that may occur would be inside the powerhouse and not visible from any outside viewpoint. PacifiCorp anticipates its proposed 0.25-foot operating band with continued run-of-river operations would not adversely affect the existing aesthetic or visual characteristic of the Project. Existing conditions in regard to aesthetic and visual resources would remain as described in section 4.9, and relicensing the Project would not generate any issues in terms of this resource. Therefore, there is no need to collect additional information or perform a study to inform an analysis of Project effects on aesthetic and visual resources.

5.1.9 Cultural Resources

PacifiCorp is not proposing any new construction, ground-disturbing activity, or change in operation that would expose culturally significant resources, making them susceptible to alteration, damage, and theft/vandalism. The existing Article 408 provides a mechanism to protect cultural and archaeological resources discovered at the Project (see section 4.10.3, *Cultural Resources Management Plan*). If changes to the Project are found to be necessary during relicensing or after a license has been issued, then PacifiCorp would consult with the Idaho SHPO and the Indian Tribes before beginning any land-clearing or land-disturbing activities within the Project boundaries. The consultation would determine the need to conduct archaeological or historical survey(s) or to implement further avoidance or mitigation measures before undertaking the action.

With no planned ground disturbance, construction activity, or change in operation, there are currently no known issues relating to cultural resources at the Project. Therefore, additional information gathering or study is unwarranted at this time.

5.1.10 Tribal Resources

There are currently no known issues relating to tribal resources at the Project.

5.1.11 Socioeconomic Resources

The Project is an established element of the local social and economic setting. The Project would continue to employ two local staff to operate the plant and to utilize some local services for equipment repair and maintenance items. The Project has a limited influence on the local labor market, and continued operation of the Project would have a modest positive effect on socioeconomic conditions within the region. No significant new construction or change in operations are proposed. Relicensing would not create new construction jobs or increase use of local infrastructure such as roads, hotels, and restaurants. Accordingly, there are no needs for additional information or study.

5.2 Potential Studies or Information Gathering

This section identifies potential studies or information gathering that may be needed to analyze the preliminary resource issues identified in section 5.1. In accordance with 18 CFR § 16.8(b)(5), within 60 days of the joint agency meeting, each interested resource agency, Indian Tribes, and members of the public must provide any and all study requests to the licensee.

Although PacifiCorp desires to use the TLP for the relicensing process, it requests that all stakeholders follow the Integrated Licensing Process (ILP) study request guidelines as set forth by the Commission and outlined below. PacifiCorp affirms that the well-defined ILP study request criteria create better study requests, and as such, provide more effective relicensing related data, which will better serve all parties throughout the relicensing process. The ILP Study criteria are as follows:

- 1. Describe the goals and objectives of each study proposal and the information to be obtained;
- 2. If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;
- 3. If the requester is not a resource agency, explain any relevant public interest considerations in regard to the proposed study;
- 4. Describe existing information concerning the subject of the study proposal, and the need for additional information;
- 5. Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements;
- 6. Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge; and
- 7. Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.

5.2.1 Water Quality

- Water quality data collected by HFF and PacifiCorp within the last 20 years indicate that temperature and DO in Ashton Reservoir can exceed spawning criteria during warm weather.
- As there have been no changes to Project operations, it is expected that applicable water quality standards are still being met.
- Collection of updated water quality data will confirm that applicable water quality standards are still being met.

5.2.2 Natural Resources (RTE & Wetlands)

- Based on the information from the FWS IPaC database, Ute ladies'-tresses occur in relative proximity to the Project.
- No adverse effects on listed or protected terrestrial species are anticipated, as PacifiCorp is not proposing modifications or new construction to the Project.
- Delineation of the wetland complex will confirm the health and locations of the wetlands, reset the monitoring baseline, and inform conservation easements for any new license.

5.2.3 Recreation Use and Needs Assessment

- PacifiCorp is responsible for ensuring the operation and maintenance of two FERCapproved Project recreation sites, with associated facilities and amenities.
- The Henry's Fork is a popular recreation resource and the condition and type and quantity of amenities can affect visitor experiences.

5.2.4 Cultural Resources

- Additional information gathering in the form of field surveys of the previously unsurveyed lands within the upland areas around Ashton Reservoir and within the wetland/pond complex would provide PacifiCorp with a more complete data set of for historic properties subject to management under the new license and the associated Historic Properties Management Plan.
- The exact nature and extent of such surveys would be determined in consultation with the Idaho State Historic Preservation Office and other consulting parties, as appropriate, but would typically entail an intensive-level pedestrian surface inspection of the relevant lands.

5.2.5 Tribal Resources

- Field survey of upland areas and lands within the wetlands/pond complex may identify cultural resources of concern to Tribal parties.
- Consultation with the appropriate Tribe(s) would occur in conjunction with the field inspection discussed above for *Cultural Resources* and would be used to identify cultural resources of concern to the Tribe(s).

5.3 Relevant Comprehensive Waterway Plans and Resource Management Plans

Section 10(a)(2)(A) of the Federal Power Act (FPA), 16 USC § 803(a)(2)(A), requires FERC to consider the extent to which a project is consistent with Federal or State comprehensive plans for improving, developing, or conserving a waterway affected by the project.

FERC Order No. 481-A, issued on April 27, 1988, established that FERC will accord FPA Section 10(a)(2)(A) comprehensive plan status to any Federal or state plan that:

- Is a comprehensive study of one or more of the beneficial uses of a waterway or waterways;
- Specifies the standards, the data, and the methodology used; and
- Is filed with the Secretary of the Commission.

FERC's most recent list of Comprehensive Plans was published in January of 2022. Based on this list 55 comprehensive plans are available for Idaho, of which, 22 are likely relevant to the Project:

- Bureau of Land Management. 2015. Record of Decision and Approved Resource Management Plan for the Great Basin Region, Including the Greater Sage-Grouse Sub-Regions of Idaho and Southwestern Montana, Nevada and Northeastern California, Oregon, and Utah. Washington, D.C. September 2015.
- Bureau of Land Management. 2019. Idaho Greater Sage-Grouse Record of Decision and Approved Resource Management Plan Amendment. Boise, Idaho. March 2019.
- Bureau of Land Management. Forest Service. 1991. Snake River final activity/operations plan. Department of the Interior, Idaho Falls, Idaho. Department of Agriculture, Idaho Falls, Idaho. February 1991.
- Idaho Department of Water Quality. 2018. Water Quality Standards. Boise, Idaho.
- Idaho Department of Fish and Game. 2005. Idaho comprehensive wildlife conservation strategy. Boise, Idaho. September 2005.
- Idaho Department of Fish and Game. 2007. Management plan for the conservation of Yellowstone cutthroat trout in Idaho. Boise, Idaho. April 2007.
- Idaho Department of Fish and Game. 2008. Idaho mule deer management plan: 2008-2017. Boise, Idaho. March 2008.
- Idaho Department of Fish and Game. 2008. Management plan for the conservation of Snake River white sturgeon in Idaho. Boise, Idaho. September 2008.
- Idaho Department of Fish and Game. 2010. Mule deer initiative action plan. Boise, Idaho. 2010.

- Idaho Department of Fish and Game. 2014. Idaho Elk management plan: 2014-2024. Boise, Idaho. June 2014.
- Idaho Department of Fish and Game. 2019. Fisheries Management Plan, 2019-2024. Boise, Idaho. 2019.
- Idaho Department of Fish and Game. Bonneville Power Administration. 1986. Pacific Northwest Rivers Study. Final report. Boise, Idaho.
- Idaho Department of Parks and Recreation. 2018. Idaho Statewide Comprehensive Outdoor Recreation Plan 2018-2022. Boise, Idaho.
- Idaho Water Resource Board. 1992. Comprehensive state water plan: Henry's Fork Basin. Boise, Idaho. December 1992.
- Idaho Water Resource Board. 2009. Eastern Snake Plain aquifer comprehensive aquifer management plan. Boise, Idaho. January 2009.
- Idaho Water Resource Board. 2012. Idaho State water plan. Boise, Idaho. November 2012.
- National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington, D.C. 1993.
- Northwest Power and Conservation Council. 2014. Columbia River Basin Fish and Wildlife Program. Portland, Oregon. Council Document 2014-12. October 2014.
- Northwest Power and Conservation Council. 2016. The Seventh Northwest Conservation and Electric Power Plan. Portland, Oregon. Council Document 2016-02. February 2016.
- Northwest Power and Conservation Council. 1988, 1991. Protected areas amendments and response to comments. Portland, Oregon.
- U.S. Fish and Wildlife Service. 2013. Greater Sage-grouse (Centrocercus urophasianus) Conservation Objectives: Final Report. Denver, Colorado. February 2013.
- U.S. Fish and Wildlife Service. n.d. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C.

6.0 SUMMARY OF CONTACTS/CONSULTATION (18 CFR §5.6(d)(5))

In the development of this PAD, PacifiCorp exercised due diligence and contacted state and federal agencies, local governments, and other non-governmental organizations to obtain as much information about project resources as possible. Agencies and other potential interested parties were also informed of the PacifiCorp's plans to request permission from FERC to use the TLP. No agencies or parties contacted during the development of the PAD expressed any objection or concerns about the proposed use of the TLP. Those potential interested parties solicited for information provided PacifiCorp with the names and contact information for agency personnel to include on the service list for distribution of the Ashton Project NOI, TLP Request, and PAD. Appendix A contains the complete summary of contacts used to prepare the PAD, and appendix B provides the results of the stakeholder outreach for the development of this Ashton Project PAD. Table 6-1 provides a summary of the comments received from the respondents.

Stakeholder	Organization	Plans to Participate in the Relicensing	Comments Regarding Resource Issues
Chris Shaver	Idaho SHPO	Yes	 Historic property information is retained with the Idaho SHPO Information can be obtained by qualified individuals Specific issues concern prehistoric resources within and around the reservoir
Matt Hively	Henry's Fork Foundation	Yes	 Henry's Fork Foundation has water quality data, including macroinvertebrates data Recreation data is also available for upstream and downstream of the dam Most water quality data on Henry's Fork Foundation website, and other data can be provided upon request.

Table 6-1.Summary of responses from the questionnaire distribution concerning resource issues at the project.

7.0 LITERATURE CITED

- Brady, N.C., and R.R. Weil. 2002. The Nature and Properties of Soils. Thirteenth Edition. Prentice Hall Pearson Education, Inc., Upper Saddle River, NJ. 960 pp.
- Christiansen, R.L. 2001. The Quaternary and Pliocene Yellowstone Plateau Volcanic Field of Wyoming, Idaho, and Montana. USGS Professional Paper 729-G. U.S. Geological Survey, Reston, Virginia. Available at: <u>http://geopubs.wr.usgs.gov/prof-paper/pp729g/.</u>
- Christiansen R., and H. Blank Jr. 1972. Volcanic Stratigraphy of the Quaternary Rhyolite Plateau in Yellowstone National Park. Geology of Yellowstone National Park. Geological Survey Professional Paper 729-B. United States Geological Survey.
- Cirrus and ERI (Cirrus Ecological Solutions and Ecosystems Research Institute). 2010. Ashton Dam Hydroelectric Project: Bathymetry and Sediment Study. Prepared for PacifiCorp by Cirrus and ERI. Logan, UT.
- Cirrus and ERI. 2013. Ashton Dam Hydroelectric Project: Water Quality Monitoring Data 2010 to 2013. Collected for PacifiCorp by Cirrus and ERI. Logan, UT.
- Cirrus. 2021. Reference photos taken by Cirrus Ecological Solutions, LLC, on location. October 2021.
- DataUSA. 2021. Fremont County Idaho. <u>https://datausa.io/profile/geo/fremont-county-id</u>. Accessed November 17, 2021.
- ERI (Ecosystems Research Institute). 1990. Ashton / St. Anthony Turbine Mortality Study: Project No. 2381. Prepared for PacifiCorp by ERI. Logan, UT.
- EPRI (Electric Power Research Institute). 1997. Turbine entrainment and survival database -field tests. Prepared by Alden Research Laboratory, Inc. EPRI Report No. TR-108630.
- ESRI. 2022. Topographic (Basemap). Scale not given. World Topographic Map. February 2022. Available at: <u>http://www.arcgis.com/home/item.html?id=30e5fe3149c34df1ba922e6f5bbf808f</u>.
- Fenner, L.A., M. Parvey, and J.C. Bard. 2013. Testing and Site Reevaluation of Four Prehistoric Archaeological Sites within the Ashton Reservoir Drawdown Zone, Fremont County, Idaho. SWCA Environmental Consultants, Salt Lake City.
- FERC (Federal Energy Regulatory Commission). 1987. Order Issuing New License. Major Project – Existing Dam. Issued August 3, 1987. Utah Power & Light Company. Project No. 2381-001.
- FERC. 1995. Preliminary Assessment of Fish Entrainment at Hydropower Projects: A Report on Studies and Protective Measures, Volume I. Paper No. DPR-10. FERC Office of Hydropower Licensing, Washington DC. June, 1995.

- FERC. 1999. Order Approving Fish Stocking Plan for Ashton Reservoir under Article 402 of Ashton Development Project No. 2381-033. FERC Office of Hydropower Licensing, Washington DC. January 26, 1999. FERC eLibrary Accession No. 19990127-0344.
- FERC. 2008. Order Issuing Original License (Major Project): Chester Diversion Hydroelectric Project No. 11879-001. 124 FERC ¶ 62,059 by Federal Energy Regulatory Commission to Symbiotics, LLC on July 23, 2008.
- FERC. 2015. Division of Hydropower Administration and Compliance, Compliance Handbook. 74 pp.
- FERC. 2018. Order Amending Recreation Area Improvement Plan Pursuant to Article 406.
- FERC. 2020. Southgate Project Final Environmental Impact Statement. February 2020. 416 pp.
- FGDC (Federal Geographic Data Committee). 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
- Flinders, J., D. Garren, B. High, B., and D. Keen. 2016. Fishery Management Annual Report, Upper Snake Region, 2015. Report No. 16-111. Idaho Department of Fish and Game, Boise, ID.
- Forest Service (U.S. Forest Service). 2021a. National Wild and Scenic Rivers. Forest Service Enterprise Content. U.S. Forest Service – Geospatial Discovery. United States Department of Agriculture.
- Forest Service. 2021b. National Wilderness Areas. FSGeodata Clearinghouse. United States Department of Agriculture.
- Fremont County. 2008. Fremont County Comprehensive Plan. Fremont County, Idaho. 2008 revision adopted December 17.
- Fremont County. 2016. Recreation Easement from Fremont County to PacifiCorp.
- FWS (U.S. Fish and Wildlife Service). 1995. Ute ladies'-tresses (*Spiranthes diluvialis*) recovery plan. Denver, CO.
- FWS. 2014. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx and Revised Distinct Population Segment Boundary; Final Rule. Department of the Interior. Federal Register.
- FWS. 2017. Species Status Assessment for the CANADA LYNX (Lynx canadensis) Contiguous United States Distinct Population Segment. Version 1.0-Final. U.S. Fish and Wildlife Service Regions 1, 3, 5, and 6. 300 pp.

- FWS. 2017. Grizzly Bear Recovery Plan Supplement: Revised Demographic Recovery Criteria of the Yellowstone Ecosystem. Grizzly Bear Recovery Office, Missoula, Montana. 16 pp.
- FWS. No Date. ECOS Environmental Conservation Online System: Canadan Lynx. < https://ecos.fws.gov/ecp/species/3652>. Accessed March 25, 2022.
- FWS. 2017. Biological Opinion for the Ora Bridge Project, Fremont, County, Idaho. U.S. Fish and Wildlife Service, Idaho Fish and Wildlife Office, Boise, Idaho. 26 pp.
- FWS. 2019. Endangered and Threatened Wildlife and Plants; Reinstatement of Endangered Species Act Listing for the Grizzly Bear in the Greater Yellowstone Ecosystem in Compliance with Court Order. Department of the Interior. Federal Register.
- FWS. 2020. Endangered and Threatened Wildlife and Plants; 12-Month Finding for the Monarch Butterfly. Department of the Interior. Federal Register.
- FWS. 2021. Grizzly Bear. Endangered Species. Mammals. Mountain-Prairie Region. Accessed 2021. Available at: <u>https://www.fws.gov/mountain-prairie/es/grizzlybear.php#:~:text=There%20are%20six%20recovery%20ecosystems,Ecosystem%2C%20and%20the%20Bitterroot%20Ecosystem</u>.
- FWS. 2022a. Wetlands Mapper. National Wetlands Inventory. Accessed 2022. Available at <u>https://www.fws.gov/wetlands/data/mapper.html</u>
- FWS. 2022b. Information for Planning and Consultation. Endangered Species. Department of the Interior.
- Garren, D., and J. Fredericks. 2006. Fishery Management Annual Report, Upper Snake Region, 2004. Report No. 05-15. Idaho Department of Fish and Game, Boise, ID.
- Grafe C.S., C.A. Mebane, M.J. McIntyre, D.A. Essig, D.H. Brandt, and D.T. Moiser. 2002. The Idaho Department of Environmental Quality Water Body Assessment Guidance. Second Edition – Final. Idaho Department of Environmental Quality. Boise, ID.
- Hamilton W. 1965. Geology and Petrogenesis of the Island Park Caldera of Rhyolite and Basalt Eastern Idaho. Geological Survey Professional Paper 504-C. United States Geological Survey.
- Heckel, J., and B. High. 2020. Fishery management annual report, Upper Snake Region, 2019. Report No. 20-103. Idaho Department of Fish and Game, Boise, Idaho.
- Herzog, N., Corigan, K. and K. Westwater. 2012. Intensive-Level Cultural Resource Inventory of the Ashton Reservoir Drawdown Zone and Borrow Sites in Fremont County, Idaho. SWCA Environmental Consultants, Salt Lake City.
- HFF (Henry's Fork Foundation). 2021.Henry's Fork Foundation: Real-Time Water Quality Monitoring Data. Available at: <u>https://henrysforkdata.shinyapps.io/scientific_website</u>. Accessed November 21, 2021.

HFF. 2022. Henry's Fork of the Snake River. Angler Access Sites.

- Hovanes, K. and A. Oliver. 2019. Intensive-Level Architectural Survey of Ashton Hydroelectric Project, Fremont County, Idaho. SWCA Environmental Consultants, Salt Lake City.
- Idaho Department of Commerce and Tourism Development. No date. Henry's Fork of the Snake River. Available at: <u>https://visitidaho.org/things-to-do/fishing/henrys-fork-of-the-snake</u>. Accessed March 7, 2022.
- Idaho Department of Parks and Recreation. 2018. 2018-2022 Idaho Statewide Comprehensive Outdoor Recreation Plan. 39 pp.
- IDEQ (Idaho Department of Environmental Quality). 2010. Upper and Lower Henry's Fork Total Maximum Daily Loads: Addendum to the Upper Henry's Fork Subbasin Assessment and TMDLs. Department of Environmental Quality. Idaho Falls, ID.
- IDEQ (Department of Environmental Quality). 2017. Upper and Lower Henrys Fork. TMDL Five-Year Review. Hydrologic Unit Codes 17040202 and 17040203. State of Idaho. Department of Environmental Quality. May 2017.
- IDEQ. 2022. Draft 2022 305(b) Integrated Report. Available at: https://mapcase.deq.idaho.gov/wq2022/default.html
- IDFG (Idaho Department of Fish and Game). 2017. State Wildlife Action Plan. Boise (ID): Idaho Department of Fish and Game.
- IDFG. 2019a. Fisheries Management Plan 2019 2024. Idaho Department of Fish and Game, Boise, USA.
- IDFG. 2019b. Game Management Unit Map.
- IDFG. 2021. Historical Stocking Records. Available at: <u>https://idfg.idaho.gov/ifwis/fishingplanner/stocking/?search=Ashton</u>. Accessed December 27, 2021.
- IDOT (Idaho Department of Transportation). 2022. Automatic Counter Volumes, Average Daily Traffic for Sheep Falls #232. Available at: <u>https://apps.itd.idaho.gov/apps/roadwaydata/counters/232/index.html</u>. Accessed March 28, 2022.
- Idaho Invasive Species Council Technical Committee. 2007. Idaho Aquatic Nuisance Species Plan; A Supplement to Idaho's Strategic Action Plan for Invasive Species. Prepared for Governor C. L. "Butch" Otter.
- IDWR (Idaho Department of Water Resources). 2012. State Water Plan. Available at: https://idwr.idaho.gov/wp-content/uploads/sites/2/iwrb/2012/2012-State-Water-Plan.pdf. Accessed March 28, 2022.
- IDWR. 2018. Dams of Idaho. Status and Downstream Hazard Potential. Earthstar Geographics.

- IDWR. 2022. Water Rights Point of Diversion and Point of Use Information. Downloaded March 2022. Available at: <u>https://data-idwr.opendata.arcgis.com/pages/gisdata#WaterRights</u>.
- Idaho Geological Survey. 2011. Putting Down Roots in Earthquake Country Your Handbook for Earthquakes in Idaho. Version 3/19/11/40 pp.
- Idaho Geological Survey. 2018. Earthquake Occurrence in Southeast Idaho. Idaho Seismic Technical Working Group.
- INHD (Idaho Natural Heritage Data). 2021. Data Request. Idaho Department of Fish and Game.

Idaho Partners in Flight. 2000. Idaho Bird Conservation Plan. Version 1.0.

- ISHPO (Idaho State Historic Preservation Office). 2012. Letter regarding Cultural Resource Inventory for the Ashton Reservoir Drawdown Zone and Borrow Sites in Fremont County, Idaho. State Historic Preservation Office and Historic Sites Archeological Survey of Idaho, Boise, Idaho. June 20.
- Leet D., S. Judson, and M. Kauffman. 1982. Physical Geology, Sixth Edition. Prentice-Hall Inc. Englewood Cliffs, New Jersey. 487 pp.
- Lewis P., P. Link, L. Stanford, and S. Long. 2012. Geologic Map of Idaho. Idaho Geological Survey. Moscow, Boise, Pocatello. ISBN 978-1-55765-118-1.
- Lifton, Z., S. Ducar, and C. Tate. 2021. Landslide Inventory Database for Idaho. Digital Databases 10. June 2021. Idaho Geological Survey. University of Idaho. Moscow, ID.
- Maiolie. M. 1987. Ashton Reservoir Fishery Enhancement Evaluation. Job Completion Report. Idaho Department of Fish and Game, Boise, ID.
- McGrath C.L., Woods A.J., Omernik, J.M., Bryce, S.A., Edmondson, M., Nesser, J.A., Shelden, J., Crawford, R.C., Comstock, J.A., and Plocher, M.D. 2002. Ecoregions of Idaho (color poster with map, descriptive text, summary tables, and photographs): Reston, VA, U.S. Geological Survey (map scale 1:1,350,000).
- Michigan State University, Institute of Water Research. 2002. RULSE On Line Soil Erosion Assessment Tool, K-Factor. Available at: <u>http://www.iwr.msu.edu/rusle/kfactor.htm</u>. Accessed March 24, 2022.
- National Research Council. 1984. Explosive Volcanism: Inception, Evolution, and Hazards. Washington, DC: The National Academies Press. https://doi.org/10.17226/18602.
- National Wild and Scenic River System. 2022. National Wild and Scenic River System –Idaho. Available at: <u>https://www.rivers.gov/idaho.php</u>. Accessed March 25, 2022.
- NASS (National Agricultural Statistics Service). 2021. National Cropland Data Layer. United States Department of Agriculture. Updated February 1, 2021.

National Park Service. 2021b. National Trail System. GIS Data. National Trail System Webmap.

- NHD (National Hydrography Dataset). 2021. National Hydrography Dataset. United States Geological Survey. Updated 2021.
- NOAA (National Oceanic and Atmospheric Administration). No Date. NOWData NOAA Online Weather Data, Climatological Data for ASHTON 1N, ID. Available at: <u>https://www.weather.gov/wrh/climate?wfo=pih</u>. Accessed February 17, 2022.
- NRCS (Natural Resource Conservation Service). 1993. Soil Survey of Fremont County, Idaho, Western Part. Ray Grow, Editor, Soil Conservation Service. Developed in cooperation with United States Department of the Interior Bureau of Land Management, University of Idaho College of Agriculture, and Idaho Soil Conservation Commission.
- NRCS. 2017. Title 430 National Soil Survey Handbook Part 647 Soil Map Development. 430-647-H. First Edition, Amendment 25. November 2017.
- NRCS. 2020. Annual Data Refresh of Soil Survey Database. Web Soil Survey.
- NRCS. 2021. Prime and other important farmlands (ID), Fremont County, Idaho, western part. U.S. Department of Agriculture, Natural Resources Conservation Service. Survey Area Version: 18, dated September 9, 2021.
- NatureServe. 2021. NatureServe Explorer [web application]. NatureServe, Arlington, Virginia. Available at: <u>https://explorer.natureserve.org/</u>. Accessed November 2021.
- Newhall C. and D. Dzurisin. 1988. Historical Unrest at Large Calderas of the World Volume 1. United States Geological Survey Bulletin 1855.
- PacifiCorp. 2010. Recreation easement agreement between PacifiCorp and Fremont County.
- PacifiCorp. 2015a. Spreadsheet of visitor counts to the Ashton boat launch recreation site based on traffic counts in 2014.
- PacifiCorp. 2015b. Licensed Hydropower Development Recreation Report. FERC Project No. P-2381.
- PacifiCorp. 2016. Ashton Hydroelectric Project. Wildlife Enhancement Plan. FERC Project No. P-2381.
- PacifiCorp. 2018a. Ashton Hydroelectric Project, FERC Project (FERC No. P-2381), submittal of revised recreation as-built drawings. Docket 2381-069.
- PacifiCorp. 2018b. Reservoir Access Permit. Ashton Plant. Henry's Fork River.
- PacifiCorp. 2019. Application for Low Impact Hydropower Institute Recertification. Ashton Hydroelectric Project (VDRC No. P-2381; LIHI Certificate No. 61) Freemont County, ID.

- PacifiCorp. 2021. Ashton Hydroelectric Project, FERC No. P-2381 Article 405 Wildlife Enhancement Plan Five Year Report of Implementation and Monitoring: 2016–2020. 190 pp.
- PacifiCorp. 2022a. Project outage data for PacifiCorp Ashton Project. Data provided by C. Baldwin (PacifiCorp). January 21, 2022.
- PacifiCorp. 2022b. Water Rights for PacifiCorp Ashton Project. Data provided by B. Morris (PacifiCorp). January 21-28, 2022. Available at: <u>https://research.idwr.idaho.gov/apps/waterrights/wrajsearch/SearchPage.aspx</u>.
- Reclamation (U.S. Bureau of Reclamation). 2004. Final Environmental Assessment Fremont-Madison Irrigation District Proposed Title Transfer. Minidoka Project, Idaho-Wyoming. Teton Basin Project, Idaho.
- Reclamation. 2012. Henrys Fork Watershed Basin Study Water Needs Assessment. Prepared by R. VanKirk. Technical Series No. PN-HFS-001.
- Ross, C., and F. Smith. 1961. Ash-Flow Tuffs: Their Origin, Geologic Relations and Identification. Geological Survey Professional Paper 366.
- Rowland, M.M., L.H. Suring, R.J. Tausch, S. Geer, and M.J. Wisdom, 2008. Characteristics of Western Juniper Encroachment into Sagebrush Communities in Central Oregon. USDA Forest Service Forestry and Range Sciences Laboratory, La Grande, Oregon 97850, USA. 23 pp.
- Schoby, G., B. High, D. Keen, and D. Garren. 2010. Fishery management annual report, Upper Snake Region, 2008. Report No. 10-107. Idaho Department of Fish and Game, Boise, ID.
- Stelten M. 2021. Henrys Fork Caldera: A glimpse into one possible future for Yellowstone. United States Geological Survey Yellowstone Volcano Observatory. October 10, 2021.
- Stene E. 1997. Minidoka Project. Bureau of Reclamation. 42. pp.
- Symbiotics LLC. 2006. Chester Diversion FERC No. 11879: Rainbow trout spawning and habitat survey, July 2006. Symbiotics, Logan, Utah.
- USACE (U.S. Army Corps of Engineers). 2020. National Inventory of Dam. Available at: <u>https://nid.usace.army.mil/#/</u>. Accessed January 14, 2022.
- U.S. Census Bureau. 2020a. QuickFacts Fremont County, Idaho; United States. United States Census Bureau, U.S. Department of Commerce.
- U.S. Census Bureau. 2020b. Census Geography Profile, Fremont County, Idaho. United States Census Bureau, U.S. Department of Commerce. Available at: <u>https://data.census.gov/cedsci/profile?g=0500000US16043</u>. Accessed: November 18, 2021.

- USDA (United States Department of Agriculture). 2017. Census of Agriculture. Idaho. United States Department of Agriculture. 2017 Census Volume 1, Chapter 2: County Level Data.
- U.S. Department of Interior. 2015. Henrys Fork Basin Study. Final Report. Reclamation. Managing Water in the West. Snake River Area Office. Boise, ID.
- USGS (United States Geological Service). 2014. National Boundary Dataset. National Map Service. Accessed 2021.
- USGS. 2018a. United States National Seismic Hazard Maps: Probabilistic seismic-hazard maps and data. Available at: <u>https://www.sciencebase.gov/catalog/item/5d5597d0e4b01d82ce8e3ff1</u>. Accessed February 17, 2021.
- USGS. 2020. Tectonic Summary of Stanley earthquake M 6.5 Stanley, Idaho. U.S. Geological Survey - Earthquake Hazards Program. Available at: <u>https://earthquake.usgs.gov/earthquakes/eventpage/us70008jr5/executive. Accessed</u> January 3, 2022.
- USGS. 2021. Continuous flow data (15-min intervals) measured at USGS gage 13046000, Henry's Fork Near Ashton, Idaho. Available at: <u>https://waterdata.usgs.gov/nwis/rt.</u> Accessed October 25, 2021.
- USGS. 2022. National Water Information System: Web Interface, USGS 13046000 Henrys Fork Nr Ashton ID. Available at: https://waterdata.usgs.gov/nwis/uv?site_no=13046000. Accessed January 20, 2022.
- Van Kirk, R. 2020. Analysis of Water Balance in the Henry's Fork Watershed. April 2, 2020.
- Van Kirk, R. 2021. What Do Macroinvertebrates (Aquatic Insects) Tell Us About the Henry's Fork?. Henry's Fork Foundation. Accessed 3/11/2022 <u>https://www.henrysfork.org/post/what-do-macroinvertebrates-aquatic-insects-tell-us-about-the-henry-s-fork</u>.
- Van Kirk, R., A. Kamberlee, C. Nowell, B. Oldemeyer, B. Contor, F. Nelson, B. Ortman, and I. Popescu. 2021. The Economic Value of Fishing in the Henry's Fork Watershed. Henry's Fork Foundation. Available at: <u>https://www.henrysfork.org/_files/ugd/650d73_9ae9e5f7b86f4d24b6a37c01d9f1bd07.pdf</u> . Accessed March 11, 2022.
- Van Kirk, R. 2022. Henry's Fork Macroinvertebrate Monitoring, 2020 & 2021. Henry's Fork Foundation. Accessed 3/11/2022 https://www.henrysfork.org/post/henry-s-forkmacroinvertebrate-monitoring-2020-2021
- Vincent, J. 2021. Ashton Reservoir Update: Idaho Department of Fish and Game, Upper Snake River. Website Article. Available at: <u>https://idfg.idaho.gov/blog/2021/08/ashton-</u> <u>reservoir-update</u> Accessed December 15, 2021.

- Winchell, F., Amaral, S., and D. Dixon. 2000. Hydroelectric Turbine Entrainment and Survival Database: An Alternative to Field Studies. HydroVision Conference, August 8-11, 2000. Charlotte, NC.
- Wood, C.A., and J. Kienle. 1992. Volcanoes of North America: United States and Canada. Cambridge University Press. <u>ISBN 0-521-43811-X</u>, 978-0-521-43811-7, p. 251.

Appendix A – Contacts Solicited for Information to Prepare the PAD

FEDERAL			
U.S. Fish and Wildlife Service Sandi Fischer Assistant State Supervisor 4425 Burley Dr. Chubbuck, ID 83202 sandi_fisher@fws.gov	U.S. Fish and Wildlife Service Erin Kenison 1387 S. Vinnell Way, Suite 368 Boise, ID 83709 Erin.Kenison@fws.gov		
U.S. Fish and Wildlife Service Dave Hopper 1387 S. Vinnell Way, Suite 368 Boise, ID 83709 Dave.Hopper@fwsgov	USGS Idaho Water Science Center Christian Schmidt Deputy Center Director 230 Collins Rd. Boise, ID 83702-4520		
U.S. Bureau of Land Management Idaho Falls District Office Rebecca Lazdaukas 1405 Hollipark Dr. Idaho Falls, ID 83401 rlazdaukas@blm.gov			
ST	ATE		
Idaho Department of Environmental Quality Idaho Falls Regional Office Troy Saffle 900 N. Skyline Drive, Suite B Idaho Falls, ID 83402 Troy.Saffle@deq.idaho.gov	Idaho Department of Fish and Game Brett High Fisheries Manager, Upper Snake Region 4279 Commerce Circle Idaho Falls, ID 83401 Brett.high@idfg.idaho.gov		
Idaho Department of Fish and Game Jacob Gray 4279 Commerce Circle Idaho Falls, ID 83401 jacob.gray@idfg.idaho.gov	Idaho Department of Parks and Recreation Garth Taylor East & South Idaho Region Parks Manager 4279 Commerce Circle, Suite B Idaho Falls, ID 83401 garth.taylor@Idpr.idaho.gov		
Idaho State Historical Preservation Office 210 Main Street Boise, ID 83702 SHPO@ishs.idaho.gov			
LOCAL			
Fremont County, Idaho Abbie Mace Clerk 151 W. 1st North Suite 12	Fremont County Parks and Recreation Tamra Cikaitoga Director 1210 S. Industrial Park Road		

St. Anthony, Idaho 83445 amace@co_fremont_id_us	St. Anthony, ID 83445 tcikaitoga@co fremont id us
City of Ashton, Idaho 714 Main Street Ashton, ID 83420 info@cityofashton.com	
TRI	BES
Shoshone-Bannock Christina Cutler P.O. Box 306 Fort Hall, ID 83203 ccutler@sbtribes.com	
NON-GOVERNMENT	AL ORGANIZATIONS
Greater Yellowstone Coalition 60 E. Little Ave., Suite 101 Driggs, ID 83422 gyc@greateryellowstone.org	Henry's Fork Foundation Brandon Hoffner Executive Director 810 Main St. Ashton, ID 83420 bhoffner@henrysfork.org
Teton Regional Land Trust P.O. Box 247 1520 S. 500 W. Driggs, ID 83422 info@tetonlandtrust.org	Trout Unlimited 910 W Main St #342, Boise, ID 83702
OT	HER
Fall River Rural Electric Cooperative, Inc. Bryan L. Case Manager 1150 N. 3400 E. Ashton, ID 83420 bryan.case@fallriverelectric.com	

Appendix B – Stakeholder Outreach and Responses



Ashton FERC Application Questionnaire

PacifiCorp (PacifiCorp) is beginning the Federal Energy Regulatory Commission (FERC) relicensing for the existing PacifiCorp Hydroelectric Project (FERC No. 2381). The project is located in Fremont County, Idaho. PacifiCorp is preparing a Pre-Application Document (PAD) for the Project that provides FERC, resource agencies and other stakeholders with existing, relevant, and reasonably available information regarding the Project to help identify issues and related information needs, develop study requests and study plans, and prepare environmental documents analyzing project impacts. This Questionnaire will be used to help identify sources of existing, relevant, and reasonably available information that is not in PacifiCorp's possession.

1. Information about person completing the questionnaire:

Name and Title: Matt Hively - Aquatic Resarces Coordinator
Organization: Henry's Fork Foundation
Address: POBox 550 Ashton, ID 83420
Phone: 208-652-3567
E-mail Address: matt@henrysfork.org

2. Do you or your organization know of existing, relevant, and reasonably available information that describes the existing environment of the Project (i.e., information regarding the resource areas listed below in the vicinity of the Project)?

Yes (please complete 2a through 2e) No (please go to question 3)

a) Please indicate by "X" next to the specific resource area or areas that the information relates to:

	Geology and Soil Resources	\times	Recreation and Land use Resources
*	Water Resource		Aesthetic Resources
X	Fish and Aquatic Resources		Historical Resources
	Wildlife and Botanical Resources		Socioeconomic Resources
	Wetlands, Riparian, and Littoral Habitat Resources		Tribal Resources

Other Resource Information



b) Please briefly describe the information or list the available documents (additional writing

space is provided on page 4 of this questionnaire). We've collected WQ date using in-river sondes, grab samples to measure nitrogen/phosphorus/sediment, invertebrake abondences, and the recreational data in tocartions above of below Ashton Dam.

- c) Where can PacifiCorp obtain this information (additional writing space is provided on page 4 of this questionnaire)?
 - Sonde date is publically available through our website; hunrysfork.org, Other date is evenilable upon request. Note: much of the date is in raw form --- analysis can be performed upon request.
- d) Please indicate whether there is a specific representative you wish to designate for a potential follow-up contact by PacifiCorp's representative for the resource area or areas indicated above (additional information may be provided on page 4 of this questionnaire).

Representative Contact Information

Name and Title:				
Organization:				
Address:				
Phone:	1		11	
E-mail Address:				

Name and Title:	
Organization:	
Address:	
Phone:	
E-mail Address:	



e) Based on the specific resources listed in 2a, are you aware of any specific issues pertaining to the resource you identified? For example, the historic significance of the facilities must be addressed during the relicensing (additional information may be provided on page 4 of this questionnaire).

_____ Yes (please list the specific issues below)



Resource Area	Specific Issue
1	

3. Do you or your organization plan to participate in the Ashton Hydroelectric Project relicensing proceeding?

<u>Y</u>es <u>No</u>



4. We are interested in your comments. If you have comments and/or questions regarding the PacifiCorp Hydroelectric Project, PAD, or the relicensing proceeding please provide them below.

Comments:

Raw data may not be useful for this process. Any requests for analysis will be given prioritization.

Please return this questionnaire and any pertinent information as soon as possible or no later than Friday December 10, 2021 to Jot Splenda: jot.splenda@wsp.com.


