ENVIRONMENTAL ASSESSMENT
FOR SURRENDER OF PARIS PROJECT EXEMPTION
AND AMENDMENT OF BEAR RIVER PROJECT LICENSE

Paris Hydroelectric Project—FERC Project No. 703-001

Bear River Hydroelectric Project—FERC Project No. 20-117

Idaho

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Administration and Compliance
888 First Street, NE
Washington, D.C. 20426

April 2024

Table of Contents

LIST OF FIGURES

LIST OF TABLES

ACRONYMS

Advisory Council	Advisory Council on Historic Preservation
APE	Area of Potential Effect
BCT	Bonneville Cutthroat Trout
BLM	Bureau of Land Management
BMI	Benthic macroinvertebrates
°C	Degrees Celsius
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CH_4	Methane
CO_2	Carbon dioxide
CWA	Clean Water Act
DO	Dissolved Oxygen
EA	Environmental Assessment
ECC	Environmental Coordination Committee
EJ Screen	Environmental Justice Screening and Mapping Tool
EPA	Environmental Protection Agency
ESA	Endangered Species Act
Exec. Order	Executive Order
Fed. Reg.	Federal Register
FERC or Commission	Federal Energy Regulatory Commission
Forest Service	United States Forest Service
FPA	Federal Power Act
FWS	U.S. Fish and Wildlife Service
GHG	Greenhouse Gas
Idaho DEQ	Idaho Department of Environmental Quality
Idaho DFG	Idaho Department of Fish and Game
Idaho DL	Idaho Department of Lands
Idaho DPR	Idaho Department of Parks and Recreation
Idaho DWR	Idaho Department of Water Resources
Idaho OEMR	Idaho Governor's Office of Energy and Mineral Resources
Idaho SHPO	Idaho State Historic Preservation Office

Idaho Water Board	Idaho Water Resource Board
IPaC	Information for Planning and Consultation
kW	Kilowatts
mg/L	Milligrams per liter
msl	Mean sea level
MW	Megawatt
Mwh	Megawatt hour
MOA	Memorandum of Agreement
NAAQS	National Ambient Air Quality Standards
NHPA	National Historic Preservation Act
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NO_x	Nitrous oxides
OPP	Office of Public Participation
Paris Relief	Paris Relief Canal Company
PM&E	Protection, mitigation, and enhancement measures
$PM_{2.5}$	Particulate matter 2.5 micrometers or smaller
SOI	Secretary of the Interior
Total P	Total phosphorus
TMDL	Total Maximum Daily Load
TSS	Total suspended solids
Upper Southfield	Upper Southfield Irrigation Company
U.S.C	United States Code
WQC	Water Quality Certification

1.0 INTRODUCTION

A.	Application:	Surrender of Conduit Exemption (Paris Project) Non-capacity Amendment of License (Bear River Project)
B.	Date Filed:	March 16, 2023
C:	Applicant:	PacifiCorp
D:	Water body:	Paris Creek; Bear River
E:	County and State:	Bear Lake County, Idaho; Franklin and Caribou counties, Idaho

1.1 Background

PacifiCorp is the exemptee for the Paris Project (P-703) and licensee for the Bear River Project (P-20). PacifiCorp seeks Commission approval to decommission the Paris Project and to surrender the Paris Project license exemption. When the Paris Project is in operation, PacifiCorp diverts water from Paris Creek into an irrigation canal that delivers the water to the Paris Project (See Section 1.2 *Project Description*). These operations substantially de-water an approximately 3.5-mile-long bypass reach of Paris Creek. The proposal to decommission the Paris Project and surrender the Paris Project license exemption would result in PacifiCorp ceasing to divert Paris Creek water into the irrigation canal and would therefore result in the enhancement and restoration of the previously de-watered bypass reach of Paris Creek.

To partially offset the cost to decommission the Paris Project and the associated loss of generation, PacifiCorp is concurrently proposing to amend Article 408(b) of its license for the Bear River Hydroelectric Project to adjust minimum instream flows in the Grace Development's bypass reach through the remaining term of the Bear River Hydroelectric Project license.

1.2 Project Description

Paris Project

The Paris Project is a 715-kilowatt (kW) conduit hydroelectric project located in Bear Lake County, Idaho on approximately 30-acres of land owned by PacifiCorp (Figure 1). The Paris Project does not occupy federal lands or reservations. Water is delivered to the Paris Project by an irrigation canal that is sometimes referred to as the Weilenmann Ditch. The canal and its diversion structure near the headwaters of Paris Creek are not elements of the Federal Energy Regulatory Commission (FERC or Commission) regulated Paris Project and they are not included within the FERC Project Boundary for the Paris Project license exemption. Water is diverted from Paris Creek into the canal by a concrete diversion structure that is located approximately 600 feet

downstream of Paris Springs, the headwaters of Paris Creek. The canal extends for approximately 4 miles from the diversion structure to the upstream-most feature of the Paris Project – the forebay. A concrete intake structure at the upstream end of the Paris Project forebay connects the forebay to the canal.

The diversion structure near the headwaters of Paris Creek, and the first 0.78 mile of the canal are located on federal lands administered by the U.S. Forest Service (Forest Service). Approximately 0.54 mile of the canal is located on federal lands administered by the Bureau of Land Management (BLM). The remainder of the canal between the diversion structure and the intake for the forebay is located on privately owned land used primarily for grazing cattle. The Forest Service land over which the canal is located is used primarily for recreation and grazing. The BLM land over which the canal is located is used primarily for grazing. All grazers hold federal grazing permits. PacifiCorp owns the diversion structure and the rights to the canal. Under the terms of a 1909 agreement between the original canal developers and PacifiCorp's predecessor in interest, the canal was enlarged and subsequently used and maintained for irrigation and power purposes. PacifiCorp currently operates and maintains the canal.

The Paris Project was constructed in 1909 or 1910 by Bear Lake Power Company. No fishery presently exists in the canal or the upper reaches of Paris Creek due to the diversion of water for irrigation and power purposes. The Commission issued an original license for the constructed project effective June 1, 1927. The Commission issued a new license for the Paris Project on November 11, 1975. On February 23, 1983, the Commission issued a conduit project license exemption for the Paris Project.[1]

The Paris Project works and lands included in the FERC license exemption consist of the following:

Forebay

A 0.16-acre forebay with: (1) a cast concrete inlet structure with a steel slide gate for irrigation delivery located at the west end (the upstream end) of the forebay, and (2) a cast concrete outlet structure located at the northeast end (the downstream end) of the forebay. The inlet structure directs water into the forebay from the canal. The walls of the forebay are constructed of earth. The outlet structure at the east end of the forebay delivers water in two directions, into the penstock or into a downhill spillway/overflow channel. Water is normally delivered into the penstock. The option to send water down the spillway/overflow channel is only activated in a surplus water scenario.

[1] *Utah Power & Light Co*., 22 FERC ¶ 62,220 (1983). With the issuance of the exemption order, the 1975 license for the project was terminated.

Penstock

A 1,366-foot-long, 22 to 30-inch-diameter steel penstock, which runs downhill from the outlet structure of the forebay at the top of the south ridge of Paris Canyon to the Paris Project powerhouse, is located on the canyon floor near Paris Creek.

Spillway

The downhill spillway is an overflow channel created to release excess water from the forebay. From the outlet structure at the northeast end of the forebay, the spillway begins as a short concrete channel and then transitions to a natural channel that runs downhill parallel to the penstock. The spillway includes an approximately 25 feet-long by 7 feet-wide concrete flume that prevents water from the downhill spillway from entering the Upper Southfield Ditch. The flume spans the Upper Southfield Ditch and allows water sent down the spillway to travel over the ditch and into Paris Creek.

Powerhouse

A rock and brick powerhouse measuring 35 feet-wide by 70 feet-long, containing one turbine/generator unit with a capacity of 715 kW.

Discharge Pipe

A 60-foot-long, 30-inch-diameter steel discharge pipe connected on its upstream end to the outflow of the turbine/generator in the powerhouse and proceeding underground from the powerhouse, under a county road (Paris Creek Road) and to the tailrace structure.

Tailrace and Slide Gates

A concrete structure with two slide gates located approximately 50 feet north of the powerhouse on the north side of Paris Canyon Road. Water from the discharge pipe is released into the tailrace, which has two slide gates and can divert the water exiting the discharge pipe in three directions: (1) into an iron pipe (Paris Relief Flume) that leads to the Paris Relief Canal Company's irrigation delivery system across Paris Creek; (2) into Upper Southfield Ditch which is on the same side of Paris Creek as the powerhouse; or (3) into a short spillway channel that joins Paris Creek.