Ashton FERC Application Questionnaire

PacifiCorp (PacifiCorp) is beginning the Federal Energy Regulatory Commission (FERC) relicensing for the existing PacifiCorp Hydroelectric Project (FERC No. 2381). The project is located in Fremont County, Idaho. PacifiCorp is preparing a Pre-Application Document (PAD) for the Project that provides FERC, resource agencies and other stakeholders with existing, relevant, and reasonably available information regarding the Project to help identify issues and related information needs, develop study requests and study plans, and prepare environmental documents analyzing project impacts. This Questionnaire will be used to help identify sources of existing, relevant, and reasonably available information that is not in PacifiCorp's possession.

1. Information about person completing the questionnaire:

Name and Title: CHRIS SHAVER COMPLIANCE ARCHAEOLOGIST							
Organization: TRAHO STATE HISTORIC PRESERVATION OFFICE							
Address: 210 MAIN STREET BOISE, IDAHO 83702							
Phone: 208 488 7467							
E-mail Address: chris, shavere ishs. Idaho.gov							

2. Do you or your organization know of existing, relevant, and reasonably available information that describes the existing environment of the Project (i.e., information regarding the resource areas listed below in the vicinity of the Project)?

Yes (please complete 2a through 2e) _____ No (please go to question 3)

a) Please indicate by "X" next to the specific resource area or areas that the information relates to:

 Geology and Soil Resources		Recreation and Land use Resources
 Water Resource		Aesthetic Resources
 Fish and Aquatic Resources	X	Historical Resources
 Wildlife and Botanical Resources		Socioeconomic Resources
 Wetlands, Riparian, and Littoral Habitat Resources	\times	Tribal Resources
Other Resource Information		



b) Please briefly describe the information or list the available documents (additional writing space is provided on page 4 of this questionnaire).

HISTORIC PROPERTY INFORMATION IS RETAINED AT OUR OFFICE AND PER FEDERAL LAW REMAINS CONFIDENTIAL

c) Where can PacifiCorp obtain this information (additional writing space is provided on page 4 of this questionnaire)?

THE INFORMATION CAN BE OBTAINED THROUGH SELPETARY OF THE INTERIOR QUALIFIED INDIVIDUALS

d) Please indicate whether there is a specific representative you wish to designate for a potential follow-up contact by PacifiCorp's representative for the resource area or areas indicated above (additional information may be provided on page 4 of this questionnaire).

Representative Contact Information						
Name and Title: CHRIS STAVER, COMPLIANCE ARCHAEOLOGY	5					
Organization: IDAHO STATE HISTORIC PRESERVATION OFFICE						
Address: BOISE, IDALLO 83702						
Phone: 209 488 7467						
E-mail Address: Chris. Shavera ishs. Idaho. gov						

Name and Title:	
Organization:	
Address:	
Phone:	
E-mail Address:	



e) Based on the specific resources listed in 2a, are you aware of any specific issues pertaining to the resource you identified? For example, the historic significance of the facilities must be addressed during the relicensing (additional information may be provided on page 4 of this questionnaire).



Yes (please list the specific issues below) No

Resource Area	Specific Issue
RESOLVOIR	PREHISTORIC RESOURCES

3. Do you or your organization plan to participate in the Ashton Hydroelectric Project relicensing proceeding?





4. We are interested in your comments. If you have comments and/or questions regarding the PacifiCorp Hydroelectric Project, PAD, or the relicensing proceeding please provide them below.

Comments:

Please return this questionnaire and any pertinent information as soon as possible or no later than Friday December 10, 2021 to Jot Splenda: jot.splenda@wsp.com.





Figure 1: Location of the Ashton Hydroelectric Project.





Figure 2: Main features of the Ashton Hydroelectric Project.

Appendix C – Current Licensed Project Boundary



This Document is Considered Public Information.

Northlac	Easting	Bearing	Distance	Remarks	StaPt M	orthing	Easting	Rearing	Distanc	ce Remarke	Chart - Main Reservoir Boundary	StoPt	Northing	Facting	Rearing	Distanc	e Remarks	
878969	832290	bearing	Distance	BEG N.0°16'08"W 1810.00' along SEC line and S.89°43'52"W 27.36' from	60	891399	845484	Dearing	Distanc	INTX N-S 1	/4 Sec line S13-T9N-R42E BM and HWL	115	88265	8 8333	8 6 041444070	175 44	Along Efu ling Concernition Economic	
070007		S.89°43'52"W	410.64'	Along S'ly line of PacifiCorp Parcel	61	887467	837560	0.000070005	74.05	INTX HWL	and E line \$22-T9N-R42E BM	116	88248	3 8333	3	/ 1/5.44	Along E ly line Conservation Easement	
878967	831879	N.34*37'30"E	155.97'	INTX of S'ly line of PacifiCorp Parcel and HWL of Henry's Fork Snake River Along HWL of Henry's Fork Snake River	62	887392	837561	S.00°27'26"E	74.95	Along E lin INTX E line	e S22-19N-R42E BM s22-T9N-R42E BM and PacifiCorp fence	117	88231	5 8333	S.04°20'21'V	/ 168.67	Along Ely line Conservation Easement	
879096	831968	N.37°51'19"E	41.34	Along HWL of Henry's Fork Snake River	63	887401	837457	N.85°18'26"V	/ 104.10	Along Paci	ifiCorp fence	118	88217	0 8332	S.16°10'59"V	/ 151.18	Along E'ly line Conservation Easement	
879128	831993	N.11*02'39"E	29.43	Along HWL of Henry's Fork Snake River	64	887444	836861	N.85°48'59"V	/ 597.41'	Along Paci	ifiCorp fence	119	88210	7 8332	S.38°40'21"V	/ 81.41'	Along E'ly line Conservation Easement	
879157	831999	N 28*25'04"E	00.00	Along HML of Hennio Fork Shake Birer	65	997520	926624	N.69"32'27"V	/ 245.97	Along Paci	tliCorp tence	120	99204	0 9324	S.12*45'50*V	/ 59.13	Along E'ly line Conservation Easement	
879236	832042	N.20 2301 L	50.05	Along TWVE OFFICITIVEST OK Shake Kivel	05	00/330	050051	N.40°11'22"V	/ 157.30'	Along Paci	ifiCorp fence	120	00204	5 0001	S.16°38'04"V	/ 256.50	Along E'ly line Conservation Easement	
879264	832042	N.00º36'21''W	27.06	Along HWL of Honry's Fork Snake River SE COR Easement across State land (PT on E'Ly HWL of Henry's Fork Snake River)	66	887650	836520	N.16°12'44"V	/ 12.03'	Along Paci	ifiCorp fence	121	88180	3 8331	1 S.37°21'09"V	/ 86.13'	Along E'ly line Conservation Easement	
879407	831819	N.57°13'25''W	265.11'	Along SWIy line Easement across State land SW COR Easement across State land (PT on WI v HWI, of Henry's Fork Snake River)	67	887662	836526			INTX Pacifi Along HWI	Corp fence and HWL	122	88173	5 8330	9 S 23°24'28'V	/ 168.18	Along E'ly line Conservation Easement	
970524	921960			Along Wily line of Easement across State land bing HWL of Henry's Fork Snake River	68	887730	836475	NI POPEO TTU	1 1 440 93	INTX HWL	and N line S22-T9N-R42E BM	123	88158	0 8330	2	/ 74.99	Along Eth line Concention Economi	
079001	031003	N.56°18'08''W	187.89'	Along SWIy line of PacifiCorp Parcel	69	887730	835034	14.09 0927 4	1,440.62	INTX N line	S22-T9N-R42E BM and PacifiCorp fence and its NIv extension	124	88151	3 8329	8	/ /1.35	Along Ely line Conservation Easement	
879636	831712	N.21°30'47"W	48.52'	INTX SWIy line PacifiCorp Parcel	70	887679	835011	S.24°03'46'V	/ 55.10	Along Paci	ftCorp tence and its NIy extension	125	88130	6 8329	S.00°55'04'V	/ 206.66	Along Ely line Conservation Easement	
879681	831695	N.22*33/57"E	226.42'	PT on SWIy extension of line parallel with and 15' NWIy of PacifiCorp fence Along extension of line parallel with and 15' NWIy of PacifiCorp fence	71	087601	004921	S.48°54'34"V	/ 119.32'	Along Paci	ifiCorp fence	126	00114	0 8329	S.24°17'48"V	/ 182.43	Along E'ly line Conservation Easement	
879890	831781	S 77*54'03"E	29.06	Parallel with and 15 NW/W of PacifiCom (ence	72	887518	834838	S.45°05'13"V	/ 117.89	Along Paci	ifiCorp fence	127	88067	6 8329	S.02°26'36"E	464.28	Along E'ly line Conservation Easement	
879884	831810	N 07107144"E	24.90	Parallel with and 16' MM/L of Dasi/Comp.	70	007070	00 4705	S.35°25'35"V	/ 177.45	Along Paci	ifiCorp fence	400	00001	0 0020	S.24°50'45"V	/ 69.03'	Along E'ly line Conservation Easement	
879885	831835	N.0/ 2/ 44 E	24.00	Paraller with and 15 NWVIY of Pacificorp rence	/3	00/3/3	034/33	S.00°49'35"E	62.94'	Along Paci	ifiCorp fence	120	00001	3 0320	S.07°30'16"E	144.58	Along E'ly line Conservation Easement	
879994	831904	N.32*24'02"E	129.11	Parallel with and 15' NWIy of PacifiCorp fence	74	887310	834736	S.45°53'25"V	/ 145.92'	Along Paci	ifiCorp fence	129	88047	0 8329	0 S.05°31'05"V	231.26	Along E'ly line Conservation Easement	
970003	921040	S.87°37'06"E	36.19	Parallel with and 15' NWIy of PacifiCorp fence	75	887209	834631	C 221/2//11/	/ 192.47	Along Baoi	if Com forse	130	88024	0 8328	7 S 17°05'40"V	(70.52	Along E'k line Conservation Economent	
000007	001940	N.55"25'48"E	142.42'	Parallel with and 15' NWIy of PacifiCorp fence	76	887057	834530	0.00 4041 1	1 400 101	Alers P	i Cam fanas	131	88017	3 8328	17 C 20040 V	/ 00./=	Along E'h ling Concernation Easendill	
880073	832057			IN LA or line parallel with and 15' NW1y of PacifiCorp fence and NE'ly line of PacifiCorp Parcel	77	886923	834397	5.44°44'21"V	/ 189.13	Along Paci	nicorp rence	132	88010	9 8328	5.38°10'53"V 7	/ 80.45'	Along Ely line Conservation Easement	
880044	832100	S 55°16'08"F	51 61'	Along NF'ly line of PacifiCorp Parcel INTX of SWIy line of PacifiCorp Parcel and HWL of Ashton Reservoir	78	886702	834127	S 50°42'54"V	/ 348.55'	Along Paci	ifiCorp fence	133	87997	7 8327	S 16°50'58"V	/ 138.65	Along Fly line Conservation Easement	
883.432	822600			Along HWL INTY of HWI and N line \$27 TBN P42E BM	70	996510	83301	S.49°20'30"V	/ 281.07	Along Paci	ifiCorp fence	404	80000	1 0000	N.46°22'58"V	/ 151.66	Along SWIy line Conservation Easement	
002438	032090	S.89*55'59"W	395.35'	Along N line S27-T3N-R42E BM	19	000019	003914	S.43°14'46"V	/ 156.51'	Along Paci	ifiCorp fence	134	00008	0326	S.28°20'40"V	/ 190.54	Along HWL	
882438	832301	N.00°33'18"W	151.65'	Sec Cor 21/22/27/28-T9N-R42E BM Along E line S21-T9N-R42E BM	80	886405	833807	S.89°53'44"V	/ 93.30'	INTX Pacifi Along N lin	Corp tence and N line Gov Lot 6 S22-T9N-R42E BM	135	87991	4 8325	/ S.50°27'38"E	55.20'	INTX of HWL and Access Road Parcel Along NE'ly line Access Road Parcel	
882590	832300)	-	INTX E line S21-T9N-R42E BM and HWL Along HWL	81	886405	833713			INTX N line	9 Gov Lot 6 S22-T9N-R42E BM and HWL	136	87987	8 8326	9 S.39*40/02**/	/ 81.73	Along SE'ly line Access Road Parcel	
885066	830403			INTX of HWL and E-W 1/4 Sec line S21-T9N-R42E BM	82	886301	833591	0.00001115-	150.00	INTX HWL	and W line Gov Lot 6 S22-T9N-R42E BM	137	87981	5 8325	7	00.70	Alexa MEth line Access Do. 10	
885037	830957	r		INTX HWL and W line Gov Lot 2 S21-T9N-R42E BM	83	886151	833592	a.00131115"E	190.03	Along W lin	e Gov Lot 6 S22-19N-R42E BM and SE'ly line Conservation Easement	138	87979	9 8325	5.4614403"E	23.70	INTX NE'ly line Access Road Parcel INTX NE'ly line Access Road Parcel and E-W 1/4 Sec line \$	27-T9N-R42E BM
885070	830956	N.00"35'14"W	33.04"	Along W line Gov Lot 2 S21-T9N-R42E BM NW Cor Gov Lot 2	84	885847	833221	S.50°40'20"V	480.20	Along SE'h	y line Conservation Easement	139	87980	1 8332	N.89°53'10"E	685.19	Along E-W 1/4 Sec line S27-T9N-R42E BM NE'ly Cor PacifiCorp Parcel (Pt on E-W 1/4 Sec line S27-T9	N-R42E BM)
886301	830043	N.00*35'12"W	1,320.17	Along W line Gov Lot1 S21-T9N-R42E BM	85	885028	833128	N.49°16'38"V	/ 123.36	Along SW1	ly line Conservation Easement	1	87806	0 8322	S.49°40'40"V	/ 1,284.68	Along SE'ly line PacifiCorp Parcel	
000001	000040	N.89*30'19"E	1,069.31'	Along N line Gov Lot 1 S21-T9N-R42E BM	00	000020	000120			Along HWL			07050	J GOLL				
886400	832012	N.16*46'58"E	122.40'	INTX of Ine Gov Lot1 S21-19N-R42E BM and PacifiCorp tence Along PacifiCorp fence	86	885907	833102	S.49°19'01"E	135.48'	Along NE's	y line Conservation Easement							
886517	832047	N.46*46'26"E	291.17	Along PacifiCom fence	87	885819	833205	\$.24°50'55"V	/ 557.02'	Alona SE'h	v line Concervation Eccement							
886716	832260	N 0092214 779.64	4.000.05	INTX PacifiCorp fence and E line S21-T9N-R42E BM	88	885313	832971	0.448600.00	1 40 651	Alere 05%	,							
887723	832250	14.00 3317 W	1,008.95	Sec Cor 15/16/21/22-T9N-R42E BM	89	885299	832957	3.44 3024 V	/ 19.05	Along SE n	y line Conservation Easement							
887727	833821	N.89*51'36"E	1,570.92	Along N line S22-T9N-R42E BM INTX N line S22-T9N-R42E BM and HWL	90	885265	832920	S.46*56'04"V	/ 50.55'	Along SE'h	y line Conservation Easement							
890362	832792			Along HWL INTX of HWL and FJW 1/4 Sec line S15-T9N-R42F BM (BLM prop line)	91	885211	832851	S.51°40'58"V	/ 87.71'	Along SE'h	y line Conservation Easement							
	002102			Along HWL		000211	002001			Curve along	g SE'ly line Conservation Easement:							
890362	833047			IN IX of HWL and E-W 1/4 Sec line S15-19N-R42E BM (BLM prop line) Along HWL	92	885150	832819			(radius a	84.91', arc 70.64', left, chord bears \$.27"50"53"W 68.62')							
890364	833719			INTX of HWL and E-W 1/4 Sec line S15-T9N-R42E BM (BLM prop line) Along HWL	93	885064	832823	S.02°19'35"E	85.90'	Along SE'h	y line Conservation Easement							
890364	833959			INTX of HWL and E-W 1/4 Sec line S15-T9N-R42E BM (BLM prop line) Along HWI						Curve along	g SETy line Conservation Easement: 138.56(arc 73.07) right, chord bears S 15*34/31*W 72.220							
888845	834901		000.00	INTX HWL and W line Gov Lot 2 S15-T9N-R42E BM	94	884994	832803	0.000000000		(ruonuo								
889048	834900	N.00*1643*W	203.44	NW Cor Gov Lot 2 S15-19N-R42E BM	95	884939	832768	S.32-2522 V	/ 65.49	Along SET	y line Conservation Easement							
889049	835719	N.89*56'45"E	819.13	Along N line Lot 2 S15-T9N-R42E BM INTX N line Lot 2 S15-T9N-R42E BM and PacifiCorp fence	96	884863	832705	S.39°45'42"V	/ 98.86'	Along SE'h	y line Conservation Easement							
990127	925975	N.63*12*26"E	174.52	Along PacifiCorp fence						Curve along	g SE1y line Conservation Easement: 604.3% am 204.01 loft, abort beam S. 20*00/01*/4/ 202.001							
005121	000070	N.00°02'17"W	114.04'	Along PacifiCorp fence	97	884687	832603			(radius d	501.36, alc 204.91, feit, cibid bears 3.50 00 01 44 203.92)							l he
สช9242	835875	N.25*15'22"E	233.35'	Along PacifiCorp fence	98	884630	832579	S.22"59'18"V	4 61.52 ⁺	Along SE'h	y line Conservation Easement							require
;89453	835974	N.52*01'09"E	312,98'	Along PacifiCorp fence						Curve along (radius	g SE'ly line Conservation Easement: 374.26', arc 116.51', right, chord bears S.31°54'24"W 116.04')							bou bou
89645	836221	S 00*10*40*E	20.42	INTX PacifiCorp fence and E 1/16 line S15-T9N-R42E BM	99	884531	832518	C 460 4500	1 6F 401	Alere OF								sou
89616	836221	a.001197461E	29.43	NONE C 1/10 IND S15-19N-R42E BM INTX E 1/16 line S15-T9N-R42E BM and HWL	100	884487	832470	3.40°45'50"V	a 05.42'	Along SE'h	y line conservation basement							conf
88737	836226			Along HWL INTX E 1/16 line S15-T9N-R42E BM and HWL						Curve along (radius 1	g SE'ly line Conservation Easement: 131.43', arc 93.39', left, chord bears S.26*24'24''W 91.44')							Public
188575	826220	S.00°19'46"E	211.79'	Along E 1/16 line S15-T9N-R42E BM	101	884405	832429	S 02000261	1 58 00'	Alona CF%	v line Conception Escement							
	030228			Along HWL	102	884347	832427	3.32 0038"V	. 36.20	Along SET	y ma conservation Lasement							
J1748	842692	N.00"34'11"W	32.69	IN IX HWL and W line PacifiCorp Interest Parcel Along W line PacifiCorp Interest Parcel	103	884255	832429	S.01°11'14"E	91.15'	Along SE'h	y line Conservation Easement							
91780	842692	S 88*14"22"LA	95.92	INTX W line PacifiCorp Interest Parcel and Pacificorp Parcel	104	884201	833409	S.09°08'02"E	54.69'	Along SE'h	y line Conservation Easement							
91778	842596	5.00 1#22 W	404	W Cor PacifiCorp Parcel	104	304201	002438			Curve along	g SE'ly line Conservation Easement:							
91843	842765	N.68*40'46"E	181.15	Along INV IITE Pacificorp Dock Parcel	105	884165	832442			(radius	596.13, arc 36.26, right, chord bears \$.07*23'51"E 36.25)							
391903	842825	N.49°29'18"E	92.02"	Along NW line PacifiCorp Dock Parcel NE Cor PacifiCorp Dock Parcel (Pt on W line S13-T0N-R49F RM)						Curve along	g SE ¹ ly line Conservation Easement: 45.41', arc 23.03', right, chord bears S.08°52'03"F 22.78')							
00445	0 40000	N.00*34*12"W	206.65'	Along W line W line S13-T9N-R42E BM	106	884143	832439	0.0400440	1 68 001	Ale 05-								
ə 9 2110	842832	N.86°11'22"E	523.83'	Along N line PacifiCorp Parcel	107	884081	832410	5.∠4°34'18"V	v 68.33'	Along SE'h	y me conservation casement							
92145	843355	S.03°48'40"E	10.00'	Along N line PacifiCorp Parcel	108	884044	832387	S.32°36'25"V	/ 44.00'	Along SE'h	y line Conservation Easement							
92135	843356	N 86"11"2""	150.00	Along N line PacifiCom Parcel						Curve along	g SE'ly line Conservation Easement:							
92145	843505		100.00		109	884012	832343			(raulus i								
92155	843505	N.03*48'41"W	10.00	Along N line PacifiCorp Parcel	110	883998	832289	S.76*05'14"V	/ 55.81'	Along SE th	y line Conservation Easement							
92104	844045	N.86°11'22"E	541.90'	Along N line PacifiCorp Parcel						Curve along	g SE'ly line Conservation Easement: 65.11 am 95.08' left, chord bears S.34*15/09''W, 86.85'							
0047	044040	S.03*48'34"E	20.00	Along N line PacifiCorp Parcel	111	883926	832240	0.000/0000-	100.001	(auids	view Concerning Foregret							
892171	844047	N.87°17'54"E	108.15'	Along N line PacifiCorp Parcel	112	883764	832263	5.08°13'29"E	163.90'	Along SE'h	y line Conservation Easement							
392176	844155	S.00"31"31"F	39.70	NE Cor PacifiCorp Parcel (Pt on E line Gov Lot 3 S13-T9N-R42E BM) Along E line Gov Lot 3 S13-T9N-R42E BM	113	883751	832727	S.71°35'22"V	42.82'	Along SE's INTX of SF	y line Conservation Easement 'ly line Conservation Easement and HWL							
392136	844155			INTX E line Gov Lot 3 S13-T9N-R42E BM and HWL	44.1	000050	000100			Along HWL	L and Mix line Conception Frances							
				NONG TVVL INTX HWL and N-S 1/4 Sec line S13-T9N-R42E BM	114	682658	833182	N.89°49'28"E	145.19	IN IX of HW Along N'ly	VL and My inte Conservation Easement							
891663	845482																	
891663	845482	S.00*28'51"E	263.65	Along N-S 1/4 Sec line S13-19N-R42E BM														

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					Project Boundary Travers	e Chart -	Wetland	Boundary 1		
StaPt	Northing	Easting	Bearing	Distance	Remarks	StaPt	Northing	Easting Bearing	Distance	Remarks
1001	882441	83495			BEG at N 1/4 COR S27-T9N-R42E BM	1048	881792	838937		NE COR S1/2NW1/4NW1/4 S26-T9N-R42E BM
1000	0007.44	00.40.4	N.00°29'13"W	300.12	Along N-S 1/4 SEC line S27-T9N-R42E BM (also Wly line Conservation Easement)	10.00	001100	S.00°49'58"E	658.97'	Along E line NW1/4NW1/4 S26-T9N-R42E BM (also E'ly line Conservation Easement)
1002	882/41	83494	N.89°03'57"E	102.73	Along N'ly line Consentation Easement	1049	881133	5.89°44'05"W	1.329.84	SE COR NW1/4NW1/4 S26-19N-R42E BM Along S line NW1/4NW1/4 S26-T9N-R42E BM (also E'lv line Conservation Easement)
1003	882743	835052		TOLITO		1050	881127	837617	1,020.01	SW COR NW1/4NW1/4 S26-T9N-R42E BM
			N.28°36'57"E	233.19'	Along EX. FNC along NIy line Conservation Easement			S.00°43'30"E	658.86	Along W line S26-T9N-R42E BM (also E1y line Conservation Easement)
1004	882948	835163	NI ODOFCIONINAL	407.00	March M. Park Assessment and Francisco A	1051	880468	837625	005 001	NW COR S1/2SW1/4NW1/4 S26-T9N-R42E BM
1005	883075	83516	N.00*5603 W	127.20	Along NIV line Conservation Easement	1052	880472	N.89-44.20 E 838450	825.33	Along N line S1/2SW1/4NW1/4 S26-T9N-R42E BW (also E ty line Conservation Easement)
1005	003073	05510	N.89°03'57"E	450.16	Along N/ly line Conservation Easement	1052	000472	S.00°44'58"E	658.92'	Along E'ly line Conservation Easement
1006	883082	83561				1053	879813	838459		PT on E-W 1/4 Sec line S26-T9N-R42E BM
			S.00°56'03"E	120.13	Along Nly line Conservation Easement			N.89°44'36"E	132.16	Along E-W 1/4 Sec line S26-T9N-R42E BM (also E'ly line Conservation Easement)
1007	882962	835613	0.549445485	0.47	March M. Par Annual Ing Francisco	1054	879814	838591	50.47	INTX of E-W 1/4 Sec line S26-T9N-R42E BM and EX FNC
1008	882057	835620	5.54'4454 E	8.17	Along NIV line Conservation Easement	1055	870761	5.22°0035 E	50.17	Along EX FIVE (also E ly line Conservation Easement)
1000	002937	055020	S.46°21'51"E	35.20	Along NIv line Conservation Easement	1033	0/9/01	S.27°10'50"E	68.04	Along EX FNC (also E'ly line Conservation Easement)
1009	882933	835645				1056	879701	838643		······································
			S.33°04'18"E	43.24	Along Nly line Conservation Easement			S.30°19'24"E	63.46	Along EX FNC (also E'ly line Conservation Easement)
1010	882897	835669	0.408000075	77.00	Alers Milling Oceananting Encount	1057	879646	838675	444.50	Alexa EV ENO (cha Ellu lica Occasación Economica)
1011	882823	835601	5.18-2923 E	11.32	Along NTy line Conservation Easement	1058	879553	838743	114.56	Along EX FINC (also E ty line Conservation Easement)
1011	001010		S.01°32'05"W	39.10	Along N/ly line Conservation Easement		0700000	S.34°38'28"E	237.71'	Along EX FNC (also E'ly line Conservation Easement)
1012	882784	835692	•			1059	879358	838878		
			S.26°47'12"W	35.10	Along NIy line Conservation Easement			S.20°29'39"E	108.76	Along EX FNC (also E'ly line Conservation Easement)
1013	882753	835677	N 80°02'57"5	214.00	Along Mix line Concension Essement	1060	879256	638916 S 17*02*10"F	38.80	Along EX ENC (also E'ly line Consensition Essement)
1014	882757	835801	14.09 U35/ E	214.90	Along wity the conservation casement	1061	879219	5.17"03"19"E 838927	30.09	Along EX FIND (also E ly line conservation Easement)
		_ 0000	N.50°08'54"E	70.99	Along N'ly line Conservation Easement	1001	2.02.10	S.17°03'18"E	168.83'	Along EX FNC (also E'ly line Conservation Easement)
1015	882802	835946				1062	879057	838977		
1010	000000		N.00°56'03"W	285.53	Along N'ly line Conservation Easement		070001	S.17°03'19"E	155.12	Along EX FNC (also E'ly line Conservation Easement)
1016	883087	83594	N 90°02'57"5	215 00	Along Mix line Concentrion Economet	1063	878909	639022 C 07%50'00''''''''	200 651	Along EV ENC (alon Elly line Concention Ecompati)
1017	883093	836256	14.09 U35/ E	313.08	mong mig-mie-conservation casement	1064	878636	5.27"5833"W 838877	309.00	Along LATING (also Elly line Conservation Easement)
		200200	N.21°19'20"E	39.71	Along N'ly line Conservation Easement	1004	2.0000	S.68°12'58"W	463.83'	Along EX FNC (also E'ly line Conservation Easement)
1018	883130	83627			PT on E 1/16 line S27-T9N-R42E BM	1065	878464	838446		
			N.00°56'03"W	293.37	Along E 1/16 line S27-T9N-R42E BM (also N'ly line Conservation Easement)			S.00°33'23"E	923.97	Along Elly line Conservation Easement
1019	883423	836266	NI COROCIETIE	400.00	Alizza Mile Bas Ocassa Alizz Essentiat	1066	877540	838455	00.40	Alexa File Bas Occurrentian Economical
1020	883425	836386	N.09'0357 E	120.00	Along Niy line Conservation Easement	1067	877524	838397	60.46	Along E ly line Conservation Easement
			N.21°19'20"E	70.20	Along Nly line Conservation Easement			S.71°20'18"W	43.06	Along E'ly line Conservation Easement
1021	883490	836412				1068	877510	838356		
			S.69°55'06"E	94.37	Along Nly line Conservation Easement			S.66°50'52"W	54.83'	Along E'ly line Conservation Easement
1022	883458	836500	0.0004414255	00.72	Along Mile line Concernation Economet	1069	877489	838306	20.77	Along Fits line Concernition Economet
1023	883457	836600	5.09 4145 E	99.75	Along why line conservation casement	1070	877474	838279	30.77	Along E ly line conservation Easement
			S.67°05'44"E	25.69	Along N/ly line Conservation Easement			S.45°01'06"W	33.90'	Along E'ly line Conservation Easement
1024	883447	836624				1071	877450	838255		
			S.49°05'39"E	27.86	Along NIy line Conservation Easement			S.00°57'22"E	273.51'	Along Ely line Conservation Easement
1025	883429	83664	N 90°03'57"E	171.50	Along Nev line Concention Escement	1072	8//1/6	838259 S 80°46'12"W/	502 51'	P1 on S line S26-19N-R42E BM Along S line S26 TBN P42E BM (also S'ly line Concentation Escenant)
1026	883432	836816	N.09 0337 E	171.30	Along Miy line Conservation Easement	1073	877174	837667	392.31	SW COR S26-T9N-R42E BM
			S.00°56'03"E	287.70	Along Elly line Conservation Easement			N.00°43'30"W	1,317.72	Along W line S26-T9N-R42E BM (also W1y line Conservation Easement)
1027	883144	836821				1074	878492	837650		SW COR NW1/4SW1/4 S26-T9N-R42E BM
1000	002074	02600	S.41°11'35"E	93.66"	Along E'ly line Conservation Easement	4075	970450	N.00°43'30"W	658.86	Along W line S26-T9N-R42E BM (also WIy line Conservation Easement)
1028	883074	83088	S 30°33'04"E	34.46	Along Fly line Consentation Essement	10/5	8/9150	5 89°52'19"W/	663 54	SE COR NE1/4NE1/4SE1/4SE1/4S27-T9N-R42E BM Along S line NE1/4NE1/4SE1/4S27-T9N-R42E BM (also W/l/ line Consensation Essement)
1029	883044	836900	0.00 0004 2	0	Prong Ely Inte contentation Education	1076	879149	836978	000.04	SW COR NE1/4NE1/4SE1/4 S27-T9N-R42E BM
			S.03°09'54"E	44.40'	Along E'ly line Conservation Easement			N.00°42'03"W	659.02	Along W line NE1/4NE1/4SE1/4 S27-T9N-R42E BM (also Wly line Conservation Easement)
1030	883000	836903				1077	879808	836970		NW COR NE1/4NE1/4SE1/4 S27-T9N-R42E BM
1024	880005	93600	5.12°48'37"W	97.44	Along Eily line Conservation Easement	1070	870900	N.89"53'10"E	331.63	Along E-W 1/4 Sec line S27-T9N-R42E BM (also WE'ly line Conservation Easement)
1031	002905	03008	S.14°52'56"W	58.14	Along E'ly line Consenation Easement	10/6	019009	N 00°42'47"W	354,46'	Along E line W1/28E1/48E1/4NE1/4 827-T9N-R42E BM (also W1v line Conservation Fasement)
1032	882849	836866			v /	1079	880163	837297		
			S.05°48'45"E	41.56"	Along E'ly line Conservation Easement			N.89°57'04''W	148.18'	Along Wly line Conservation Easement
1033	882807	836870				1080	880163	837149		PT on CL of EX Canal
1024	000705	00007	5.13°35'59"E	23.09	Along Nity line Conservation Easement	4007	000400	035050		Wily Along GL of EX Canal (also Wily line Conservation Easement)
1034	882/85	836876	S 08°18'55"F	57.36	Along Filv line Conservation Easement	1081	880160	5 88°58'45''M	605.27	PT ON CE OF EX Canal Along Wilv line Conservation Easement
1035	882728	836884	5.00 1000 E	01.00		1082	880149	835253	300.21	and the second function becomen
			S.25°29'35"W	65.75'	Along E'ly line Conservation Easement			N.00°48'42"W	100.04'	Along Wly line Conservation Easement
1036	882669	836856	i			1083	880249	835251		
4007	000000		S.11°46'48''W	46.73'	Along E'ly line Conservation Easement	100	0000 15	S.89°11'18"W	275.65'	Along Wly line Conservation Easement
1037	882623	836846	S 00°56'03"E	30.95	Along F'ly line Consentation Easement	1084	880245	634975 N 00°37'43'''44	877 21'	PT ON N-5 1/4 Sec line S2/- ISN-K42E BM Along N-S 1/4 Sec line S27-T9N-R42E BM (also W/v line Concentration Escement)
1038	882592	83684	0.00 0000 E	00.00	nong biy ma concentation bacement	1085	881123	834966	311.21	N C1/16 COR S26-T9N-R42E BM
			N.89°03'57"E	103.34	Along E'ly line Conservation Easement			N.89°54'20"E	257.50'	Along N 1/16 line S27-T9N-R42E BM (also Wly line Conservation Easement)
1039	882594	836950				1086	881123	835223		INTX of N 1/16 line S27-T9N-R42E BM and EX FNC
12.12	000111	0000-	S.00°56'03"E	149.84	Along E'ly line Conservation Easement	100-	001105	N.50°39'10"E	93.09	Along EX FNC (also Wily line Conservation Easement)
1040	882444	836951	C 2192544504	1 416 55	P I ON N line S2/-19N-R42E BM	1087	881182	635295 N 0092742544	105.24	PT ON EXENUTING An exemption Escenart
1041	881125	83643	0.21 2011 W	1,410.00		1088	881307	835294	120.04	PT on EX FNC line
	001120	000400	S.00°48'42"E	330.12	Along NIy line Conservation Easement		001001	N.16°56'21''W	175.57	Along EX FNC (also Wly line Conservation Easement)
1042	880795	836440				1089	881475	835243		FNC COR/Angle Point
		_	N.56°08'50"E	809.62	Along E'ly line Conservation Easement			N.30°12'53"E	96.18	Along EX FNC (also W1y line Conservation Easement)
1043	881246	837112	N 90°14'4 0=E	502 40	Along Elly line Concentrion Economet	1090	881558	835291 NI 00927 42" 41	439.00	PT on EX FNC line
1044	881253	837614	14.09 1110 E	005.10	PT on F line S27-T9N-R42F BM	1091	881997	835286	430.20	Along with the Conservation Edsement
1044	001200	00701	N.00°43'30"W	203.10	Along E line S27-T9N-R42E BM (also E'ly line Conservation Easement)	1001	001001	S.89°22'17"W	330.12	Along Wly line Conservation Easement
1045	881456	837613			SW COR NW1/4SW1/4NW1/4NW1/4 S26-T9N-R42E BM (also E'ly line Conservation Easement)	1092	881993	834956		PT on N-S 1/4 Sec line S27-T9N-R42E BM
		_	N.89°43'57"E	332.31'	Along S line NW1/4SW1/4NW1/4NW1/4 S26-T9N-R42E BM (also E'ly line Conservation Easement)			N.00°37'43''W	448.06'	Along N-S 1/4 Sec line S27-T9N-R42E BM (also Wly line Conservation Easement)
1046	881458	837945	N 00°4E'07"NA	320 44	SE COR NVV1/4SW1/4NW1/4NW1/4 S26-T9N-R42E BM (also E'ly line Conservation Easement)	1001	882441	834951		POINT OF BEG
1047	881787	83794	14.00 4307 VV	328.44	NE COR NW1/4SW1/4NW1/4NW1/4 S26-T9N-R42E BM (also E ty line Conservation Easement)					
			N.89°43'49"E	996.45	Along N line S1/2NW1/4NW1/4 S26-T9N-R42E BM (also E'ly line Conservation Easement)					

Project Boundary Traverse Chart - Wetland Boundary 2											
StaPt	Northing	Easting	Bearing	Distance	Remarks						
2001	882457	840255			BEG at S 1/4 COR S23-T9N-R42E BM						
			S.89°43'33"W	1,327.36	Along S Line S23-T9N-R42E BM						
2002	882451	838927			SE COR SW1/4SW1/4 S23-T9N-R42E BM						
			S.89°43'33"W	663.68	Along S Line S23-T9N-R42E BM						
2003	882448	838264			SW COR E1/2SW1/4SW1/4 S23-T9N-R42E BM						
			N.00°23'14"W	1,321.01	Along W line E1/2SW1/4SW1/4 S23-T9N-R42E BM						
2004	883769	838255			NW COR E1/2SW1/4SW1/4 S23-T9N-R42E BM						
			N.89°45'04" E	665.30'	Along S 1/16 line S23-T9N-R42E BM						
2005	883772	838920			SW 1/16 COR S23-T9N-R42E BM						
			N.89"45'04" E	390.71	Along S 1/16 line S23-T9N-R42E BM						
2006	883773	839311			INTX S 1/16 line S23-T9N-R42E BM and S'ly line Co. RD E 1425 N						
					Along S'ly line Co. RD E 1425 N						
2007	883775	839829			INTX S'ly line Co. RD E 1425 N and S 1/16 line S23-T9N-R42E BM						
			N.89°45'04" E	421.68	Along S 1/16 line S23-T9N-R42E BM						
2008	883777	840251			C-S 1/16 COR S23-T9N-R42E BM						
			N.89°44'44"E	331.31'	Along S 1/16 line S23-T9N-R42E BM						
2009	883779	840582			NE COR W1/2NW1/4SW1/4SE1/4 S23-T9N-R42E BM						
			S.00°12'02"E	659.98'	Along E line W1/2NW1/4SW1/4SE1/4 S23-T9N-R42E BM						
2010	883119	840584			SE COR W1/2NW1/4SW1/4SE1/4 S23-T9N-R42E BM						
			S.89°43'49"W	331.58	Along S line W1/2NW1/4SW1/4SE1/4 S23-T9N-R42E BM						
2011	883117	840253			SW COR W1/2NW1/4SW1/4SE1/4 S23-T9N-R42E BM						
			S.00°10'38"E	660.07"	Along N-S 1/4 Sec Line S23-T9N-R42E BM						
2001	882457	840255			Point of BEG						







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FERC Drawing No. P-2381-75

Appendix D – Current License and License Amendments

UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners:

Martha O. Hesse, Chairman; Anthony G. Sousa, Charles G. Stalon, Charles A. Trabandt and C. M. Naeve.

Utah Power & Light Company

Project No. 2381-001

<u>[]</u>

Siller.