Operator House and Garage

There is a one-story, wood-frame house located approximately 40 feet east of the powerhouse. There is a one-story utility building that is constructed of lumber with a corrugated galvanized steel exterior that is located approximately 30 feet south of the powerhouse.

Bear River Project

The Commission issued a 30-year license for the Bear River Project on December 22, 2003.[2] The current license expires on November 30, 2033. The Bear River Project is a 77-megawatt (MW) hydroelectric facility situated on the Bear River in Caribou and Franklin counties, in southeastern Idaho, where it occupies 503.59 acres of federal lands managed by the BLM. The Bear River Project is composed of three developments, listed from upstream to downstream: Soda, Grace, and Oneida (Figure 2).[3]

The major headwater storage facility is Bear Lake, in Bear Lake County, Idaho, and extending south into northern Utah. Discharges from Bear Lake are primarily for irrigation and flood control. The Soda Development is located approximately 45 miles downstream of Bear Lake; the Grace Development is located approximately 6 river miles downstream of the Soda Development; and the Oneida Development is located 36 river miles downstream of the Grace Development. While the Soda and Oneida developments are integral to the Bear River Project, the proposed surrender of the Paris Project and amendment to the Grace Development would not affect their respective facilities or operation, therefore only the facilities at the Grace Development are described here.

The Grace Development (Figure 3) consists of: (1) a 51-foot-high by180-foot-long rock-filled timber crib dam, with a concrete core and a 120-foot-long central spillway section with 8-foot-high wooden flashboards; (2) a 250-foot-long earthen dam on the right abutment; (3) a forebay with 250 acre-feet of usable storage capacity at a surface elevation of 5,555 feet (United States Geological Survey datum); (4) a 52-foot-wide intake structure contained within a concrete stucco building, adjacent to the earth embankment section of the dam, containing eighteen 5-foot by 10-foot screen sections; (5) a 26,000-foot-long, 11-foot-diameter flowline, consisting of 15,000 feet of steel and 11,000 feet of wood stave pipeline; (6) two surge tanks, one 10 feet in diameter and 38 feet high, located approximately 2.6 miles downstream of the diversion, and the other 30 feet in diameter and 132 feet high, located directly above the powerhouse; (7) three 90-inch-diameter steel penstocks, equipped with two butterfly valves; (8) a 53-foot by 148.5-foot powerhouse containing three vertical Francis units, each with an installed capacity of 11 MW and a hydraulic capacity of 320 cubic feet per second (cfs); (9) a tailrace consisting of a short concrete-lined section that transitions to an unlined open channel section; and (10) a substation containing step-up transformers and circuit breakers,

[2] *PacifiCorp*, 105 FERC ¶ 62,207 (2003).

[3] An amendment to the Bear River Project license approved the removal and decommissioning of the Cove Development and reduced the minimum flow requirements in the bypass reach of the Grace development. *PacifiCorp*, 115 FERC ¶62,205 (2006), as clarified on rehearing, *PacifiCorp*, 117 FERC ¶61,088 (2006).

located immediately adjacent to the powerhouse, which also serves as the point of interconnection to the transmission grid system.

The three Bear River developments are operated in a coordinated manner to meet irrigation demands and to generate power. During the irrigation season (April through October), Bear River flows are generally higher than the natural conditions due the irrigation releases from Bear Lake, and the three developments are usually operated in a modified run-of-river mode during this season. Water stored in Soda and Oneida reservoirs may be used to satisfy short-term irrigation demand or to maintain reservoir levels in Cutler reservoir, a licensed facility located downstream of the Oneida development. During the non-irrigation season, releases from Bear Lake are generally lower than natural conditions, and the river is regulated primarily to maintain downstream reservoir levels and minimum instream flows. Some releases may be made from Bear Lake during this season to meet spring flood control target elevations in Bear Lake reservoir. The three developments continue to generate during the non-irrigation season, using available flows (that is, the inflow to the Bear River Project on a given day, that may be used for power generation consistent with and subject to obligations of all water contracts and agreements).

The Grace Development generally operates in a semi-automatic mode with the Grace forebay ranging between 5,554.20 and 5,554.50 feet mean sea level (msl). The Grace Development operates closer to a strictly run-of-river (inflow equals outflow) operation than the other developments because of limited storage in the forebay.

Pursuant to Article 408 of the Bear River Project license, PacifiCorp maintains the following minimum flow schedule: (a) below the Soda dam, a year-round minimum flow of 150 cfs, or inflow into the Soda reservoir, whichever is less; (b) in the Grace bypass reach, a year-round minimum bypass flow of 63 cfs or inflow, whichever is less, in addition to 2 cfs leakage below Grace dam; and (c) in the Oneida reach below the powerhouse, year-round minimum flow of 250 cfs or inflow, whichever is less, in addition to 1 cfs leakage below Oneida dam. Exceptions to the required minimum flows are only allowed on a temporary basis for maintenance or emergencies, and after consultation with the Environmental Coordination Committee (ECC).[4] Article 408(b), as clarified on rehearing, included additional exceptions specific to temporary reduction or suspension of the required minimum as necessary to facilitate removal of the Cove Development.

[4] The ECC was established pursuant to Article 402 of the Bear River Project license and Section 4.1 of the Settlement Agreement signed on August 28, 2002, by sixteen participants to the Bear River Project relicensing process. The ECC includes representatives from each of the signatories, which includes the licensee, state and federal resource agencies, Indian Tribes, and non-governmental organizations.

1.3 Purpose and Need for Action

This Environmental Assessment (EA) is being prepared to satisfy the Commission's responsibilities under the National Environmental Policy Act of 1969 (NEPA),[5] the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1500-1508), and the Commission's implementing regulations under 18 CFR 380. In this EA, Commission staff analyze the environmental effects of the proposed surrender of project exemption for the Paris Project with the proposed amendment of the Bear River Project license given the inter-relatedness of the proposals. Commission staff also analyze any alternatives to the proposed action and the no-action alternative.

1.4 Statutory and Regulatory Requirements

The surrender and amendment requests for the Paris and Bear River projects, respectively, would be subject to numerous requirements under the Federal Power Act (FPA) and other applicable statutes. The major regulatory and statutory requirements are described in Appendix A.

1.5 Public Notice and Comments

Commission staff issued a public notice of the applications on July 21, 2023. On August 21, 2023, the State of Idaho filed a motion to intervene in the proceedings on behalf of the Idaho Department of Fish and Game (Idaho DFG), Idaho Water Resource Board (Idaho Water Board), Idaho Department of Environmental Quality (Idaho DEQ), Idaho Department of Water Resources (Idaho DWR), Idaho Department of Lands (Idaho DL), and Idaho Park and Recreation Board by and through Idaho Department of Parks and Recreation (Idaho DPR).

Separately, on August 21, 2023, the Idaho Governor's Office of Energy and Mineral Resources (Idaho OEMR), together with Idaho DWR, filed comments in response to the public notice. In the letter, Idaho DWR stated that any change in the minimum bypass flow at the Grace power plant should not be conditioned on maintaining a specific minimum flow in any segment of Paris Creek. Idaho DWR stated that while it is sensible to expect that PacifiCorp's abandoning its Paris Creek water right will increase Paris Creek stream flows and have some environmental benefit, it should not be assumed that any specific flow target will be maintained reliably. Idaho DWR stated that it is not consistent with Idaho water law to interpret PacifiCorp abandoning its Paris Creek water right as establishing a minimum stream flow in Paris Creek equivalent to PacifiCorp's Paris Creek water right. It stated that pursuant to Idaho Code § 42-222(1), which states how existing Idaho water rights may be changed, "[M]inimum stream flow

[5] 42 U.S.C. §§ 4321 *et seq*.

water rights may not be established under the local public interest criterion, and may only be established pursuant to chapter 15, title 42, Idaho Code." Idaho DWR stated that Idaho Code § 42-1503 states that only the Idaho Water Board may obtain a minimum stream flow water right, and it must do so by applying for a new water right. Idaho Code § 42-1503 also states that minimum stream flow approvals must be submitted to the Idaho Legislature for review and approval.

Idaho DWR further stated that instead of becoming a minimum stream flow, abandoning a water right results in an increase in unappropriated water in the source stream. It stated that unappropriated water is subject to diversion and use by holders of valid water rights, up to the amounts authorized by such water rights and put to beneficial use. Idaho DWR noted that if PacifiCorp abandons its Paris Project water right, the water that it no longer diverts may be distributed to Paris Creek water right holders to satisfy their water rights. How much of that water remains in any segment of Paris Creek depends on the water rights authorized to divert water from that stream segment. If there is a connection between the bypass flow at the Grace power plant and the abandonment of the Paris Creek hydroelectric project, the connection must be based on objectives and measures other than specific stream flow targets in Paris Creek.

Commission staff issued a notice of intent to prepare an EA for the proposed action on January 24, 2024. The notice provided a proposed schedule for completion of the EA and invited federal, state, local, and Tribal agencies with jurisdiction and/or special expertise with respect to environmental issues affected by the proposal to cooperate in the preparation of the EA.

No parties sought to cooperate on preparation of the EA. On February 20, 2024, the U.S. Environmental Protection Agency (EPA) provided comments and recommendations for Commission staff's consideration in the EA. EPA recommended the EA characterize effects to water quality, protected species and habitats, climate change, coordination with tribal governments, environmental justice, cumulative impacts, and monitoring and adaptive management. These recommendations are addressed in Section 3.0, *Environmental Analysis* and Appendix A, *Statutory and Regulatory Requirements*.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

PacifiCorp's proposal to surrender the Paris Project exemption is part of a larger habitat restoration effort proposed by PacifiCorp and the parties to a relicensing settlement agreement for PacifiCorp's Bear River Hydroelectric Project. PacifiCorp proposes to decommission the Paris Project and stop the diversion of water from Paris Creek into the irrigation canal that serves the Paris Project. After decommissioning and exemption surrender, flows currently diverted through the canal would be returned to Paris Creek for the enhancement and restoration of approximately 3.5 miles of cold-water

habitat for Bonneville Cutthroat Trout (BCT) in the currently bypassed reach of Paris Creek.

To partially mitigate the cost of the proposed decommissioning of the Paris Project, PacifiCorp proposes to amend the license for the Bear River Project to reduce the minimum instream flow requirement in the Grace Development's bypass reach. This reduction in required minimum instream flow would allow PacifiCorp to increase hydroelectric generation at the Grace Development to offset lost generation associated with the Paris Project decommissioning. The specifics of the proposed actions at each project are discussed below:

Paris Project

PacifiCorp proposes to decommission project facilities and to surrender the Paris Project exemption. The specifics of decommissioning activities include:

Forebay

The Paris Project forebay is approximately 350 feet-long by 60 feet-wide with a total surface area of approximately 0.61 acres. The earthen forebay embankments would be graded to resemble natural landforms. Disturbed areas would be graded and seeded.

Inlet Structure

There is a concrete inlet structure at the upstream end of the forebay. This structure has a slide gate where an abandoned irrigation ditch connects to the forebay. PacifiCorp proposes to decommission the inlet structure by removing the concrete structure and the slide gate. Concrete would be broken up and buried on site. Disturbed areas would be graded and seeded.

Outlet Structure

At the downstream end of the forebay is a concrete outlet structure with two bays, one leading to the penstock and one leading to the spillway. PacifiCorp proposes to decommission the outlet structure by removing the concrete, gates, and trash racks. Concrete would be broken up and buried on site. Disturbed areas would be graded and seeded.

Penstock

Downstream of the forebay outlet structure, is a 1,366-foot-long, 22 to 30-inch-diameter steel penstock supported on concrete piers spaced approximately every 15 feet. The penstock travels downhill from the forebay outlet structure to the powerhouse. PacifiCorp proposes to decommission the penstock by removing the steel penstock, salvage or dispose of it offsite, remove the concrete piers and break up and bury the concrete onsite. Appropriate erosion control measures would be deployed on this steep slope. Disturbed areas would be graded and seeded.

Spillway and Spillway Flume

Downstream of the forebay outlet structure is an overflow spillway channel. The first short portion of the channel is cast concrete and the remainder of the channel is natural. PacifiCorp proposes to remove the concrete elements of the spillway and flume, and to break up and bury the concrete onsite. PacifiCorp would leave the natural channel unmodified. Disturbed areas would be graded and seeded.

Powerhouse

Downstream of the penstock is a rock and brick powerhouse containing one horizontal (above floor) Francis turbine/generator unit with a capacity of 715 kW. PacifiCorp proposes to decommission the powerhouse by granting a salvage contract for all equipment within the powerhouse. The penstock entry into the powerhouse and the tailrace pipe would both be filled with concrete. PacifiCorp would disconnect the powerhouse from PacifiCorp's electrical distribution and transmission system. The secure and empty powerhouse structure would not be demolished and would remain in place on site.

Discharge Pipe

Exiting the Francis turbine/generator downstream of the powerhouse is a 60-foot-long, 30-inch-diameter steel discharge pipe. PacifiCorp proposes to decommission the discharge pipe by removing the portion of pipe across the road from the powerhouse. PacifiCorp would leave in place the approximately 60-foot-long section of discharge pipe located under the county road that connects to the powerhouse and would fill this section of pipe with concrete. Disturbed areas would be graded and seeded.

Tailrace

At the downstream end of the discharge pipe is a concrete tailrace basin with two slide gates that allow water to be delivered to the Upper Southfield Ditch and the Paris Relief Canal Company or allow water to return to the original stream bed of Paris Creek. PacifiCorp proposes to decommission the tailrace by removing the concrete tailrace basin and associated slide gates, and by disposing of concrete on site.

Paris Relief Flume

Downstream of the tailrace basin is an iron pipe and trestle structure which crosses over Paris Creek and discharges the water that has passed through the Paris Project into the irrigation canal of the Paris Relief Canal Company. PacifiCorp would leave this structure in place. It would be connected to Paris Relief and Upper Southfield's new irrigation diversion to be constructed by others upstream from the current tailrace. This work would be completed after the decommissioning of the Paris Project is complete. PacifiCorp included an agreement document in its surrender application (Attachment L) discussing the details of the agreement between the tailrace irrigators, Trout Unlimited, PacifiCorp and the private landowners.

Employee House and Garage

There is an employee house, an associated freestanding garage, and a drain field located on the Paris Project site. PacifiCorp proposes to decommission the employee house by first abating asbestos in compliance with all applicable laws regarding the handling of asbestos, and then demolishing the house and disposing of the material off-site. Concrete would be broken up and buried on site. PacifiCorp would leave the free-standing garage in place surrounded and secured by an existing metal fence. PacifiCorp would leave the drain field in place. Disturbed areas would be graded and seeded.

Paris Project Lands

The forebay, penstock, powerhouse, discharge pipe, tailrace basin, spillway flume, Paris Relief flume, employee house, garage, and drain field are located on an approximately 30-acre parcel of real property owned by PacifiCorp (Paris Project Lands). A legal description of the Paris Project Lands is included in the surrender application (Attachment G). After decommissioning the forebay, penstock, powerhouse, discharge pipe, tailrace basin, spillway flume, employee house, garage, and drain field, PacifiCorp would likely divest itself of the Paris Project Lands, including the empty powerhouse and empty garage with surrounding fence.

Hydroelectric Water Right

PacifiCorp notes that it owns an Idaho water right to divert 70 cfs from Paris Creek for power production with a priority date of February 3, 1910. Upon decommissioning of the Paris Project, PacifiCorp stated in its application that it would likely abandon this water right. The Commission has no oversight or jurisdiction over water rights.

Bear River Project

PacifiCorp proposes to reduce the year-round minimum instream flow requirement in the Grace Development's bypass reach, pursuant to Article 408(b) of the Bear River Project license, from the lesser of 63 cfs or inflow, plus 2 cfs of leakage from Grace Dam, to the lesser of 48 cfs or inflow, plus 2 cfs of leakage from Grace Dam. This reduction would provide PacifiCorp with 15 cfs of additional flow for power generation at the Grace powerhouse for the remaining term of the Bear River Project license,[6] which would partially offset the loss of generation associated with the decommissioning of the Paris Project and the cost of the decommissioning. The Grace Development's bypass reach is about approximately 6.6 miles long and passes through land administered by the BLM, but implementation of the license amendment would not involve in-water work or any disturbance of federal lands.

[6] The Bear River Project license expires November 30, 2033.

PacifiCorp also proposes an administrative change to Article 408(b) which would remove the exceptions which allowed modification of the Grace Development's minimum flows as needed to facilitate the removal of the Cove Development. Since the removal of the Cove Development is complete, PacifiCorp states that the exception is no longer necessary.

2.2 No-Action Alternative

The no-action alternative is the baseline from which to compare the proposed action and all action alternatives that are assessed in this environmental document. Under the no-action alternative, PacifiCorp would continue to operate the Paris and Bear River projects as they are currently, and no decommissioning of Paris Project facilities would occur. The ECC would continue to consult and make decisions regarding the various protection, mitigation, and enhancement measures (PM&Es) designed to enhance fishery and wildlife resources, provide additional recreational opportunities, and improve management of project lands as part of the Bear River Project's license articles and the Relicensing Settlement Agreement. While the PM&Es are intended to occur primarily within an action area defined as the Bear River and land drained by the Bear River and its tributaries below the point of confluence of the Bear Lake Outlet Canal with the mainstem Bear River and above the Idaho-Utah border, the ECC would still be authorized to pursue and fund PM&Es outside that area if PacifiCorp approves.