ORDER ISSUING NEW LICENSE (Major Project - Existing Dam)

(Issued August 3, 1987)

Utah Power & Light Company (UP&L) has filed an application for new license under Section 15 of the Federal Power Act (FPA), 16 U.S.C. § 807, to continue to operate and maintain the Ashton-St. Anthony Project No. 2381, located in Fremont County, Idaho, on the Henry's Fork of the Snake River. The project, which occupies 0.39 acres of federal land administered by the Bureau of Land Management, consists of two developments: the Ashton Development and the St. Anthony Development. The Ashton Development is located on the Henry's Fork of the Snake River. The St. Anthony Development is located on the Henry's Fork and on the Egin Irrigation Canal (EIC), a diversion of the Henry's Fork. The license for the project, which was issued on December 19, 1977, with an effective date of January 1, 1938, expires on December 31, 1987. 1/ UP&L proposes to replace a turbine-generator unit within the Ashton Development powerhouse and to install a fish passage facility at the St. Anthony Development diversion dam.

Notice of the application has been published. The motions to intervene that have been granted and the comments filed by agencies and individuals have been fully considered in determining whether to issue this license, as discussed below.

The Idaho Department of Water Resources (IDWR) filed a timely motion to intervene on July 12, 1985, which was automatically granted pursuant to Commission regulations. IDWR requested that any new license issued to UP&L for the Ashton-St. Anthony Project include provisions making the license consistent with the Idaho State Water Plan. In addition, IDWR requested that UP&L be required to have filed an application for a water rights permit prior to issuance of the license. The issues raised by IDWR are addressed in the Comprehensive Plans portion of this order.

The Idaho Department of Fish and Game (IDFG) filed an untimely motion to intervene on July 22, 1985, and was granted late intervention on November 6, 1985. IDFG is concerned with the potential adverse



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See 1 FERC 1 61,263 (1977). PROPERTY OF PUBLIC REFERENCE DO NOT REMOVE FROM **ROOM 1000**

impacts on the fish and wildlife resources related to entrainment and impingement, flow fluctuations during and after construction, and upstream migration of resident fish past the project diversion structure. The issues raised by IDFG are addressed in the <u>Recommendations of Federal and State Fish and Wildlife Agencies</u> portion of this order and in the Environmental Assessment (EA) attached to this order.

Although the original license for the project included as a project work the headworks structure from the power canal to the EIC at the St. Anthony Development, UP&L's application for new license excluded this structure. However, the irrigation canal headworks structure is being included in this license as a project facility, because operation of the structure could affect flows to the St. Anthony powerhouse. Pursuant to Standard Article 5 of the license, UP&L will be required to obtain all rights in the headgate structure necessary to operate and maintain the project. Article 304 requires that the irrigation canal headworks structure be included in the as-built exhibits.

Section 10 of the Federal Power Act



Section 3 of the Electric Consumers Protection Act of 1986 ¹ (ECPA), Pub. L. No. 99-495 (Oct. 16, 1986), amended Section 10 of the FPA, 16 U.S.C. § 803, with regard to various aspects of the Commission's hydroelectric program. Section 15(a)(2) of the FPA, as added by Section 4 of ECPA, provides that the requirements of Section 10 of the FPA are applicable to Commission consideration of applications for new license under Section 15 of the FPA. Following is a discussion of the relevant provisions of Section 10.

Recommendations of Federal and State Fish and Wildlife Agencies (Section 10(j))

Section 10(j) of the FPA requires the Commission to include license conditions based on recommendations of federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife. The EA for the Ashton-St. Anthony Project, which was prepared prior to the enactment of ECPA and which is attached to and made part of this license, addresses the concerns of the federal and state fish and wildlife agencies. For example, agencies requested that UP&L implement a wildlife enhancement plan, which UP&L agreed to do. Article 405 requires UP&L, in consultation with IDFG and the U.S. Fish and Wildlife Service (FWS), to file with the Commission for approval a wildlife report showing the final locations and design specifications of 15 goose nesting structures, 10 raptor perch structures, 10 osprey nesting platforms, a bald eagle nesting platform, and other facilities proposed in the wildlife enhancement plan. In addition, the article requires UP&L to monitor the effectiveness of the plan and to submit monitoring reports to the Commission, IDFG, and FWS. However, as



discussed next, the EA did not recommend adoption of one of the recommendations contained in IDFG's motion to intervene.

For the protection of fish resources in the Henry's Fork River, IDFG recommended various measures that would minimize project effects on these resources. The EA generally concurred in IDFG's assessment of the project impacts, except for its recommended mitigation regarding fish entrainment. IDFG recommended screening at the St. Anthony Development to prevent mortality of wild trout and also as mitigation for the loss of predominantly hatchery trout at the upstream Ashton Development. However, review of the St. Anthony Development intake design and position relative to that of the EIC intake suggests that, if entrainment is occurring, the majority of fish would be entrained to the EIC rather than to the St. Anthony Development intake. Because of this, the EA concluded that entrainment and turbine-related mortality of trout would be insignificant; however, to ensure that fish entrainment mortality would not be significant, the EA recommended a post-operational monitoring study at the St. Anthony Development.

Consistent with Section 10(j)(2) of the FPA, Commission staff negotiated with IDFG to resolve the intake screening issue. By letter dated April 2, 1987, the Director of the Division of Environmental Analysis (Director) advised IDFG of the difference between the EA's and IDFG's recommended mitigation for entrainment at the St. Anthony Development. By letter filed with the Commission on May 11, 1987, IDFG notified the Director that, while it continues to believe that screening at the St. Anthony Development is appropriate as a license condition, it would accept the EA's recommendation for requiring a post-operational monitoring study if entrainment and turbine-related losses of trout are quantified for both the St. Anthony Development and the Ashton Development and if the loss of wild trout is prevented or an equivalent off-site enhancement of wild trout populations is provided.

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On May 26, 1987, UP&L filed with the Commission additional information regarding mitigation and enhancement of the fish resources at the St. Anthony Development. In light of IDFG's recommendation for screening at the St. Anthony Development, UP&L proposed therein to create additional off-site fish habitat as mitigation for any fish losses by providing a 35-cubic-feet-persecond minimum flow to the EIC during the 7-month non-irrigation season. At times when the canal is dewatered for maintenance, UP&L proposes to conduct fish salvage operations if deemed necessary by IDFG. Further, UP&L proposes to evaluate other non-screening alternatives, such as behavioral barriers, to minimize the potential for fish entrainment to the St. Anthony Development intake.

IDFG has reviewed UP&L's proposed alternative mitigation measures and has stated that it would consider these alternative

measures to screening the St. Anthony Development intake pending results of the post-operational monitoring study and further evaluation of non-screening alternatives. 2/ IDFG also states that its consideration of these alternatives does not preclude the potential for requiring screening if the results of the post-operational monitoring studies show screening is necessary.

Continued operation of the Ashton-St. Anthony Project could result in some entrainment and turbine-related mortality of fish. However, based on available information, we conclude that project operation would not result in significant entrainment and subsequent turbine-related mortality and that screening of the St. Anthony intake is not necessary at this time. To ensure that entrainment mortality is low, UP&L should conduct monitoring studies to fully assess fish entrainment mortality at the St. Anthony Development. Further, because this license does not require immediate screening at the St. Anthony Development, which IDFG says would mitigate for the turbine-related loss of trout at the Ashton Development as well, UP&L should quantify the losses of trout at both developments through post-operational monitoring studies. Accordingly, Article 404 of the license requires UP&L to conduct such studies in consultation with IDFG and FWS and to submit the study results to the Commission after receiving the comments of IDFG and FWS. In the event that the monitoring Ł studies show that turbine-related fish mortality is significant, UP&L must submit to the Commission its recommendations for mitigation measures, together with comments from the above agencies on its recommendations, and the Commission, through the authority reserved in Article 404, will require UP&L to implement appropriate mitigative measures, such as screening the intake, providing an equivalent off-site enhancement of a wild trout population, providing supplemental stocking of upstream reservoirs, and providing other non-screening alternatives, such as behavioral barriers, to minimize and compensate for any fish losses. Further, IDFG could petition the Commission under Standard Article 15 for further mitigation measures if evidence of mortality warrants additional mitigation.

2. Comprehensive Plans (Section 10(a)(2)(A))

Section 10(a)(2)(A) of the FPA, as amended by ECPA, requires the Commission to consider the extent to which a project is consistent with comprehensive plans (where they exist) for improving, developing, or conserving a waterway or waterways affected by the project that are prepared by an agency established pursuant to federal law that has the authority to prepare such a plan or by the state in which the facility is or will be located. The Commission

2/ Personal communication, Al Van Voren, Staff Biologist, Idaho Department of Fish and Game, Boise, Idaho, June 1, 1987.

considers plans to be within the scope of Section 10(a)(2)(A)only if such plans reflect the preparers' own balancing of competing uses of a waterway, based on their data and applicable policy considerations (i.e., consider and balance all relevant public use considerations). With regard to plans prepared at the state level, such plans are within the scope of Section 10(a)(2)(A)only if they are prepared and adopted pursuant to a specific act of the state legislature and developed, implemented, and managed by an appropriate state agency. 3/

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The Commission has identified the Northwest Power Planning Council's (Council) Northwest Conservation and Electric Power Plan (Plan) and Columbia River Basin Fish and Wildlife Program (Program) as falling within the scope of Section 10(a)(2)(A). UP&L's application is consistent with the goals and policies of the Program, since, as required therein, fish and wildlife agencies, Indian tribes and the Council have been consulted with regard to the project, and the license is being conditioned to mitigate fish and wildlife impacts. Furthermore, Article 203 of the license reserves to the Commission the authority to order alterations of project structures and operations to take into account to the fullest extent practicable the Program. With regard to the Council's Plan, the project is in a part of UP&L's service area that lies within Ł the Council's geographic area of planning responsibility. However, since UP&L's load within the Council's geographic planning area is served by generation of UP&L from outside that area, it does not represent load for which the Council must plan resources. Therefore, we considered the power development plans and feasibility of the capacity addition based upon UP&L's data. However, if the project were evaluated as a project within the Council's resource planning responsibilities, the proposed capacity at the project would be feasible based upon the Council's economic yardstick, since it is less expensive than coal-fueled steam generation. Based on the above, the project is not inconsistent with the Council's Plan.

In its intervention request filed July 12, 1985, IDWR stated that the Idaho State Water Plan provides a comprehensive plan for the development of the water resources of the State of Idaho and requested that the new license for Project No. 2381 include provisions making the license consistent with the Idaho State Water Plan. The Idaho State Water Plan is a self-described statement of objectives and policies that will be followed by the state in allocating water rights. The allocations are made on a case-bycase basis upon application by the user based on consideration of the flows required to satisfy existing and potential users of the water. However, the Idaho State Water Plan does not provide information on the uses, or combination of uses, that could be

3/ Fieldcrest Mills, Inc., 37 FERC ¶ 61,264 (1986).

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developed to utilize the flows in any particular river section to the extent that it reflects an explicit balancing of the competing uses of a waterway in the public interest. We do not need to decide whether the Idaho State Water Plan is a comprehensive plan under Section 10(a)(2)(A), as we believe the license as conditioned herein is consistent with the Idaho State Water Plan, since the use of water by the additional generating capacity to be licensed herein is not in conflict with the water uses prescribed in the Idaho State Water Plan for the reach of the river where the project would be located. Therefore, no further conditions are necessary to achieve such consistency. 4/

Three resources plans 5/ that touch on various aspects of waterway management were brought to our attention and have been reviewed in relation to the proposed project as part of our broad public interest examination under Section 10(a)(1) of the FPA. No conflicts were found.

3. Recommendations of Other Agencies (Section 10(a)(2)(B))

Section 10(a)(2)(B) of the FPA requires the Commission to consider the recommendations of relevant federal and state agencies exercising administration over flood control, navigation, irrigation,

- 4/ IDWR also requested that UP&L apply for an additional state water rights permit prior to the issuance of the new license for Project No. 2381. UP&L subsequently applied for such a permit, which was approved by IDWR on January 20, 1986. Thus, IDWR's request has been met. However, the permit contains a condition purporting to subordinate UP&L's water rights for hydroelectric use to other water rights and uses. As we explained in Boise Cascade Corporation, 36 FERC ¶ 61,135 (1986), we do not believe that general subordination clauses unsupported by factual record evidence are in the public interest. Since we have not been provided with factual justification for the subordination clause included in UP&L's water rights permit, we cannot determine if the clause is appropriate. Accordingly, our issuance of this license should not be interpreted as an affirmation of the appropriateness of the clause. Furthermore, operation of the subordination clause will not excuse UP&L from fulfilling its obligation during the term of the license to acquire and retain all rights, including water rights, necessary for project purposes.
- 5/ U.S. Department of Agriculture, Forest Service, Targhee National Forest, Land Management Plan, 1985; Idaho Department of Fish and Game, Fisheries Management Plan, 1986 - 1990, January 1986; and Idaho Department of Parks and Recreation, Idaho Outdoor Recreation Plan, 1983.

recreation, cultural and other relevant resources, and the recommendations of Indian tribes affected by the project.

Other than the recommendations submitted by IDWR discussed previously, no specific state and federal agency comments or recommendations were made addressing flood control, navigation, or irrigation requirements in the basin. The Idaho State Historic Preservation Officer indicated that procedures should be implemented to preserve the historic turbine that will be removed from the Ashton Development. Article 408 of the license requires UP&L to implement a cultural resources management plan to mitigate any impacts to the historic turbine. The Idaho Department of Parks and Recreation and the National Park Service recommended a variety of measures to improve recreational facilities at the Ashton Reservoir, which UP&L incorporated into its Recreation Area Improvement Plan. Article 406 of the license requires UP&L to implement the plan within one year from the effective date of this license.

4. Consumption Efficiency Improvement Program (Section 10(a)(2)(C))



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Based upon our review of the foregoing, we conclude that UP&L has made, and is continuing to make, a successful good-faith effort to promote cost-effective energy conservation and to educate end-use customers as to the financial rewards accruing from conservation. Commission staff's contact with pertinent regulatory authorities substantiated UP&L's assertion that the ongoing energy

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consumption efficiency improvement programs are in compliance with the relevant state agency recommendations in these matters.

Section 15(a) of the Federal Power Act

Section 4 of ECPA amended Section 15 of the FPA to specify a number of factors the Commission is required to consider in acting on applications for new license following the expiration of existing licenses.

 The plans and abilities of the applicant to comply with the articles, terms, and conditions of any license issued to it and other applicable provisions of Part I of the FPA (Section 15(a)(2)(A))

UP&L states that, since obtaining the existing license, it has been committed to meeting the requirements of all the articles, terms, and conditions of the existing license. UP&L maintains that its past performance, in conjunction with its future operation and maintenance plans, and its record of compliance with the requirements of the jurisdictional agencies, demonstrate that it is committed to meeting the future requirements for the continued operation of the project.

Our review of the compliance record of UP&L substantiates that UP&L has complied in a good faith manner with all articles, terms, and conditions of its existing license. Also, it appears that UP&L has the financial and personnel resources necessary to fulfill its obligations under the license and Part I of the FPA. Based on the above, and in consideration of the requirements of the new license, we conclude that UP&L will be able to comply with the terms and conditions of the new license and other provisions of Part I of the FPA.

2. The plans of the applicant to manage, operate and maintain the project safely (Section 15(a)(2)(B))

UP&L states that it is operating the generating facilities with a foremost concern for the safety of its employees and the public. Records indicate that there has never been an employee fatality, and the only lost-time employee injury occurred in 1956. Also, there has been no injury or death to any member of the public within the project boundary. UP&L has adopted an official safety code based on its operating experience, and this code is continually updated. The project is, and will continue to be, operated run-ofriver, which causes no extreme fluctuations, thus posing no project-caused hazard for fishermen and boaters. UP&L has prepared an emergency action plan with a notification procedure to the public in case of a potential threat to life or property downstream.

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Based upon our review of the specific information provided by UP&L on various aspects of the project that affect public safety, inspection reports by the Commission's Regional Director, and independent consultant reports filed under Part 12 of our regulations, 18 C.F.R. Part 12 (1987), we conclude that UP&L's plans to manage, operate, and maintain the project safely are adequate. However, as discussed in detail in the <u>Dam Safety</u> section of the Safety and Adequacy Assessment attached to this order, unresolved dam safety concerns exist with the Ashton dam. In order to assure continued safe operation of the project during all conditions, including floods up to the probable maximum, UP&L was directed by letter dated May 14, 1987, to perform remedial measures. Completion of these remedial measures and compliance with the provisions of this license and any future dam safety requirements imposed pursuant to Part 12 will assure a safe and adequate project.

3. The plans and abilities of the applicant to operate and maintain the project in a manner most likely to provide efficient and reliable electric service (Section 15(a)(2)(C))

UP&L states that it acquired the St. Anthony plant in 1913 and immediately replaced the existing unit with the present 500-kW unit. The plant is operated in a semi-automatic mode in a manner ¹ that maximizes generating efficiency. Maintenance upkeep has included upgrading electrical systems and repairs to the project works.

UP&L acquired the Ashton plant in 1924 with an 1,800-kW unit installed in a powerhouse constructed for three units. It proceeded to install two additional 2,000-kW units in the powerhouse. The plant is operated at a constant head to maximize efficiency and generating capacity. Electrical systems and the project facilities are continually maintained. Unit Nos. 2 and 3 have been semiautomated, and Unit No. 1 would be semi-automated and upgraded from 1,800 kW to 3,400 kW installed capacity under the new license. The increase in hydraulic capacity of Unit No. 1 would reduce the flows currently being spilled and utilize these flows for more efficient generation. Other efficiency and reliability measures include preventative maintenance programs, training of hydro plant operators, and closer coordination on upstream releases from the Island Park Reservoir with the U.S. Bureau of Reclamation.

Operation of the Ashton and St. Anthony plants enables UP&L to reduce the loading of its transmission lines and the substation, which are approaching limits of their thermal capacity. The hydroelectric plants provide low-cost generation in UP&L's system, and these benefits are expected to increase in the future because of the escalation of fuel costs.

Based on the above considerations and our review of the operation inspection reports by the Regional Director and UP&L's past performance and future plans to operate the project, we believe

that the project is, and under the new license will continue to be, operated and maintained in an efficient and reliable manner.

4. The need of the applicant over the short and long term for the electricity generated by the project to serve its customers (Section 15(a)(2)(D))

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The proposed modifications to the project would increase its capacity from 6.3 MW to 7.9 MW and would provide an estimated average of 10,000,000 kilowatt hours (kWh) of additional electrical energy and 49,922,000 kWh of total energy per year from the project. The project is part of UP&L's existing electric generating resource base and is currently used to meet part of UP&L's electric system load requirements. Being small in comparison to current total system power capability requirements (2600 megawatts), the project has a negligible effect on UP&L's need for power status. UP&L's projections show surplus generating capacity through 1995, and loss of the project capacity would not change these projections. However, the project is an inexpensive source of energy that does, and would continue to, provide benefits through the displacement of more expensive thermal generation.

UP&L's proposal to upgrade the project is made in accordance with a letter of agreement between UP&L, the United States, the City of Idaho Falls, and the Fremont-Madison Irrigation District relating to the operation of the U.S. Bureau of Reclamation's Island Park reservoir. Among other things, the agreement requires that water spills past the Ashton plant be minimized to the greatest extent possible. The increased hydraulic capacity of the project would use the available head more effectively and capture capability that is currently lost. The upgrading would provide additional economic benefits through increased thermal displacement. This displacement of thermal generation also conserves fossil fuel and reduces the emissions that are a product of the combustion of fossil fuels. Finally, the project is located in the northeast corner of UP&L's Idaho service area, and its continued generation would defer the need to reinforce transmission and transformer facilities that provide a second power source for the area.

If a new license is not issued for Project No. 2381, UP&L would have to cease operating the project. In the short term, replacement power would have to be provided from existing operating capacity, installed reserve capacity, deactivated but available capacity, or from purchased power.

UP&L does not have capacity which is in a deactivated status, but could use existing operating capacity and installed reserves for replacement power in the short term. However, each was found to be less desirable on an economic and environmental basis than continued project generation. Also, because of the current surplus of generating capacity on UP&L's power system, purchased power was not viewed as an appropriate alternative for replacement power in the short term.

Long term, UP&L's resource acquisition strategy is to purchase power under contract as long as surplus market conditions exist, installing its own generating capacity only when necessary. UP&L viewed cogeneration and small power producer generation as potential replacement power in both the short and long term, but, because of the questionable availability and reliability experienced in past relationships with cogeneration and some small power producers, such resources were deemed inadequate replacements for project generation. Similarly, since load management measures were already treated in the development of load projections and involve considerable uncertainty, additional conservation and other load management techniques were considered inappropriate to replace the project generation on a firm, long-term basis. The purchase of firm power and the construction of additional coal-fired generating capacity were deemed the most likely long-term alternatives, and both were found to be less desirable than continued project generation. Continued operation of the project would save UP&L's customers approximately \$1,862,000 per year over the estimated most likely replacement energy cost. This would equate to \$3.67 per year per customer. ₽.

With the exception of load management measures, none of the above alternatives would affect the load characteristics of UP&L's system, and only purchased power would affect the system operation or customers of the supplier of the purchased power. Any effect of purchased power on the supplier of that power and its customers would have to be viewed as positive by the supplier of the power, or it would not be made available to UP&L on a long-term firm basis.

The overall effect of the cessation of the operation of the project on the customers of, and communities served by, UP&L or the supplier of purchased power would be minimal because of the small size of the project, but continued project generation would be more beneficial than the alternative means of replacing project power. Accordingly, despite the existence of capacity surpluses on UP&L's system, Project No. 2381 as proposed to be modified by UP&L would provide system benefits that would be lost if a new license were not issued for the project and that justify a new license for the project from a need-for-power perspective.

5. The applicant's existing and planned transmission services (Section 15(a)(2)(E))

Review of the license application and UP&L's supplemental filing of December 30, 1986, indicates that UP&L's existing project transmission service would not change if a new license were granted. If a non-power license were issued, a requirement for additional

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system transmission capacity to the area would occur sooner than it would with the project in operation. Specifically, the project provides power to the Rigby-St. Anthony 69-kV transmission network on the northeast corner of the UP&L's Idaho service area. Additional power is supplied to the 69-kV network via the 161-kV to 69-kV stepdown transformer at the Rigby substation and the 161-kV transmission line to the Rigby substation. Project generation defers the cost of reinforcing the 161-kV transmission network and the Rigby stepdown transformer by reducing the power requirement at the Rigby substation.

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UP&L has commenced plans to rebuild the 65-year-old Rigby-St. Anthony 69-kV line and has long range plans to rebuild the 60year old Ashton-St. Anthony 46-kV line. Rebuilding the Rigby-St. Anthony and the Ashton-St. Anthony lines should improve the reliability of the existing project transmission service by reducing the number of transmission line outages.

From the above, we conclude that, although loss of the project would have minimal affect on UP&L's system reliability, issuance of a non-power license for the project would reduce reliability in the Rigby area and would impose additional costs on UP&L's customers sooner than with the project in operation.

6. Whether the plans of the applicant will be achieved, to the greatest extent possible, in a cost effective manner (Section 15(a)(2)(F))

With regard to the Ashton Development, UP&L plans to semiautomate the plant, upgrade and modernize the equipment, and reduce the overall operating expenses. Semi-automation will result in a 35 percent reduction in work force. Unit No. 1, being the oldest, is the least efficient and would be replaced by the upgraded unit proposed in the application for new license. Since the present unit is experiencing increased down-time, the flow utilization is not being optimized. UP&L has implemented its advanced project management planning program to achieve the above objectives for the selection of the most cost-effective alternative.

As to the total project, UP&L plans to improve recreational facilities and their operation and maintenance to enhance day-use recreation in the project area. UP&L plans to acquire additional lands, upgrade a boating ramp and fishing-observation pier, add new picnic facilites, improve vehicular and pedestrian traffic, assume greater responsibility for recreational facility operation and maintenance, and reevaluate the need for additional recreational facilities in the near future.

We have reviewed UP&L's plans and have determined that the measures proposed would be cost-effective. The upgrading of Unit No. 1 would result in the hydraulic capacity of the Ashton plant being increased and would optimize the utilization of flows

at the project. Upgrading of the unit would involve minimal amount of incidental work and additional costs. Improvement of the recreational facilities would enhance day-use recreation at reasonable costs.

7. Such other factors as the Commission deems relevant (Section 15(a)(2)(G))

As discussed elsewhere in this order and in the attached EA, the issuance of a new license for the project would not result in any major, long-term adverse environmental impacts. Moreover, the issuance of a new license will permit the implementation of UP&L's proposed fish and wildlife mitigation and recreational improvements, which would benefit the environmental resources of the project area.

8. The applicant's record of compliance with the terms and conditions of the existing license (Section 15(a)(3)(A))

Based on a review of Regional Director and other Commission records, we conclude that UP&L has complied with the terms and conditions of its existing license. Specifically, UP&L, as required by the existing license, satisfactorily installed signs and public safety devices at the Ashton dam, and filed an amended Exhibit R and provided the facilities described therein. Also, pursuant to Part 12 of our regulations, UP&L has filed an emergency action plan and periodic updates, all of which were found acceptable. Also, in accordance with Part 12, UP&L has submitted an initial independent consultant's report that was found satisfactory. The second report submitted by UP&L has been reviewed and, as a result, UP&L has been directed to undertake remedial measures. UP&L has adequately complied with Commission requirements regarding this second report. Thus, UP&L's compliance record indicates that it can be expected to fully comply with the terms and conditions of any new license issued for Project No. 2381.

9. The actions of the applicant related to the project which affect the public (Section 15(a)(3)(B))

The record indicates that UP&L has an excellent record of providing recreation facilities at the project. Also, UP&L's regard for public safety is demonstrated by the installation of a boating safety barrier, transformer yard fencing, warning signs and lifesaving devices at Ashton dam. Thus, the actions affecting the public taken by UP&L in relation to Project No. 2381 support the issuance of a new license.

Summary of Findings

Background information, analysis of impacts, support for related license articles, and the basis for a finding of no

significant impact on the environment are contained in the EA 6/ attached to this order. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

Pursuant to Section 15(a)(2) of the FPA, as amended by ECPA, the Commission considers UP&L's plans and abilities to be adequate in regard to compliance with the articles, terms, and conditions of the license and in managing, operating, and maintaining the project safely and in a manner that would provide efficient and reliable electric service.

UP&L has demonstrated its need for project power, taking into consideration system reliability and reasonable costs and availability of alternative sources of power and their effect on the provider of the alternative power sources, its customers, and UP&L's operating and load characteristics.

The project will be safe if operated and maintained in accordance with the requirements of this license and Part 12 of the Commission's regulations. Analysis of dam safety issues is provided in the Safety and Design Assessment attached to this order.

Pursuant to Section 15(a)(3) of the FPA, we conclude that UP&L has also demonstrated an adequate record of compliance with the terms and conditions of the existing license, and has taken appropriate actions related to the project which affect the public. Maintenance of the project has been adequate. No significant environmental problems are apparent. The primary dam safety concern is the ability of the spillway to pass the probable maximum flood, which is being addressed pursuant to Part 12 of our regulations.

Conclusion

As amended by ECPA, Section 15(a)(2) of the FPA requires the Commission to issue new licenses "to the applicant having the final proposal which the Commission determines is best adapted to serve the public interest." As explained previously, the provisions of Section 10 of the FPA are applicable to applications for new license under Section 15. Consequently, Section 10(a)(1) of the FPA, as amended by ECPA, governs Commission consideration of applications for new license, and the Commission may issue a new license only if the proposal "will be best adapted to a comprehensive plan for

6/ Section II of the EA, entitled "Resource Development", is superseded by the portion of the attached Safety and Design Assessment entitled "Economic Feasibility" and by the analysis of Section 15(a)(2)(D) of the FPA contained in this order.

improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water power development, for the adequate protection, mitigation, and enhancement of fish and wildlife (including related spawning grounds and habitat), and for other beneficial public uses, including irrigation, flood control, water supply, and recreational and other purposes referred to in [Section 4(e) of the FPA]." 7/

Based upon our review of the agency and public comments filed in this proceeding, and our independent analysis of the requirements of Sections 4(e), 10, and 15 of the FPA as discussed herein, we conclude that the Ashton-St. Anthony Project would not conflict with any planned or authorized development and is best adapted to a comprehensive plan for the Henry's Fork of the Snake River, taking into consideration the equal consideration requirements of Section 4(e) of the FPA and the beneficial public uses described in Section 10(a)(1) of the FPA.

Section 15(e) of the Federal Power Act

Section 5 of ECPA added a new subsection (e) to Section 15 of the FPA specifying that any license issued under Section 15 shall be for a term which the Commission determines to be in the public interest, but not less than 30 years, nor more than 50 years. This new provision is consistent with pre-ECPA Commission policy, which was to establish 30-year terms for those projects which proposed no or less than moderate new construction or capacity, 40-year terms for those projects that proposed a moderate amount of new development, and 50-year terms for those projects that proposed a substantial amount of new development. 8/

<u>7</u>/ Section 4(e) of the FPA authorizes the Commission to issue licenses for project works "necessary or convenient for the development and improvement of navigation and for the development, transmission, and utilization of power...." Also, Section 4(e) provides, in a provision added by Section 3(a) of ECPA, that:

> In deciding whether to issue any license under this Part for any project, the Commission, in addition to the power and development purposes for which licenses are issued, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality.

8/ See Montana Power Company, 56 F.P.C. 2008 (1976).

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UP&L proposes to replace an existing 1,800-kW generator unit at the Ashton Development with a new 3,400-kW unit and to install a fish passage facility at the St. Anthony diversion dam. This work constitutes a moderate amount of new development that warrants a 40year license. Accordingly, the new license for the project will be for a term of 40 years.

The Commission orders:

(A) This license is issued to Utah Power & Light Company (licensee) for a period of 40 years, effective January 1, 1988, to operate and maintain the Ashton-St. Anthony Project. This license is subject to the terms and conditions of the Federal Power Act (Act), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by Exhibit G:

Exhibit G- (Ashton)	FERC Drawing No. 2381-	Showing
1	33	General Location Map
2	34	Project Boundary Map
3	35	Project Boundary Map
4	36	Project Boundary Map
5	37	Project Boundary Map
6	38	Plant Facilities Map
Exhibit G- (St. Anthony)	FERC Drawing No. 2381-	Showing
1	46	Location and Boundary Map

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(2) Project works consisting of two developments. The Ashton Development is comprised of: (a) a 65-foot-high, 252-foot-long earth and rock-filled dam having an 82-foot-long reinforced-concrete spillway with crest elevation 5,146.6 feet MSL surmounted by six 10-foot-high radial gates; (b) a reservoir having a surface area of 404 acres, a gross storage capacity of 9,800 acre-feet and a usable storage capacity of 3,988 acre-feet at normal water surface elevation 5,156.6 feet MSL; (c) a reinforced-concrete powerhouse located at the right bank having integral intakes controlled by vertical slide gates and containing a generating unit rated at 3,400 kW operated at a flow of 1,000 cfs and two generating units each rated at 2,000 kW; (d) a tailrace; (e) the 2.4-kV generator leads; (f) a 2.4/46-kV step-up transformer; (g) a 133-foot-long, 46-kV transmission line; (h) a 2,160-foot-long access road; and (i) appurtenant facilities. The St. Anthony Development is



comprised of: (a) a 9.5-foot-high, 863-foot-long concrete diversion dam having a 206-foot-long spillway with crest elevation 4,949.0 feet MSL surmounted by 2.5-foot-high flashboards, an 81.5-foot-long wasteway with crest elevation 4,947.0 feet MSL surmounted by 4.5-foot-high flashboards and a fishway; (b) a 41-foot-wide reinforced-concrete canal intake structure; (c) a 35-foot-wide, 1,350-foot-long power and irrigation canal; (d) an irrigation canal headworks structure; (e) a 16-foot-wide, 145-foot-long screened and rubber-lined wooden-box flume having an overflow spillway and an ice chute; (f) a reinforced concrete powerhouse containing a generating unit rated at 500-kW; (g) a tailrace; (h) the 2.3-kV generator leads; and (i) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F recommended for approval in the attached Safety and Design Assessment.

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The portions of the Exhibit G described above and those sections of Exhibits A and F recommended for approval in the attached Safety and Design Assessment are approved and made part of the license.

(D) This license is subject to the articles set forth in Form L-1 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Lands of the United States." The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charge, effective January 1, 1988:

- a. For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 10,500 horsepower.
- b. For the purpose of recompensing the United States for the use, occupancy and enjoyment of 0.39 acres of its lands, a reasonable annual charge as determined by the Commission in accordance with its regulations, in effect from time to time.

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Article 202. Pursuant to Section 10(d) of the Act, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One-half of the project surplus earnings, if any, accumluated under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account shall be maintained until in the project amortization reserved account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

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Article 203. The Commission reserves the authority to order upon its own motion or upon the recommendation of federal or state fish and wildlife agencies or affected Indian Tribes, alterations of project structures and operations to take into account to the fullest extent practicable the regional fish and wildlife program developed pursuant to the Pacific Northwest Electric Power Planning and Conservation Act.

Article 301. The licensee shall commence construction of the modifications to the project within two years from the effective date of the license and shall complete construction of the project within four years from the effective date of the license.

Article 302. The licensee shall, at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections, of the final contract drawings and specifications for pertinent ^{*} Project No. 2381-001

features of the modifications to the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 303. The licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction of the modifications to the project and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall submit to the Commission's Regional Director and Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and the letter(s) of approval.

Article 304. The licensee shall within 90 days of completion of construction of the modifications to the project file, for approval by the Commission, revised Exhibits A, F, and G to describe and show the project as built and to include the irrigation canal headworks structure at the St. Anthony Development.

Article 401. The licensee shall operate the Ashton Development in an instantaneous run-of-river mode for the protection of fish and wildlife resources in the Henry's Fork. The licensee, in operating the development in an instantaneous run-of-river mode, shall at all times act to minimize the fluctuation of the reservoir surface elevation, i.e., maintain a discharge from the development so that flow in the Henry's Fork, as measured immediately downstream from the powerhouse tailrace, approximates the instantaneous sum of inflow to the project reservoir. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee and the Idaho Department of Fish and Game.

Article 402. The following part of the Report on Fish, Wildlife and Botanical Resources, filed on December 31, 1984, as Section 3 of Exhibit E (the Environmental Report), is approved: pages E-26 to E-37 pertaining to the fishery mitigative plan for the Ashton Reservoir.

Article 403. The licensee shall consult with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service and, within six months from the effective date of this license, file with the Commission, for approval, functional design drawings of fish passage facilities for the Egin Irrigation Canal diversion dam at the St. Anthony Development, and a plan to monitor the operation of the fish passage facilities. The filing shall include documentation of agency consultation and any agency comments on the drawings and monitoring plan. The Commission reserves the right to require changes in the design of the fish passage facilities and in the monitoring plan. The licensee shall file as-built drawings

with the Commission within three months after completion of the construction of the fish passage facilities.

Article 404. The licensee, after consultation with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service, shall develop a monitoring plan to evaluate turbine-induced injury and mortality to fish resources at the St. Anthony Development date of this license, the licensee shall file a copy of the monitoring plan, along with any comments from the above agencies on the plan, and a schedule for filing the results of the monitoring program. The Commission reserves the right to require modifications to the plan and the schedule.

The results of the monitoring shall be submitted to the Commission according to the approved schedule, along with any comments from the consulted agencies. If the results of the monitoring indicate that measures are necessary to minimize adverse effects to fish resources, the licensee also shall provide, for Commission approval, its recommendations for mitigation measures and a schedule for implementing the measures, along with comments from the above agencies on the recommended measures. Measures to be considered by the licensee shall include, but need not be limited to, screening the intakes, providing an equivalent off-site enhancement of a wild trout population, providing supplemental stocking, and providing other non-screening alternatives, such as behavior barriers, to minimize and compensate for any fish losses. At the same time, copies of the schedule shall be served upon the agencies consulted. The Commission reserves the right to require the licensee to undertake measures different than those recommended by the licensee and to make changes in the implementation schedule.

Article 405. The licensee shall, after consultation with the U.S. Fish and Wildlife Service (FWS) and the Idaho Department of Fish and Game (IDFG), within 18 months from the effective date of the license, file, for Commission approval, a wildlife report that includes a series of maps and drawings indicating the final locations and design specifications of the 15 goose nesting structures, 10 raptor perch structures, 10 osprey nesting platforms, the bald eagle nesting platform, the cattle exclosure fence, the wetlands protected by preservation easements, and the restored grassland habitat. The report also shall include a plan for monitoring the effectiveness of the various enhancement measures and maintaining the aforementioned facilities, a schedule for filing annual monitoring reports with the Commission, FWS, and IDFG, and an implementation schedule. Agency comments on the adequacy of the wildlife report shall be included with the wildlife report. The Commission reserves the right to order changes in the final designs and in the monitoring program.

Article 406. The licensee, within one year from the effective date of this license, shall implement the plan described in the Report on Recreational Resources, filed December 31, 1984, as

Section 5 of the Exhibit E (Environmental Report), pages E-49 through E-59, which provides for improved recreational facilities and operation and maintenance of a boat ramp and dock area at the Ashton Development.

Article 407. The licensee, after consultation with the City of St. Anthony, and within one year from the effective date of this license, shall repair or replace those portions of the diversion structure and retaining wall at the St. Anthony Development necessary to prevent flooding conditions at Keefer Park. Further, the licensee shall continue to maintain the above facilities during the license period.

Article 408. The licensee shall implement its cultural resources management plan to mitigate any impacts to the historic Unit No. 1 turbine, as described in the licensee's filing with the Commission dated July 22, 1985. Within 4 years of the effective date of this license, the licensee shall file with the Commission a report that includes: (a) documentation of the turbine's historical significance in terms of eligibility criteria for inclusion in the National Register of Historic Places; (b) a detailed plan for documenting or preserving the turbine to mitigate its removal, if it is determined that the turbine is eligible; (c) copies of letters from the Idaho State Historic Preservation . Officer (SHPO) and the Historic American Engineering Record (HAER) of the National Park Service commenting on (a) and (b), or, if comments are not provided, copies of letters to the SHPO and the HAER indicating that these agencies have been afforded at least 60 days to comment. The Commission reserves the right to require changes in the report. Within six years of the effective date of this license, the licensee shall file with the Commission documentation that the turbine has been recorded or preserved in a manner consistent with the plan in the report, if required. This documentation shall include a copy of a letter from the SHPO indicating that the turbine has been protected as agreed upon or a copy of a letter indicating that the SHPO has been afforded at least 60 days to provide such a letter. The licensee shall make available funds in a reasonable amount for any required work.