3.0 ENVIRONMENTAL ANALYSIS

In this section, Commission staff describe the environmental setting for PacifiCorp's proposed action and the scope of our effects analysis. We also present our analysis of the environmental effects of the proposed action.[7] Sections are organized by resource areas. Under each resource area, we first describe the current conditions. The existing condition is the baseline against which the environmental effects of the proposed action are compared, including an assessment of the effects of proposed mitigation, protection, and enhancement measures, and any potential cumulative effects. Our conclusions and recommended measures are discussed in Section 4.0, *Conclusions and Recommendations* of the EA.

3.1 General Description

The Bear River drainage covers approximately 7,500 square miles of mountain and valley lands in Idaho, Utah, and Wyoming, beginning in the Uinta Mountains in Utah

[7] Unless otherwise noted, information used in the development of this EA came from the project exemption order (Paris), license order (Bear River), and PacifiCorp's March 16, 2023 surrender and amendment applications, respectively, including associated Exhibit E, Environmental Report sections.

and continuing 500 miles to Great Salt Lake. The Bear River ranges in elevation from 4,200 feet to over 13,000 feet and is entirely enclosed by mountains. The climate of southeastern Idaho is influenced by prevailing west winds. The north-south ranging mountains create an orographic effect. Precipitation during the May through September growing season is only about one-third of the annual amount; most precipitation occurs as snow during the winter. Average precipitation is about 12 inches per year in the Bear River Project area, but ranges from 9 inches to 40 inches over the entire Bear River Basin. Winters are long and are influenced by cold air from the Canadian Arctic (daily temperature ranges approximately 18-36°F), while summers are generally cool and sunny with infrequent rainfall (daily temperature ranges approximately 50-84°F).

The Bear River is highly regulated and managed to provide a stable water supply for irrigated farmland, hydropower, recreation opportunities, flood control, and habitat enhancements for fish and wildlife. In addition to numerous diversion canals regulating water flow for irrigation, there are five hydroelectric dams on the Bear River, all operated by PacifiCorp. The hydroelectric dams are: the Soda, Grace, and Oneida developments comprising the Bear River Project (at river miles 185, 179, and 143 of the Bear River, respectively); the Cutler Hydroelectric Project (FERC No. 2420) located approximately 44 river miles downstream of the Oneida Development; and the Last Chance Diversion Dam (FERC No. 4850) located 4 miles downstream of the Soda Development.

The Paris Project, operated under a conduit exemption and not part of the Bear River Project, is located on Paris Creek north of Bear Lake with historical tributary connectivity to the Bear River. The Paris Project area occupies 30 acres in Paris Canyon, east of the town of Paris, Idaho. Operation of the Paris Project includes FERC regulated and non-FERC infrastructure that diverts water from Paris Creek 250 feet below Paris Springs and conveys it to the Paris Project.

Hydrology in the system is influenced by regulated releases from Bear Lake, which is the major headwater storage reservoir and is located approximately 45 miles upstream of the Soda Development in Bear Lake County, Idaho. Flows in the Bear River are largely influenced by water releases from the Bear Lake Facilities[8] during the irrigation season (April through October). The Bear River Project is operated to maintain reservoir water levels and minimum instream flow requirements during the non-irrigation season.

Developed and undeveloped agricultural lands occur throughout the basin, and several small urban areas are located in valleys along the main stem of the river and its

[8] The Bear Lake Facilities include Stewart Dam, Rainbow Canal Headgates, Rainbow Canal, Ream-Crocket Canal Intake, Ream-Crocket Canal, Bear Lake Causeway Inlet, Lifton Pumping Station, Outlet Canal, Paris Dike and Outlet Canal Headgates, and are used by PacifiCorp to divert water from the Bear River and to store and release water from the Bear Lake Reservoir (PacifiCorp 2023c).

tributaries. Land use in the project area is mostly rural (widely dispersed homes and ranches, and small urban areas in the valleys), with areas of forest, mountains, valleys, and open pastures; primary land uses in the project vicinity are grazing and dry and irrigated farming. The Bear River watershed includes large amounts of federal (both BLM and Forest Service) and state lands that serve a range of natural and agricultural functions.

3.2 Scope of Cumulative Effects Analysis

According to the CEQ's regulations for implementing NEPA,[9] a cumulative effect is the effect on the environment that results from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period, including hydropower and other land and water development activities.

PacifiCorp discussed other elements of the Paris Creek Restoration Project that would take place on areas outside of the Commission's jurisdiction. PacifiCorp states that as part of the Paris Creek restoration project, PacifiCorp and the ECC under the Bear River Project license plan to engage in a number of activities beyond the decommissioning of the FERC-regulated Paris Project facilities. These activities are described below:

Removal of Diversion and Intake Structure Near Paris Springs

PacifiCorp intends to remove the concrete diversion and intake structure located in Paris Creek on federal lands administered by the Forest Service. The diversion and intake structure are not a part of the Paris Project authorized by PacifiCorp's conduit exemption. The diversion and intake structure, and that portion of the canal that is located on the Forest Service lands, are authorized under a Special Use Permit. The Forest Service has completed an environmental assessment and authorized the removal work.[10]

The diversion and intake structure are located approximately 300 feet downstream of the point at which Paris Creek emerges from a natural spring and approximately 3.5 miles upstream of the Paris Project. The structure consists of two elements: (1) a concrete and wood diversion structure located in Paris Creek that diverts water away from the natural alignment of Paris Creek and toward the intake structure; and (2) a

[9] 40 CFR § 1508.1

[10] See Attachment J of the surrender application.

concrete and steel intake structure that channels the diverted water into the irrigation canal along the south ridge of Paris Canyon.

PacifiCorp intends to remove the diversion structure and intake structure, and to recycle or dispose of the removed materials (wood, concrete, and metal) off site. The work will occur on federal lands administered by the Forest Service. The work is not expected to have any long-term adverse effects on the stream bed and should ultimately improve the condition of the steam bed downstream by allowing natural transport of substrate materials and by restoring the spring flow hydrograph.

Abandonment of the Irrigation Canal

The irrigation canal (aka the Weilenmann Ditch) is approximately 3.6 miles long (measured from the diversion structure in Paris Creek to the Paris Project forebay). The canal is located on federal land administered by the Forest Service and BLM, and on privately held land. The canal is not part of the Paris Project authorized by PacifiCorp's conduit exemption. The canal is built on steep to moderate side slopes. Generally, the canal is cut into the hillside with an earthen berm on the downslope side. From the diversion and intake structure near Paris Springs, the canal meanders eastward along the southern slope of Paris Canyon approximately 60 to 80 feet above the natural creek bed of Paris Creek. The canal continues beyond the forebay of the Paris Project. Water transported through the canal passes through the Paris Project and is then directed by the tailrace of the Paris Project either into the original stream bed of Paris Creek or into the Paris Relief or Upper South Field irrigation works.

The unlined canal was designed to measure 4 feet wide across the bottom, 15 feet wide across the top, and 5 feet 8 inches deep. The interior sidewalls have a 1:1 slope angle. Portions of the last approximately 0.25 mile of the canal, located nearest to the Paris Project forebay, are covered with a series of round wooden timbers and steel half pipe sections to prevent drifting snow from damming the canal. Several vehicle and pedestrian bridges cross the canal. The abandoned Weilenmann Ditch beyond the forebay connects to the slide gate in the forebay intake structure.

Water has not been diverted past the forebay for irrigation purposes in over twenty years. The Forest Service notified owners of these irrigation water rights that the intake structure on Forest Service and the canal would be decommissioned. The Forest Service did not receive any protests from these landowners to these actions.

If PacifiCorp is authorized to decommission the Paris Project, then PacifiCorp intends to stop diverting water from Paris Creek into the canal and to partially de-construct the canal and abandon it in place. Specifically, PacifiCorp intends to remove all wooden timbers and half steel pipe sections placed across the canal and to recycle or dispose of those timbers and half pipe steel sections off site. PacifiCorp intends to leave existing pedestrian and vehicle bridges in place.

For the portion of the canal located on federal lands administered by the Forest Service, PacifiCorp proposes to grade the outer canal berm toward the hillside to create a rough bench that slopes back into the hillside. Larger grading actions would be undertaken in areas where snow melt overland flows may occur. These areas would be graded so canal remnants would not intercept overland flows. The Forest Service has approved, through a categorical exclusion, PacifiCorp's activity to partially deconstruct the canal and to abandon it in place. The Forest Service will oversee and approve PacifiCorp's activities regarding the canal.