If the licensee discovers any previously unidentified archeological or historic sites during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all construction and development activities in the vicinity of the sites and shall consult a qualified cultural resources specialist and the SHPO concerning the eligibility of the sites for listing in the National Register of Historic Places and any measures needed to avoid the sites or to mitigate effects on the sites. If the licensee and the SHPO cannot agree on the amount of money to be spent for project-specific archeological and historical purposes, the Commission reserves the right to require the licensee to conduct the necessary work at the licensee's own expense.

Article 409. The licensee, within one year from the effective date of this license, and after consultation with the U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, and the Idaho Board of Water Resources, shall prepare and file with the Commission a detailed, site-specific plan to minimize the quantity of sediment or other potential water pollutants resulting from construction of fish passage facilities at the Egin Irrigation Canal diversion dam. The plan shall address, among other things, measures to contain sediment, to filter sediment-laden discharges, and to store and dispose of excess sediment and other spoil materials. The plan shall also include functional design drawings and map locations of control measures, an implementation schedule, monitoring and maintenance programs for construction of these facilities, provisions for periodic review of the plan and for making any necessary revisions to the plan.

Documentation of consultation with agencies during preparation of the plan, and a summary of agency comments and recommendations, must be included in the filing. In the event that the licensee does not concur with any agency recommendations, the licensee shall provide a discussion of the reasons for not concurring, based on actual site geological, soil, and groundwater conditions. The Commission reserves the right to require changes to the plan. Unless the Director, Office of Hydropower Licensing, within 90 & days from the filing date instructs otherwise, the licensee may commence instream construction or spoil-producing activities associated with installation of fish passage facilities at the Egin Irrigation Canal diversion dam at the end of that period.

Article 410. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action

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necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) noncommercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve singlefamily type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

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(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each

year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed * is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

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(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only, upon a determination that the lands are not necessary for project public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(E) This order is final unless an application for rehearing is filed within 30 days from the date of its issuance, as provided in Section 313(a) of the Act. The filing of an application for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file an application for rehearing shall constitute acceptance of this order.

By the Commission.

(SEAL)

Sennetto F. Plumb

Kenneth F. Plumb, Secretary.


SAFETY AND DESIGN ASSESSMENT ASHTON-ST. ANTHONY PROJECT FERC NO. 2381-001--IDAHO

DAM SAFETY

The Ashton dam is an earth and rock-filled dam 65 feet high and 252 feet long. The gross storage capacity of the reservoir is 9,800 acre-feet. The dam is composed of an upstream earthen shell and a downstream rock-filled zone. The earthen shell has finer material on the upstream side and coarser material placed against the rock-filled zone. There is a concrete cut-off on the upstream side penetrating into the compact foundation gravels. The dam was constructed about 70 years ago with major rehabilitation work performed in 1958.

The Commission's San Francisco Regional Director's inspection report dated August 27, 1986, maintained the classification of the existing Ashton dam as high hazard and the existing St. Anthony dam as low hazard. The Ashton dam is classified high hazard because the Town of St. Anthony with a population of 3,000 is located about 10 miles downstream of the Ashton dam. The Regional Director reported that the project facilities appear to be structurally sound with no significant problems visible.

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The project facilities are also inspected periodically by the applicant's in-house staff and the Idaho State dam safety engineers. In addition, the project is inspected in-depth every five years by an independent consultant in accordance with Part 12 of the Commission's regulations, 18 C.F.R. Part 12 (1987).

The latest five-year inspection was made on August 13, 1984, and the report was submitted in January 1985. The report shows that the probable maximum flood at the project site is estimated at 36,900 cfs. The spillway discharge capacity is 14,200 cfs. The dam would be overtopped by six feet during the probable maximum flood and, if the Ashton dam were to fail, there would be potential loss of life and substantial property damage.

The powerhouse which is integral with the dam impounds water and is also classified as high hazard. It is founded on bedrock and compact gravels. The actual uplift was measured and found to be considerably less than the assumed full uplift. Based on the actual uplift and the assumed foundation properties, the report states that the powerhouse would be stable. However, no supporting documentation was provided to justify the stability analysis. The stability would have to meet the Commission's standards for factorsof-safety for all credible loading conditions. •

No stability analysis was performed for the spillway section of the dam. It is likely that the spillway section would be modified to increase its capacity to pass the floods up to the probable maximum. However, the alternative to modify the spillway is not finalized. The existing or the modified spillway section would have to meet the required factors-of-safety for all credible loading conditions.

The review of the report indicated a need for supplemental information from the applicant which was subsequently received and evaluated by the Commission staff. By letter dated May 14, 1987, the Regional Director directed the applicant to submit by August 1, 1987, a plan and schedule for the design and construction of the necessary remedial measures to safely pass floods up to the probable maximum. The applicant was also directed to submit by August 1, 1987, a reanalysis of the stability of the project structures with modifications, if necessary, to meet the required stability criteria, along with the supporting documentation.

In contrast to the Ashton dam, the St. Anthony dam is a concrete structure only a few feet high used for diverting flows. Because of the negligible storage, any failure of the dam would not pose a threat to downstream life or property.

PROJECT DESIGN

The basic design of the operating project would remain unchanged. The only change would be the installation of additional capacity at the Ashton Development. This would be accomplished by replacing the 1,800 kW generating Unit No. 1 installed in 1917 by a newer 3,400 kW unit in the three-unit powerhouse. Most of the work related to replacing the unit would be confined to the existing powerhouse.

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At the St. Anthony Development, the applicant would repair or replace portions of the diversion structure and the retaining wall to prevent flooding of the adjoining park.

The total installed capacity at Ashton Development would increase from 5,800 kW to 7,400 kW and for the total project from 6,300 kW to 7,900 kW.

ECONOMIC AND FINANCIAL FEASIBILITY

The proposed modifications to the Ashton - St. Anthony Project are economically feasible so long as the projected levelized cost of the energy to be produced by the modifications is less than the long-term levelized alternative energy cost of any utility in the region that can be served by the modified project. In this instance, the applicant intends to utilize the additional power generated by the project in its own system. Commission staff has estimated the





projected levelized alternative energy costs for the applicant to be 58.0 mills/kWh. Since the levelized cost of energy from the modifications to the project is estimated to be 52.7 mills/kWh, the modifications are economically feasible. Also, it appears that this utilization of the project power is at a price sufficient to support the modifications to the project. Thus, the project modifications are financially feasible.

WATER RESOURCES PLANNING

The project is operated run-of-river. When the hydraulic capacity of the Ashton powerplant is increased it would reduce the average annual spill period from four months to one month.

The applicant entered into a contract in 1935 with the U.S. Bureau of Reclamation, Fremont-Madison Irrigation District, and the City of Idaho Falls, Idaho, that requires the applicant not to interrupt, interfere or otherwise fluctuate irrigation releases from the Island Park Reservoir during the irrigation season.

The existing hydraulic capacity at the project would be increased by replacing one of the units at the Ashton Development. This unit has a hydraulic capacity of 567 cubic-feet-persecond (cfs) which would be increased to 1,000 cfs. The total ' hydraulic capacity of the Ashton plant would increase from 2,079 cfs to 2,512 cfs which corresponds to the flow equalled or exceeded 25 percent and 12 percent of the time, respectively, on the flowduration curve for Henry's Fork near Ashton. The new unit would generate an additional 10,000,000 kWh annually which would increase the average annual generation from 36,000,000 kWh to 46,000,000 kWh at the Ashton development and to 49,922,000 kWh at the project. The proposed capacity is reasonable based on the limited operation that would be possible at higher flows.

The flow-duration curve for Henry's Fork is based on the period 1961 to 1983 from U.S.G.S. Gage No. 13046023 near Ashton, Idaho, located 0.3 mile below the Ashton plant. The gage was subsequently relocated. The period of flow is considered representative of future flows anticipated at the site. Based on this gaged record, the applicant's estimate of 10,000,000 kWh of additional average annual energy is reasonable. There are no minimum flow requirements imposed by the resource agencies that would cause reduction in generation.

No specific state and federal agency comments or recommendations were made addressing flood control, navigation, water supply, or irrigation requirements in the basin other than those raised by the Idaho Department of Water Resources discussed in the order to which this assessment is attached. 0

The Upper Snake River Basin Planning Status Report includes no projects, either proposed or constructed on the Snake River that this project would impact, and the project would not conflict with any pending applications for exemption, license or preliminary permit.

Based on the above, it is concluded that the modified Ashton - St. Anthony Project will adequately utilize the available flow and head at the site and will not be in conflict with any existing or planned water resource developments in the basin.

EXHIBITS

The following portions of Exhibits A and the following Exhibits F drawings conform to the Commission's rules and regulations and should be included in the license.

Exhibit A (Ashton). Section entitled "Equipment."

Exhibit F		
Drawing (Ashton)	FERC No. 2381-	Description
F-1	24	Powerhouse-Elevations
F-2	25	Powerhouse-Plans and Sections
F-3	26	Spillway-Plan and Elevation
Exhibit F		
Drawing (Ashton)	FERC No. 2381-	Description
F-4	27	Dam-Elevation
F-5	28	Gates-Plan and Elevation
F - 6	29	Powerplant-Plan and Section
Drawing (Ashton)	FERC No. 2381-	Description
F-7	30	Dam-Details
F-8	31	Intake Gates-Elevation
F-9	32	Powerplant-Plan and Section

Exhibit A (St. Anthony). Item 1 (i) entitled "Generator" and Item 1 (ii) entitled "Turbine".

Exhibit F		
Drawing (St. Anthony)	FERC No.	Description
F-1	40	Dam-Profile, Plan and Sections
F-2	41	Canal Intake and Wasteway-Plans, Elevation and Sections
F-3	42	Flume-Elevation and Section
F-4	43	Powerhouse-Plan
F-5	44	Powerhouse-Sections
F-6	45	Powerhouse-Elevations

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FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED MAJOR PROJECT AFFECTING LANDS OF THE UNITED STATES

<u>Article 1</u>. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

<u>Article 2</u>. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: <u>Provided</u>, <u>however</u>, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

<u>Article 4</u>. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate,

who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

<u>Article 6</u>. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a nonpower licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and

discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: <u>Provided</u>, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

<u>Article 7</u>. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

<u>Article 9</u>. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

<u>Article 10</u>. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

<u>Article 11</u>. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

<u>Article 12</u>. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

<u>Article 14</u>. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal

wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

<u>Article 15</u>. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

<u>Article 17</u>. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

<u>Article 18</u>. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: <u>Provided</u>, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection

of life, health, and property.

<u>Article 19</u>. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

<u>Article 20</u>. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Timber on lands of the United State cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 22. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

<u>Article 23</u>. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of

the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works the Licensee in the operation of the project works covered by the license.

<u>Article 24</u>. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

<u>Article 25</u>. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

<u>Article 26</u>. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

<u>Article 27</u>. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

<u>Article 28</u>. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so

designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

<u>Article 29</u>. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, <u>et seq</u>.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: <u>Provided</u>, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: <u>Provided further</u>, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice ad opportunity for hearing.

Article 30. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

<u>Article 31</u>. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 32. The terms and conditions expressly set forth in the license shall not be

construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

UNITED STATES OF AMERICA 50 FERC [62,070 FEDERAL ENERGY REGULATORY COMMISSION

Utah Power & Light Company

Project No. 2381-012 I daho

ORDER AMENDING LICENSE AND REVISING ANNUAL CHARGES (Issued February 2, 1990)

On October 31, 1989, Utah Power & Light Company (UP&L) filed a request for an amendment of license for the Ashton-St. Anthony Project, FERC No. 2381.

The amendment of license proposes to reduce the generating capacity of Unit No. 1 from the authorized 3,400-kW to 2,250-kW. The new 3,400-kW generating unit was authorized by Order Issuing New License, issued August 3, 1987, to replace the existing 1,800-kW Unit No. 1. The amendment of license request proposes to upgrade the existing 1,800-kW Unit No. 1 by replacing the existing turbine runner with a new runner capable of an output of 2,250-kW and to rewind the generator to accommodate the increased capacity. The 2,250-kW unit would have a hydraulic capacity of 670 cfs as opposed to the authorized 1,000 cfs for the 3,400-kW unit.

To support its request, the licensee provided an economic analysis of the proposed modifications to Unit No. 1 and several alternatives to determine the most economically viable development. The alternatives included the installation of a new 2,700-kW Francis Unit, a 2,700-kW Propeller Unit, a 2,700-kW Kaplan Unit, and the authorized 3,400-kW Francis Unit. The economic analysis shows that the rehabilitation of Unit No. 1 is the only alternative which is economically feasible. Staff concurs with the methodology and results of the economic evaluation of the proposed alternatives and the rehabilitation of Unit No. 1.

Although the reduction in the project's installed capacity is currently reasonable, the proposed amendment does not fully utilize the hydroelectric potential of the site. Therefore, a special article will be added to the license to require the licensee to re-evaluate the economic feasibility of the installation of additional generating capacity within 5 years from the effective date of the amendment of license.

Construction and operation of the project as amended would not result in any additional adverse environmental impacts other than those identified during processing of the original application. Adherence to the conditions made a part of the

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original license would insure that construction and operation of the project would not result in significant impacts to the quality of the human environmental.

The Director orders:

(A) The license for the Ashton-St. Anthony Project, FERC No. 2381, is amended as provided in this order, effective the first day of the month in which this order is issued.

(B) Ordering Paragraph (B)(2)(c) is revised, in part, as follows:

... (c) a reinforced concrete powerhouse located at the right bank having integral intakes controlled by verticle slide gates and containing a generating unit rated at 2,250-kW operated at a flow of 670 cfs and two generating units each rated at 2,000-kW; (d)...

(C) Article 201 of the license is revised, in part, to reads as follows:

Article 201. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this order amending license is issued: a. For the purpose of reimbursing the United States for administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 9,000 horsepower.

(D) The following special article is added to the license:

Article 305. The licensee shall, within 5 years, from the effective date of this amendment of license, prepare and submit to the Director, Office of Hydropower Licensing, a detailed economic feasibility study for the installation of additional generating capacity at the Ashton-St. Anthony Project. If the study shows that the installation of additional capacity is economically feasible, the licensee shall, simultaneously, file an amendment of license application to install that additional capacity.

(E) This order is issued under authority delegated to the Director and is final unless appealed to the Commission under Rule 1902 within 30 days from the date of this order. Failure to file a petition appealing this order to the Commission shall constitute acceptance of this order.

J. Mark Robinson Director, Division of Project Compliance and Administration

UNITED STATES OF AMERICA 51 FERC •62,163 FEDERAL ENERGY REGULATORY COMMISSION

Utah Power and Light Company

Project No. 2381-006 Idaho

ORDER APPROVING "AS-BUILT" EXHIBIT

May 21, 1990 On December 20, 1988, Utah Power and Light Company, licensee for the Ashton-St. Anthony Project, filed a revised exhibit E-4 drawing showing the constructed configurations of the licensed project facilities. The "as-built" exhibit conforms to the Commission's regulations and confirms that the constructed project facilities do not differ significantly from the design approved in the license. Further, the "as-built" exhibit shows a parking lot (upper parking lot) that is located outside the project boundary. The licensee is reminded that approval of the filed "as-built" exhibit in no way changes the project boundary.

The Director orders:

(A) The following revised exhibit E-4 drawing is approved and made a part of the license:

Exhibit	FERC Drawing No. 2381	Showing	Superseding FERC Drawing No. 2381
E-4	47	Ashton Reservoir Recreation Site	23

(B) Within 90 days from the date of this order, the licensee must file with the Commission's Secretary one original and one Diazo-type duplicate set of aperture cards showing the approved exhibit drawing. The original must be reproduced on silver or gelatin 35mm microfilm and mounted on a Type D $(3-1/4" \times 7-3/8")$ aperture card. The licensee must also submit at the same time a set of Diazo-type duplicate aperture cards to the Commission's Portland Regional Office. The exhibit number and the FERC drawing number must be shown in the margin below the title block of microfilmed drawings and in the upper right corner of each aperture card.

(C) This order is issued under authority delegated to the Director and is final unless appealed to the Commission under Rule 1902 within 30 days from the date of its issuance.

> J. Mark Robinson Director, Division of Project Compliance and Administration

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Document Content(s)
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UNITED STATES OF AMERICA 52 FERC [62, 126 FEDERAL ENERGY REGULATORY COMMISSION

Utah Power & Light Company 014

Project No. 2381-

I daho

ORDER APPROVING IN PART AND MODIFYING FINAL WILDLIFE ENHANCEMENT PLAN

(ISSUED AUGUST 15, 1990)

On June 28, 1990, Utah Power & Light Company (licensee) filed the wildlife enhancement plan required by article 405 of the license for the Ashton-St. Anthony Project on the Henry's Fork of the Snake River.

Article 405 requires that the plan include maps and drawings showing the final locations and design specifications of 15 goose nesting structures, 10 raptor perch structures, 10 osprey nesting platforms, the bald eagle nesting platform, the cattle enclosure fence, the wetlands protected by preservation easements, and the restored grassland habitat. Article 405 also requires the plan to include provisions for monitoring the effectiveness of the various enhancement measures and maintaining the facilities, a schedule for filing monitoring reports with the Commission and fish and wildlife agencies, and an implementation schedule.

The plan filed by the licensee does not include final proposals for all of the components specified in article 405. Instead, the licensee has filed final proposals for those components of the plan that it has reached an agreement with the Idaho Department of Fish and Game (IDFG). The licensee will install 10 raptor perches, 7 osprey nest platforms with perches in addition to the 3 already constructed, and the bald eagle nesting platform by October 1, 1990. The licensee and the IDFG have not agreed upon the items in the licensee's plan concerning fencing, goose nesting structures, plantings of forage for geese, the adequacy of the preservation easements, and the details of the monitoring program. The licensee intends to continue consulting with IDFG about the unresolved issues and will provide the Commission with its response to IDFG's recommendations by October 1, 1990, including any revisions to this plan, and verification that the measures approved in this order have been implemented.

The licensee's plan to install 10 raptor perches, 7 additional osprey nest platforms with perches, and one bald eagle nesting platform while continuing to consult with the IDFG about the remaining components of the plan is reasonable. The licensee

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should install the agreed upon structures by October 1, 1990. Also by October 1, 1990, the licensee should supplement its plan to include the results of its continuing consultation with the IDFG and any revisions to its June 28, 1990, plan.

The Director orders:

(A) The licensee's June 28, 1990, proposal to install the 10 raptor perches, 7 additional osprey nests with perches, and the bald eagle nesting platform by October 1, 1990, fulfills part of the requirements of article 405 and is approved.

(B) The licensee, not later than October 1, 1990, shall supplement its June 28, 1990, wildlife enhancement plan to include the results of its continuing consultation with the Idaho Department of Fish and Game, any revisions to its plan, and verification that the wildlife enhancement structures approved in paragraph A of this order have been installed.

(C) This order is issued under authority delegated to the Director pursuant to section 375.314 of the Commission's regulations. Section 385.1902 of the Commission's regulations provides 30 days from the date of this order for an appeal to the Commission of this action. Filing an appeal does not stay the effective date of this order or any date specified herein.

J. Mark Robinson Director, Division of Project Compliance and Administration

UNITED STATES OF AMERICA 54 FERC 0 62,166 FEDERAL ENERGY REGULATORY COMMISSION

Utah Power Light & Company

Project No. 2381-016 I daho

ORDER APPROVING AND MODIFYING SUPPLEMENTAL WILDLIFE ENHANCEMENT PLAN (ISSUED MARCH 13, 1991)

On October 1, 1990, Utah Power & Light Company (licensee) filed the supplemental wildlife enhancement plan required by paragraph B of the August 15, 1990 Order Approving in Part and Modifying Final Wildlife Enhancement Plan. The final wildlife enhancement plan was required by article 405 of the license for the Ashton-St. Anthony Project on the Henry's Fork of the Snake River.

The August 15, 1990 order approved the installation of 10 raptor perches, 7 additional osprey nests with perches, and a bald eagle nesting platform but delayed action on the other components of the plan required by article 405 pending further consultation with fish and wildlife agencies. The issues left unresolved by the August 15, 1990, order include the amount of fencing to be constructed to protect riparian habitat; plantings to restore riparian and upland habitat and provide goose foraging areas; goose nesting platforms; wetland preservation easements; and monitoring. Those remaining issues are discussed in this order.

Fenci ng

The licensee proposes to construct 1.5 miles of cattle exclosure fencing at four locations along Ashton Reservoir. This fencing will protect from grazing 40 acres in four parcels and 1.4 miles of shoreline. The licensee's original plan filed with the license application proposed fencing for as much as 5.7 miles of shoreline to protect 31.8 acres from livestock grazing. Because of opposition from owners of shoreline property, fencing of the entire proposed 5.7 miles of shoreline is not feasible. The licensee, however, has proposed, as part of this filing, to provide an additional 2 miles of fencing at an offsite location.

The Idaho Department of Fish and Game (IDFG) supports the licensee's proposal to fence the 1.4 miles of shoreline at Ashton Reservoir and fence 2 miles at an offsite location. IDFG recommends that the licensee fence an additional 2.3 miles of riparian habitat to meet the original plan's goal of 5.7 miles or protect, through fee-title or easement acquisition, 40 acres of deciduous scrub-shrub or forested wetlands. The U.S. Fish and

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Wildlife Service (FWS) suggests that the licensee consider installing offsite watering troughs or stock ponds for adjacent landowners in exchange for allowing fencing of the reservoir shoreline to meet the original goal of 5.7 miles. The need for any additional fencing or other mitigation for the licensee's inability to meet the goal of 5.7 miles of reservoir fencing will be discussed below in the sections concerning wetland preservation and offsite mitigation.

Riparian and Upland Planting

The licensee proposes to plant three of the four fenced parcels, totaling 20 acres, with native trees and shrubs. A temporary irrigation system would be installed and maintained to ensure the survivability of the plantings. Species selection and planting densities would be based on site-specific soils, topography, canopy cover, and the area's response when livestock grazing is discontinued. IDFG supports the licensee's planting proposal with the further recommendation that all plantings be at a spacing of 12 feet by 12 feet or less, with an average of at least 300 trees and shrubs planted per acre.

We agree with the licensee's position that some portions of the areas to be protected from grazing by the fencing may show marked improvement in plant density and vigor without concentrated planting. However, we also believe that those areas that respond quickly from discontinued grazing are not the appropriate candidates to be among the 20 acres to be planted. Areas not likely to revegetate with trees and shrubs following removal of cattle would benefit most from the licensee's planting efforts. The licensee's planting efforts should be concentrated on those areas. On the 20 acres that need plantings to establish tree and shrub cover, some criteria or goal for planting is necessary to evaluate success. The goal proposed by IDFG appears to be reasonable and should be adopted by the licensee for the 20 acres that it will plant.

The licensee's original enhancement plan included a provision for planting one or two areas along the reservoir with a mixture of alfalfa and Kentucky bluegrass for goose forage. The licensee's final plan has eliminated the planting for goose forage. The licensee says that, because of crop depredation, local landowners are opposed to any efforts to increase the numbers of Canada geese and sandhill cranes. Also, according to the licensee, approximately 4 to 5 acres of the 40 acres that will be fenced adjacent to the reservoir support a mixture of grasses and forbs that could provide forage for geese.

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Both FWS and IDFG disagree with the licensee's reason for eliminating the goose forage area from the plan. They believe that development of a high-quality goose forage area would provide an alternative feeding area for the birds and would reduce, rather than increase, depredation on private cropland. They recommend that 10 acres be planted with a mixture of alfalfa and bluegrass.

The licensee's case for eliminating the plantings for goose forage is not convincing. We agree with the agencies that additional foraging areas are more likely to reduce cropland depredation than increase it. By providing an alternative feeding area, the local birds will be drawn away from private croplands. As discussed below, the concerns of the landowners have been addressed by eliminating the nesting platforms at the reservoir from the plan. Therefore, we will require the licensee to plant a mixture of alfalfa and Kentucky bluegrass on the 4- to 5-acre area that was identified as an area that would afford a foraging area once cattle are excluded.

Planting of the 4 to 5-acre area will fulfill the requirements of the original plan approved in the license. The original plan proposed that one or two suitable fenced areas would be planted. Within the 40 acres available, the 4 to 5-acre lowland site identified by the licensee can most readily be enhanced to provide goose forage. Incorporation of the 10-acre planting recommended by IDFG would be difficult, given the site conditions of the area and the other planting requirements for the 40 acres along the reservoir.

Goose Nesting Platforms

The licensee withdrew the proposal in its original plan to install 15 goose nesting platforms around Ashton Reservoir. Its decision again is based on local landowner opposition to increasing the Canada goose population. Further, the licensee believes that if the nesting platforms are not necessary within or adjacent to the project, they should not be required.

While FWS and IDFG don't object to the licensee's decision to withdraw its proposal for nesting platforms at Ashton Reservoir, they disagree with the licensee's elimination of the goose nesting platforms from the enhancement plan altogether. They suggest that the nesting platforms (IDFG recommends ten) should be included as part of the enhancement plan at the offsite area that will be developed to offset lost onsite enhancement opportunities.

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We agree with the agencies. Landowner opposition may provide sufficient reason for not trying to increase goose population at the project reservoir but it doesn't justify dropping the provision from the plan. The licensee has accepted the alternative of offsite mitigation for other components of the plan that are now infeasible and it would be inconsistent to eliminate the nesting platforms from the plan if offsite alternatives exist. We believe that benefits to local goose populations can be gained by constructing 10 nesting platforms at the offsite area.

Wetland Preservation Easements

As part of its original wildlife enhancement plan, the licensee had proposed to acquire preservation easements on a

wetland complex near Ashton Reservoir. The wetland complex consists of 298 acres, of which the licensee obtained easements on 230 acres. (The licensee had set the figure at 250 acres but recalculation shows that only 230 acres were under easement). The remaining 68 acres are not available, but the licensee proposed to compensate for the 68 acres of wetlands that cannot be protected by pursuing enhancement at an offsite location.

FWS and IDFG contend that the intent of the licensee's original enhancement proposal was to secure easements for the entire 420 acres of the wetland-upland complex. While there may have been differences during agency consultation on the plan as to how much land would be covered by the easements, both the exhibit E of the license and the license itself are clear that the licensee's enhancement plan would require obtaining easements on only 250 acres of wetlands, not 420 acres. The license does not support IDFG's interpretation of the plan's requirements.

Now that the licensee has recalculated the acreage under easement to be only 230 acres, it has proposed to pursue additional wildlife enhancement at an offsite location to compensate for easement acreage not secured at the original site. The licensee intends to compensate for the 68 acres of the entire 298-acre complex not protected by easement, not only the 20-acre shortfall identified when the acreage was recalculated. This proposal seems to more than satisfy the intent of the plan outlined in article 405 of the license.

Offsite Mitigation

To compensate for the unavailability of onsite enhancement opportunities near Ashton Reservoir, the licensee will enhance wildlife habitat at IDFG's Sand Creek Wildlife Management Area at

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Swan Pond. By constructing approximately 2 miles of fencing and an effective dike and water control structure, the licensee would enhance wildlife habitat on over 200 acres of IDFG-owned land, much of it ponds and scrub-shrub wetland. The licensee intends to construct the fencing and dike and water control structure, but leave to IDFG the development of the necessary water agreement with the local canal company and the maintenance and management of the lands.

IDFG generally agrees with the licensee's proposal to enhance wildlife habitat at Sand Creek, but recommends additional provisions. Specifically, they want the licensee to be party to the water agreement with the canal company and to be responsible for the maintenance of the fencing and dike and water control structure.

We don't see any need for the licensee to be part of the water agreement. IDFG, as owner of the area, is the appropriate entity to enter into the water agreement. Having the licensee as a party to the agreement is unnecessary for the success of the enhancement measures proposed for Sand Creek. The licensee's enhancement measures at Sand Creek are contingent on IDFG development of a water agreement with the local canal company so water will be available on a secure basis. If such an agreement cannot be reached, the licensee will have to consult with IDFG to identify an alternative area for offsite mitigation. We agree that since the fencing and dike and water control structure are being constructed instead of other required long-term enhancement features, the licensee should be responsible for their maintenance.

Even with the enhancement of Sand Creek, IDFG asserts that the licensee is still responsible for obtaining, either through easements or acquisition, an additional 90 acres of wetland and upland. IDFG based the 90-acre figure on its contention that the licensee agreed to obtain 420 acres of wetland and upland near the reservoir as part of its original enhancement plan and that the improvements at Sand Creek reduce the outstanding 170-acre deficit by 80 acres (the 80-acre figure is based on IDFG's estimation of net habitat enhancement on the 200 acres at Sand Creek).

As previously discussed, we do not find support for the agencies' position that the licensee is obligated to secure protection for 420 acres at the wetland complex near the reservoir. We believe that the improvements at Sand Creek required by this order which, by IDFG's own estimation, provide

an equivalent of 80 acres of habitat improvement, more than compensates for the licensee's inability to construct the total amount of fencing at the reservoir and to protect the 250 acres of wetland originally proposed.

Monitoring and Maintenance

The licensee intends to monitor the enhancement measures annually and submit reports to the agencies and the Commission for the first five years. Annual reports with a five-year summary would be submitted every five years for the remaining term of the license. All plantings would be monitored and additional plantings would be made during the first five years as may be necessary to achieve the desired habitat value.

The licensee proposes to maintain the fences, raptor perches, and the eagle and osprey nest platforms around Ashton Reservoir. The licensee expects IDFG to maintain the fencing and dike and water control structure at the Sand Creek area. As concluded earlier, we believe that the licensee should also be responsible for maintenance of the enhancement features at Sand Creek, including the goose nesting platforms.

The licensee does not propose to monitor the 230 acres of wetland protected by the easement. FWS and IDFG recommend establishing baseline wildlife habitat conditions on the wetlands and periodically evaluating the areas to determine if wildlife habitat values are being maintained. We believe that, since the protection of the 230 acres of wetland is a significant component of the enhancement plan, the licensee must provide some documentation that the wildlife habitat values of the area are indeed being protected. While we don't believe that a habitat evaluation procedure (HEP) analysis suggested by the agencies is necessary for that determination, the licensee's monitoring report must provide documentation, such as vegetative surveys or photographic records, that the easements are providing the needed protection.

In summary, the supplemental wildlife enhancement plan will be modified as follows:

(1) on the 20 acres at the reservoir that the licensee proposes to plant with trees and shrubs, the goal will be to plant at a spacing of 12 feet by 12 feet, or less, an average of at least 300 trees or shrubs per acre;

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- (2) 4 to 5 acres of alfalfa and bluegrass will be planted on the fenced areas at the reservoir;
- (3) ten goose nesting platforms will be included as part of the enhancement program at Sand Creek;
- (4) the licensee shall be responsible for maintenance of the fencing and dike and water control structure, and ten goose nesting platforms at the Sand Creek area; and
- (5) the licensee's monitoring report should include documentation that the wildlife habitat values of the 230-acre wetland are being protected by the licensee's easement.

The Director orders:

(A) The licensee's supplemental wildlife enhancement plan filed on October 1, 1990, as modified by paragraphs B and C herein, fulfills the requirements of paragraph B of the August 15, 1990, Order Approving in Part and Modifying Final Wildlife Enhancement Plan, and is approved.

(B) The licensee's supplemental wildlife enhancement plan is modified to include the following provisions:

- (1) on the 20 acres at the reservoir that the licensee proposes to plant with trees and shrubs, the goal will be to plant at a spacing of 12 feet by 12 feet, or less, an average of at least 300 trees or shrubs per acre;
- (2) 4 to 5 acres of alfalfa and bluegrass will be planted on the fenced areas at the reservoir;
- (3) ten goose nesting platforms will be included as part of the enhancement program at Sand Creek;
- (4) the licensee shall be responsible for maintenance of the fencing, dike and water control structure, and ten goose nesting platforms at the Sand Creek area; and

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(5) the licensee's monitoring report should include documentation that the wildlife habitat values of the 230-acre wetland are being protected by the licensee's easement.

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(C) The licensee shall file with the Commission an annual report documenting the results of the licensee's monitoring of the plan approved in paragraph A and modified in paragraph B, recommending any necessary changes to the enhancement plan, and including comments of the U.S. Fish and Wildlife Service and the Idaho Department of Fish and Game on the monitoring results and recommendations. The annual reports shall be filed on December 31 of each year beginning in 1991 and continuing through 1995. Thereafter, the annual monitoring results with a five-year summary and agency comments will be filed with the Commission every five years beginning no later than December 31, 2000. The Commission reserves the right to require modification of the enhancement plan.

(D) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R.[] 385.713.

J. Mark Robinson Director, Division of Project Compliance and Administration

UNITED STATES OF AMERICA 58 FERC [62, 042 FEDERAL ENERGY REGULATORY COMMISSION

Paci fi Corp

Project No. 2381-019 I daho

ORDER AMENDING LICENSE AND REVISING ANNUAL CHARGES (ISSUED JANUARY 17, 1992)

On September 30, 1991, PacifiCorp, licensee for the Ashton-St. Anthony Project, FERC No. 2381, filed with the Commission a request to amend their license.

On February 2, 1990, an Order Amending License 1 for the Ashton-St. Anthony Project was issued, authorizing the rehabilitation of Unit No. 1. The rehabilitation consisted of rewinding the existing generator and replacing the existing runner with one having a more modern and efficient design. The licensee specified that the rehabilitated Unit No. 1 turbine would have an installed capacity of 2,250 kW, with a hydraulic capacity of 670 cfs, as opposed to the originally authorized replacement unit of 3,400-kW and a hydraulic capacity of 1,000 cfs.

When the rehabilitation work was contracted by the licensee, a new turbine unit having a nameplate rating of 2,700-kW (3,600 horsepower) and a hydraulic capacity of 850 cfs was selected. This selection was made during the final design for the rehabilitation of Unit 1. The existing turbine unit will be replaced with the new turbine using the existing "open chamber" intake and will provide for greater long-term reliability over what was originally proposed. This change in turbine capacity will increase the total installed capacity of the project from 9,000 horsepower to 9,600 horsepower. This capacity will be used to calculate the annual charges effective February 2, 1990.

The licensee requested that Article 305, which was added to the license by the Order Amending License, be eliminated from the license. Article 305 requires that within 5 years from the date of the license amendment, a report be submitted addressing the economic feasibility of increasing the generating capacity of the projects to fully utilize the potential of the site. With the September 30, 1991, filing the licensee has fully compiled with the requirements of article 305 and it does not need to be removed from the license.

1 50 FERC **[**62, 070.

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The adverse environmental effects of rehabilitating and operating Unit No. 1 at the revised nameplate rating of 2,700-kW and hydraulic capacity of 850 cfs would be similar to those for the project evaluated in the environmental assessment (EA) dated June 27, 1986. 2 Therefore, the conclusion reached by staff's EA, that construction and operation of the project would not constitute a major federal action significantly affecting the quality of the human environment, remains valid for the project as amended by this order.

The Director orders:

(A) The license for the Ashton-St. Anthony Project, FERC No. 2381, is amended as provided in this order, effective the first day of the month in which this order is issued.

(B) Ordering Paragraph (B)(2)(c) is revised, in part, as follows:

... (c) a reinforced concrete powerhouse located at the right bank having integral intakes controlled by vertical slide gates and containing a generating unit rated at 2,700-kW operated at a flow of 850 cfs and two generating units each rated at 2,000-kW; (d) ...

(C) Article 201 of the license is revised, in part, as follows:

Article 201. The licensee shall pay the United States the following annual charge, effective February 2, 1990: a. For the purpose of reimbursing the United States for administration of Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. the authorized installed capacity for that purpose is 9,600 horsepower.

2 Environmental Assessment, Ashton-St. Anthony Hydroelectric Project FERC No. 2381-001--Idaho, Office of Hydropower Licensing, Federal Energy Regulatory Commission, June 27, 1986. This document is available in the Commission's public files associated with the proceeding.

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(D) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. [385.713.

J. Mark Robinson Director, Division of Project Compliance and Administration
UNITED STATES OF AMERICA 65 FERC [62, 146 FEDERAL ENERGY REGULATORY COMMISSION

Paci fi Corp

Project No. 2381-023 I daho

ORDER AMENDING LICENSE, APPROVING AS-BUILT EXHIBITS, AND REVISING ANNUAL CHARGES (ISSUED NOVEMBER 16, 1993)

PacifiCorp, licensee for the Ashton-St. Anthony Project, FERC No. 2381, filed as-built exhibits A, F, and G on September 30, 1992, and supplemented the filing on July 8, 1993. The licensee submitted the as-built exhibits in partial compliance with Article 304 of the license.1 The exhibits show the remedial work done to the Ashton Development based on the recommendations from a recent independent consultant's safety inspection report.

As part of the remedial work, the licensee:

- ù decreased the height of the project's dam by five feet. The revised dam crest is at elevation 5156.6 feet MSL, which is the normal reservoir level. The modified dam acts as an overflow spillway when upstream flows exceed the hydraulic capacities of the generating units and gated spillway. Also, the licensee installed two-foothigh flashboards on the crest of the dam to prevent spillage from reservoir wave action.
- ù covered the downstream slope of the overflow spillway with roller compacted concrete. The concrete protects the slope from erosion when the development passes high flows.
- ù constructed reinforced concrete walls between the west abutment, powerhouse, and overflow spillway. The walls direct high flows to the spillway area.
- ù added stabilizing fill to the upstream slope of the earth and rockfill dam. The fill increases the dam's stability safety factors.

ù closed off the low-level outlet pipe by filling the pipe with low-strength concrete.

The exhibits also describe the rehabilitation of Unit No. 1 which the Commission authorized in the license. Since licensing the project, the Commission has twice amended the license to show a change in the authorized installed capacity of the unit. The

1 40 FERC [61, 139, issued August 3, 1987.

-2-

licensed, amended, and as-built capacities for Unit No. 1 are as follows:

UNIT NO. 1 - AUTHORIZED AND

AS-BUILT CAPACITIES

		AUG 3 1987 ORDER	FFB 2 1990
ORDER	JAN. 17, 1992, ORDER	100. 5, 1707, ORDER	
	CAPACITY	ISSUING NEW LICENSE	AMENDING LICENSE
AND	AMENDING LICENSE AND	AS-BUILT	
			REVISING ANNUAL

CHARGES2 REVISING ANNUAL CHARGES3

GENERATING (KW) 2,700	2,850	3,400	2, 250
HYDRAULIC (CFS) 850	875	1,000	670

The Commission's staff find that the adverse environmental effects of rehabilitating and operating Unit No. 1 at the revised nameplate rating of 2,850 kW and hydraulic capacity of 875 cfs would be similar to those for the project evaluated in the Environmental Assessment (EA) dated June 27, 1986.4 Therefore, the conclusion reached by the staff's EA, that the construction and operation of the project would not constitute a major federal action significantly affecting the quality of the human environment, remains valid for the project as amended by this order.

The as-built exhibits adequately show the modifications to

the Ashton Development in accordance with the license and the recommendations from the independent consultant's safety inspection report. Therefore, this order will approve the asbuilt exhibits and amend the project description to show all modifications to the Ashton Development. This order will also change the project's installed capacity from 7,200-kW to 7,350-kW (9,800 horsepower equivalent). The licensee shall pay the United States revised annual charges effective the first day of the month in which the Commission issued the February 2, 1990, Order Amending License. The change in capacity does not materially affect the Commission's determination that the Ashton-St. Anthony Project is best adapted to a comprehensive plan for the waterway.

- 2 50 FERC¹⁶2, 070.
- 3 58 FERC 062,042.

4 Environmental Assessment, Ashton-St. Anthony Hydroelectric Project, FERC No. 2381-001--Idaho, Office of Hydropower Licensing, Federal Energy Regulatory Commission, June 27, 1986. This document is available in the Commission's public files associated with the proceeding.

-3-

The Director orders:

(A) The license for the Ashton-St. Anthony Project, FERC No. 2381, is amended as proposed in the September 30, 1992, and July 8, 1993, filings, effective the first day of the month in which the Commission issues this order.

(B) The following exhibits conform to the Commission's rules and regulations. They are approved and made part of the license:

Exhibit A (Ashton Development) - Pages 1 through 5 of the licensee's July 8, 1993, filing, entitled "Exhibit A -Revised April 1993 - Description of the Project". This filing amends, in part, the exhibit A approved in the license.

♠

EXHI BI T (ASHTON)	FERC NO.	TITLE	SUPERSEDED/ DELETED
F-1	2381-48	Powerhouse, Elevations	2381-24
F-2	2381-49	Powerhouse, Plan and Sections	2381-25
F-4 F-6	2381-50 2381-51	Dam, Elevation Powerhouse, Plan and	2381-27 2381-29
		Sections	
F-7	2381-52	Dam, Low Level Outlets- Plan and Sections	2381-30
F-9	2381-53	Powerhouse, Plan and Sections	2381-32
G-6	2381-54	Plant Facilities Map	2381-38

(C) The superseded exhibit F and G drawings, as well as Exhibit F-8 (Ashton), FERC No. 2381-31, are eliminated from the license.

(D) The project description in ordering paragraph (B)(2) of the license is revised, in part, to read as follows:

"(2) Project works consisting of two developments. The Ashton Development is comprised of: (a) a 56.6-foot-high, 226-foot-long, earth and rock-filled dam having its downstream slope covered with roller compacted concrete, upstream slope stabilized by additional rock fill, and crest elevation at 5156.6 MSL; (b) two-foot-high flashboards on the dam crest to prevent spillage from reservoir waveaction; (c) an 82-foot-long reinforced concrete spillway

surmounted by six 10-foot-high radial gates; (d) a reservoir having a surface area of 404 acres, a gross storage capacity of 9,800 acre-feet and a usable storage capacity of 3,988 acre-feet at normal water surface elevation 5156.6 feet MSL; (e) a reinforced-concrete powerhouse located at the right bank, having integral intakes controlled by vertical slide gates and containing two generating units, each rated at 2,000 kW, and one generating unit rated at 2,850 kW; (f) a tailrace; (g) a 46/2.3-kV step-up transformer; (g) a 133foot-long, 46-kV transmission line; (h) a 2,160-foot-long access road; and (i) appurtenant facilities..."

(E) Article 201 of the license is revised to read as follows:

Article 201. The licensee shall pay the United States the following annual charge:

(a) Effective February 1, 1990 (the first day of the month in which the Commission issued the February 2, 1990, Order Amending License), for the purpose of reimbursing the United States for administration of Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 9,800 horsepower.

(b) Effective January 1, 1988 (the effective date of the license), for the purpose of recompensing the United States for the use, occupancy, and enjoyment of 0.39 acres of its lands, a reasonable annual charge as determined by the Commission in accordance with its regulations, in effect from time to time.

(F) Within 90 days of the issuance date of this order, the licensee shall file an original and three duplicate aperture cards of the approved drawings. The originals should be reproduced on silver or gelatin 35mm microfilm. The duplicates are copies of the originals made on Diazo-type microfilm. All microfilm should be mounted on a Type D (3 1/4" x 7 3/8") aperture card.

Prior to microfilming, the FERC Drawing Number (2381-48 through 2381-54) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number should be typed in the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (F-1 through G-6), Drawing Title, and date of this order should be typed on the upper left corner of each aperture card. The original and one duplicate set of aperture cards should be filed with the Secretary of the Commission. One duplicate set of aperture cards should be filed with the Commission's San Francisco Regional Office. The remaining duplicate set of aperture cards should be filed with the Bureau of Land Management's Idaho State Office. 5

(G) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the issuance date of this order, pursuant to 18 C.F.R. [385.713.

J. Mark Robinson Director, Division of Project Compliance and Administration

5 The address from the Bureau of Land Management's Idaho State Office is as follows:

State Director Idaho State Office Bureau of Land Management Land Services Section (ID-943A) Attn: FERC Withdrawal Recordation 3380 Americana Terrace Boise, ID 83706

UNITED STATES OF AMERICA76 FERC ¶62,176 FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp) Project No. 2381-035

ORDER MODIFYING AND APPROVING REVISED WILDLIFE ENHANCEMENT PLAN Issued September 10, 1996

On December 29, 1995, PacifiCorp (licensee) filed a revised wildlife enhancement plan for the Ashton-St. Anthony Project. The licensee changed its wildlife enhancement program, deleting some measures required by its current plan and adding other measures in substitution. By letter dated April 11, 1995, the Director, Division of Project Compliance and Administration (Director) required the licensee to file a revised plan, for Commission approval, because of these changes.

The Ashton-St. Anthony Project consists of two developments in Fremont County, Idaho. The Ashton development is located on the Henry's Fork of the Snake River. The St. Anthony Development is located on the Egin Irrigation Canal, a diversion of the Henry's Fork.

BACKGROUND

The Commission issued a license for the project on 40 FERC ¶ 61,139. August 3, 1987. Article 405 required the licensee to consult with Idaho Fish and Game (IFG) and the U.S. Fish and Wildlife Service (FWS) and file a wildlife enhancement plan based on enhancement measures proposed in the application for license. The licensee filed a plan on June 28, 1990, which was modified 52 FERC ¶ 62,126. and approved by a Director's order dated August 15, 1990. licensee filed a supplement to the plan on October 1, 1990, which was modified and approved by a Director's order dated 54 FERC ¶ 62,166. March 13, 1991.

REVISED WILDLIFE ENHANCEMENT PLAN

The licensee's revised plan is designed to supersede its

40 FERC ¶ 61,139. 52 FERC ¶ 62,126. 54 FERC ¶ 62,166.

currently approved plan. The revised plan contains all enhancement measures in the approved plan and those measures that are either new or were modified by the licensee in consultation with IFG and the FWS. Major components in the revised plan include:

A.<u>Ashton Reservoir</u>

The licensee put up 3.7 miles of cattle fencing along the shoreline of Ashton Reservoir. Fencing allows the licensee to control grazing on selected riparian and upland areas, allowing vegetation to regrow, enhancing wildlife habitat. Twenty acres of land, enclosed by the licensee's fences, were planted with native trees and shrubs to speed the regrowth of vegetation. A 5.7-acre area is annually planted with alfalfa-bluegrass to provide goose forage. This area is also located adjacent to Ashton Reservoir within the licensee's fencing. Further, the licensee installed 15 raptor perches, 10 osprey nesting platforms, and 1 bald eagle nesting platform around the shoreline.

B.<u>Wetland/Upland Complex</u>

The licensee acquired conservation easements on 250 acres of an upland/wetland complex, privately owned by 5 landowners, located about 1 mile to the southeast of Ashton Reservoir. The easements prohibit changes to these lands which would diminish their current value for wildlife; for example, actions like expanding agricultural land for farming and building homes or other structures are prohibited. The licensee also acquired grazing rights to control cattle grazing on a total of 176 acres of land within and adjacent to the above 250-acre area. The conservation easements and grazing rights together allow the licensee to manage the above lands for wildlife purposes.

C.<u>Sand Creek Wildlife Management Area (SCWMA)</u>

The licensee put up 2.0 miles of cattle fencing at the SCWMA, located about 10 miles northwest of Ashton Reservoir, to control grazing and allow riparian and upland areas to regrow. The SCWMA is owned and operated by IFG. Further, the licensee installed 10 goose nesting platforms at various locations within the SCWMA.

D.<u>Monitoring</u>

The licensee filed annual monitoring reports by December 31, 1991 through 1995 in accordance with its approved plan. After 1995, the approved plan requires the licensee to file monitoring reports every 5 years beginning December 31, 2000, for the term of the license. Monitoring reports must be submitted to IFG and the FWS for comment prior to being filed with the Commission. The licensee proposes to continue this reporting schedule in the revised plan. The licensee's next Project No. 2381-035 monitoring report would be due December 31, 2000.

CONSULTATION

The revised plan is the result of extensive negotiations among the licensee, IFG, and the FWS. The IFG and FWS agreed to the plan by separate letters dated November 30, 1995.

DISCUSSION

The licensee's revised plan incorporates all changes made to its wildlife enhancement program as required by the Director's April 11, 1995 letter. These changes include additional fencing and the acquisition of grazing rights, measures agreed upon by IFG and the FWS in lieu of other measures the licensee wished deleted. Additional fencing and the acquisition of grazing rights will allow the licensee to control grazing in important riparian and wetland areas, enhancing habitat for breeding, foraging, and roosting wildlife. These measures are appropriately included in the revised plan.

The licensee states in its plan that the 5.7-acre goose forage area, wetland/upland complex, and those features at the SCWMA are not within the project boundary. In accordance with §4.51(h)(2) of the Commission's regulations, the project boundary must enclose those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources (See Order on Rehearing for the Skagit River Project where the Commission required the City of Seattle, Washington to include off-site habitat and recreation areas within the project boundary as project "islands" because these lands were necessary Order on Rehearing dated June 26, 1996 at 75 FERC 161,319. for project purposes under §4.51(h)(2)).

Consequently, the project boundary should be revised to include the wildlife enhancement features in the licensee's revised plan. The boundary should be amended to include as many of these features as are reasonable given the nature of these features. As such, the boundary around Ashton Reservoir should be expanded to include all those lands being enhanced for wildlife by the construction of fences and by planting native vegetation and goose forage. Project boundary "islands" should be drawn around the wetland/upland complex. The project boundary should not be expended for the sole purpose of including individual osprey and bald eagle nesting or perch structures. The boundary should not include individual goose nesting structures or fenced areas at the SCWMA. Ordering paragraph (B) requires the licensee to file revised exhibit G drawings showing

Order on Rehearing dated June 26, 1996 at 75 FERC ¶61,319.

the above lands and features in the project boundary.

CONCLUSION

The licensee's revised wildlife enhancement plan incorporates those changed and unchanged provisions in the licensee's current plan and should be approved with Commission staff's modification to file revised exhibit G drawings.

The Director orders:

(A) The licensee's revised wildlife enhancement plan filed December 29, 1995 is approved as modified by paragraph (B) below. The Commission reserves the right to require changes to the plan.

(B) Within 90 days from the date of this order, the licensee shall file, for Commission approval, revised exhibit G drawings showing those lands and features in the licensee's revised wildlife enhancement plan in the project boundary as discussed in this order.

(C)This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. §385.713.

J. Mark Robinson Director, Division of Project Compliance and Administration

UNITED STATES OF AMERICA76 FERC •62,176 FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp) Project No. 2381-035

ORDER MODIFYING AND APPROVING REVISED WILDLIFE ENHANCEMENT PLAN Issued September 10, 1996

On December 29, 1995, PacifiCorp (licensee) filed a revised wildlife enhancement plan for the Ashton-St. Anthony Project. The licensee changed its wildlife enhancement program, deleting some measures required by its current plan and adding other measures in substitution. By letter dated April 11, 1995, the Director, Division of Project Compliance and Administration (Director) required the licensee to file a revised plan, for Commission approval, because of these changes.

The Ashton-St. Anthony Project consists of two developments in Fremont County, Idaho. The Ashton development is located on the Henry's Fork of the Snake River. The St. Anthony Development is located on the Egin Irrigation Canal, a diversion of the Henry's Fork.

BACKGROUND

The Commission issued a license for the project on August 3, 1987. 1/ Article 405 required the licensee to consult with Idaho Fish and Game (IFG) and the U.S. Fish and Wildlife Service (FWS) and file a wildlife enhancement plan based on enhancement measures proposed in the application for license. The licensee filed a plan on June 28, 1990, which was modified and approved by a Director s order dated August 15, 1990. 2/ The licensee filed a supplement to the plan on October 1, 1990, which was modified and approved by a Director s order dated March 13, 1991. 3/

REVISED WILDLIFE ENHANCEMENT PLAN

The licensee's revised plan is designed to supersede its currently approved plan. The revised plan contains all enhancement measures in the approved plan and those measures that are either new or were modified by the licensee in consultation with IFG and the FWS. Major components in the revised plan include:

- 1/ 40 FERC 61,139.
- 2/ 52 FERC 62,126.
- 3/ 54 FERC 62,166.

-2-

A. Ashton Reservoir

The licensee put up 3.7 miles of cattle fencing along the shoreline of Ashton Reservoir. Fencing allows the licensee to control grazing on selected riparian and upland areas, allowing vegetation to regrow, enhancing wildlife habitat. Twenty acres of land, enclosed by the licensee s fences, were planted with native trees and shrubs to speed the regrowth of vegetation. A 5.7-acre area is annually planted with alfalfa-bluegrass to provide goose forage. This area is also located adjacent to Ashton Reservoir within the licensee s fencing. Further, the licensee installed 15 raptor perches, 10 osprey nesting platforms, and 1 bald eagle nesting platform around the shoreline.

B. Wetland/Upland Complex

The licensee acquired conservation easements on 250 acres of an upland/wetland complex, privately owned by 5 landowners, located about 1 mile to the southeast of Ashton Reservoir. The easements prohibit changes to these lands which would diminish their current value for wildlife; for example, actions like expanding agricultural land for farming and building homes or other structures are prohibited. The licensee also acquired grazing rights to control cattle grazing on a total of 176 acres of land within and adjacent to the above 250-acre area. The conservation easements and grazing rights together allow the licensee to manage the above lands for wildlife purposes.

C. Sand Creek Wildlife Management Area (SCWMA)

The licensee put up 2.0 miles of cattle fencing at the SCWMA, located about 10 miles northwest of Ashton Reservoir, to control grazing and allow riparian and upland areas to regrow. The SCWMA is owned and operated by IFG. Further, the licensee installed 10 goose nesting platforms at various locations within the SCWMA.

D. Monitoring

The licensee filed annual monitoring reports by December 31, 1991 through 1995 in accordance with its approved plan. After 1995, the approved plan requires the licensee to file monitoring reports every 5 years beginning December 31, 2000, for the term of the license. Monitoring reports must be submitted to IFG and the FWS for comment prior to being filed with the Commission. The licensee proposes to continue this reporting schedule in the revised plan. The licensee's next monitoring report would be due December 31, 2000.

-3-

CONSULTATION

The revised plan is the result of extensive negotiations among the licensee, IFG, and the FWS. The IFG and FWS agreed to the plan by separate letters dated November 30, 1995.

DISCUSSION

The licensee s revised plan incorporates all changes made to its wildlife enhancement program as required by the Director s April 11, 1995 letter. These changes include additional fencing and the acquisition of grazing rights, measures agreed upon by IFG and the FWS in lieu of other measures the licensee wished deleted. Additional fencing and the acquisition of grazing rights will allow the licensee to control grazing in important riparian and wetland areas, enhancing habitat for breeding, foraging, and roosting wildlife. These measures are appropriately included in the revised plan.

The licensee states in its plan that the 5.7-acre goose forage area, wetland/upland complex, and those features at the SCWMA are not within the project boundary. In accordance with •4.51(h)(2) of the Commission s regulations, the project boundary must enclose those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources (See Order on Rehearing for the Skagit River Project where the Commission required the City of Seattle, Washington to include off-site habitat and recreation areas within the project boundary as project "islands" because these lands were necessary for project purposes under $\cdot 4.51(h)(2)$. 4/

Consequently, the project boundary should be revised to include the wildlife enhancement features in the licensee s revised plan. The boundary should be amended to include as many of these features as are reasonable given the nature of these features. As such, the boundary around Ashton Reservoir should be expanded to include all those lands being enhanced for wildlife by the construction of fences and by planting native vegetation and goose forage. Project boundary islands should be drawn around the wetland/upland complex. The project boundary should not be expended for the sole purpose of including individual osprey and bald eagle nesting or perch structures. The boundary should not include individual goose nesting structures or fenced areas at the SCWMA. Ordering paragraph (B) requires the licensee to file revised exhibit G drawings showing the above lands and features in the project boundary.

4/ Order on Rehearing dated June 26, 1996 at 75 FERC •61,319.

- 4 -

CONCLUSION

The licensee s revised wildlife enhancement plan incorporates those changed and unchanged provisions in the licensee s current plan and should be approved with Commission staff s modification to file revised exhibit G drawings.

The Director orders:

(A) The licensee's revised wildlife enhancement plan filed December 29, 1995 is approved as modified by paragraph (B) below. The Commission reserves the right to require changes to the plan.

(B) Within 90 days from the date of this order, the licensee shall file, for Commission approval, revised exhibit G drawings showing those lands and features in the licensee s revised wildlife enhancement plan in the project boundary as discussed in this order.

(C) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. •385.713.

J. Mark Robinson Director, Division of Project Compliance and Administration Filed Date: 09/10/1996



UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp

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Project No. 2381-035

ORDER MODIFYING AND APPROVING REVISED WILDLIFE ENHANCEMENT PLAN

SEP 1 0 1996

On December 29, 1995, PacifiCorp (licensee) filed a revised wildlife enhancement plan for the Ashton-St. Anthony Project. The licensee changed its wildlife Enhancement program, deleting some measures required by its current plan and adding other measures in substitution. By letter dated April 11, 1995, the Director, Division of Project Compliance and Administration (Director) required the licensee to file a revised plan, for Commission approval, because of these changes.

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BACKGROUND

The Commission issued a license for the project on August 3, 1987. 1/ Article 405 required the licensee to consult with Idaho Fish and Game (IFG) and the U.S. Fish and Wildlife Service (FWS) and file a wildlife enhancement plan based on enhancement measures proposed in the application for license. The licensee filed a plan on June 28, 1990, which was modified and approved by a Director's order dated August 15, 1990. 2/ The licensee filed a supplement to the plan on October 1, 1990, which was modified and approved by a Director's order dated March 13, 1991. 3/

REVISED WILDLIFE ENHANCEMENT PLAN

The licensee's revised plan is designed to supersede its currently approved plan. The revised plan contains all enhancement measures in the approved plan and those measures that are either new or were modified by the licensee in consultation with IFG and the FWS. Major components in the revised plan include:

<u>9120465</u>

- 1/ 40 FERC ¶ 61,139.
- <u>2</u>/ 52 FERC ¶ 62,126.
- <u>3/</u> 54 FERC ¶ 62,166.

FERC - DOCKETED

Project No. 2381-035 -2-

Α. <u>Ashton Reservoir</u>

The licensee put up 3.7 miles of cattle fencing along the shoreline of Ashton Reservoir. Fencing allows the licensee to control grazing on selected riparian and upland areas, allowing vegetation to regrow, enhancing wildlife habitat. Twenty acres of land, enclosed by the licensee's fences, were planted with native trees and shrubs to speed the regrowth of vegetation. A 5.7-acre area is annually planted with alfalfa-bluegrass to provide goose forage. This area is also located adjacent to Ashton Reservoir within the licensee's fencing. Further, the licensee installed 15 raptor perches, 10 osprey nesting platforms, and 1 bald eagle nesting platform around the shoreline.

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The licensee acquired conservation easements on 250 acres of an upland/wetland complex, privately owned by 5 landowners, located about 1 mile to the southeast of Ashton Reservoir. The easements prohibit changes to these lands which would diminish their current value for wildlife; for example, actions like expanding agricultural land for farming and building homes or other structures are prohibited. The licensee also acquired grazing rights to control cattle grazing on a total of 176 acres of land within and adjacent to the above 250-acre area. The conservation easements and grazing rights together allow-the licensee to manage the above lands for wildlife purposes.

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Sand Creek Wildlife Management Area (SCWMA) c.

The licensee put up 2.0 miles of cattle fencing at the SCWMA, located about 10 miles northwest of Ashton Reservoir, to control grazing and allow riparian and upland areas to regrow. The SCWMA is owned and operated by IFG. Further, the licensee installed 10 goose nesting platforms at various locations within the SCWMA.

D. Monitoring

The licensee filed annual monitoring reports by December 31, 1991 through 1995 in accordance with its approved plan. After 1995, the approved plan requires the licensee to file monitoring reports every 5 years beginning December 31, 2000, for the term of the license. Monitoring reports must be submitted to IFG and the FWS for comment prior to being filed with the Commission. The licensee proposes to continue this reporting schedule in the revised plan. The licensee's next monitoring report would be due December 31, 2000.

-3-

CONSULTATION

The revised plan is the result of extensive negotiations among the licensee, IFG, and the FWS. The IFG and FWS agreed to the plan by separate letters dated November 30, 1995.

DISCUSSION

The licensee's revised plan incorporates all changes made to its wildlife enhancement program as required by the Director's April 11, 1995 letter. These changes include additional fencing and the acquisition of grazing rights, measures agreed upon by IFG and the FWS in lieu of other measures the licensee wished deleted. Additional fencing and the acquisition of grazing rights will allow the licensee to control grazing in important riparian and wetland areas, enhancing habitat for breeding, foraging, and roosting wildlife. These measures are appropriately included in the revised plan.

The licensee states in its plan that the 5.7-acre goose forage area, wetland/upland complex, and those features at the SCWMA are not within the project boundary. In accordance with §4.51(h)(2) of the Commission's regulations, the project boundary must enclose those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources (See Order on Rehearing for the Skagit River Fioject where the Commission required the City of Seattle, Washington to include off-site habitat and recreation areas within the project boundary as project "islands" because these lands were necessary for project purposes under §4.51(h)(2)). 4/

Consequently, the project boundary should be revised to include the wildlife enhancement features in the licensee's revised plan. The boundary should be amended to include as many of these features as are reasonable given the nature of these features. As such, the boundary around Ashton Reservoir should be expanded to include all those lands being enhanced for wildlife by the construction of fences and by planting native vegetation and goose forage. Project boundary "islands" should be drawn around the wetland/upland complex. The project boundary should not be expended for the sole purpose of including individual osprey and bald eagle nesting or perch structures. The boundary should not include individual goose nesting structures or fenced areas at the SCWMA. Ordering paragraph (B) requires the licensee to file revised exhibit G drawings showing the above lands and features in the project boundary.

4/ Order on Rehearing dated June 26, 1996 at 75 FERC ¶61,319.

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CONCLUSION

The licensee's revised wildlife enhancement plan incorporates those changed and unchanged provisions in the licensee's current plan and should be approved with Commission staff's modification to file revised exhibit G drawings.

The Director orders:

(A) The licensee's revised wildlife enhancement plan filed December 29, 1995 is approved as modified by paragraph (B) below. The Commission reserves the right to require changes to the plan.

(B) Within 90 days from the date of this order, the licensee shall file, for Commission approval, revised exhibit G drawings showing those lands and features in the licensee's revised wildlife enhancement plan in the project boundary as discussed in this order.

(C) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. §385.713.

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J. Mark Robinson Director, Division of Project — Compliance and Administration

Document Content(s)
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FEDERAL ENERGY REGULATORY COMMISSION UNITED STATES OF AMERICA

Pacificorp

Project No. 2381-033

ORDER APPROVING FISH STOCKING PLAN

(Issued danuary 26, 1999)

Pacificorp filed on November 13, 1995, a Fish Stocking Flan for Ashton Reservoir under article 402 of the Order Issuing New License for the Ashton-St. Anthony Project, FERC No. 2381.1/ The Ashton Development is located on Henry's Fork of the Snake River, about 2.5 miles northwest of Ashton, in Fremont County, Idaho.

BACKGROUND

Project Description

The Ashton-St. Anthony Project consists of the 5.8 MW Ashton Development and the 500 KW St. Anthony Development. The Ashton Development includes a 65-foot-high, 252-foot-long, earth and rock-filled dam that impounds a reservoir with a surface area of 404 acres. The St. Anthony Development consists of a 9.5-foot-high concrete diversion dam, which diverts water into the Egin

License Requirement

Pacificorps' December 31, 1984 application for relicense, in which Pacificorp describes its proposed fish enhancement plan for Ashton Reservoir. That plan was primarily a program of study to determine appropriate fishery mitigative measures to enhance the reservoir fishery. Development of the specific mitigation would be based on the results of field studies and on an evaluation by Idaho Department of Fish and Game (IDFG) and pacificorp of a two-year fish stocking program for Ashton Reservoir. Article 402 approves pages E-26 to E-37 of Exhibit E to

OBJECTIVES AND STUDY RESULTS

compare various strains of rainbow and cuthroat trout for suitability of enhancing the reservoir fishery; and (3) determine a stocking rate that would result in a catch rate of 1 fish per hour with an average length between 25 and 30 The objectives of the study were to: (1) characterize the limnology of Ashton Reservoir to evaluate trout habitat; (2)

The results of the limnology studies suggest Ashton

Issued August 3, 1987 at 40 FERC 61,139, ਕੇ

Project No. 2381-033

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temperature and dissolved oxygen levels throughout the year are suitable for trout growth and survival. However, low plankton densities probably contribute to a low overwinter survival rate for fingerling and catchable-size hatchery trout. Reservoir would support a stocked trout fishery

Evaluations of fishery success were made among stockings of catchable-size Hayspur rainbow trout, Henrys Lake cutthroat trout, Sand Creek Rainbow trout, finespot cuthroat trout and Mt. Issuen rainbow trout. Hayspur rainbow trout had suitable creel return rates and were most vulnerable to bank anglers shifting return the other strains of stocked trout. Stocking fingerling trout increased the annual catch rate from .41 fish 25,000 catchable-size trout and 60,000 fingerlings in the sixth year increased the cut of .95 fish per hour.

PACIFICORPS' MITIGATION PROPOSAL

Pacificorp proposes to provide funding to IDFG to perform the following fish stocking program for Ashton Reservoir.

ASHTON RESERVOIR FIGH STOCKING SCHEDULE

FIVE YEAR PERIOD	ANNUAL FISH NUMBERS STOCKED	ESTIMATED COST
(1) 1991-1995	22.000	
(2) 1996-2000		\$66,000
	27,500	587 500
(3) 2001-2005	140 46	00011101
	GICIEC	\$103,125
(4) 2006-2010	37,400	6112 200
(5) 2011_201E		002,2114
STAPLITAT IN	37,400	5112 200
(6) 2016-2020		00212774
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the An initial payment of \$110,000 to IDFG for renovation of Anton hatchery. This removation allows IDFG to produce 22,000 Hayspur strain rainbow trout. The stocking of Hayspure is rainbow trout with a mean length of 280 millimeters is to occur annually according to the fish RECEIVED FEB - 2 1999

HYDRO RESOURCES

FERC, File: Ashton, Compliance, Environmental, Fish Roppe/Burruss Snyder

NTO OTN Johnson, S-270 Central Files Johnson, P-270 Holt-Grace

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- Payment to IDFG for the annual rearing and stocking into Ashton Reservoir of Hayspur rainbow trout.
- Beginning in the year 1996 and ending in 2028, increase the initial five-year period annual stocking rate of 22,000 fish by twenty-five percent for each five-year period, until a seventy percent increase occurs or 37,400 fish per year is stocked (see fish stocking schedule). The twenty-five percent increase will occur in the first year of each fiveyear period.
- IDFG will determine when during each year the fish are stocked. If the Ashton hatchery cannot provide the required number of fish in a given year, the required number of fish from an outside source, approved by IDFG, will be purchased by Pacificorp. Hayebur rainbow trout will continue to be stocked unless IDFG determines a better strain of fish is more desirable to stock in Ashton Reservoir.

AGENCY COMMENTS

By letter dated August 23, 1995, IDFG made several recommendations to Pacificorp on the draft plan, concerning the timing of stocking and on the number, size, and strain of fish to be stocked. Pacificorp modified the draft plan by incorporating all of IDFG's recommendations into the final plan. By letter dated July 14, 1995, the U.S. Fish and Wildlife Service deferred to IDFG on this matter.

CONCLUSION

Article 402 approved a plan of study to determine the appropriate type and amount of mitigation to enhance the Ashton Reservoir fishery. Results of the studies suggest that Ashton Reservoir has suitable habitat to support a stocked trout fishery. Hayspur rainbow trout proved to be the most suitable strain of trout for successful stocking in Ashton Reservoir. The proposed fish stocking schedule should support a catch rate of about 1 fish per hour for the reservoir fishery.

Implementing the fish stocking plan would provide adequate mitigation for the fishery-related impacts of the Ashton Development on the fish resources. The plan, should therefore, be approved.

The Director orders

(A) Pacificorps' Fish Stocking Plan for the Ashton-St. Anthony Project (FERC No. 2381) filed on November 13, 1995, is approved.

Project No. 2381-033

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(B) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR 385.73.

Division of Licensing and Compliance incole A Nurger J Hark Robinson Director

UNITED STATES OF AMERICA 115 FERC ¶62,082 FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp

Project No. 2381-056

ORDER AMENDING FILING DATE AND ACCEPTING WILDLIFE ENHANCEMENT PLAN FIVE-YEAR SUMMARY REPORT

(Issued April 18, 2006)

On December 28, 2005, PacifiCorp (licensee) filed its wildlife enhancement plan five-year summary report pursuant to paragraph (C) of the Order Approving and Modifying Supplemental Wildlife Enhancement Plan, issued March 13, 1991¹ for the Ashton – St. Anthony Project. The project is located on the Henry's Fork of the Snake River in Fremont County, Idaho.

Paragraph (C) of the March 1991 Order requires the licensee to file the results of monitoring for the approved supplemental wildlife enhancement plan every five years beginning December 31, 2000.

The filed report documents wildlife monitoring results, work completed between 2001 and 2005, and activities proposed for the next reporting period. This report satisfies the filing requirements of paragraph (C) of the Order Approving and Modifying Supplemental Wildlife Enhancement Plan.

In its filing, the licensee requests that the filing requirement dates for the five-year reports be extended until March 31 of the following year. This change would allow data to be collected through the end of the monitoring period and included in the final report with time for a 30-day review by the resource agencies.

The licensee's request to amend the filing date for its five-year summary reports is reasonable and should be approved.

The Director orders:

(A) The wildlife enhancement plan five-year summary report, filed December 28, 2005, pursuant to paragraph (C) of the Order Approving and Modifying Supplemental Wildlife Enhancement Plan, issued March 13, 1991, is accepted.

¹ 54 FERC ¶ 62,166.

- 2 -

(B) The filing dates for the five-year summary reports for the wildlife enhancement plan required by paragraph (C) of the Order Approving and Modifying Supplemental Wildlife Enhancement Plan, issued March 13, 1991, are changed to March 31 of the following year, beginning March 31, 2011.

(C) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.

> John E. Estep Chief, Land Resources Branch Division of Hydropower Administration and Compliance

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UNITED STATES OF AMERICA 115 FERC *62,082 FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp 2381-056 Project No.

ORDER AMENDING FILING DATE AND ACCEPTING WILDLIFE ENHANCEMENT PLAN FIVE-YEAR SUMMARY REPORT

(Issued April 18, 2006)

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be collected through the end of the monitoring period and included in the final report with time for a 30-day review by

resource agencies.

The licensee's request to amend the filing date for its five-year summary reports is reasonable and should be approved.

The Director orders:

(A) The wildlife enhancement plan five-year summary

filed December 28, 2005, pursuant to paragraph (C) of the Order Approving and Modifying Supplemental Wildlife Enhancement Plan, issued March 13, 1991, is accepted. (B) The filing dates for the five-year summary reports

for

report,

the wildlife enhancement plan required by paragraph (C) of the Order Approving and Modifying Supplemental Wildlife Enhancement Plan, issued March 13, 1991, are changed to March 31 of the following year, beginning March 31, 2011.

(C) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. * 385.713.

John E. Estep Chief, Land Resources Branch Division of Hydropower Administration and Compliance

Footnotes

[1] 54 FERC * 62,166.

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144 FERC ¶ 62,239 UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp St. Anthony Hydro LLC Project Nos. 2381-063 and 14552-000

ORDER AMENDING LICENSE, DESIGNATING NEW DOCKET NUMBER, APPROVING TRANSFER OF LICENSE, AND REVISING ANNUAL CHARGES

(Issued September 13, 2013)

1. On June 11, 2013, PacifiCorp (PacifiCorp or transferor), and St. Anthony Hydro LLC (St. Anthony or transferee) (together referred to as applicants) filed a joint application to divide the license for the Ashton – St. Anthony Hydroelectric Project No. 2381 into two licenses and to transfer one license to St. Anthony Hydro LLC. The project is located on the Henry's Fork of the Snake River in Fremont County, Idaho, and includes the Ashton and St. Anthony developments. The St. Anthony development is also located on the Egin Irrigation Canal (Egin Canal), a diversion of the Henry's Fork. The Ashton development occupies 0.39 acres of federal land administered by the Bureau of Land Management. The St. Anthony development does not occupy any federal lands.

Background

2. The Ashton – St. Anthony Project was originally licensed to Utah Power and Light Company on December 19, 1977,¹ and relicensed on August 3, 1987.² The project was transferred to PacifiCorp on November 23, 1988.³ As licensed,⁴ the Ashton

¹ Utah Power & Light Co. 1 FERC ¶ 61,263 (1977). The license was made effective January 1, 1938, with an expiration date of December 31, 1987.

² Utah Power & Light Co. 40 FERC ¶ 61,139 (1987). The new license was issued effective January 1, 1988, with an expiration date of December 31, 2027.

³ Utah Power & Light Co. and PC/UP&L Merging Corp., 45 FERC \P 62,145 (1988). The license transfer was a result of a merger of PacifiCorp and Utah Power & Light Corp. into PacifiCorp.

⁴ The project description was amended in *Utah Power & Light Co.*, 50 FERC ¶ 62,070 (1990), *PacifiCorp*, 58 FERC ¶ 62,042 (1992), *PacifiCorp*, 65 FERC ¶ 62,146 (1993), and *PacifiCorp*, 66 FERC ¶ 62,198 (1994).

development is comprised of: (a) a 56.6-foot-high, 226-foot-long, earth and rock-filled dam having its downstream slope covered with roller compacted concrete, upstream slope stabilized by additional rock fill, and crest elevation at 5,156.6 mean sea level (msl); (b) two-foot-high flashboards on the dam crest to prevent spillage from reservoir wave-action; (c) an 82-foot-long reinforced concrete spillway surmounted by six 10-foot-high radial gates; (d) a reservoir having a surface area of 404 acres, a gross storage capacity of 9,800 acre-feet and a usable storage capacity of 3,988 acre-feet at normal water surface elevation 5,156.6 feet msl; (e) a reinforced-concrete powerhouse located at the right bank, having integral intakes controlled by vertical slide gates and containing two generating units, each rated at 2,000 kW, and one generating unit rated at 2,850 kW; (f) a tailrace; (g) a 46/2.3-kV step-up transformer; (h) a 133-foot-long, 46-kV transmission line; (i) a 2,160-foot-long access road; and (j) appurtenant facilities.

3. The St. Anthony development is comprised of: (a) a 375.2-foot-long concrete overflow diversion dam that is approximately 6.5 feet high with a crest elevation of 4,952.5 feet msl. The crest is formed by a 152.9-foot-long concrete ogee section and by a 1.0-foot-high, 169.3-foot-long timber section. The dam also includes a 31-foot-wide stoplog section and fish passage section at the left abutment; (b) a 41-foot-wide reinforced-concrete canal intake structure; (c) a 35-foot-wide, 1,350-foot-long power and irrigation canal; (d) an irrigation canal headworks structure; (e) a 16-foot-wide, 145-foot-long screened and rubber-lined wooden-box flume having an overflow spillway and an ice chute; (f) a reinforced concrete powerhouse containing one generating unit rated at 500-kW; (g) a tailrace; (h) the 2.3-kV generator leads; and (i) appurtenant facilities.

4. The turbine at the St. Anthony development has not been operational since 2002 when the turbine shaft coupling failed. PacifiCorp states that continued operation of the facility is no longer an economically viable option for it. PacifiCorp has been providing the Commission's Division of Dam Safety and Inspections – Portland Regional Office with quarterly reports that include options on the rebuilding, decommissioning, or sale of the St. Anthony development since 2003.

Proposed Action

5. The Applicants propose to divide the two developments, remove the St. Anthony development from the original license, and transfer it to a separate license issued to St. Anthony Hydro LLC. The separation of the two noncontiguous developments does not include any alteration to project works, nor will approval of the division of the two developments and the transfer result in any lands or waters being added to or deleted from the developments.

6. St. Anthony Hydro LLC plans to restore the St. Anthony development. Attachment B of the application includes a detailed plan with work items that will be completed to restore the turbine and return the St. Anthony development to an operational

state. The estimated capital cost to return the project to operation is \$800,000. Attachment C of the application includes a bank statement and letter of credit worthiness demonstrating that St. Anthony Hydro LLC has adequate financial resources to fund the rehabilitation work.

Public Notice

7. The Commission issued a public notice of the application on July 12, 2013, that established August 12, 2013, as the deadline to file comments, motions to intervene, and protests. The State of Idaho filed a timely notice of intervention on July 25, 2013.⁵ No other comments, motions to intervene, or protests were received.

Discussion

A. License Amendment and Separate License

8. The license amendment would separate the Ashton and St. Anthony developments, leaving the Ashton development under the existing license, and creating a separate license for the St. Anthony development, with a new docket number. The license for the new St. Anthony Project will include all of the terms and conditions of the existing license that are applicable to that development. The two projects are not connected either physically or operationally, and the separation would not require any changes to project works. I will approve the separation of the two developments into two licenses as described below.