Regarding the portion of the canal located on federal lands administered by BLM, PacifiCorp intends to leave the canal as is and to abandon it in place pursuant to direction from BLM. PacifiCorp and BLM have entered into an agreement addressing PacifiCorp's abandonment of the canal in place on federal lands administered by BLM. A copy of the agreement between PacifiCorp and BLM is included in the surrender application as Attachment K.

Regarding the portions of the canal located on private lands, PacifiCorp intends to remove all surplus materials along the canal and work with the private landowners to generally abandon the canal in place. Site-specific actions would be coordinated with landowners.

Memorandum of Agreement with Irrigators

PacifiCorp entered into a Memorandum of Agreement (Irrigator MOA) with Paris Relief Canal Company (Paris Relief), Upper Southfield Irrigation Company (Upper Southfield), Trout Unlimited, the City of Paris, Idaho, and the Mattson family. Paris Relief and Upper Southfield own water rights to divert water from Paris Creek for irrigation. Pursuant to an agreement dated August 14, 1936, PacifiCorp has the right to divert these water rights through the power canal, generate with them and then has the obligation to deliver this water into the irrigation works of these companies at that tailrace. Because of the overall fishery restoration goals of the decommissioning project, the ECC for the Bear River Project is proposing to construct a new intake for these water rights on Paris Creek upstream of the Paris Project tailrace. This new intake would be screened to protect BCT that would be able to move into the restored Paris Creek reach. The parties intend that the ECC for the Bear River Project would use restoration project funds that it manages, and other grant funds, to fund the design and construction of the irrigator's new intake structure. The Irrigator MOA also provides that PacifiCorp would contribute funds to help address an upstream sinkhole that is a concern of the irrigators, and that PacifiCorp would terminate the 1936 Agreement and that Paris Relief and Upper Southfield would not protest the termination of the 1936 Agreement. To memorialize this approach, the parties have entered into the Irrigator MOA that is enclosed as Attachment L in the surrender application.

Agreement with Stock Watering Entities

PacifiCorp drafted an agreement with Ward Brothers Dairy and the members of the Bloomington Grazing Association to address the loss of the canal as a source of stock water. Ward Brothers Dairy owns private land, and holds a grazing permit for BLM land, that are crossed by the canal. The six members of the Bloomington Grazing Association hold permits to graze cattle on the Forest Service lands crossed by the canal. Both entities use the canal as a source of stock water. Under the agreement, PacifiCorp would agree to make a payment to the stock watering entities to aid them in the development of sources of stock water other than the canal. In exchange, the stock watering entities would agree to release PacifiCorp from any claims arising from the loss of the canal as a source of stock water. PacifiCorp stated in its application that the agreement has been reviewed for legal sufficiency by the stock watering entities and is circulating it for signatures.

Commission staff is not aware of other foreseeable future actions in the geographic or temporal scope of this analysis.

3.3 Resource Areas

3.3.1 Geology and Soils

Affected Environment

Geology in the area of the Paris and Bear River Projects is varied, with mountains to the west and basalt formations occupying much of the valley floor. The immediate area around the Paris Project consists of rolling hills with flat meadow areas. The soil consists of clay, stone, and a high degree of herbaceous material. Erosion concerns are moderate to low (Utah Power and Light Company, 1982). The Bear Project's Grace Development is located within the Gem Valley, which is underlain by a widespread basalt lava flow of Pleistocene Age that is approximately 12,000 to 2 million years old. This flatly bedded basalt lava flow is more than 1,000 feet thick with some vegetation and surface weathering. The Grace Development is located within a broad valley on the Bear River where the river has cut a 50- to 60-foot deep channel across the valley. The natural topography within this portion of the valley is relatively flat. Overburden soils resulting from surface weathering of the basalt bedrock occurs in varying thickness over the bedrock in the immediate vicinity of the dam and consists of silty clay, sandy silt, and silty sand.

Environmental Effects

Paris Project

Decommissioning activities at the Paris Project include ground disturbing activity with heavy equipment for the demolition and removal of the forebay structures, removal of the penstock, and grading of the site. All concrete and rubble associated with demolition of the structures would be buried in designated locations on site at a sufficient

depth where it would facilitate grading and stabilization of the area for the long-term. The powerhouse building would remain intact, but all existing equipment, supplies, and furnishings would be removed. Floor penetrations for the penstock and tailrace would be filled with concrete and the building would be secured to ensure public safety. The operator house would be demolished after asbestos abatement and disposed of off-site, except for the house foundation which would be broken up and fully buried in designated locations on site.

Decommissioning activities have the potential to cause erosion; however, PacifiCorp would implement sediment control and grading measures. Minor, short-term effects to geology and soils are expected for the decommissioning and surrender of the Paris Hydroelectric Project. Commission staff recommends that PacifiCorp be required to complete decommissioning activities on Paris Project lands prior to the Commission finding the exemption surrender effective.

For phases of the larger river restoration effort outside of the Paris Project, and Commission jurisdiction, erosion and sedimentation has the potential to occur. PacifiCorp would implement measures for sediment management including stabilizing and revegetating disturbed areas. PacifiCorp has agreements with the Forest Service, BLM, and stakeholders regarding construction and restoration expectations and would be required to obtain any necessary local, state, or federal permits and authorizations to complete the work.

Bear River Project

The proposed reduction in minimum flows would not increase or significantly alter erosion and sedimentation processes in the bypass reach and would therefore have no effect to geology and soils at the Grace Development.

3.3.2 Water Quantity

Affected Environment

Paris Project

Paris Creek is fed by a cold-water spring originating approximately 3.5 miles above the Paris Project. The spring supports municipal, irrigation, and hydropower uses. Approximately 250 feet below the source, water is diverted into the power canal, leaving less than 1 cfs in Paris Creek, particularly from late summer through the winter. Downstream of the Paris Project (from the tailrace), water is released into the works of two irrigation companies or returned to Paris Creek. The canal and diversion structure are not part of the Paris Project. The approximately 3.5 miles of stream from the diversion to the Paris Project are dewatered or have minimal flow from late summer to early spring runoff, restricting aquatic habitat. The Paris Project can divert up to 38 cfs into the canal. Average monthly flows though the plant range from 3.3 to 26.5 cfs (Table 1).

Bear River Project

Bear River is almost completely regulated for irrigation, resulting in the hydrology of the system behaving differently than a natural flowing river. River flows are generally higher than the natural conditions during the irrigation season (April through October) due to the irrigation releases from Bear Lake. In the non-irrigation season, flow in the river is regulated to keep reservoirs within desired operating ranges and to maintain minimum instream flows, and river flows are generally lower than natural winter conditions. Some releases may be made from Bear Lake during the non-irrigation season to meet spring flood control target elevations in Bear Lake reservoir. Additionally, if Bear Lake storage is too high, controlled releases are made to provide a flood storage reserve.

The volume and timing of water released from the storage reservoirs and dams upstream of the Grace Development, including the Alexander Reservoir at the Soda Development and further upstream at Bear Lake, vary based on the annual precipitation levels recorded in the Bear River basin during any given year. In years of low precipitation and runoff, irrigation demands are greater, begin earlier and last longer than during a normal year; as a result, releases from the Bear Lake Facilities are greater and power generation can be higher (PacifiCorp 2023c). Power generation is secondary to the primary uses of Bear Lake to provide for irrigation, flood control, and drawdown for storage of spring runoff; therefore, if Bear Lake elevations decrease below 5,914 feet msl, releases for power generation are prohibited (FERC 2003). During years of high precipitation and runoff, flow from the Bear Lake Facilities and annual power generation can be lower, except for situations when high runoff and full storage at Bear Lake occur at the same time (PacifiCorp 2023c).

The Grace Reservoir has a surface area of 38 acres and an active storage capacity of approximately 350 acre-feet. Due to the limited storage in the forebay, the Grace Development operates closer to a strictly run- of-river (inflow equals outflow) operation than the Soda and Oneida developments, which can store water to satisfy short-term irrigation demand or to maintain reservoir levels at the downstream Cutler Project. Flows entering the Grace forebay are ultimately dependent upon upstream releases from Alexander Reservoir at the Soda Development, which are subsequently influenced by irrigation deliveries from Bear Lake storage water, irrigation withdrawals, maintenance activities, winter operations, and electrical demand. After water is released from Soda Dam, two irrigation diversions owned by the Last Chance Canal Company can divert up to 658 cfs for irrigation purposes before the Bear River enters the Grace forebay, and typically diverts water mid-May through mid-October (PacifiCorp 2023c).

The Grace Development has a 6.5-mile bypass reach below the Grace Dam, known as the Black Canyon reach of the Bear River. Prior to the 2003 license issuance, the upstream portion of the Grace bypass reach was virtually dewatered except for approximately 1 to 18 cfs leakage from the dam. Existing irrigation contracts and water rights which withdraw from the Grace Reservoir must be met prior to making minimum

flow releases from Grace Dam. Water is not diverted to the flowline for generation if inflow to Grace forebay is less than the required minimum flow of 63 cfs. Flow diverted for power generation at the Grace Development generally includes all available water up to the design capacity of each turbine; the maximum diversion capacity of the Grace flowline is 960 cfs.

Flow in the bypass reach is comprised of the minimum flow requirement (63 cfs or inflow, required by amended Article 408), leakage at Grace Dam (approximately 2 cfs), irrigation deliveries in excess of the flowline capacity, and discharge from five major springs in the reach (contributing an estimated 30 to 60 cfs to the downstream end of the reach). When forebay inflows exceed the amounts diverted to the Grace flowline (960 cfs), excess flows over Grace Dam are passed into the bypass reach. PacifiCorp has two available methods to provide minimum flows and to monitor compliance with the flow requirements in the bypass reach,[11] either through a low-level bypass valve or by using one or more of the slide gates on the dam.

Flow records in the bypass reach indicate that, on average, the lowest flows occur December through February (Table 2). Releases below the minimum flow requirement are rare but can occur when inflows fall below the 63 cfs and the Grace Development is off-line. Article 408 allows the minimum instream flow to be reduced without limitation to match inflow when inflow is less than 63 cfs; however, if allowed within operational and legal constraints, PacifiCorp voluntarily releases additional water from the Soda Development to maintain a lower minimum flow target of 40 cfs in the Grace bypass reach, avoiding extremely low bypass flows regardless of the inflow.[12]

Higher flows in the bypass reach occur in spring and early summer, when irrigation demand or spring runoff exceeds the maximum hydraulic capacity of the Grace Development. Infrequently, higher flows also occur during scheduled whitewater flow releases.

Environmental Effects

Paris Project

The proposed action would provide a long-term benefit to Paris Creek by returning full flow to the stream channel from the headwaters downstream approximately 3.5 miles from the diversion to the power plant. Based on the flow data reported above (Table 1), a range of flows from 3.3 to 26.5 cfs would be added to the restored reach across the year.

---

[11] Order Approving Revised Operations and Compliance Monitoring Plan Pursuant to Article 415 (148 FERC ¶ 62,200), issued September 16, 2014.

[12] This is a strictly voluntary measure and is not required by the license (PacifiCorp 2013).

Maintaining flows during the summer and winter months would improve the aquatic environment.

Bear River Project

Minimum flows in the Grace bypass reach would continue to be influenced by upstream water rights and precipitation conditions in the Bear River Basin, and spring discharges at the downstream end of the bypass would continue to supply 30 to 60 cfs in the reach.

Since flows in the bypass reach are junior to upstream irrigation water rights, during drought years discharge into the Grace bypass reach could fall below 48 cfs. In the event that inflow is less than the minimum flow, the project would operate run-of-river; if possible given the operational and legal constraints of water allocation, PacifiCorp could continue voluntarily providing additional water from the Soda Development to protect aquatic resources in the bypass. While releases from the Grace forebay to the bypass reach under the proposed action would be reduced, the proposed 48 cfs minimum flow release would be much greater than the historical record (prior to the 2003 license) when no minimum flow requirement was mandated. Under the proposed amendment, PacifiCorp would be able to more consistently provide minimum flows at the lower threshold in the bypass reach during the winter low flow period, based on data in Table 2 indicating that all monthly average and minimum flows shown for the upstream end of the Grace bypass reach have exceeded the proposed minimum flow of 48 cfs.

The proposed amendment would allow generation to occur during lower flow conditions as PacifiCorp would be able to divert inflows above 48 cfs to the Grace flowline up to design capacity of 960 cfs, giving an additional 15 cfs for power generation. If inflows are less than 48 cfs, no water would be diverted for generation and all inflows would pass into the bypass reach. Water removed from the Bear River for power generation is returned to the river except for the amount lost to evaporation and transpiration; irrigation continues to be the largest consumptive use of water in the Bear River watershed. Based on this analysis, the reduction of minimum flows would not have an adverse effect to water quantity in the Grace bypass reach. Inflows would continue to be affected by precipitation and upstream water rights, and the altered hydrograph with inflows higher in the summer and lower in the winter, would also continue.

3.3.3 Water Quality

Affected Environment

Paris Project

Paris Creek is not listed as an impaired waterway. Little monitoring of water quality at the Paris Project is available. There is no baseline data for total suspended solids (TSS) and total phosphorus (Total P) in Paris Creek. However, observations

indicate the creek has a minimal TSS loading during the majority of year. During spring runoff TSS may elevate slightly but flows remain clear and water quality remains high.

Increases in water temperatures above the power plant in the upper section of Paris Creek have been noted (Idaho DEQ 2022). Monitoring in Paris Creek in 2001 indicated the upper reach above the Paris Plant averages 10.6 to 24.0 degrees Celsius (°C). Downstream of the project, temperatures ranged from 5.8 to 14.0 °C. The canal maintained the lowest temperature of 4.6 to 10.6 °C (Lyman and Carter 2015). Paris Creek monitoring in 2012 indicated that average temperatures from June to August above the power plant in the upper reach were 9.1 to 16.2 °C with a maximum temperature of 19.2 °C. Downstream of the power plant average temperatures were 7.1 to 11.0 °C with a maximum temperature of 15.1 °C. The canal daily averages were substantially lower at 5.9 to 6.7 °C with a max temperature of 7.4 °C (Lyman and Carter 2015). No recorded temperature in 2012 violated the state standard for temperature (Table 3).

Bear River Project

Idaho DEQ has designated the following beneficial uses for the Bear River in the Bear River Project area: cold-water aquatic life, salmonid spawning, and primary contact recreation. The aquatic life designation is the most conservative and relevant for the water quality parameters potentially affected by the proposed amendment, and the applicable water quality standards are provided in Table 3. The Bear River has long been manipulated for a variety of uses, which has resulted in degraded water quality through much of its mainstem. Due to this degraded condition, the Bear River is not fully supporting cold-water aquatic life, primary contact recreation, and other beneficial uses, and is listed on the 303(d) list for impaired water (ERI 2006, Idaho DEQ 2022).[13] Impairments in the Bear River include TSS and Total P. A Total Maximum Daily Load Plan (TMDL), which establishes the maximum amount of a pollutant allowed in a waterbody and serves as the starting point or planning tool for restoring water quality, has been developed for the Bear River.[14]

Although the Bear River has existing impairments, monitoring conducted by PacifiCorp pursuant to license Article 413 and water quality certification (WQC)

[13] Section 305(b) of the Clean Water Act (CWA) requires states to conduct biennial water quality assessments to determine the degree to which surface water resources are attaining their designated uses. These data are used to develop a state-wide list of impaired waterbodies, as required by Section 303(d) of the CWA, which typically requires the development and implementation of a Total Maximum Daily Load Plan (TMDL).

[14] The EPA approved the TMDL for the Bear River Basin/Malad River Subbasin in 2006. https://www.deq.idaho.gov/water-quality/surface-water/total-maximum-daily-loads/bear-river-basin-malad-river-subbasin/.

condition 1(a) determined that operation of the Grace Development is not contributing to exceedance of the water quality criteria, and the Idaho DEQ concurred with the findings and with the discontinuation of the monitoring (PacifiCorp 2010).

To support cold water aquatic life, state water temperature standards are set at 22 °C or less with a maximum daily average of no greater than 19 °C; and to support salmonid spawning the temperature standard is 13 °C or less with a maximum daily average of no greater than 9 °C (salmonid spawning waters are those which provide or could provide a habitat for active self-propagating salmon populations). Because the Bear River is highly regulated and the natural hydrograph is altered to accommodate transfer water to irrigators or to produce electricity, in the summer there are sections of the river with limited flow and other areas of high flow. These factors can drastically alter temperature in segments of the river, and temperatures in the Bear River often exceed the Idaho DEQ criteria.

A 2018 temperature study in the Bear River from Alexander Reservoir to Oneida Reservoir (encompassing the Bear River Project) indicated that the maximum daily temperature criteria is exceeded across all sites in the reach (Table 4). Temperature studies during relicensing indicated some signs of temperature stratification in Grace forebay during in summer sampling periods, with water temperatures 22 °C at the surface and l6 °C at a depth of 29.5 feet at the upper end of the forebay.