B. Transfer of the St. Anthony Project.

9. The separate St. Anthony Project license would be transferred to St. Anthony Hydro LLC as applicable to the two developments. None of the terms of the license for the Ashton – St. Anthony Project will be changed (although, as discussed below, we will add some new requirements in the St. Anthony Project license). The licenses for each of the new, separate projects will include those terms of the current license that are applicable to each project.⁶ A transfer of license does not authorize any deviation from the terms and conditions of the existing license.

⁵ By filing a timely notice of intervention, the State of Idaho is a party by operation of Rule 214(a)(2) of the Commission's Rules of Practice and Procedure. 18 C.F.R.§ 385.214(a)(2) (2013)

⁶ In other words, all of the general terms and conditions of the current license will be included in both of the new licenses. Terms and conditions that are applicable to specific project works will be included in the license for the project that includes those (continued)

10. PacifiCorp has complied fully with the terms and conditions of the license, with the exception of allowing the St. Anthony development to remain non-operational since 2002, and has agreed to pay charges attributable to the St. Anthony Project until the date of the transfer. St. Anthony Hydro LLC is qualified to hold a license and operate the properties under the license, and agrees to accept and be bound by all of the terms and conditions of the license as though it was the original licensee. The owner of St. Anthony Hydro LLC currently owns or manages the operation of nine hydroelectric plants ranging in size from 290 kW to 7.5 megawatts.⁷ These projects have generally complied with the terms and conditions of the existing licenses or exemptions. This order includes several additional requirements for the St. Anthony Project that aim to ensure the project becomes operational in a reasonable time frame and to protect the environment and public safety in the event that the project does not become operational. By accepting the transfer St. Anthony Hydro LLC agrees that the failure to satisfy these requirements will be taken as its intention to surrender the project and that the Commission may terminate the license through implied surrender.

11. This action does not authorize new construction or any change in project operations other than that already approved in the license for the Ashton – St. Anthony Project. St. Anthony Hydro LLC's rehabilitation of the St. Anthony Project consists only of restoring the turbines and related equipment within the project powerhouse. The Commission's regulations provide that neither an environmental assessment nor an environmental impact statement need be prepared for a license transfer, and the rehabilitation work will have no environmental consequences that would require analysis. Accordingly, there is no need to prepare an environmental document in this proceeding.⁸ In light of the facts discussed herein, the proposed actions are consistent with the Commission's regulations and are in the public interest.

C. Ashton License (Project No. 2381)

12. The Ashton license includes only the Ashton development of the prior Ashton – St. Anthony license, and includes the articles of the license as modified by this order.

13. Exhibits A, F, and G of the Ashton license will need to be revised to reflect the separation and removal of the St. Anthony development. PacifiCorp must revise the

works.

⁷ FERC Project Nos. 3574 (Tiber Dam), 5637 (Pancheri), 6552 (North Fork Sprague River), 7194 (Birch Creek), 8438 (Schaffner), 9134 (Dry Creek), 10468 (Marsh Valley), 12597 (Lower Turnbull Drop), and 12598 (Upper Turnbull Drop).

⁸ 18 C.F.R. § 380.4(a)(8) (2013).

exhibits to accurately reflect the project name, project number, and licensee. This order requires PacifiCorp to file for Commission approval, revised Exhibits A, F, and G, that reflect the administrative changes approved by this order and conform to sections 4.39 and 4.41 of the Commissions regulations. PacifiCorp should also take this opportunity to verify all information on the exhibits is accurate and make revisions, if necessary.

14. The Commission collects annual charges from licensees for administration of the Federal Power Act (FPA) and, where applicable, use and occupancy of U.S. lands. The Ashton Project occupies 0.39 acres of federal land administered by the Bureau of Land Management. Article 201 provides for the collection of funds for administration of the FPA and use and occupancy of U.S. lands. This order revises Article 201 of the Ashton license to reflect the correct installed capacity of the Ashton Project of 6,850 kW.⁹

D. St. Anthony License (Project No. 14552)

15. The St. Anthony license includes only the St. Anthony development of the prior Ashton – St. Anthony license and includes the requirements set forth in this order. While some of the requirements of the articles set forth below have been satisfied by the transferor and the articles may have no outstanding requirements, the articles will remain part of the St. Anthony license.

16. St. Anthony Hydro LLC must file revised Exhibits A, F, and G for Commission approval that reflect the administrative changes approved by this order and conform to sections 4.39 and 4.41 of the Commissions regulations. The exhibits must accurately reflect the project name, project number, and licensee. St. Anthony Hydro LLC should also take this opportunity to verify all information on the exhibits is accurate and make revisions, if necessary.

17. The application includes a detailed plan to return the St. Anthony Project to operation. While this plan is acceptable, the applicant did not provide a schedule. This order requires St. Anthony Hydro LLC to re-file its plan and a supplemental schedule when it files plans and specifications with the Commission's Division of Dam Safety and Inspection – Portland Regional Engineer.

18. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA. The authorized installed capacity for the St. Anthony Project is 500 kW. Under the

⁹ The application identifies the authorized installed capacity for the Ashton-St. Anthony Project as 9,600 horsepower (hp). The Commissioned issued an order on November 16, 1993, that revised the capacity to 9,800 hp. The Commission currently uses kilowatts measurement to determine annual charges. 18 C.F.R. § 11.1 (2013).

regulations currently in effect, projects with authorized installed capacity of less than or equal to 1,500 kW, like this project, will not be assessed an annual charge.

The Director orders:

(A) The applicants' request to separate the two developments in Project No. 2381 into two licenses is approved, as described by this order.

(B) The transfer of the license for the St. Anthony Project No. 14552 (formerly the St. Anthony development of the Ashton – St. Anthony Project No. 2381), from PacifiCorp to St. Anthony Hydro LLC is approved. The license to operate and maintain the St. Anthony Project has an expiration date of December 31, 2027, and is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(C) PacifiCorp shall pay all annual charges for the St. Anthony Project No. 14552 (formerly the St. Anthony development of the Ashton – St. Anthony Project 2381), that accrue up to the effective date of the transfer to St. Anthony Hydro LLC.

(D) Approval of the transfer of the St. Anthony Project No 14552 (formerly the St. Anthony development of the Ashton – St. Anthony Project 2381), from PacifiCorp to St. Anthony Hydro LLC is contingent upon: (1) transfer of title of the properties under license, transfer of all project files including all dam safety related documents, and delivery of all license instruments to St. Anthony Hydro LLC, which shall be subject to the terms and conditions of the license as though it were the original licensee for that development; and (2) St. Anthony Hydro LLC acknowledging acceptance of this order and its terms and conditions by signing and returning the attached acceptance sheet. Within 60 days from the date of this order, St. Anthony Hydro LLC shall submit certified copies of all instruments of conveyance and the signed acceptance sheet.

(E) Project No. 2381, formerly known as the Ashton – St. Anthony Project, is now the Ashton Project.

(F) The project description for the Ashton Project No. 2381 set forth in ordering paragraph (B)(2) of the August 3, 1987 Order Issuing New License (Major Project—Existing Dam),¹⁰ is revised to read as follows:

¹⁰ The project description was amended in *Utah Power & Light Co.*, 50 FERC ¶ 62,070 (1990), *PacifiCorp*, 58 FERC ¶ 62,042 (1992), *PacifiCorp*, 65 FERC ¶ 62,146 (1993), and *PacifiCorp*, 66 FERC ¶ 62,198 (1994).
Project works consisting of: (a) a 56.6-foot-high, 226-foot-long, earth and rockfilled dam having its downstream slope covered with roller compacted concrete, upstream slope stabilized by additional rock fill, and crest elevation at 5,156.6 mean sea level (msl); (b) two-foot-high flashboards on the dam crest to prevent spillage from reservoir wave-action; (c) an 82-foot-long reinforced concrete spillway surmounted by six 10-foothigh radial gates; (d) a reservoir having a surface area of 404 acres, a gross storage capacity of 9,800 acre-feet and a usable storage capacity of 3,988 acre-feet at normal water surface elevation 5,156.6 feet msl; (e) a reinforced-concrete powerhouse located at the right bank, having integral intakes controlled by vertical slide gates and containing two generating units, each rated at 2,000 kW, and one generating unit rated at 2,850 kW; (f) a tailrace; (g) a 46/2.3-kV step-up transformer; (h) a 133-foot-long, 46-kV transmission line; (i) a 2,160-foot-long access road; and (j) appurtenant facilities.

Exhibit	FERC Drawing No.	Title
F-10	2381-55	Dam and Fish Passage Structure - Plan, Profile and Details
F-11	2381-41	Canal Intake and Wasteway - Plans, Elevation and Sections
F-12	2381-61	General Design Drawing
F-13	2381-43	Powerhouse – Plan
F-14	2381-44	Powerhouse – Sections
F-15	2381-45	Powerhouse – Elevations
G-7	2381-56	Project Location Map - Project Works and Principal Features

(G) The following exhibits are deleted from the Ashton Project No. 2381:

(H) The licensee for the Ashton Project No. 2381 shall file, within 60 days from the effective date of the transfer, revised Exhibits A, F, and G, for Commission approval. The revised exhibits shall reflect the administrative changes approved by this order and confirm to sections 4.39 and 4.41 of the Commissions regulations.

(I) Articles 403, 407, and 409 are deleted from the license for the Ashton Project No. 2381.

(J) Articles 201 and 404 of the license for the Ashton Project No. 2381 are revised to read as follows:

Article 201. The licensee shall pay the United States the following annual charges, as determined in accordance with the provisions of the Commission's regulations in effect from time to time:

(a) effective as of the issuance date of this order, to reimburse the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 6,850 kW.

(b) effective as of the issuance date of this order, for the purpose of recompensing the United States for the use, occupancy, and enjoyment of 0.39 acres of its lands, a reasonable annual charge as determined by the Commission in accordance with its regulations, in effect from time to time.

Article 404. The licensee, after consultation with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service, shall develop a monitoring plan to evaluate turbine-induced injury and mortality to fish resources at the Ashton Project. Within six months from the effective date of the license, the licensee shall file a copy of the monitoring plan, along with any comments from the above agencies on the plan, and a schedule for filing the results of the monitoring program. The Commission reserves the right to require modifications to the plan and the schedule.

The results of the monitoring shall be submitted to the Commission according to the approved schedule, along with any comments from the consulted agencies. If the results of the monitoring indicate that measures are necessary to minimize adverse effects to fish resources, the licensee also shall provide, for Commission approval, its recommendations for mitigation measures and a schedule for implementing the measures, along with comments from the above agencies on the recommended measures. Measures to be considered by the licensee shall include, but need not be limited to, screening the intakes, providing an equivalent offsite enhancement of a wild trout population, providing supplemental stocking, and providing other nonscreening alternatives, such as behavior barriers, to minimize and compensate for any fish losses. At the same time, copies of the schedule shall be served upon the agencies consulted. The Commission reserves the right to require the licensee to undertake measures different than those recommended by the licensee and to make changes in the implementation schedule.

(K) The St. Anthony Project No. 14552 shall consist of the following:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by Exhibit G.

(2) Project works consisting of: (a) a 375.2-foot-long concrete overflow diversion

dam that is approximately 6.5 feet high with a crest elevation of 4,952.5 feet msl. The crest formed by a concrete ogee section extending a length of 152.9 feet and by a 1.0-foot-high timber section extending a length of 169.3 feet. The dam, including a 31-foot-wide stoplog section and a fish passage section at the left abutment; (b) a 41-foot-wide reinforced-concrete canal intake structure; (c) a 35-foot-wide, 1,350-foot-long power and irrigation canal; (d) an irrigation canal headworks structure; (e) a 16-foot-wide, 145-foot-long screened and rubber-lined wooden-box flume having an overflow spillway and an ice chute; (f) a reinforced concrete powerhouse containing a 500-kW generating unit; (g) a tailrace; (h) the 2.3-kV generator leads; and (i) appurtenant facilities.

The project works generally described above are more specifically shown and described by Exhibits A and F.

(L) The following sections of the Federal Power Act are waived and excluded from the license for the St. Anthony Project No. 14552: 4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers, and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the Act that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(M) The license for the St. Anthony Project No. 14552 shall be subject to the articles set forth in Form L-12 (October 1975), entitled "Terms and Conditions of License for Constructed Minor Project Affecting the Interests of Interstate or Foreign Commerce" and attached to this order. The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charges, as determined in accordance with the provisions of the Commission's regulations in effect from time to time: effective as of the issuance date of this order, to reimburse the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 500 kW. Under the regulations currently in effect, projects with authorized installed capacity of less than or equal to 1,500 kW will not be assessed an annual charge.

Article 202 (formerly Article 203 of the Ashton Project No. 2381). The Commission reserves the authority to order upon its own motion or upon the recommendation of federal or state fish and wildlife agencies or affected Indian tribes, alterations of project structures and operations to take into account to the fullest extent practicable the regional fish and wildlife program developed pursuant to the Pacific Northwest Electric Power Planning and Conservation Act.

Article 203 (formerly Article 204 of the Ashton Project No. 2381). The licensee

for the St. Anthony Project No. 14552 shall file, within 60 days from the effective date of the transfer, revised Exhibits A, F, and G, for Commission approval. The revised exhibits shall reflect the administrative changes approved by this order and confirm to sections 4.39 and 4.41 of the Commission's regulations.

Article 301. The licensee shall start construction of the proposed work authorized in this order within one year and complete construction within three years from the effective date of the transfer. Failure to commence construction within one year from the issuance date of this order, or complete construction within three years from the issuance date of this order, will be considered intent to surrender the project and the Commission may terminate the license by implied surrender.

Article 302. At least 60 days prior to the start of construction, the licensee shall submit one copy of its plans and specifications and supporting design document to the Commission's Division of Dam Safety and Inspections (D2SI)–Portland Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections). The submittal must also include as part of preconstruction requirements: a Quality Control and Inspection Program, a Temporary Construction Emergency Action Plan, a Soil Erosion and Sediment Control Plan, and a Restoration Plan and Schedule. The licensee may not begin construction until the D2SI-Portland Regional Engineer has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

Article 303. Should construction require cofferdams or deep excavations, the licensee shall: (1) review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction; and (2) shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of any cofferdams or deep excavations, the licensee shall submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2SI), of the approved cofferdam and deep excavation construction drawings and specifications, and the letters of approval.

Article 304. Within 90 days of completion of construction of the facilities authorized by this order, the licensee shall file for Commission approval, revised Exhibits A, F, and G, as applicable, to describe and show those project facilities as built. A courtesy copy shall be filed with the Commission's Division of Dam Safety and Inspections (D2SI)–Portland Regional Engineer, the Director, D2SI, and the Director, Division of Hydropower Administration and Compliance.

Article 305. Within 60 days from the effective date of the transfer, the licensee shall submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2SI) of a Public Safety Plan. The plan shall include an evaluation of public safety concerns at the project site, including designated recreation areas, and assess the need for the installation of safety devices or other safety measures. The submitted plan should include a description of all public safety devices and signage, as well as a map showing the location of all public safety measures. For guidance on preparing public safety plans the licensee can review the Guidelines for Public Safety at Hydropower Projects on the FERC website.

Article 306. Within 60 days from the effective date of the transfer, the licensee shall submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-Portland Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2SI) of an Emergency Action Plan (EAP). The plan should be in accordance with Part 12, Subpart C of the Commission's Regulations and Chapter 6 of the Commission's Engineering Guidelines. If applicable, the licensee may ask for an exemption from filing an EAP in accordance with Subpart 12.21 of the Commission's Regulations.

Article 307. The licensee shall file, within 120 days from the effective date of the transfer, a Financial Assurance Plan, for Commission approval. The plan shall identify that the licensee has the funds necessary to operate and maintain the project, and identify those project facilities that would be removed, secured in-place, or otherwise modified to ensure public safety and any other measures needed to protect environmental resources in the event the licensee cannot complete project restoration or is unable to operate the project once restoration is completed. The plan must include, at a minimum, financial statements, including a balance sheet, income statement, and a statement of actual or estimated cash flows over the license term which provide evidence that the licensee has sufficient assets, credit, and projected revenues to cover project operation and maintenance expenses, and any other estimated project liabilities and expenses. The financial statements must be prepared in accordance with generally accepted accounting principles and signed by an independent certified public accountant. The plan shall also include an itemized cost estimate, prepared by a registered engineer, for those project facilities that would be removed, secured in-place, or otherwise modified in the event the licensee cannot complete project restoration or is unable to operate the project once construction is completed.

Subsequent to Commission approval of the Financial Assurance Plan, the licensee shall file documentation that the licensee has obtained a bond or equivalent financial instrument that ensures the licensee has the financial means necessary to implement the Financial Assurance Plan. The implementation of the plan and the determination of

measures necessary to render the site safe for the public and to protect environmental resources shall be at the direction of the Commission. The licensee shall maintain the bond or equivalent financial instrument throughout the term of the license. The licensee shall file annually by January 1 of each year a report documenting that the bond or equivalent financial instrument will remain in effect for the ensuing year.

Article 401 (formerly Article 403 of the Ashton Project No. 2381). The licensee shall consult with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service and, within six months from the effective date of the license, file with the Commission, for approval, functional design drawings of fish passage facilities for the Egin Irrigation Canal diversion dam at the St. Anthony Project, and a plan to monitor the operation of the fish passage facilities. The filing shall include documentation of agency consultation and any agency comments on the drawings and monitoring plan. The Commission reserves the right to require changes in the design of the fish passage facilities and in the monitoring plan. The licensee shall file as-built drawings with the Commission within three months after completion of the construction of the fish passage facilities.

Article 402 (formerly Article 404 of the Ashton Project No. 2381). The licensee, after consultation with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service, shall develop a monitoring plan to evaluate turbine-induced injury and mortality to fish resources at the St. Anthony Project. Within six months from the effective date of the license, the licensee shall file a copy of the monitoring plan, along with any comments from the above agencies on the plan, and a schedule for filing the results of the monitoring program. The Commission reserves the right to require modifications to the plan and the schedule.

The results of the monitoring shall be submitted to the Commission according to the approved schedule, along with any comments from the consulted agencies. If the results of the monitoring indicate that measures are necessary to minimize adverse effects to fish resources, the licensee also shall provide, for Commission approval, its recommendations for mitigation measures and a schedule for implementing the measures, along with comments from the above agencies on the recommended measures. Measures to be considered by the licensee shall include, but need not be limited to, screening the intakes, providing an equivalent offsite enhancement of a wild trout population, providing supplemental stocking, and providing other nonscreening alternatives, such as behavior barriers, to minimize and compensate for any fish losses. At the same time, copies of the schedule shall be served upon the agencies consulted. The Commission reserves the right to require the licensee to undertake measures different than those recommended by the licensee and to make changes in the implementation schedule.

Article 403 (formerly Article 407 of the Ashton Project No. 2381). The licensee,

after consultation with the City of St. Anthony, and within one year from the effective date of the license, shall repair or replace those portions of the diversion structure and retaining wall at the St. Anthony Project necessary to prevent flooding conditions at Keefer Park. Further, the licensee shall continue to maintain the above facilities during the license period.

Article 404 (formerly Article 408 of the Ashton Project No. 2381). If the licensee discovers any previously unidentified archeological or historic sites during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all construction and development activities in the vicinity of the sites and shall consult a qualified cultural resources specialist and the SHPO concerning the eligibility of the sites for listing in the National Register of Historic Places and any measures needed to avoid the sites or to mitigate effects on the sites. If the licensee and the SHPO cannot agree on the amount of money to be spent for project-specific archeological and historical purposes, the Commission reserves the right to require the licensee to conduct the necessary work at the licensee's own expense.

Article 405 (formerly Article 409 of the Ashton Project No. 2381). The licensee, within one year from the effective date of the license, and after consultation with the U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, and the Idaho Board of Water Resources, shall prepare and file with the Commission a detailed, site specific plan to minimize the quantity of sediment or other potential water pollutants resulting from construction of fish passage facilities at the Egin Irrigation Canal diversion dam. The plan shall address, among other things, measures to contain sediment, to filter sediment-laden discharges, and to store and dispose of excess sediment and other spoil materials. The plan shall also include functional design drawings and map locations of control measures, an implementation schedule, monitoring and maintenance programs for construction of these facilities, provisions for periodic review of the plan and for making any necessary revisions to the plan.

Documentation of consultation with agencies during preparation of the plan, and a summary of agency comments and recommendations, must be included in the filing. In the event that the licensee does not concur with any agency recommendations, the licensee shall provide a discussion of the reasons for not concurring, based on actual site geological, soil, and groundwater conditions. The Commission reserves the right to require changes to the plan. Unless the Director, Office of Energy Projects, within 90 days from the filing date instructs otherwise, the licensee may commence instream construction or spoil-producing activities associated with installation of fish passage facilities at the Egin Irrigation Canal diversion dam at the end of that period.

Article 406 (formerly Article 410 of the Ashton Project No. 2381). (a) In accordance with the provisions of this article, the licensee shall have the authority to

grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any noncomplying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) noncommercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline.

To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) nonproject overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Energy Projects, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(N) The licensee for the St. Anthony Project No. 14552 shall serve copies of any Commission filing required by this order on any entity specified in the order to be consulted on matters relating to that filing. Proof of service on these entities must accompany the filing with the Commission.

(O) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l* (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2013). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. Failure to file a request for rehearing shall constitute acceptance of this order.

Charles K. Cover, P.E. Chief, Project Review Branch Division of Hydropower Administration and Compliance

Form L-12 (October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED MINOR PROJECT AFFECTING THE INTERESTS OF INTERSTATE OR FOREIGN COMMERCE

<u>Article 1</u>. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

<u>Article 2</u>. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: <u>Provided</u>, <u>however</u>, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

<u>Article 4</u>. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and

supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

<u>Article 6</u>. The Licensee shall install and thereafter maintain gages and streamgaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

<u>Article 7</u>. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

<u>Article 8</u>. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

<u>Article 9</u>. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

<u>Article 10</u>. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive

reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

<u>Article 11</u>. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 12. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

<u>Article 13</u>. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: <u>Provided</u>, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

<u>Article 14</u>. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil

erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon the request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

<u>Article 15</u>. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 16. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

<u>Article 17</u>. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

<u>Article 18</u>. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this order, ______ this _____ day of _____, 20___, has caused its corporate name to be signed hereto by _______, its President, and its corporate seal to be affixed hereto and attested by _______ its Secretary, pursuant to a resolution of its Board of Directors duly adopted on the ______ day of ______, 20____, a certified copy of the record of which is attached hereto.

By_____

Attest:

Secretary	
(Executed in triplicate	

Document	Content(s)
P-2381-06	53.DOC

153 FERC ¶ 62,052 UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp

Project No. 2381-056

ORDER APPROVING REVISED WILDLIFE ENHANCEMENT PLAN AND AMENDING PROJECT BOUNDARY UNDER ARTICLE 405

(Issued October 23, 2015)

1. On July 17, 2015, PacifiCorp, licensee for the Ashton Hydroelectric Project, FERC No. 2381, filed a request to revise its approved Wildlife Enhancement Plan (WEP) to replace preservation leases on certain parcels with a conservation easement applying to differing parcels in some areas.¹ The licensee filed additional information regarding this request on September 25, 2015. The project is located on the Henry's Fork of the Snake River, in Fremont County, Idaho and occupies federal land administered by the Bureau of Land Management.

Proposed Plan Revision

2. Under the approved WEP, the licensee manages a wetland complex and two goose forage areas within the project boundary under a patchwork of fee ownership, conservation easements, and wetland preservation leases. The licensee recently noted that the preservation lease terms were ten years short of the license term. Rather than renew the expiring leases, the licensee proposes to participate in the acquisition of a perpetual conservation easement that would overlap two of the existing expiring preservation leases, and include portions of two additional parcels covered by a licensee-funded conservation easement. This conservation easement, known as the Baum Conservation Easement (CE), would include additional wetland and open space lands beyond those currently protected. No other components of the WEP are affected by this proposal.

3. Two previously preserved riparian wetland buffer areas (16.5 acres) are included in the Baum CE, along with additional lands funded by the licensee, for a total of

¹ Order Modifying and Approving Revised Wildlife Enhancement Plan issued September 10, 1996 (76 FERC ¶62,176).

approximately 72 acres.² The only areas that will no longer be covered by preservation leases or other conservation measures are two areas, totaling approximately 19.5 acres, previously held with the intent of providing pasture for goose habitat. The licensee states that if this proposal is approved, an updated WEP will be prepared and filed, prior to or with the next five year report of activities that is due March 31, 2016. Also, if approved, the licensee will change the project boundary from encompassing the existing preservation lease boundaries to encompass the boundary of the new PacifiCorp-funded CE. This would remove the approximately 19.5 acres currently preserved for goose forage, and add approximately 55.5 acres of PacifiCorp-funded CE lands (16.5 of the 72acre CE lands are already in the project boundary). The licensee states that updated exhibit G maps reflecting this change will be filed by the licensee on or before January 29, 2016, in conjunction with final exhibit G maps submitted for the resolution of property rights at the project.³

The licensee consulted with the Idaho Department of Fish and Game (Idaho 4. DFG) and the U.S. Fish and Wildlife Service (FWS) regarding this proposed change to the WEP, as required by article 405. In letters dated July 10 and July 17, 2015, the Idaho DFG and FWS, respectively, state that the proposed amendment to the WEP is acceptable, but that the CE should contain a grazing management plan to ensure the riparian and wetland habitats remain viable for wildlife and migratory birds, as intended in the original WEP. The licensee filed the draft Baum CE and draft grazing management plan on September 25, 2015.

According to the grazing management plan, activities are to be conducted in a 5. manner that: maintains or improves, but does not impair or diminish, the ecological and range conditions of the properties as documented in baseline reports; is consistent with the best livestock management and agricultural practices in the general geographic area of the properties; and is consistent with all applicable laws, rules, and regulations. Under the grazing management plan, the property management goals are: to maintain and enhance herbaceous vegetation production for cattle grazing and wildlife habitat; to protect and enhance native plant communities to benefit priority species, particularly within the pond and adjacent wetland areas; and to control noxious weeds and invasive species.

² The entire Baum CE applies to 424 acres; 72 of those would be funded by PacifiCorp.

³ See licensee's six-month progress report concerning resolution of property rights and preparation of final Exhibit G maps filed July 1, 2015.

Discussion and Conclusion

6. The licensee's proposal to replace expiring preservation easements with a perpetual CE would protect and preserve more habitat acreage than the previous arrangement, and the new acreage to be protected includes high quality riparian wetland habitat for wildlife and birds. Regarding the pasture lands currently preserved and managed for goose habitat that will no longer be under a preservation easement (approximately 19.5 acres), the WEP five-year summary report, filed March 29, 2011, indicates that no geese or signs of goose-use have ever been observed by PacifiCorp staff or the lessee that manages this property. The wetlands and wetland buffer areas would be included in the Baum CE, so the habitat value of these areas will be protected and maintained under the proposed revised WEP.

7. The only project purpose served by the 19.5 acres that would be removed from the project boundary under the proposed revision to the WEP is to preserve lands for goose forage (these lands were brought into the project boundary when the WEP was approved for that purpose). Under the proposed revised WEP, that purpose will be fulfilled by higher quality wildlife habitat lands that will be added to the project boundary. Therefore, the proposed change to the project boundary is appropriate.

8. The licensee responded to agency comments by developing a grazing management plan for the lands covered by the Baum CE. The implementation of the proposed grazing management plan should ensure that the quality of the wetland habitat and buffer area is maintained throughout the license term.

9. Because the Baum CE filed with the licensee's proposal is a draft, any details that significantly change in the final Baum CE would need to be approved by the Commission. If minor, they may be adjusted or corrected, as appropriate, with the submittal of the five year report due to the Commission on March 31, 2016. For the reasons discussed above, the licensee's request to revise the WEP should be approved.

The Director orders:

(A) The revised wildlife enhancement plan, , filed on July 17, 2015, and supplemented on September 25, 2015, by PacifiCorp, under article 405 of the license for the Ashton Hydroelectric Project FERC No. 2381, and associated project boundary revision, is approved.

(B) The licensees shall file, by January 29, 2016, for Commission approval, revised exhibit G drawings affected by the revision to the wildlife enhancement plan and project boundary approved in paragraph (A). The Exhibit G drawing must comply with sections 4.39 and 4.41 of the Commission's regulations.

(C) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days of the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l* (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2015). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensees' failure to file a request for rehearing shall constitute acceptance of this order.

Robert J. Fletcher Chief, Land Resources Branch Division of Hydropower Administration and Compliance

Document Content(s)
P-2381-056.DOC

156 FERC ¶ 62,044 UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp

Project No. 2381-067

ORDER APPROVING REVISED EXHIBITS A AND G AND REVISING ANNUAL CHARGES

(Issued July 19, 2016)

1. On May 26, 2016, and supplemented July 5, 2016, PacifiCorp, licensee for the Ashton-St. Anthony Project No. 2381, filed revised Exhibits A and G pursuant to ordering paragraph (H) of the September 13, 2013 Order Amending License, Designating New Docket Number, Approving Transfer of License and Revising Annual Charges.¹ The project is located on the Henry's Fork Snake River in Freemont County, Idaho and occupies federal land administered by the U.S. Bureau of Land Management (BLM).

Background

2. The Commission licensed the project on August 3, 1987 with two developments, Ashton and St. Anthony.² On June 11, 2013, the licensee filed a request to separate the two project developments and transfer the St. Anthony development to a new owner. The Commission granted this request in the September 13, 2013 Order, creating the St. Anthony Project No. 14552 and leaving the Ashton development as the Ashton Project with the existing project number.

3. Ordering paragraph (H) of the September 13, 2013 Order requires the licensee to file revised Exhibits A, F, and G to reflect the administrative changes to the project. The revised Exhibits A and F were approved by an order issued on March 13, 2014.³ However, the Commission granted the licensee extensions of time to file the Exhibit G drawings on November 22, 2013, July 14, 2014, and January 29, 2016. On September 12, 2014, the licensee filed interim Exhibit G drawings, which the Commission approved on March 12, 2015.⁴

¹ *PacifiCorp, St. Anthony Hydro LLC*, 144 FERC ¶ 62,239 (2013).

² Utah Power & Light Co, 40 FERC ¶ 61,139 (1987).

³ PacifiCorp, 146 FERC ¶ 62,182 (2014).

⁴ *PacifiCorp*, 150 FERC ¶ 62,145 (2015).

Licensee's Filings

4. In its May 26, 2016 filing, the licensee included a revised Exhibit A. Although the licensee has filed an Exhibit A to comply with the September 13, 2013 Order, the licensee states that it revised the exhibit to clarify elevations and datums, correct the surface area and storage volume of the reservoir, and update project features and reporting of federal lands.

5. The licensee's July 5, 2016 supplemental filing included revised Exhibit G drawings for the project. The licensee states that as a result of the extensions of time, it has been able to research land rights and obtain necessary interest in lands, where needed. The licensee states that it now has all necessary rights to lands within the project boundary.

Review

6. The licensee's May 26, 2016 Exhibit A, indicates the installed capacity of the project is 6,700 kilowatts (kW). However, the authorized installed capacity of the project, according to Commission records, is 6,850 kW. A review of previous Commission orders and inspection reports indicate that units 2 and 3 have capacities of 2,000 kW each, whereas unit 1 has a nameplate capacity of 2,700 kW, but an as-built capacity of 2,850 kW as described in the November 16, 1993 Order Amending License, Approving As-built Exhibits, and Revising Annual Charges.⁵ Therefore, we will accept the Exhibit A but leave the current authorized installed capacity of 6,850 kW unchanged.

7. The Commission's records show that the project occupies 0.39 acres of federal land. However, the revised Exhibit A and Exhibit G drawings indicate the project occupies 15.6 acres of federal land. Our review of the drawings indicate the new value is correct and we will revise license Article 201, which provides for annual charges based on the amount of federal land utilized by the project, to reflect the change.

8. The licensee's May 26, 2016 Exhibit A, adequately describes the project and should be approved. We have also reviewed the licensee's Exhibit G drawings filed on July 5, 2016, and determined that they conform to the Commission's regulations and should be approved. In ordering paragraph (C) we are requiring the licensee to file the exhibit drawings in electronic format. Because these exhibits replace the entire existing set of Exhibit G drawings, we are re-starting the exhibit numbering at G-1.

⁵ *PacifiCorp*, 65 FERC ¶ 62,146 (1993).

The Director orders:

(A) License Article 201 is revised to read as follows:

The licensee shall pay the United States the following annual charges, as determined in accordance with the provisions of the Commission's regulations in effect from time to time:

(a) effective as of the issuance date of this order, to reimburse the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 6,850 kilowatts.

(b) effective as of the issuance date of this order, for the purpose of recompensing the United States for the use, occupancy, and enjoyment of 15.6 acres of its lands (other than for transmission line right-of-way), a reasonable annual charge as determined by the Commission in accordance with its regulations, in effect from time to time.

(B) PacifiCorp's Exhibit A, filed on May 26, 2016 is approved, superseding the previous Exhibit A.

(C) The following exhibit drawings, filed on July 5, 2016, for the Ashton Project, conform to the Commission's rules and regulations, and are approved and made part of the license, as labeled and numbered below. The superseded drawings are removed from the license.

EXHIBIT	FERC DRAWING No.	SUPERSEDED FERC DRAWING No.	FERC DRAWING TITLE
G-1	P-2381-73	P-2381-34 P-2381-35 P-2381-54 P-2381-57 P-2381-58 P-2381-59 P-2381-60 P-2381-71 P-2381-72	Project Boundary Map
G-2	P-2381-74		Project Boundary Description Part 1 of 2
G-3	P-2381-75		Project Boundary Description Part 2 of 2

(D) Within 45 days of the date of issuance of this order, as directed below, the licensee must file two sets of the approved exhibit drawings, Form FERC-587, and GIS

data in electronic file format on compact disc with the Secretary of the Commission, ATTN: OEP/DHAC.

Digital images of the approved exhibit drawing must be prepared in electronic format. Prior to preparing each digital image, the FERC Project-Drawing Number (i.e., P-2381-73, etc.) must be shown in the margin below the title block of the approved drawing. Each drawing must be a separate electronic file, and the file name must include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this order, and file extension in the following format [P-2381-73, G-1, Project Boundary Map, MM-DD-YYYY.TIF].

Each Exhibit G drawing that includes the project boundary must contain a minimum of three known reference points (i.e., latitude and longitude coordinates, or state plane coordinates). The points must be arranged in a triangular format for GIS georeferencing the project boundary drawing to the polygon data, and must be based on a standard map coordinate system. The spatial reference for the drawing (i.e., map projection, map datum, and units of measurement) must be identified on the drawing and each reference point must be labeled. In addition, a registered land surveyor must stamp each project boundary drawing. All digital images of the exhibit drawings must meet the following format specification:

IMAGERY - black & white raster file FILE TYPE – Tagged Image File Format, (TIFF) CCITT T.6 (CCITT Group 4 fax encoding) RESOLUTION – 300 dpi desired, (200 dpi min) DRAWING SIZE FORMAT – 22" x 34" (min), 24" x 36" (max) FILE SIZE – less than 1 MB desired

A third set and a copy of Form FERC-587 must be filed with the Bureau of Land Management office at the following address:

Bureau of Land Management Land Services Section (ID-943A) 1387 S. Vinnell Way Boise, ID 83709-1657

Form FERC-587 is available through the Commission's website at the following URL: <u>http://www.ferc.gov/docs-filing/forms/form-587/form-587.pdf</u>. Although instruction no. 3 requires microfilm copies of the project boundary maps in aperture card format, electronic copies that meet the digital specifications in this ordering paragraph should be substituted. If the FERC-587 cannot be downloaded from the Internet, a hard copy may be obtained by mailing a request to the Secretary of the Commission.

b) Project boundary GIS data must be in a georeferenced electronic file format (such as ArcView shape files, GeoMedia files, MapInfo files, or a similar GIS format). The filing must include both polygon data and all reference points shown on the individual project boundary drawings. An electronic boundary polygon data file(s) is required for each project development. Depending on the electronic file format, the polygon and point data can be included in single files with multiple layers. The georeferenced electronic boundary data file must be positionally accurate to ± 40 feet in order to comply with National Map Accuracy Standards for maps at a 1:24,000 scale. The file name(s) must include: FERC Project Number, data description, date of this license, and file extension in the following format [P-2381, boundary polygon/or point data, MM-DD-YYYY.SHP]. The filing must be accompanied by a separate text file describing the spatial reference for the georeferenced data: map projection used (i.e., UTM, State Plane, Decimal Degrees, etc.), the map datum (i.e., North American 27, North American 83, etc.), and the units of measurement (i.e., feet, meters, miles, etc.). The text file name must include: FERC Project Number, data description, date of this order, and file extension in the following format [P-2381, project boundary metadata, MM-DD-YYYY.TXT].

In addition, for those projects that occupy federal lands, a separate georeferenced polygon file(s) is required that identifies transmission line acreage and non-transmission line acreage affecting federal lands for the purpose of meeting the requirements of 18 CFR §11.2. The file(s) must also identify each federal owner (e.g., BLM, USFS, Corps of Engineers, etc.), land identification (e.g., forest name, Section 24 lands, national park name, etc.), and federal acreage affected by the project boundary. Depending on the georeferenced electronic file format, the polygon, point, and federal lands data can be included in a single file with multiple layers.

(E) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l* (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2015). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Kelly Houff Chief, Engineering Resources Branch Division of Hydropower Administration and Compliance

Document Content(s)	
P-2381-067.DOCX1	

158 FERC ¶ 62,126 UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp

Project No. 2381-056

ORDER APPROVING UPDATED WILDLIFE ENHANCEMENT PLAN UNDER ARTICLE 405

(Issued February 23, 2017)

1. On September 22, 2016, PacifiCorp, licensee for the Ashton Hydroelectric Project, FERC No. 2381, filed an updated wildlife enhancement plan (plan) to replace its previous plan that was approved on September 10, 1996.¹ The project is located on the Henry's Fork of the Snake River in Fremont County, Idaho, and occupies federal land administered by the Bureau of Land Management.

2. The plan update applies to all lands within the project boundary and includes licensee fee-owned lands, the reservoir to maximum full pool, leased conservation lands, and conservation easements held or funded by the licensee. The updated plan is designed to supersede the currently approved plan. The following measures are proposed under the updated plan: (1) install fencing to control cattle grazing on the reservoir shoreline and wetland complex; (2) install waterfowl nesting structures; (3) provide and maintain 15 raptor perches and 11 osprey nest platforms around Ashton Reservoir; (4) secure preservation and conservation easements at Ashton wetland complex; (5) preserve north end of Ashton wetland complex through leasing grazing rights; (6) obtain temporary conservation easement for 23 acres of shoreline and perpetual conservation easement for 4.05 acres of shoreline to exclude grazing; (7) acquisition of additional land for conservation; and (8) annual control of noxious weeds.