The 2018 temperature study also indicates that the average summer temperatures in the Grace Development lower bypass reach are often lower than the mainstem of the Bear River (Table 4). This is a result of spring inflow mixing with releases from Grace Dam. This was also observed during relicensing studies, which indicated summer daily average water temperatures in the Grace bypass reach ranged from 14 to 22 °C, but that inflow from the springs (generally 9 to 12 °C) cooled the water in the reaches during the summer, with the effect greatest at the downstream end of the bypass. Higher inflows from the Grace Development can influence temperature in the lower sections of the bypass reach by mixing larger volumes of water with spring water, raising the average temperature. Temperature in the upper part of the bypass reach is typically similar to mainstem temperatures. Relicensing studies indicated that average temperatures in the Grace bypass reach exceeded the salmonid spawning criterion of 9 °C during the months of March through July, and daily average temperatures exceeded the cold-water aquatic life criterion of 19 °C in the upper end of the bypass reach in August. During periods of lower flow, temperature in the upper part of the bypass reach can exceed 24.2 °C, which would be lethal to BCT (Cirrus 2019).

The applicable Dissolved Oxygen (DO) standard in the Bear River is to maintain DO concentrations greater than 6 milligrams per liter (mg/L) at all times. Relicensing studies indicated some DO stratification in the Grace forebay during summer sampling, with DO concentrations greater than 7 .5 mg/L at the surface, but as low as 1.0 to 2.0 mg/L near the bottom. That sampling also indicated DO concentrations occasionally dropped below the 6.0 mg/L criterion, to a low of 3.9 mg/L, in the upper 80 percent of the

water column (as measured by depth). In the Grace bypass reach, during relicensing studies, all periodic DO measurements exceeded 6.0 mg/L. Monitoring conducted post-licensing indicated exceedances of the criteria occur in July and August, with fewer exceedances in August and with exceedances generally decreasing toward the lower bypass reach.

TSS standards recommended in the TMDL during the runoff season (e.g., March through June) are 80 mg/L for river segments above receiving water bodies (reservoirs) and 60 mg/L for all other river segments. For the remainder of the year (summer base flow July–September, and winter base flow October–February) the TSS standard is 60 mg/L and 35 mg/L, respectively (ERI 2006). Sources of TSS in the Bear River Basin may include agriculture, livestock practices, alteration of the natural hydrograph, and erosion. A loss of riparian buffers can lead to elevated erosion rates and high sediment levels. TSS load tends to be higher during the irrigation season due to higher delivery flows to downstream users.

As part of the Bear River Project Settlement Agreement, PacifiCorp in conjunction with the ECC has helped fund multiple habitat enhancement projects annually, and conservation easements have been created through purchases. Many of the funded projects have focused on stabilizing erosive streambanks, replanting riparian vegetation, screening irrigation intakes, limiting livestock in riparian areas, installing beaver dam analogs, and relocating animal feeding operations away from waterways. Other projects have installed sediment basins in fields to reduce sediment to streams. Studies conducted by the Idaho DEQ during the TMDL Five-Year Review indicated that the reach of the Bear River encompassing the Bear River Project was not impaired for TSS (Idaho DEQ 2017). The studies indicated average sediment measurements collected from the Bear River above Soda Dam to Oneida Reservoir ranged from 31 mg/L to 33 mg/L (Table 5). Based on the information, average TSS is lower throughout the Grace Development than upstream of Alexander Reservoir. Sediment is resuspended in the reach downstream of Grace before entering Oneida Reservoir.

Total P and orthophosphorus (the dissolved portion of phosphorus) are pollution indicators and the mainstem Bear River has historically recorded high levels of both (ERI 1998). Wastewater treatment plants, agriculture, livestock grazing, and recreation are a source of nutrients in the basin. Other possible pollutant sources include urban activities, effects associated with hydropower production (e.g., ramping practices), and an altered hydrograph (ERI 2006). The Grace forebay is characterized as meso-eutrophic or moderately enriched from a nutrient standpoint. The state-recommended standard for Total P is 0.05 mg/L for river segments above a receiving water body and 0.075 mg/L for all other river segments.

Sampling conducted from 2006 to 2015 indicated that Total P in single water samples collected above Soda Dam to the Oneida Reservoir (encompassing the Bear River Project) consistently exceeded the state-recommended standard for Total P (Idaho DEQ 2017; Table 5). However, average Total P measurements taken below Grace Dam

in the bypass reach were below state standards, and average Total P measurements below the Grace Development were at state standards. The sampling indicated that concentration of Total P tends to increase downstream to Oneida Reservoir.

Environmental Effects

Paris Project

Under the proposed action, no in-water work would occur as part of the decommissioning of the Paris Project facilities and no effect to TSS is expected from that work. Therefore, no CWA 401 WQC or 402 permit are needed for the decommissioning activities at the Paris Project. The decommissioning of the Paris Project would have no effect on Total P concentrations in Paris Creek as no nutrients would be mobilized by facility removal or channel restoration. For the portion of the restoration project to remove the diversion structure in Paris Creek on Forest Service lands and the construction of a new irrigation intake structure, localized ground and channel disturbances would occur. These would be temporary, and minimized through removal plans and best management practices to protect water quality and minimize sediment transport. PacifiCorp would be responsible for coordinating any permitting needs for construction activities on Forest Service and BLM lands. The Paris Creek restoration project and decommissioning of the Paris Project would substantially reduce water temperature in approximately 4 miles of Paris Creek in the reach above the power plant, improving water quality. Based on average temperature data collected in 2012, the stream could see a reduction in temperature of 4 to 5 °C during warm periods with the increase in flow to the reach. No in-water work would be required for decommissioning the Paris Project specific facilities so there would be no effect to water quality during construction. Over the long-term, the reduction in water temperatures during warm periods would have a beneficial effect on Paris Creek.

Bear River Project

Under the proposed action, no changes to water temperature and DO in the forebay and tailrace of the Grace Development are expected compared to current conditions. The exceedances from temperature and DO standards, which are typical during the summer, would continue to occur and would not be exacerbated by the proposal. Downstream of the Grace Development, the additional 15 cfs for generation would generally be available in the winter months, outside the irrigation season, which is not a critical period for temperature or DO conditions.

In the bypass reach, temperature and DO in the upper portion of the reach (upstream of the influence of the springs) would be marginally affected by the reduced minimum flow, as temperatures in this section of the bypass are already similar to forebay conditions. The reduced minimum flows in the bypass would be a factor in prolonged impairment for temperature, but this would not be significantly different from the current trends. At the downstream end of the bypass reach, where the springs enter

the bypass reach, a slight cooling effect would occur due to the reduced volume of minimum flows and therefore greater influence of the springs on temperature conditions.

The reduced minimum flows would not affect TSS and Total P conditions in the Grace Development's bypass reach or tailrace, as there would be no additional disturbance of the channel and no addition of nutrients to the system as a result of the proposal. The flow fluctuations in the Bear River would remain within the current range.

The proposed reduction in minimum flow would not adversely affect the water quality conditions in the Grace bypass reach or the tailrace of the Grace Development and may marginally improve temperature conditions at the downstream end of the bypass reach.

3.3.4 Aquatic Resources

Affected Environment

Paris Project

Paris Creek is affected by limited flows that affect riverine habitat, limit fish migration, and may strand resident fish during periods with no flow. At present, the upper reach is dewatered at times but supports brook trout and mottled sculpin. During periods of sufficient flow, BCT (*Oncorhynchus clarkii utah*) may migrate upstream in the reach. Downstream of the powerhouse where flow is continuous, Paris Creek supports resident and fluvial BCT in limited numbers, brook trout, and other native fishes. Non-native brook trout, a cold-water species, are currently found throughout Paris Creek. The population of brook trout suggests BCT are being displaced because of limited flows and limited available spawning habitats for BCT. Non-native rainbow trout are occasionally found in Paris Creek (Lyman and Carter 2015). Rainbow trout spawn during similar periods and often hybridize with BCT which poses a negative effect on BCT.

Bear River Project

The Bear River in the vicinity of the Grace Development supports a variety of native and nonnative species, including several sportfish species which have been stocked to local waters (Table 6). Relicensing studies indicate that most of the sportfish species in the Grace bypass (e.g., the salmonids, smallmouth bass, walleye, and yellow perch) are located in the lower half of the reach in the vicinity of the springs (FERC 2003, Table 6).

BCT are a unique subspecies of the cutthroat trout complex native to the Bonneville Basin. BCT are not currently federally listed under the ESA but are designated as a sensitive species by the Forest Service and a species of special concern by the State of Idaho. Factors leading to BCT population declines include human activities such as water development (dams and diversions), agricultural activities, energy development, mining, timber harvesting, grazing, over-fishing and the introduction of non-native species.