3. Most of these elements were in the original wildlife enhancement plan, but under the updated plan, certain specific enhancements measures will change as follows: mileage and locations of exclusionary grazing fencing; number of bald eagle and osprey nest platforms; wetland and riparian conservation measures; addition of waterfowl nesting and noxious weed control measures; discontinuation of tree and shrub plantings; and discontinuation of goose forage/nesting measures (these measures are replaced with

¹ Order Modifying and Approving Revised Wildlife Enhancement Plan (76 FERC ¶62,176).

wetland conservation easements²). The plan includes a comprehensive implementation schedule for the enhancement and preservation measures proposed in this plan update. PacifiCorp will continue to annually monitor and maintain the enhancement measures proposed under this plan, and as under the previous plan, will submit a five-year summary report by December 31, 2020.

4. The licensee consulted with the Idaho Department of Fish and Game (Idaho DFG) and the U.S. Fish and Wildlife Service (FWS) regarding the proposed changes in the plan update. In letters dated August 16, 2016 and September 12, 2016, the FWS and Idaho DFG, respectively, approved the proposed updated plan.

5. The licensee's updated wildlife enhancement plan incorporates the changes to the measures being undertaken to protect and enhance the wetlands and riparian habitat areas at the project. Approving this plan update ensures that the licensee's actions adapt to new information and changing conditions at the project to best protect wildlife habitat in the project area. The plan update satisfies the requirements of article 405, and it should be approved.

The Director orders:

(A) The revised wildlife enhancement plan, filed on September 22, 2016, by PacifiCorp, under article 405 of the license for the Ashton Hydroelectric Project FERC No. 2381, is approved.

(B) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days of the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l* (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2016). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Robert J. Fletcher Land Resources Branch Division of Hydropower Administration and Compliance

² The Order Approving Revised Wildlife Enhancement Plan and Amending Project Boundary Under Article 405 issued on October 23, 2015 (153 FERC \P 62,052) approved the discontinuance of goose forage and nesting measures and change in wetland conservation easements.

Document Content(s)	
D-2381-056.DOC	L

165 FERC ¶ 62,069

UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp

Project No. 2381-069

ORDER AMENDING RECREATION AREA IMPROVEMENT PLAN PURSUANT TO ARTICLE 406

(Issued October 31, 2018)

1. On September 6, 2018, and supplemented on October 26, 2018, PacifiCorp (licensee) filed recreation as-built site plan drawings for the Ashton Hydroelectric Project No. 2381.¹ The project is located on the Henry's Fork of the Snake River in Fremont County, Idaho. The project occupies lands administered by the U.S. Bureau of Land Management.

2. Article 406 of the license requires the licensee to implement the recreation area improvement plan described in the Report on Recreational Resources, filed December 31, 1984, as Section 5 of the Exhibit E (Environmental Report), pages E-49 through E-59. The plan provided for improvements to a single, existing recreation site (i.e., the Ashton Reservoir Recreation Site), which provides opportunities for boat launching, fishing, and picnicking on Ashton Reservoir.

3. On December 20, 1988, the licensee filed recreation as-built drawings for the site, which were subsequently approved.² Later, in a letter filed September 29, 2011, the licensee notified the Commission that it had been working with the Idaho Department of Fish and Game (IDF&G) and Fremont County on upgrades (e.g., parking improvements, boat ramp upgrades, etc.) to the site, which would be performed by the IDF&G. The licensee's filing included design drawings for the upgrades and stated that it would file as-built drawings by June 1, 2012. In our December 15, 2011 letter responding to the licensee's filing, we acknowledged the licensee's notification of intent to file revised as-built drawings. The licensee did not file its drawings by June 1, 2012, but now has filed the drawings in its September 6, 2018 filing. The licensee's October 26, 2018 supplemental filing made minor corrections to the drawings and should supersede the September 6, 2018 filing.

¹ Order Issuing New License (40 FERC ¶ 61,139), issued August 3, 1987.

² Order Approving As-Built Exhibit (51 FERC ¶ 62,163), issued May 21, 1990.

4. The licensee's drawings depict the Ashton Reservoir Recreation Site (also known as the Ashton Reservoir Boat Launch) as it currently exists. Although the site layout differs from the original layout approved in Article 406 of the license, the site provides the same general recreation opportunities (i.e., boat launching, fishing, and picnicking) as originally required. In addition, the licensee's drawings depict an additional recreation site (i.e., the Fisherman's Access Area) which is was not originally included in its recreation area improvement plan. The Fisherman's Access Area is located on an island below Ashton Dam. The access road and bridge to the island were built in 1991 during improvements to the downstream face of the dam and have since become a popular local access point. The licensee provides a picnic table at this location.

5. The licensee's drawings include an overview drawing of the project showing the location of the two project recreation sites and a table that describes the recreation facilities located at each site. The drawings also reflect the layout and general upgrades at the Ashton Reservoir Recreation Site as well as improvements to the Fisherman's Access Area. The licensee's improvements to both recreation sites have occurred at different points in time but have not been formally included in the licensee's recreation area improvement plan. Thus, the licensee's filed as-built site plan drawings for the project constitute an application to amend the recreation area improvement plan. The constructed project recreation facilities represent an improvement to public recreational access to the project, have been in place for a number of years, and should be approved.

The Director orders:

(A) PacifiCorp's application to amend the recreation area improvement plan for the Ashton Hydroelectric Project No. 2381, filed on September 6, 2018, and supplemented on October 26, 2018, is approved.

(B) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825l (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2018). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensees' failure to file a request for rehearing constitutes acceptance of this order.

Robert J. Fletcher Land Resources Branch Division of Hydropower Administration

and Compliance

Document Content(s)
p-2381-069 order.DOCX1
Appendix E – Wildlife Species with the Potential to Occur in the Project Vicinity

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
Amphibians						
Columbia spotted frog (Rana luteiventris)	G4	S3, S4	Yes		Yes	Nearly always found near permanent slow moving or stagnant fresh water. Can move into uplands during wet weather, but often found near breeding ponds.
Northern leopard frog (<i>Lithobates</i> <i>pipiens</i>)	G5	S2	Yes		Yes	Often found near permanent slow or stagnant freshwater sites with rooted aquatic vegetation. Terrestrial habitat includes wet meadows and fields. Often winter under water.
Western toad (Anaxyrus boreas)	G4	S2	Yes			Occupy a wide variety of habitats where permanent slow moving or stagnant fresh water is available. Terrestrial habitat can vary widely but must include substrate or terrain features suitable for burrowing and hiding.
Birds		ſ				
American avocet (Recurvirostra americana)	G5	S3B, S3M	Yes	Yes	Yes	Habitat includes lowland marshes, mudflats, and ponds. Nests are placed in open flats on islands or along lake and marsh edges.
American bittern (Botaurus lentiginosus)	G4	S1B			Yes	Breeding habitat is primarily large marshes, lakes and pond edges, and other aquatic habitat that has patches of open water as well as tall emergent vegetation.
American dipper (Cinclus mexivanus)	G5	S 3		Yes	Yes	Found along montane streams, less often in ponds or lakes. Nests on raised sites over water.
American white pelican (Pelecanus erythrorhynchos)	G3	S3B	Yes	Yes	Yes	Often found in rivers, lakes, reservoirs, and open marshes. Roosting habitat includes islands and peninsulas. Nests are in open areas near vegetation and logs.
Bald eagle (Haliaeetus leucocephalus)	G5	S 5	Yes		Yes	Travel long distances through various habitat types to find food. Nests are typically located in large trees or along cliffs near water.

Table 1.	State-listed species w	with potential to occur	in the Project Area.
		r	J

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
Barrow's goldeneye (Bucephala islandica)	G5	S3B, S3N		Yes		Nests near lakes or ponds with dense vegetation, but can also nest in open or wooded areas. Nests are placed in tree cavities.
Black tern (Chlidonias niger)	G4	S2B	Yes		Yes	Breeding habitat includes marshes, sloughs, rivers, lakeshores, impoundments, or wet meadows with emergent vegetation and open water.
Black-billed magpie (Pica hudsonia)	G5	S 5		Yes	Yes	Often found in open habitats with scattered trees and open woodlands as well as urban areas. Nests are placed in bushes or trees.
Black-crowned night-heron (Nycticorax nycticorax)	G5	S2B, S2N	Yes		Yes	Found in either salt or freshwater aquatic habitat with emergent and overhanging vegetation. Nests are built on a platform in trees, on the ground, or on islands near water.
Black-necked stilt (<i>Himantopus</i> <i>mexicanus</i>)	G5	S4B	Yes	Yes	Yes	Foraging habitat includes shallow fresh or salt water with muddy substrate as well as wet marshes, mudflats, and flooded fields. Nests are located along the banks of shallow water.
Brewer's sparrow (Spizella breweri)	G5	S4B	Yes	Yes	Yes	Breeding habitat includes sagebrush with short grasses. Nests are placed in low sagebrush or shrubs.
Brown creeper (Certhia americana)	G5	S 4		Yes	Yes	Often found in forest, woodlands, floodplains, and swamps where they forage in the largest trees. Nests are typically placed behind loose bark or in small tree cavities.
California gull (Larus californicus)	G5	S3B, S2N	Yes		Yes	Found in a wide variety of salt and freshwater habitat types as well as urban areas where food is available. Nests are placed on the ground in open sandy or gravelly areas, often on islands.
Calliope hummingbird (Selasphorus calliope)	G5	S4B		Yes	Yes	Often found in open shrubby montane forest, meadows, and brushy areas. Nests are placed in trees at meadow edges or thickets along streams.

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
Caspian tern (Sterna caspia)	G5	S1B	Yes			Habitat includes coastal areas, estuaries, lakes, marshes, and rivers. Nests are placed on sandy or gravel beaches or large inland lakes.
Cinnamon teal (Anas cyanoptera)	G5	S3B		Yes	Yes	Often found along shallow lake margins, ponds, slow-moving streams, and marshes. Nests are built on the ground near water.
Clark's grebe (Aechmophorus clarkii)	G5	S2B	Yes		Yes	Found in marshes, lakes, and bays. Nests are located along tall plants in water near open water.
Columbian sharp-tailed grouse (Tympanuchus phasianellus columbianus)	G5	\$3	Yes		Yes	Habitat includes a mosaic of dense grasslands and shrublands as well as riparian areas. Nests are placed on the ground near dense herbaceous and shrub cover. The nearest lek to the reservoir is approximately 2 miles to the west. ⁵
Common loon (Gavia immer)	G5	S1B, S2N	Yes		Yes	Breeding habitat includes large lakes with shallow and deep water areas. Nests are placed on small islands or along the shoreline.
Dusky flycatcher (Empidonax oberholseri)	G5	S4B		Yes	Yes	Breeding habitat includes scrub, brushy areas, thickets with scattered trees and open coniferous forest, often near water. Nests are located in dense vegetation with high cover.
Eared grebe (Podiceps nigricollis)	G5	S1N, S2B			Yes	Often found in marshes, ponds, and lakes. Nests are placed in areas with temporary or permanent water, with the nest over shallow water.
Ferruginous hawk (Buteo regalis)	G4	S3B	Yes	Yes	Yes	Often utilize open grasslands, shrublands, pastures, and steppe habitats. They avoid high elevation and forested habitat. Nests can be located on the ground or in lone trees.
Forster's tern (Sterna forsteri)	G5	S2B	Yes		Yes	Occupy freshwater and saltwater habitat. Nests are placed on floating marsh plants, on old grebe nests, or in a depression near water.
Franklin's gull (<i>Larus pipixcan</i>)	G4 G5	S3B	Yes	Yes	Yes	Occupy a wide variety of salt and freshwater habitat types. Nesting takes

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
						place in freshwater marshes and lakes where nests are often floating structures anchored to emergent plants.
Golden eagle (Aquila chrysaetos)	G5	S 3		Yes	Yes	Found in a variety of habitat types, but generally open areas with abundant prey availability. Nests are often placed on rocky cliffs and ledges.
Grasshopper sparrow (Ammodramus savannarum)	G5	S3B		Yes	Yes	Found in grasslands with patches of bare ground and woody vegetation. Nests are often on the ground in dense cover.
Great egret (Ardea alba)	G5	S2B	Yes		Yes	Forage along streams, lakes, ponds, and shallow freshwater areas as well as in fields and meadows. Nests are primarily placed in tall trees near water.
Greater yellowlegs (Tringa melanoleuca)	G5	S3M			Yes	Commonly found in marshes, ponds, lakes, and stream margins. Nests are placed in muskeg and tundra habitat.
Greater sage- grouse (Centrocercus urophasianus)	G3	\$3	Yes		Yes	Found in the foothills, plains, and gentle mountain slopes with sagebrush. Leks are formed near high quality breeding habitat, which provides cover and food availability. The INHD identified several leks 5 to 10 miles west of the reservoir. ⁵
Hooded merganser (Lophodytes cucullatus)	G5	S2B, S2N	Yes	Yes	Yes	Typical habitat includes streams, lakes, swamps, and estuaries. Nests are in tree cavities in forested areas near water.
Horned grebe (Podiceps auritus)	G5	S2N			Yes	Occupy marshes, ponds, lakes, and slow moving streams. Nests are on small and large lakes and ponds in tall vegetation in shallow water.
Killdeer (Charadrius vociferus)	G5	S4B, S4N		Yes	Yes	Habitat is often open areas such as fields and meadows as well as urban lawns and parks. Nests are placed on the ground in open gravel areas.
Lark sparrow (Chondestes grammacus)	G5	S4B		Yes	Yes	Found in open habitat with scattered bushes and trees. Nests are placed on the ground or in low woody vegetation.

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
Least sandpiper (Calidris minutilla)	G5	S3M			Yes	Utilize wet meadows, mudflats, fields, lakes, and marshes. Nests are placed in mossy tundra.
Lesser scaup (Aythya affinis)	G5	\$3	Yes		Yes	Occupy fresh or saltwater ponds, lakes, or rivers. Nesting takes place in marshes, ponds, and small lakes where nests are placed near water in vegetation that provides cover.
Lesser yellowlegs (Tringa flavipes)	G5	S2M			Yes	Occupy marshes, ponds, lakes, and mudflats. Nests are placed in muskeg and tundra habitat.
Lewis's woodpecker (<i>Melanerpes</i> <i>lewis</i>)	G4	S3B	Yes	Yes	Yes	Breeding habitat is in open forest and woodlands with open canopies and a brushy understory. Nests are in natural tree cavities or old holes excavated by other woodpeckers.
Loggerhead shrike (<i>Lanius</i> <i>ludovicianus</i>)	G4	S 3		Yes	Yes	Often found in open country with occasional trees and shrubs or other conspicuous perch sites. Nests are placed in shrubs or trees.
Long-billed curlew (<i>Numenius</i> americanus)	G5	S2B	Yes	Yes	Yes	Foraging habitat includes open fields and mudflats. Breeding habitat includes prairies and grassy meadows, often near water. Nests are on the ground in dry prairies and moist meadows.
MacGillivray's warbler (Geothlypis tolmiei)	G5	S5B		Yes	Yes	Often found in dense shrubby areas and the undergrowth of coniferous forests, riparian thickets, and chapparal. Nests are located in bushes, saplings, or other dense underbrush.
Marbled godwit (<i>Limosa fedoa</i>)	G4	S2M				Found in marshes and floodplains as well as beaches and mudflats. Nests on the ground in grassy prairies and pastures, often near water.
Merlin (Falco columbarius)	G5	S4	Yes		Yes	Occupy a wide variety of habitat types, including marshy areas, deserts, coastal areas, open woodlands, and fields. Nesting takes place in conifer woodlands or wooded prairies, often near water.
Northern pintail (Anas acuta)	G5	S4B, S4N	Yes			Breed along lakes, rivers, marshes, and ponds in grasslands, open forests and

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
						cultivated fields. Often associated with seasonal and semipermanent wetlands. Prefer shallow, open freshwater for foraging.
Olive-sided flycatcher (Contopus cooperi)	G4	S3B		Yes	Yes	Found in a variety of forest and woodland habitat and wetlands. Nests are placed in coniferous trees.
Peregrine falcon (Falco peregrinus anatum)	G4	S2B	Yes		Yes	Habitat typically includes open areas including farmlands, meadows, marshes, lakeshores, and urban areas near rocky cliffs or buildings suitable for nesting.
Pied-billed grebe (Podilymbus podiceps)	G5	\$3			Yes	Breeding habitat includes ponds, sloughs, marshes, lakes, and wetlands. Nests are placed in shallow water with dense vegetation.
Prairie falcon (Falco mexicanus)	G5	S4		Yes		Found in open habitat in mountainous areas, generally prairies and plains. Nests are placed in holes or sheltered rock ledges.
Redhead (Aythya americana)	G5	S 4		Yes	Yes	Found in large marshes, lakes, lagoons, rivers, and bays. Nests are placed on the ground in dense brush near water.
Red-necked grebe (<i>Podiceps</i> grisegena)	G5	S2B	Yes		Yes	Found in both salt and freshwater habitats during winter and migration. Breeding habitat includes freshwater lakes or shallow marshy areas with emergent vegetation. Nests are placed in reeds near shallow lakes.
Ring-billed gull (Larus delawarensis)	G5	S2B, S2N			Yes	Habitat includes a wide variety of aquatic habitat and urban environments. Nests are placed on rocky, sandy, or grassy islets or isolated shores in low vegetation.
Rufous hummingbird (Selasphorus rufus)	G5	S4B		Yes	Yes	Breeding habitat includes coniferous forest, brushy hillsides, scrubby areas, and meadows with nectar flowers. Nests are in trees, shrubs, or on vines.
Sage thrasher (Oreoscoptes montanus)	G5	S3B		Yes	Yes	Breeding habitat includes sagebrush and arid habitats with high shrub cover. Nests are located in shrubs near the ground.

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
Sagebrush sparrow (Artemisiospiza nevadensis)	G5	S3B		Yes	Yes	Found in open, sagebrush and shrubby habitat. Nests are placed in shrubs.
Sandhill crane (Grus canadensis)	G5	S3B	Yes	Yes	Yes	Breeding habitat is typically open grasslands, marshes, along the edges of lakes and ponds, and river banks. Nests are generally located on the ground near water or within shallow water.
Short-eared owl (Asio fammeus)	G5	\$3		Yes	Yes	Habitat includes large areas of open habitat with low vegetation for both nesting and foraging. Nests are placed on the ground in small depressions.
Snowy egret (Egretta thula)	G5	S1B	Yes		Yes	Often found in marshes, lakes, ponds, lagoons, and shallow coastal habitat. Nests are placed in trees or shrubs near other water birds.
Sora (Porzana carolina)	G5	S1N, S4B			Yes	Occupy shallow freshwater wetlands, wet meadows, and flooded fields. Nests are placed above the water in vegetation, often near open water.
Spotted sandpiper (Actitis macularia)	G5	S3B			Yes	Often use seacoasts and shorelines of lakes, ponds, streams, and marshes, especially those with wood or debris. Nests are located on the ground near freshwater in open and wooded areas.
Swainson's hawk (<i>Buteo swainsoni</i>)	G5	S5B		Yes	Yes	Occupy open habitat including savannah, open woodlands, and agricultural areas. Nests are placed in solitary trees or large bushes.
Trumpeter swan (Cygnus buccinator)	G4	S1B, S2N	Yes	Yes	Yes	Habitat includes ponds, lakes, and marshes with tall emergent vegetation. Nests are on a large plant mass near or on water.
Upland sandpiper (Bartramia longicauda)	G5	S1B	Yes			Require extensive areas of open short grassland habitat. Nests are located in dry prairies, meadows, and pastures, or within dry patches in wet meadows.
Virginia rail (Rallus lomicola)	G5	S2N, S3B			Yes	Generally utilize freshwater habitat, although occasionally found in brackish marshes. Emergent and shoreline

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
						vegetation is as important as open water. Nests are placed in dense vegetation next to open water.
Western grebe (Aechmophorus occidentalis)	G5	S2B	Yes	Yes	Yes	Occupy marshes, lakes, and bays. Nests are located on freshwater ponds and lakes with large areas of open water. Nests are located in or close to deep water on living vegetation.
White-faced ibis (<i>Plegadis chihi</i>)	G5	S2B	Yes	Yes	Yes	Found in marshes, swamps, ponds, and rivers. Nests are placed in low trees or along the ground in marshy areas.
Willet (Tringa semipalmata)	G5	S3B			Yes	Found in many aquatic habitat types with shallow water and mudflats, as well as open grasslands. Nests are placed on the ground in open areas, including beaches and islands, or in short grasses near water.
Willow flycatcher (<i>Empidonax</i> traillii)	G5	S4B		Yes	Yes	Requires brushy willow habitat within riparian areas for breeding and nesting. Often found in thickets and open second growth near wetlands.
Wilson's phalarope (Phalaropus tricolor)	G5	S4B	Yes		Yes	Breeding habitat includes shallow water in marshes and wet meadows. Foraging habitat includes shallow water and mudflats. Nests are placed on the ground near water.
Yellow warbler (Setophaga petechia)	G5	S5B		Yes	Yes	Often found in open scrub, second- growth woodlands, thickets, farmlands, and areas near open water. Nests are found in bushes, saplings, or large trees.
Invertebrates				-		
A mayfly (Ameletus sparsatus)	G4	S3	Yes			Found in large, moderately flowing rivers and streams.
Ashy pebblesnail (Fluminicola fuscus)	G2	S 1	Yes		Yes	Found along small and large rivers with swift currents and gravel or boulder substrate.
Gillette's checkerspot (Euphydryas gillettii)	G3	S2	Yes			Habitat includes valleys, open wooded areas in mountains and glades, and areas near streams.

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
Kriemhild kritillary (Boloria kriemhild)	G3 G4	S2	Yes			Occupy mountain meadows, streamsides, and forest edges.
Rustic pondsnail (Stagnicola hinkleyi)	G2	S2	Yes		Yes	Found in freshwater habitats.
Western pearlshell (Margaritifera falcata)	G4 G5	S 2	Yes			Occupy cold and clean creeks and rivers that support salmon populations.
Mammals						
Big brown bat (Eptesicus fuscus)	G5	S 3				Occupy a wide variety of habitat types, including riparian areas. Roosts are in buildings, bridges, or hollow trees.
California Myotis (<i>Myotis</i> californicus)	G5	S2	Yes			Found in a wide variety of habitat types across a broad range. Roosts are generally in crevices, sheletered trees, caves, and infrastructure.
Gray wolf (<i>canis lupus</i>)	G4 G5	S4	Yes			Habitat generalist, but prefers areas with little development and roads.
Long-eared myotis (<i>Myotis</i> <i>evotis</i>)	G5	\$3				Occupy woodlands, shrublands, forests, meadows, wooded streams, and areas with open water. Roots are often in rock crevices or buildings.
Long-legged myotis (<i>Myotis</i> <i>volans</i>)	G5	S3				Primarily found in mountainous areas with coniferous trees, but also found in riparian areas and desert habitat. Roots are in tree hollows and under loose bark, rock crevices, or buildings.
North American wolverine (<i>Gulo</i> gulo luscus)	G4	S1	Yes		Yes	Habitat includes alpine and high elevation arctic tundra with boreal forests. Dispersal habitat can include highly atypical habitat, including low elevation areas.
Silver-haired bat (Lasionycteris covtivagans)	G3 G4	S 3				Found in forested areas adjacent to lakes, ponds, or streams, including disturbed areas. Roosts are located in dead trees and tree cavities.

Species Name	Global Rank ^a	State Rank ^b	SWAP ^c	PIF ^d	Records Near Project Area ^e	Habitat Requirements ^f
Townsend's big- eared bat (Corynorhinus townsendii)	G4	S 3	Yes			Occupy a wide range of forested, grassland, and mesic habitat types. Maternity and hibernation habitat includes caves and old mining tunnels.
Western small- footed myotis (Myotis ciliolabrum)	G5	\$3				Found in a variety of habitat types, including deserts, mesic habitat, forests, riparian areas, and cliffs or outcrops. Maternity colonies are often in old buildings or in cracks in rocky outcrops.
Wyoming ground squirrel (Urocitellus elegans)	G5	S 3	Yes			Occupy upland slopes with dry grasslands, shrub steppe, or sagebrush. Soils must be suitable for digging burrows.
Yuma myotis (Myotis yumanensis)	G5	S 3				Closely associated with water, including wetlands, riparian areas, moist woodlands, and forests. Roosts are in caves, rock crevices buildings and bridges.

^a Global rank definitions: G1: Critically imperiled; G2: Imperiled; G3: Vulnerable; G4: Apparently Secure; G5: Secure.

^b State rank indicator: S1: Critically imperiled; S2: Imperiled; S3: Rare or uncommon; S4: Not rare and apparently secure; S5: Demonstrably widespread, abundant and secure; SNA: State rank not applicable; A: Accidental; B: Breeding population; M: Only applies when migrant occurs in an irregular, transitory, and dispersed manner. Occurrences cannot be defined from year-to-year; N: Non-breeding population; ?: Uncertainty exists about the state rank.

^c Species listed in SWAP.

^d PIF high priority species.

^e Based on data from INHD (2021)

^f Information from Nature Serve (2021).

Table 2.Mammal species that occur or have the potential to occur in the Project area

Common Name	Scientific Name
American badger	Taxidea taxus
American beaver	Castor canadensis
American black bear	Ursus americanus
American mink	Vison vison
American water shrew	Sorex palustris
Black-tailed jackrabbit	Lepus californicus
Bobcat	Lynx rufus

Common Name	Scientific Name
Bushy-tailed woodrat	Neotoma cinerea
Common muskrat	Ondatra zibethicus
Coyote	Canis latrans
Dwarf shrew	Sorex nanus
Dusky shrew	Sorex obscurus
Elk	Cervus canadensis
Fringed myotis	Myotis thysanodes
Golden-mantled ground squirrel	Callospermophilus lateralis
Great basin pocket mouse	Perognathus parvus
Hoary bat	Lasiurus cinereus
Idaho pocket gopher	Thomomys idahoensis
Least chipmunk	Tamias minimus
Little brown myotis	Myotis lucifugus
Long-tailed vole	Microtus longicaudus
Long-tailed weasel	Mustela frenata
Masked shrew	Sorex cinereus
Meadow vole	Microtus pennsylvanicus
Merriam's shrew	Sorex merriami
Montane vole	Microtus montanus
Moose	Alces americanus
Mountain cottontail	Sylvilagus nuttallii
Mountain lion	Puma concolor
Mule deer	Odocoileus hemionus
North American deer mouse	Peromyscus maniculatus
North American porcupine	Erethizon dorsatum
Northern grasshopper mouse	Onychomys leucogaster
Northern pocket gopher	Thomomys talpoides
Northern raccoon	Procyon lotor
Northern river otter	Lontra canadensis
Ord's kangaroo rat	Dipodomys ordii
Pronghorn	Antilocapra americana
Pygmy rabbit	Brachylagus idahoensis

Common Name	Scientific Name
Red fox	Vulpes vulpes
Red squirrel	Tamiasciurus hudsonicus
Sagebrush vole	Lemmiscus curtatus
Short-tailed weasel	Mustela erminea
Snowshoe hare	Lepus americanus
Southern red-backed vole	Myodes gapperi
Striped skunk	Mephitis mephitis
Uinta ground squirrel	Urocitellus armatus
Vagrant shrew	Sorex vagrans
Water vole	Microtus richardsoni
Western harvest mouse	Reithrodontomys megalotis
Western jumping mouse	Zapus princeps
Western spotted skunk	Spilogale gracilis
White-tailed deer	Odocoileus virginiauns
White-tailed jackrabbit	Lepus townsendii
Yellow-bellied marmot	Marmota falviventris
Yellow-pine chipmunk	Tamias amoenus

 Table 3.
 Amphibian species that occur or have the potential to occur in the Project area.

Common Name	Scientific Name
Boreal chorus frog	Pseudacris maculata
Western tiger salamander	Ambystoma mavortium

Table 4.Reptile species that occur or have the potential to occur in the Project area.

Common Name	Scientific Name
Common garter snake	Thamnophis sirtalis
Gopher snake	Pituophis catenifer
North American racer	Coluber constrictor
Northern rubber boa	Charina bottae
Pygmy short-horned lizard	Phrynosoma douglasii
Sagebrush lizard	Sceloporus graciosus
Terrestrial gartersnake	Thamnophis elegans
Western rattlesnake	Crotalus oreganus

Common Name	Scientific Name
American coot	Fulica americana
American crow	Corvus brachyrhynchos
American golden plover	Pluvialis dominica
American goldfinch	Spinus tristis
American kestrel	Falco sparverius
American pipit	Anthus rubescens
American redstart	Setophaga ruticilla
American robin	Turdus migratorius
American three-toed woodpecker	Picoides dorsalis
American tree sparrow	Spizella arborea
American wigeon	Anas americana
Baird's sandpiper	Calidris bairdii
Bank swallow	Riparia riparia
Barn owl	Tyto alba
Barn swallow	Hirundo rustica
Belted kingfisher	Megaceryle alcyon
Black-bellied plover	Pluvialis squatarola
Black-capped chickadee	Poecile atricapillus
Black-chinned hummingbird	Archilochus alexanderi
Black-headed grosbeak	Pheucticus melanocephalus
Black-necked stilt	Himantopus mexicanus
Black-throated sparrow	Amphispiza bilineata
Blue-gray gnatcatcher	Polioptila caerulea
Blue-winged teal	Anas discors
Blue jay	Cyanocitta cristata
Bobolink	Dolichonyx oryzivorus
Bohemian waxwing	Bombycilla garrulus
Bonaparte's gull	Chroicecephalus philadephia
Brewer's blackbird	Euphagus cyanocephalus
Broad-tailed hummingbird	Selasphorus platycercus
Broad-winged hawk	Buteo platypterus

Table 5.Bird species that occur or have the potential to occur in the Project Area.

Common Name	Scientific Name
Brown-headed cowbird	Molothrus ater
Bufflehead	Bucephala albeola
Bullock's oriole	Icterus bullockii
Burrowing owl	Athene cunicularia
Cackling goose	Branta hutchinsii
Canada goose	Branta canadensis
Canvasback	Aythya valisineria
Canyon wren	Catherpes mexicanus
Caspian tern	Hydroprogne caspia
Cattle egret	Bubulcus ibis
Cedar waxwing	Bombycilla cedrorum
Chestnut-sided Warbler	Setophaga pensylvanica
Chipping sparrow	Spizella passerine
Clay-colored sparrow	Spizella pallida
Cliff swallow	Petrochelidon pyrrhonota
Common goldeneye	Bucephala clangula
Common grackle	Quiscalus quiscula
Common merganser	Mergus merganser
Common nighthawk	Chordeiles minor
Common poorwill	Phalaenoptilus nuttallii
Common raven	Corvus corax
Common redpoll	Acanthis flammea
Common tern	Sterna hirundo
Common yellowthroat	Geothlypis trichas
Cooper's hawk	Accipiter cooperii
Cordilleran flycatcher	Empidonax occidentalis
Dark-eyed junco	Junco hyemalis
Dickcissel	Spiza americana
Double-crested cormorant	Phalacrocorax auratus
Downy woodpecker	Picoides pubescens
Dunlin	Calidris alpina
Eastern kingbird	Tyrannus tyrannus

Common Name	Scientific Name
Eastern phoebe	Sayornis phoebe
Eurasian collared-dove	Streptopelia decaocto
Eurasian wigeon	Anas penelope
European starling	Sturnus vulgaris
Evening grosbeak	Coccothraustes vepertinus
Fox sparrow	Passerella iliaca
Gadwall	Anas strepera
Glaucous-winged gull	Larus glaucescens
Golden-crowned kinglet	Regulus satrapa
Grasshopper sparrow	Ammodramus savannarum
Gray catbird	Dumetella carolinensis
Gray jay	Perisoreus canadensis
Gray partridge	Perdix perdix
Great blue heron	Ardea herodias
Greater white-fronted goose	Anser albifrons
Great-tailed grackle	Quiscalus mexicanus
Green heron	Butorides virescens
Green-tailed towhee	Pipilo chlorurus
Green-winged teal	Anas crecca
Hairy woodpecker	Picoides villosus
Hammond's flycatcher	Empidonax hammondii
Harlequin duck	Histrionicus histrionicus
Harris's sparrow	Zonotrichia querula
Horned lark	Eremophila alpestris
House finch	Haemorhous mexicanus
House sparrow	Passer domesticus
House wren	Troglodytes aedon
Indigo bunting	Passerina cyanea
Lapland longspur	Calcarius lapponicus
Lark bunting	Calamospiza melanocorys
Lazuli bunting	Passerina amoena
Least flycatcher	Empidonax minimus

Common Name	Scientific Name
Lincoln's sparrow	Melospiza lincolnii
Long-billed curlew	Numenius americanus
Long-billed dowitcher	Limnodromus scolopaceus
Long-tailed duck	Clangula hyemalis
Mallard	Anas platyrhynchos
Marsh wren	Cistothorus palustris
Mountain bluebird	Sialia currucoides
Mountain chickadee	Poecile gambeli
Mourning dove	Zenaida macroura
Northern flicker	Colaptes auratus
Northern harrier	Circus cyaneus
Northern mockingbird	Mimus polyglottos
Northern rough-winged swallow	Stelgidopteryx serripennis
Northern shoveler	Anas clypeata
Northern shrike	Lanius excubitor
Northern waterthrush	Parkesia noveboracensis
Orange-crowned warbler	Oreothlypis celata
Osprey	Pandion haliaetus
Pectoral sandpiper	Calidris melanotos
Red-breasted merganser	Mergus serrator
Red-necked phalarope	Phalaropus lobatus
Red-tailed hawk	Buteo jamaicensis
Red-winged blackbird	Agelaius phoeniceus
Ring-necked duck	Aythya collaris
Rock pigeon	Coluba livia
Rock wren	Salpinctes obsoletus
Ross's goose	Chen rossii
Rough-legged hawk	Buteo lagopus
Ruby-crowned kinglet	Regulus calendula
Ruddy duck	Oxyura jamaicensis
Sabine's gull	Xema sabini
Sanderling	Calidris alba

Common Name	Scientific Name
Savannah sparrow	Passerculus sandwichensis
Say's phoebe	Sayornis saya
Semipalmated plover	Charadrius semipalmatus
Semipalmated sandpiper	Calidris pusilla
Sharp-shinned hawk	Acipiter striatus
Snow bunting	Plextrophenax nivalis
Snow goose	Chen caerulescens
Solitary sandpiper	Tringa solitaria
Song sparrow	Melospiza melodia
Sora	Porzana carolina
Spotted towhee	Pipilo maculatus
Steller's jay	Cyanocitta stelleri
Tree swallow	Tachycineta bicolor
Tundra swan	Cygnus columbianus
Turkey vulture	Cathartes aura
Varied thrush	Ixoreus naevius
Vesper sparrow	Pooecetes gramineus
Violet-green swallow	Tachycineta thalassina
Warbling vireo	Vireo gilvus
Western bluebird	Sialia mexicana
Western kingbird	Tyrannus verticalis
Western meadowlark	Sturnella neglecta
Western sandpiper	Calidris mauri
Western tanager	Prianga ludoviciana
Western wood-pewee	Contopus sordidulus
White-breasted nuthatch	Sitta carolinensis
White-crowned sparrow	Zonotrichia leucophrys
White-throated sparrow	Zonotrichia albicollis
White-throated swift	Aeronautes saxatalis
Wild turkey	Meleagris gallopavo
Wilson's snipe	Gallinago delicata
Wilson's warbler	Cardellina pusilla

Common Name	Scientific Name
Wood duck	Aix sponsa
Yellow-breasted chat	Icteria virens
Yellow-headed blackbird	Xanthocephalus xanthocephalus
Yellow-rumped warbler	Setophaga coronata

Appendix F – Wildlife Enhancement Plan

Ashton Hydroelectric Project

FERC Project No. P-2381

Wildlife Enhancement Plan

2016 Update

Prepared by: PacifiCorp 822 Grace Power Plant Road Grace Idaho 83241

September 20, 2016



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Appendix B – Wetland Preservation and Conservation Easement Documents

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Appendix G – Nest and Perch Licenses

1.0 INTRODUCTION

On August 3, 1987, the Federal Energy Regulatory Commission (FERC) issued PacifiCorp (formerly Utah Power and Light) a license for the Ashton-St. Anthony Hydroelectric Project, effective January 1, 1988. License Article 405 required development of a final Wildlife Enhancement Plan (WEP) in consultation with resource agencies and filed with FERC by June 30, 1989. The plan was to contain descriptions and maps showing locations of the enhancement measures proposed in the license application. Subsequently, PacifiCorp prepared a WEP in 1990 and received orders from FERC in 1990 and 1991 approving and modifying the WEP. FERC requested that PacifiCorp file an application to amend the WEP by December 31, 1995. The amended 1995 WEP included the changed and unchanged components from the 1990 approved plan. This 1995 version of the WEP was approved by FERC on September 10, 1996. An update to the 1995 WEP was undertaken in 2015 to address changes in management focus initiated by Idaho Department of Fish and Game (IDFG) for off-site measures at the Sand Creek Wildlife Management Area and the need to address expiring wetland preservation leases.

1.1 Purpose of the Updated WEP

This updated plan describes the complete enhancement measures developed in consultation with the agencies to fulfill the requirements of License Article 405. To avoid potential problems associated with multiple documents or a complex amendment to the approved 1995 WEP, this update includes all current enhancement measures and will replace all previous WEP versions. All measures in this plan whether existing, new or modified have been approved by IDFG and the U.S. Fish & Wildlife Service (FWS) and are included in this plan for FERC approval. PacifiCorp intends to implement the measures outlined in this updated WEP for the remaining term of the license (expiring December 31, 2027). PacifiCorp believes that implementation of this updated WEP will fulfill requirements of License Article 405.

This document is organized into the following sections:

- Background Describes the history of WEP measures since issuance of the hydro license;
- Enhancement Measures Lists all enhancement measures with current objectives and practices;
- Monitoring and Maintenance Provides a general description of monitoring and maintenance procedures;
- Implementation Schedule Describes items that need to be implemented and their status; and
- Appendices Contain support materials including agency correspondence, monitoring plan and forms, wetland preservation and conservation easement documents, wetland preservation lease and temporary easement for conservation documents, and fence and raptor structure details.

2.0 BACKGROUND

This section provides background information and summarizes the implementation of enhancement measures since 1984.

In December 1984, PacifiCorp filed a license application with the FERC that proposed measures for enhancing the wildlife and botanical resources on project lands. The enhancement measures were described in Exhibit E, pages E-38 to 43 of the license application. The enhancement plan focused on: improving riparian habitats around the reservoir; protecting 250 acres of existing wetlands near the project; constructing cattle exclosure fences; building nest structures for geese, osprey and bald eagles; vegetation plantings; and monitoring. The enhancement measures proposed in the application were based on a reconnaissance-level evaluation of the habitat, land uses, and soil profiles in the vicinity of Ashton Reservoir.

On August 3, 1987, the FERC issued a license to PacifiCorp for the Ashton-St. Anthony Hydroelectric Project, effective January 1, 1988. License Article 405 required development of a final WEP in consultation with the resource agencies and filed with FERC by June 30, 1989. PacifiCorp filed a final wildlife plan with FERC on June 28, 1990, as required by the new license. PacifiCorp and IDFG were unable to agree on all components of the plan, so FERC issued an order approving the WEP in part on August 15, 1990. The order required PacifiCorp to install raptor perches, osprey nest structures and a bald eagle platform, and to file a supplement to its WEP by October 1, 1990. The supplement was to contain results of continuing consultation and any revisions to the plan. The issues left unresolved by the August 15, 1990 order included: the amount of fence to be constructed to protect riparian habitat; plantings to restore riparian and upland habitat and provide goose foraging areas; goose nesting platforms; wetland preservation easements; and monitoring.

On October 1, 1990, PacifiCorp filed verification that the ten raptor perches, seven osprey nest platforms with perches, and a bald eagle nest structure were installed. A supplemental WEP was also filed with FERC on this date. The supplemental plan proposed offsite enhancement measures through construction of 2 miles of fence and a water control structure in addition to the components of the June 1990 plan. The supplemental plan was not completely satisfactory to the IDFG and USFWS.

FERC issued an order approving and modifying the supplemental wildlife enhancement plan on March 13, 1991. The order required PacifiCorp to plant trees and shrubs on 20 acres around the reservoir with an average density of 300 stems per acre; plant 4-5 acres of alfalfa and bluegrass to provide a goose forage area; construct and maintain ten goose nesting structures, 2 miles of fence and a water control structure at IDFG's Sand Creek Wildlife Management Area (SCWMA); provide documentation that the wildlife habitat values are being protected by the wetlands easements; and file annual monitoring reports and 5-year summary reports with results of annual monitoring beginning in December 2000.

During 1992, PacifiCorp: constructed the required fences (1.5 miles at Ashton and 2.0 miles at SCWMA); planted trees and shrubs on 20 acres within 10 fenced areas at Ashton with an average of at least 300 stems per acre; acquired and planted 4.5 acres in alfalfa/bluegrass for a goose forage area; installed ten goose nesting structures at SCWMA; engineered a water control structure adjacent to SCWMA (construction was pending a water agreement and necessary

permits); and conducted vegetation surveys, aerial photography and cover typing to define baseline wildlife habitat conditions within the 250-acre wetland preservation easement area.

Enhancement plan components were modified from the 1991 FERC order during the summer of 1992. The water agreement necessary for construction of the dike and water control structure proved unattainable and IDFG and USFWS requested 2.2 miles of additional fence in lieu of a dike and water control structure. During the fall of 1992, PacifiCorp completed the original fencing (1.5 miles at Ashton and 2.0 miles at SCWMA) and 2.2 miles of additional fence for a total of 5.7 miles of fence as well as the tree and shrub plantings.

In 1993, the resource agencies requested that additional trees and shrubs be planted during the following year due to lower-than-expected survival, and that PacifiCorp more actively manage the wetland preservation easements. PacifiCorp agreed to a spring supplemental tree and shrub planting and to explore the feasibility of additional habitat enhancement measures within the wetland preservation easements during 1994. PacifiCorp indicated that the proposed improvements in the wetland preservation easements would be considered additional measures that exceed FERC requirements for the wetland preservation easements.

In October 1994, a draft enhancement settlement agreement which was intended to bring closure to the unresolved WEP issues was prepared by PacifiCorp and reviewed by the resource agencies. The proposed settlement agreement contained enhancement measures to be implemented in 1995. PacifiCorp proposed to: interplant an additional 5,000 trees and shrubs to restore the required density, provide \$20,000 to IDFG in lieu of any further plantings, and monitor plant survival through the fall of 1996; fence the goose forage area, install a water trough, and use cattle to maintain a suitable forage height for geese; and control grazing on approximately 96 acres within the wetland preservation easement area and attempt to acquire an additional 30 acres of grazing rights within or adjacent to the wetland complex. PacifiCorp also proposed to file an amended WEP with FERC once agreements were reached with the IDFG and USFWS. The resource agencies modified PacifiCorp's proposal but still reached a preliminary agreement with PacifiCorp on most issues except the tree and shrub plantings during 1994.

During 1995, PacifiCorp continued to discuss contingencies for low tree and shrub survival with the resource agencies and the following recommendations resulted. PacifiCorp agreed to continue to monitor plant survival, and in the fall of 1996, establish a new baseline survival density instead of the 300 stems per acre. If the density fell below this 1996 baseline in 1997, PacifiCorp had agreed to replant to maintain the 1996 level. An alternative to replanting was to acquire grazing rights on approximately 36 acres of wetland complex adjacent to the areas protected by wetland preservation easements. To pursue this option, PacifiCorp leased grazing rights and acquired a grazing right easement on 32 acres around two ponds at the wetland complex. This allowed PacifiCorp to control grazing on 105 acres (32 acres of pasture and 73 acres of marsh/open water) within the wetland preservation easements. The grazing rights easement is perpetual and the grazing right leases were acquired for 22 years.

In 1998, a property that PacifiCorp held a wetland lease on became available for purchase and was acquired to continue the protections provided by the lease. This property was known at the time as the Ritchie Pond property and is 45 acres in size. This property remains in PacifiCorp ownership and is managed for wildlife benefit under this WEP.

The leases at the wetland complex that were established for 22 years would generally expire 10 years short (expiring in 2017) of the hydro license expiration date. One goose forage lease on the

reservoir was established for 24 years and would expire 9 years short (expiring in 2018) of the hydro license expiration date.

In 2014, PacifiCorp was approached by Teton Regional Land Trust to gauge interest in participating in a large conservation easement at the wetland complex that would overlap two PacifiCorp preservation leases, one PacifiCorp preservation easement and a portion of a second PacifiCorp preservation easement. USFWS and IDFG were consulted to see if participation in this conservation easement project could be used as replacement mitigation for some of the expiring wetland leases. Agreement was reached that providing funding for 62 acres of new conservation easement on the Baum property could be used as replacement for three expiring preservation leases. The following expiring leases were replaced: a goose forage lease area of 4.5 acres on the reservoir, a goose forage area of 14.7 acres at the wetland complex, and two cattle exclusion lease areas on Hosner Pond that total 17.2 acres. This new PacifiCorp-funded conservation easement on the Baum property was approved by FERC on October, 23, 2015 and closed later in December of 2015. Ongoing monitoring and management of the conservation easement on the Baum property was approved by FERC on October, 23, 2015 and closed later in December of 2015. Ongoing monitoring and management of the conservation easement on the Baum property was approved by FERC on October, 23, 2015 and closed later in December of 2015. Ongoing monitoring and management of the conservation easement on the Baum property is the responsibility of Teton Regional Land Trust with reservation of oversight responsibility and reassignment by PacifiCorp.

Also completed in 2015 was the creation of a temporary conservation easement on 23 acres of reservoir riparian and shoreline areas through the remaining term of the license. This replaced measures on Egbert Farms of 5,100 feet of fence on the south shore that the owner removed consistent with the 1992 agreement for its installation and the 4 acres of leased shrub planting areas on the north shore and associated fencing.

During an ongoing investigation of property rights around Ashton Reservoir, PacifiCorp identified 32.8 acres of abandoned lands on the north shore. PacifiCorp gained title to these lands in 2016 and added them to the project's lands managed for wildlife purposes. Also added in 2016 is a 4.05-acre conservation easement that allows the fencing of 0.6 mile of reservoir shoreline.

This 2016 WEP update includes the changes to leases, easements and fee ownership described in the preceding paragraphs. In addition, because of changes in IDFG and USFWS priorities, some additional wildlife measures to enhance waterfowl cavity nesting and swan nesting at the reservoir and wetland complex are included in this updated plan. The 2016 WEP update also includes formal discontinuation of all off-site measures at the SCWMA.

Table 2.1 provides a comparison of enhancement measures approved in the 1990 and 1991 FERC Orders, the 1995 amended WEP, and the measures included in this updated WEP.

Table 2.1. Comparison of enhancement measures approved in the 1990 and 1991 FERC Orders, the 1995 amended WEP, and the measures included in this updated WEP.

WEP Approved by FERC Orders 8/15/90 and 3/13/91	1995 Amended WEP Approved by FERC Order 9/10/1996	2016 Updated WEP
Fencing		
• 1.5 miles at Ashton	• 1.5 miles at Ashton	 2.2 miles of cattle exclusion fencing at Ashton Reservoir as broken out below: 1.1 miles of cattle exclusion fencing at Ashton Reservoir at PacifiCorp fee-owned north shore parcels. 0.3 mile of cattle exclusion fencing at Ashton Reservoir at PacifiCorp fee-owned south shore parcel. 0.2 mile of cattle exclusion fencing at Ashton Reservoir on BLM lands on the north shore. 0.6 mile of PacifiCorp shoreline buffer fencing on south shore at the Jenkins conservation easement. Option to install approximately 1 mile of fence if needed to exclude grazing at the Nedrow/Baker temporary conservation easement on the reservoir. Currently not needed but may be if adjacent use changes.
• 2.0 miles at SCWMA*	• 2.0 miles at SCWMA	• SCWMA measures were discontinued.
• Water control structure at SCWMA	• 2.2 miles additional at Ashton (see "Wetland Preservation Easements")	 2.6 miles of cattle exclusion fencing at the wetland complex as broken out below: 0.8 mile of cattle exclusion fencing at the wetland complex at the Marshal grazing exclusion lease. 0.9 mile of cattle exclusion fencing at the wetland complex at the Cordingly grazing exclusion easement. 0.9 mile of cattle exclusion fence at the wetland complex around PacifiCorp fee-owned property at PacifiCorp Pond property.

WEP Approved by FERC Orders 8/15/90 and 3/13/91	1995 Amended WEP Approved by FERC Order 9/10/1996	2016 Updated WEP
		• Annual inspection and maintenance of fences.
		• If entire sections of fencing are planned to be rebuilt, PacifiCorp will consult with IDFG and USFWS to apply the latest information on wildlife friendly fence designs.
Tree & Shrub Plantings		
• 20 acres within four fenced parcels at 300/acre spaced 12' x 12'	• 20 acres within ten fenced areas at 300/acre spaced 12' x 12'	• All tree & shrub planting measures were discontinued.
Annual monitoring	• Establish baseline plant survival in 1996	
	Annual monitoring through 1996	
	Annual photo documentation through license term	
• Maintain an average plant	• Replant in 1994	
survival of 300 stems/acre.	 Acquire 31 acres of grazing rights 	• See sections of this table titled "Wetland Conservation and Preservation Easements" and "Wetland and Riparian Enhancement Measures" for current grazing rights.
• Irrigation system	Construct fences to manage adjacent grazing.	• See "Fencing" section of this table for current fencing measures.
Goose Forage Area		
• Plant 4 to 5 acres of alfalfa- bluegrass within fenced area.	• Lease adjacent property	• All goose forage measures were discontinued.
	• Plant 4.5 acres of alfalfa- bluegrass	
	• Install water trough	

WEP Approved by FERC Orders 8/15/90 and 3/13/91	1995 Amended WEP Approved by FERC Order 9/10/1996	2016 Updated WEP
	• Fence area to manage forage height with livestock grazing.	
Goose Nesting Platforms		
• Ten platforms at SCWMA	• Ten platforms at SCWMA	• All goose nesting measures were discontinued.
• Annual inspection and maintenance	Annual inspection and maintenance	
Raptor Perches (1990 FERC order)		
• Ten perches	• Fifteen perches	• Fifteen perches.
Annual inspection and maintenance	Annual inspection and maintenance	Annual inspection and maintenance.
Osprey & Bald Eagle Nesting Platfor	ms (1990 FERC order)	
• Seven osprey nest platforms	• Ten osprey nest platforms	Eleven osprey nest platforms
• One bald eagle nest platform	• One bald eagle nest platform	• One bald eagle nest monitored (they moved from platform)
• Annual inspection and maintenance	Annual inspection and maintenance	Annual inspection and maintenance.
Wetland Conservation and Preservat	ion Easements	
• Acquire preservation easements on 250 acres of a wetland complex.	• Acquire preservation easements on 250 acres of a wetland complex.	 Conservation and preservation easements were acquired on 252.8 acres at the wetland complex. Cordingly preservation easement of 112.7 acres with 7.3 acres of overlapping grazing rights around Cordingly Pond. Marshal preservation easement of 78.1 acres with overlapping lease of 10.8 acres of grazing rights at Cordingly Pond. Baum conservation easement of 62 acres. Includes grazing management plan to protect riparian areas.

W 8/1	EP Approved by FERC Orders 15/90 and 3/13/91	1995 Amended WEP Approved by FERC Order 9/10/1996	2016 Updated WEP
			• Jenkins conservation easement with grazing exclusion on 4.05 acres was acquired on the south shore of the reservoir.
• 2	2.0 miles of fencing at SCWMA	• 2.0 miles of fencing at SCWMA	SCWMA measures were discontinued.
• \	Water control structure at SCWMA	• 2.2 miles additional at Ashton (see "Wetland Preservation Easements")	SCWMA measures were discontinued.
• I V F	Document wildlife habitat values are being protected by preservation easements.	• Annual photo documentation and site visit. Conduct aerial photography at 5-year intervals, as necessary.	 Annual photo documentation and site visit at Cordingly, Marshal and Jenkins easements, and aerial photo comparison to baseline every five years to assess changes in vegetation cover types. Review Teton Land Trust Monitoring Report of Baum conservation easement annually. See "Fencing" section of this table for associated fencing measures.
Wetla	and and Riparian Enhancement	Measures	
		 Lease 32 acres of grazing rights to manage 105 acres within wetland preservation easements. Control livestock grazing by fencing and using goose forage area. Lease 31 acres to control grazing on 72 acres of adjacent wetlands outside of wetland preservation easements. Construct fences to control livestock on the 31 acres of grazing leases, obtained in lieu of continued tree and shrub planting, and the adjacent 41 acres of wetlands. 	 Lease grazing rights from Marshal through the term of the license on 10.8 acres of the wetland complex at the north end of Cordingly Pond. This lease includes a renewal provision that will be exercised in 2017 to extend through 2027. Execute temporary conservation easement from Nedrow/Baker for 23 acres on the south reservoir shoreline. Manage PacifiCorp fee ownership of 45 acres at PacifiCorp Pond for conservation (These were leased lands in the 1995 WEP). Manage PacifiCorp fee-owned lands, south shore, 9.9 acres for conservation. Manage PacifiCorp fee-owned lands, north shore, 64.7 acres for conservation. Continue to maintain and manage 1.7 acres of BLM lands on the north shore for conservation and riparian protection. Conduct annual photo documentation and site visit at Marshal lease and Nedrow/Baker temporary conservation easement. Aerial photo comparison to baseline every five years to asses changes in yargetation cover types

WEP Approved by FERC Orders 8/15/90 and 3/13/91	1995 Amended WEP Approved by FERC Order 9/10/1996	2016 Updated WEP
		• See "Fencing" section of this table for associated fencing measures.
Waterfowl Nesting Measures	·	
		 Install cavity nesting boxes in consultation with IDFG and USFWS on conservation lands within the FERC Boundary. Install up to five cavity nesting boxes per year for seven years, starting in 2017. Install two floating swan nesting platforms at wetland complex ponds in consultation with IDFG and USFWS. To be installed in 2017 and 2018, or on mutually agreeable schedule. Agencies will make final decision to implement after completion of nesting survey. Annual inspection and maintenance.
Noxious Weed Control		-
		 Perform noxious weed control at: PacifiCorp fee-owned conservation and operations property at reservoir and PacifiCorp Pond Nedrow/Baker temporary conservation easement Jenkins conservation easement BLM lands within the FERC Boundary Marshal wetland preservation lease (cattle exclusion on north end of Cordingly Pond) Cordingly wetland wildlife habitat easement (cattle exclusion easement at Cordingly Pond).
* SCWMA = IDFG's Sand Creek Wild	life Management Area.	

3.0 WEP AREA

The Ashton project is located in southeast Idaho, approximately 1 mile north of Ashton and about 50 miles northeast of Idaho Falls, Idaho. U.S. Highway 20 provides major access to the project area. The Ashton project includes the 329 surface-acre Ashton Reservoir located on the Henry's Fork of the Snake River. The maximum reservoir full pool elevation is 5,155.9 feet msl. The project operates in a run-of-river mode, as required by the license.

The WEP area is encompassed by the FERC Project Boundary and includes PacifiCorp feeowned lands, the reservoir to maximum full pool, leased conservation lands, and conservation easements held or funded by PacifiCorp. Exceptions to the WEP area are the properties occupied by the dam, substation, shop/office, housing, operations yard, warehouse and, project roadways and parking. All of the listed exceptions to the WEP area are on two parcels, one each on the north and south ends of the Ashton Dam.

The climate in the WEP area is characterized by cold, snowy winters and warm, dry summers. Average annual precipitation is 14 inches, about two-thirds of which occurs in the form of snow. Average monthly temperatures range from 8 to 29°F in January to 48 to 85°F in July.

The WEP area lies within the northern extent of the Snake River Plain. Mostly aeolean (wind deposited) soils overlay basalt bedrock at a depth of 3 to greater than 5 feet. Knolls of shallow soil and rock outcrops are also common.

Major land uses in the project area include agriculture and livestock grazing. Both irrigated and dryland crops are grown including potatoes, alfalfa, and grain. A portion of the shoreline at Ashton Reservoir is developed for recreation home sites.

Federal land managed by the U.S. Department of Interior, Bureau of Land Management (BLM) is on the north shoreline of the reservoir in places and extends to the north. All BLM lands within the FERC Boundary have Section 24 reservations.

4.0 WEP ENHANCEMENT MEASURES

This updated WEP describes the complete and current enhancement measures approved by IDFG and the USFWS to fulfill the requirements of License Article 405. This plan includes measures previously approved in FERC orders, modified measures and new measures. This section describes the current objectives and practices for each measure.

4.1 Fencing (Reservoir Shoreline)

Objectives

The objective of this enhancement measure is to protect riparian areas on the reservoir shoreline from cattle grazing by constructing and maintaining fence at Ashton Reservoir.

Practices

The following practices have been implemented:

- 1.4 miles of cattle exclusion fencing at Ashton Reservoir at PacifiCorp fee-owned north shore and south shore parcels.
- 0.2 mile of cattle exclusion fencing at Ashton Reservoir on the north shore on BLM reserved lands.
- 0.6 mile of cattle exclusion fencing at Jenkins conservation easement on the south shore, reservoir buffer.

The following practices are to be implemented:

- Option to install approximately 1 mile of fence if needed to exclude grazing at the Nedrow/Baker temporary conservation easement. Currently not needed but might be if adjacent use changes.
- Annual inspection and maintenance of fences.
- If entire sections of fencing are planned to be rebuilt, PacifiCorp will consult with IDFG and USFWS to apply the latest information on wildlife friendly fence designs.

4.2 Fencing (Wetland Complex)

Objectives

The objective of this enhancement measure is to protect riparian areas from cattle grazing by constructing and maintaining fence at the Ashton wetland complex.

Practices

The following practices have been implemented:

- 0.8 mile of cattle exclusion fencing at the wetland complex at the Marshal grazing exclusion lease.
- 0.9 mile of cattle exclusion fencing at the wetland complex at the Cordingly grazing exclusion easement.
- 0.9 mile of cattle exclusion fence at the wetland complex around PacifiCorp fee-owned PacifiCorp Pond property.

The following practices are to be implemented:

- Annual inspection and maintenance of wetland complex fences.
- If entire sections of fencing are planned to be rebuilt, PacifiCorp will consult with IDFG and USFWS to apply the latest information on wildlife friendly fence designs.

4.3 Nesting Enhancements

Objectives

The objective of this measure is to increase nesting opportunities for waterfowl by installing and maintaining nesting structures.

Practices

The following practices are to be implemented:

- Install cavity nesting boxes at wetland complex, PacifiCorp fee ownership on reservoir, and Baker/Nedrow lease area. This measure will be implemented over seven years with five nesting boxes installed per year. Type of nesting box and locations will be determined jointly with IDFG and USFWS. This measure to start in 2017.
- Install two floating swan nesting platforms, one each at the PacifiCorp Pond property and Baum Pond. This measure to be coordinated with USFWS and IDFG. This measure to start in 2017.
- Make best effort to obtain licenses for placement of perches and nests on private lands.

4.4 Raptor Perches

Objective

The objective of this enhancement measure is to provide and maintain 15 raptor perches around Ashton Reservoir.
Practices

The following practices have been implemented:

- PacifiCorp installed 15 raptor perches along the shoreline of Ashton Reservoir in areas where no power poles or natural perches existed.
- Rocky Mountain Power installed three additional perches on power line structures.
- Perches consist of two cross arms intersecting at a 90 degree angle.

The following practices are to be implemented:

- Annual inspection and maintenance.
- Make best effort to obtain licenses for placement of perches and nests on private lands.

4.5 Osprey Nesting Platforms

Objective

The objective of this enhancement measure is to provide and maintain 11 osprey nest platforms along Ashton Reservoir.

Practices

The following practices have been implemented:

- Installation and maintenance of 11 osprey nest platforms along Ashton Reservoir. Sticks or existing nest material were added to each platform to increase their attractiveness to osprey.
- Annual inspection and maintenance.

4.6 Wetland Preservation and Conservation Easements

Objective

The objective of this amended enhancement measure is to protect wildlife habitat values at the Ashton wetland complex by securing preservation and conservation easements to prevent current and future landowners from taking any actions that diminish the wildlife values of these wetlands.

Practices

The following practices have been implemented:

- Conservation and preservation easements were acquired on 252.8 acres at the wetland complex.
 - Cordingly preservation easement of 112.7 acres (includes 7.3 acres of grazing rights around Cordingly Pond).
 - Marshal preservation easement of 78.1 acres.
 - Baum conservation easement of 62 acres. Includes grazing management plan to protect riparian areas (replaced two Hosner wetland leases, overlapped a portion of Cordingly wetland easement, and overlapped Bolland preservation easement).
- Conservation easement was acquired on the reservoir.
 - $\circ~$ Jenkins conservation easement of 4.05 acres. Grazing exclusion on reservoir shoreline.

The following practices are to be implemented:

- Noxious weed control at Cordingly wetland wildlife habitat easement (7.3 acres) and Jenkins conservation easement (4.05 acres).
- Annual monitoring.

4.7 Wetland Preservation Lease

Objectives

The objectives of this amended enhancement measure are to maintain or enhance riparian and upland wildlife habitat values within the wetland complex. These areas will be managed to provide habitat for waterfowl and other wildlife.

Practices

The following practices have been implemented:

• Lease grazing rights from Marshal through the term of the license on 10.8 acres of the Ashton wetland complex at the north end of Cordingly Pond. This current lease includes a renewal provision that will be exercised in 2017 to extend through 2027

The following practices are to be implemented:

• Annual monitoring and noxious weed control.

4.8 Reservoir Shoreline Temporary Conservation Easement

Objectives

The objective of this enhancement measure is to maintain or enhance riparian and upland wildlife habitat values along the reservoir. These areas will be managed to provide habitat for waterfowl and other wildlife.

Practices

The following practices have been implemented:

• Enter into a temporary conservation easement for 23 acres of shoreline from Baker/Nedrow for the remaining term of the hydro license. Grazing will be excluded from the easement area.

The following practices are to be implemented:

- Waterfowl nesting enhancements may be deployed within the lease boundary and may include cavity nesting boxes and vegetation measures to improve conditions for ground nesting.
- Remove old fencing and install buffer marker posts.
- Noxious weed control.
- Annual monitoring.

4.9 Reservoir Shoreline Conservation Easement

Objectives

The objective of this enhancement measure is to maintain or enhance riparian and upland wildlife habitat values along the reservoir. These areas will be managed to provide habitat for waterfowl and other wildlife.

Practices

The following practices have been implemented:

• Enter into a perpetual conservation easement for 4.05 acres of shoreline from Jenkins. Grazing will be excluded from the easement area.

The following practices are to be implemented:

- Maintain exclusion fencing (see conservation easement for option of buffer posts)
- Noxious weed control.
- Annual monitoring.

4.10 PacifiCorp Fee-Title Property

Objectives

The objective of this enhancement measure is to maintain or enhance riparian and upland wildlife habitat values along the reservoir and at the Ashton wetland complex. These areas will be managed to provide habitat for waterfowl and other wildlife.

Practices

The following practices have been implemented:

- Acquired fee ownership of 45 acres at PacifiCorp Pond property (formerly Ritchie lease area) for conservation (These were leased lands in the 1995 WEP).
- Acquired abandoned lands on the north shore of the reservoir for conservation (32.8 acres acquired in 2016).

The following practices are to be implemented:

- Manage through fencing and noxious weed control PacifiCorp fee-owned lands, south shore, 9.9 acres for conservation.
- Manage through fencing and noxious weed control PacifiCorp fee-owned lands, north shore, 64.7 (32.8 acres acquired in 2016, 31.9 previously held) acres for conservation.
- Annual monitoring and monthly trespass grazing monitoring June, July, August, September and October.

4.11 Noxious Weed Control

Objective

The objective of this measure is to conform with state and county regulations concerning noxious weed control.

Practices

The following practices are to be implemented:

- Perform annual noxious weed control on:
 - PacifiCorp fee-owned lands—both conservation and operations lands,
 - Marshal wetlands preservation lease (cattle exclusion lease, north end of Cordingly Pond),
 - Cordingly wetland wildlife habitat easement (cattle exclusion easement at Cordingly Pond),
 - Jenkins conservation easement,

- BLM reserved lands parcels between exclusion fences and reservoir, and
 BLM reserved land parcel in Cedar View Estates.



Figure 4-1. Ashton Reservoir with Wildlife Enhancement Plan Measures, Map Sheet 1.



Figure 4-2. Ashton Reservoir with Wildlife Enhancement Plan Measures, Map Sheet 2.



Figure 4-3. Ashton Reservoir with Wildlife Enhancement Plan Measures, Map Sheet 3.

5.0 MONITORING AND MAINTENANCE

Monitoring for compliance has been conducted annually since 1991 and is documented in annual reports. A monitoring plan developed to facilitate data collection was included in Appendix D of the 1992 annual report. An updated monitoring plan is included in Appendix A of this document. Monitoring coordination meetings with resource agencies and submittal of reports will continue as outlined in this updated WEP for the remaining term of the license.

PacifiCorp has monitored the enhancement measures annually and submitted reports to the agencies and the Commission for the first 5 years (1991 through 1995). Thereafter, the annual monitoring results were submitted in a 5-year summary report. Preparation and submittal of the 5-year summary report will continue through the remaining term of the license. PacifiCorp will continue to conduct the following monitoring and maintenance for each enhancement measure.

5.1 Fencing

Fences installed and maintained by PacifiCorp at Ashton Reservoir and the wetland complex will be inspected and maintained annually. All of these fences are shown on Figure 4.1, 4.2 and 4.3. To improve the life span of fencing PacifiCorp may elect to use take-down fences in place of permanent fencing. Fences will be inspected in the spring and repaired as needed.

5.2 Nesting Enhancements

PacifiCorp will inspect and maintain approximately one-third of the 35 cavity nesting boxes (installed over a period of seven years) and the two floating swan nesting platforms before the nesting season. Nesting platforms and approximately one-third of the nesting boxes will be annually monitored for occupancy and brood success. All nesting boxes will be maintained over a three-year period.

5.3 Raptor Perches

PacifiCorp will annually inspect and maintain 15 raptor perches before the nesting season.

5.4 Osprey Nesting Platforms

PacifiCorp will annually inspect the 11 osprey nesting platforms before the nesting season. Maintenance will be performed as needed. Platforms will be annually monitored for occupancy and brood success.

5.5 Eagle Nest Monitoring

Existing eagle nest and any future nests identified will be monitored annually for brood success.

5.6 Wetland Preservation and Conservation Easements

For PacifiCorp-held wetland preservation easements and conservation easements, PacifiCorp will provide annual documentation that the wildlife habitat values covered by the wetland preservation easements at the wetland complex (Cordingly and Marshall) and the conservation easement at the reservoir (Jenkins) are being protected by: conducting annual walk-through visits, conducting on-the-ground photo documentation, and every 5 years reviewing available aerial photography with 1993 baseline aerial photography for the wetland preservation easements and 2016 aerial

photography for the reservoir shoreline easement. If changes are evident in the aerial photos, PacifiCorp will discuss this information with IDFG and USFWS.

For the Teton Land Trust-held Baum conservation easement, PacifiCorp shall review a copy of the annual monitoring report from Teton Land Trust and will summarize those results in the annual and five-year report. If changes are evident from the baseline report PacifiCorp will discuss with Teton Regional Land Trust. See Appendix B for easement documents.

5.7 Wetland Preservation Lease and Reservoir Shoreline Temporary Conservation Easement

For the PacifiCorp-held wetland preservation lease (Marshal) and reservoir shoreline temporary conservation easement (Nedrow/Baker), PacifiCorp will provide annual documentation that the wildlife habitat values covered by the wetland preservation lease at the wetland complex and temporary conservation easement at the reservoir are being protected by: conducting annual walk-through visits, conducting on-the-ground photo documentation, and every 5 years, reviewing available aerial photography with 1993 baseline aerial photography for the wetland preservation lease and 2016 aerial photography for the reservoir shoreline temporary conservation easement. If changes are evident in the aerial photos, PacifiCorp will discuss this information with IDFG and USFWS. See Appendix C for lease documents.

5.8 PacifiCorp Fee Title Properties

For the PacifiCorp-held fee title properties, PacifiCorp will provide annual documentation that the wildlife habitat values on them are being protected by: conducting annual walk-through visits, monitoring and maintaining exclusion fences, semi-monthly trespass monitoring in the months of June through October and noxious weed control.

6.0 IMPLEMENTATION SCHEDULE

The status and schedule for implementing enhancement measures discussed in the WEP are presented below in Table 6.1.

Table 6.1. Summary of Ashton Wildlife Enhancement Plan Implementation (Completed and Euture Actions)		
Tu	Enhancement Measure	Status
Fe	ncing	
•	1.4 miles of cattle exclusion fencing at Ashton Reservoir at PacifiCorp fee-owned north shore and south shore parcels.	Complete.
•	0.2 mile of cattle exclusion fencing at Ashton Reservoir on north shore on BLM.	Complete. All on BLM Reserved Lands.
•	0.8 mile of cattle exclusion fencing at the wetland complex at the Marshal grazing exclusion lease.	Complete.
•	0.9 mile of cattle exclusion fencing at the wetland complex at the Cordingly grazing exclusion easement.	Complete.
•	0.9 mile of cattle exclusion fence at wetland complex around PacifiCorp fee-owned property at PacifiCorp Pond.	Complete.
•	0.6 mile of cattle exclusion fence on reservoir at the Jenkins conservation easement.	Complete
•	Option to install approximately 1 mile of fence if needed to exclude grazing at the Nedrow/Baker temporary conservation easement. Currently not needed but might be if adjacent use changes.	Not currently needed. Evaluate annually.
•	Annual inspection and maintenance of exclusion fences.	Ongoing
Ne	sting Enhancement Measures	
•	Install cavity nesting boxes in consultation with IDFG and USFWS on conservation lands within the FERC Boundary. Install up to five cavity nesting boxes per year for seven years, starting in 2017.	To be implemented over five years starting in 2017.
•	Install two floating swan nesting platforms at wetland complex ponds in consultation with IDFG and USFWS. To be installed in 2017 and 2018 or on mutually agreeable schedule.	To be implemented in 2017 and 2018.
٠	Annual inspection and maintenance.	Ongoing
Ra	ptor Perches	
٠	15 perches.	Complete
٠	Annual inspection and maintenance.	Ongoing
•	Make best effort to obtain licenses for placement of perches and nests on private lands.	Ongoing
Os	prey Nesting Platforms	
•	11 osprey nest platforms	Complete
•	Annual inspection and maintenance.	Ongoing
•	Make best effort to obtain licenses for placement of perches and nests on private lands.	Ongoing

Table 6.1. Summary of Ashton Wildlife Enhancement Plan Implementation (Completed and Future Actions)			
	Enhancement Measure	Status	
Ea	Eagle Nest		
•	Annual brood success monitoring.	Ongoing	
W	etland Preservation and Conservation Easements	Complete	
•	 Preservation and conservation preservation easements were acquired on 252.8 acres at the wetland complex. Cordingly preservation easement of 112.7 acres (includes 7.3 acres of grazing rights easements around Cordingly Pond). Marshal preservation easement of 78.1 acres. Baum conservation easement of 62 acres. Includes grazing management plan to protect riparian areas. Conservation easement on reservoir shoreline. Jenkins conservation easement 4.05 Acres. 		
•	Annual photo documentation and site visit at Cordingly and Marshal easements and aerial photo comparison to baseline every five years.	Ongoing	
•	Review Teton Land Trust Monitoring Report of Baum conservation easement annually.	Ongoing	
W	etland Preservation Lease		
•	Lease grazing rights from Marshal through the term of the license on 10.8 acres of the wetland complex at the north end of Cordingly Pond. Lease includes a renewal provision that will be exercised in 2017 to extend through 2027.	To be implemented in 2017.	
•	Annual photo documentation and site visit at Marshal lease and aerial photo comparison to baseline every five years.	Ongoing	
Re	servoir Shoreline Temporary Conservation Easement		
•	Execute temporary conservation easement from Nedrow/Baker for 23 acres on the south reservoir shoreline.	Complete	
•	Annual photo documentation and site visit at Nedrow/Baker temporary conservation easement and aerial photo comparison to baseline every five years.	Ongoing	
Pa	cifiCorp Fee Title Property		
•	Manage for conservation PacifiCorp fee ownership of 45 acres at PacifiCorp Pond property.	Ongoing	
•	Manage for conservation PacifiCorp fee ownership of 9.9 acres on south reservoir shore.	Ongoing	
•	Manage for conservation PacifiCorp fee ownership of 64.7 acres on the north shore.	Ongoing	
•	Annual monitoring.	Ongoing	
No	xious Weed Control		
•	Perform noxious weed control on PacifiCorp fee-owned property at reservoir and PacifiCorp Pond, Nedrow/Baker temporary conservation easement, Jenkins conservation easement, BLM lands within FERC Boundary, Marshal wetland preservation lease (cattle exclusion on north end of Cordingly Pond), and Cordingly	Ongoing	

Table 6.1. Summary of Ashton Wildlife Enhancement Plan Implementation (Completed and Future Actions).		
wetland wildlife habitat easement (cattle exclusion easement at		
Cordingly Pond).		

Appendices

Appendix A – Monitoring Plans and Forms including the Ashton Wildlife Enhancement Program Monitoring Plan (Revised May 9, 2016)

Appendix B – Wetland Preservation and Conservation Easement Documents

Appendix C – Wetland Preservation Lease and Temporary Easement for Conservation Documents

Appendix D - Fence Specifications and Construction Details for Wildlife Friendly Cattle Exclusion Fences

Appendix E – Osprey Perch Detail

Appendix F – Osprey Nest Platform Detail

Appendix G – Nest and Perch Licenses

Appendix G – U.S. Fish and Wildlife Service Official Species List



United States Department of the Interior

FISH AND WILDLIFE SERVICE Idaho Fish And Wildlife Office 1387 South Vinnell Way, Suite 368 Boise, ID 83709-1657 Phone: (208) 378-5243 Fax: (208) 378-5262



In Reply Refer To: Project Code: 2022-0018663 Project Name: Ashton PAD March 11, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/ executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Idaho Fish And Wildlife Office

1387 South Vinnell Way, Suite 368 Boise, ID 83709-1657 (208) 378-5243

Project Summary

Project Code:2022-0018663Event Code:NoneProject Name:Ashton PADProject Type:Dam - OperationsProject Description:Ashton PADProject Location:Frage 100 (200) (20

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@44.080101150000004,-111.47959006396064,14z</u>



Counties: Fremont County, Idaho

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS	
 Grizzly Bear Ursus arctos horribilis Population: U.S.A., conterminous (lower 48) States, except where listed as an experimental population There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: <u>https://ecos.fws.gov/ecp/species/7642</u> 	Threatened	
Insects NAME	STATUS	
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9743</u>	Candidate	
Flowering Plants	STATUS	
Ute Ladies'-tresses <i>Spiranthes diluvialis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/2159</u>	Threatened	

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act^{1} and the Bald and Golden Eagle Protection Act^{2} .

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The <u>Bald and Golden Eagle Protection Act</u> of 1940.
- 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the <u>USFWS</u> <u>Birds of Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data</u> <u>mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found <u>below</u>.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31
Cassin's Finch <i>Carpodacus cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/9462</u>	Breeds May 15 to Jul 15

NAME	BREEDING SEASON
Evening Grosbeak Coccothraustes vespertinus	Breeds May 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA	to Aug 10
and Alaska.	e

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (=)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <u>http://www.fws.gov/birds/management/managed-species/</u> <u>birds-of-conservation-concern.php</u>
- Measures for avoiding and minimizing impacts to birds <u>http://www.fws.gov/birds/</u> <u>management/project-assessment-tools-and-guidance/</u> <u>conservation-measures.php</u>
- Nationwide conservation measures for birds <u>http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf</u>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

<u>Nationwide Conservation Measures</u> describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. <u>Additional measures</u> or <u>permits</u> may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern</u> (<u>BCC</u>) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian</u> <u>Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>AKN Phenology Tool</u>.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey, banding, and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: <u>The Cornell Lab</u> of <u>Ornithology All About Birds Bird Guide</u>, or (if you are unsuccessful in locating the bird of interest there), the <u>Cornell Lab of Ornithology Neotropical Birds guide</u>. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the <u>Northeast Ocean Data Portal</u>. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the <u>NOAA NCCOS Integrative Statistical</u> <u>Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic</u> <u>Outer Continental Shelf</u> project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell

me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of</u> <u>Engineers District</u>.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT <u>HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML</u> OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

IPaC User Contact Information

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