BCT located at the Bear River Project are within the Bear River Geographic Management Unit, a distinct area defined by historic BCT range and geographic boundaries and designated to help guide BCT conservation (Lentsch et al 2000). BCT are known to occur in many tributaries of the Bear River, upstream of Soda Dam, and in Bear Lake. While relicensing studies did not document the presence of BCT in the vicinity of the Grace Development, the species could seasonally inhabit the Grace bypass and reaches of the Bear River downstream of the Grace Project to the upstream end of the Oneida Reservoir (FERC 2003). Due to restoration efforts enacted since relicensing of the Bear River Project, populations of BCT are currently found in Bear River tributaries downstream of the Grace bypass and tailrace area.

Protection and restoration of BCT is a key issue to the Bear River Settlement Agreement and various Bear River Project license articles. Accordingly, PacifiCorp and the ECC have implemented projects to reconnect riverine habitats, restore aquatic and riparian habitats, and supplement BCT populations. The BCT Restoration Study Plan[15] pursuant to Article 403 required PacifiCorp to study the feasibility of improving passage at the Cove development, including an assessment on decommissioning the development. Removal of Cove Dam in 2006 reconnected lower sections of the Bear River to the Grace bypass. Various aquatic and riparian habitat restoration projects funded pursuant to Articles 405 and 406 have improved habitat conditions in the Bear River Project area by acquiring available land and water rights in the project area, reducing sediment input, stabilizing stream banks, modifying channel morphology, and improving migratory corridors (PacifiCorp 2023a). BCT stocking activities are funded through Article 404, and the Idaho DFG produces BCT at the Grace Fish Hatchery and the Cove BCT broodstock ponds on PacifiCorp land near the Grace Development. Idaho DFG released 17,000 BCT in the Bear River below Grace Dam and tributaries downstream of the development (including over 6,500 released into the Grace bypass reach) in 2011 (Idaho DGF 2012), and since then has continued releasing hatchery produced BCT to continue the restoration efforts in the Bear River (PacifiCorp 2023a).

Rainbow trout, brook trout, and brown trout are the most common non-native salmonid species found in the Bear River drainage and can pose a threat to BCT populations through hybridization, competition, and predation (Idaho DFG 2022). Rainbow trout, which were historically stocked to the area by Idaho DFG, or may have escaped into the reach from a private trout farm, can compete with native salmonids for limited resources, or may crossbreed with BCT. Brook trout and brown trout were introduced to the river by stocking events, and while they do not pose a risk to BCT through hybridization, both species are competitors and predators of BCT. Brown trout

[15] Order Modifying and Approving Bonneville Cutthroat Trout Restoration Study Plan Under Article 403 (109 FERC ¶62,151), issued December 2, 2004.

are more tolerant of warm water temperatures than Idaho's native trout species and may be able to exploit additional habitats.

Nonnative sportfish species (walleye, smallmouth bass, and yellow perch) and nonnative non-sportfish species (carp) present in the Bear River may also adversely affect BCT populations (Idaho DFG 2022). The nonnative species are generally more tolerant of a wider range of habitat conditions and may compete with and predate on native fish species. Carp can disturb sediments when feeding, which results in increased siltation and turbidity and may adversely affect water quality and smother eggs.

Paiute and mottled sculpins occur in the middle to lower sections of the Grace bypass reach. Because sculpins are susceptible to land use practices or other events that degrade water quality or quantity, substrate composition, and temperature, their presence is a potential indicator of the high-quality waters which may also be suitable for salmon and trout (Wallace and Zaroban 2013).

The land use practices and water resource management associated with development and settlement of the Bear River basin has resulted in adverse effects to aquatic resources and ecosystem. Agricultural diversions have reduced stream flows and contributed warm water from agricultural returns, affecting the availability of cold-water habitat. Sediment inputs from agricultural sources, reductions in flushing flows caused by storage of irrigation water in Bear Lake, and interruption of sediment transport caused by numerous dams have reduced the availability of silt-free gravel substrates available for use by spawning salmonids.

The primary effects of the Grace Development on aquatic resources include inundation of riverine habitat, blockage of fish migrations, entrainment and turbine mortality, flow fluctuations associated with project operations and the delivery of irrigation water, and reduced flows in the bypass reach. Surveys in the Grace bypass reach described the upper, middle, and lower reaches of the bypass, located 0.25 miles, 3.4 miles, and 5.9 miles downstream of the Grace Dam, respectively (Cirrus 2010, Oasis 2011). Surveys have indicated that the Bear River immediately below the Grace Dam is slow moving and prone to modification of the wetted perimeter by beaver dams (Cirrus 2009). Approximately 0.5 miles downstream of Grace Dam, the Bear River cuts through a basalt bedrock layer into the Black Canyon, leading into a section of the bypass which is considerably steep-walled and alternates between steep cascades, plunge pools, riffles and runs (Oasis 2011). Flows in the upper and middle reaches are similar and controlled by flow regulation at Grace Dam while flows in the lower reach are 30-60 cfs higher due to inflow from the springs. Substrates in the bypass reach are variable and include fines to boulders, as well as bedrock, with quality spawning gravels present in the middle reach (Oasis 2011).

As noted in Section 3.3.3, *Water Quality*, stream temperatures in the upper and middle reaches of the Grace Bypass tend to reflect summer meteorological conditions similar to Grace Reservoir surface water temperatures and exceed the salmonid threshold

of 20 °C. In the lower reach, spring flows lower the water temperature. At present, the lower part of the bypass reach offers the only summer cold-water refugia in the bypass reach below Grace Dam for cold-water organisms to flourish (FERC 2003, Oasis 2011).

Benthic macroinvertebrate (BMI) studies have indicated that the BMI community in the reach directly below Grace Dam tends to be dominated by orders considered indicators of poor habitat and water quality (e.g., dipterans such as chironomids, and Acarina) while the orders typically associated with high water quality and interstitial habitat conditions (the Ephemeroptera, Plecoptera and Trichoptera taxa) were nearly non-existent (Oasis 2011). In the lower reach of the bypass, the BMI community was dominated by gastropods due to the presence of invasive New Zealand mudsnails. New Zealand mudsnails displace other macroinvertebrates through competition for food and space and have limited nutritional value for fish resulting in reduced growth. Their dominance in the lower reach and potential upstream expansion into the bypass may limit these reaches as mainstem recovery areas for BCT (Oasis 2011).

Environmental Effects

Paris Project

The Paris Creek restoration project and decommissioning of the Paris Project would have a positive effect on the aquatic environment of Paris Creek by restoring flows to the headwaters. Restored flows would provide cooler water temperatures, increase flow during critical summer periods, and promote spawning by cleaning substrate of fine sediment in spawning gravels. Surveys conducted in 2001 and again in 2011 found the most abundant species in the creek were brook trout and mottled sculpin. In 2001, BCT were found in the upper reach but were not found in the 2011 survey. Below the powerhouse, BCT were sampled in both survey years in small numbers. The restoration of flows to Paris Creek would likely have a significant positive effect on BCT, restoring access and high-quality habitat from the Paris Project upstream to the headwaters. The habitat improvements in Paris Creek resulting from the proposed action would benefit native and non-native fish species, including mottled sculpin and brook trout, respectively. The Paris Creek restoration project and decommissioning of the Paris Project would have a long-term positive effect on aquatic resources.

Bear River Project

The proposed action to reduce flow in the Grace bypass would affect habitat conditions and aquatic resources in the upper and middle reaches of the bypass, but effects would be attenuated in the lowermost reach of the bypass due to the inflow from the springs.

Habitat conditions in the upper and middle reaches of the Grace bypass reach are already marginal, as evidenced by the BMI community and high summer water temperatures. The bypass reach is constricted into a U-shaped channel through the Black Canyon, therefore the reduction in minimum flow is not likely to significantly reduce the

wetted channel width for the native and non-native fish present. Substrate and spawning beds would be affected by decreased minimum flow releases in the Grace bypass reach, specifically in the middle reach where quality trout spawning gravels occur, if finer sediments settle in the gravels. The habitat in the middle reach does not currently meet the spawning needs of native and non-native trout due to the high-water temperatures, therefore the potential increase in sedimentation is not likely to decrease spawning habitats available to trout in the bypass.

As discussed in Section 3.3.3, *Water Quality*, temperature and DO conditions in the upper and middle reaches of the bypass are not expected to be significantly affected from the current baseline. The fish community present in these reaches (represented primarily by native and non-native suckers, bass, minnows and carp) is adaptable to a range of environmental conditions and has persisted even in drought years when flows have fallen below the current minimum flow of 63 cfs, therefore the reduction in minimum flows is not expected to adversely affect the fish community. Trout and sculpin were not identified in the upper reach and only infrequently found in the middle reach during surveys, and we expect this trend would not change under the proposed amendment, as those fish would likely remain in their preferred cooler habitat in the downstream reach of the bypass.

As discussed in Section 3.3.3, *Water Quality*, in the downstream reach of the bypass, the reduced minimum flow would allow the spring inflow to have a greater influence on temperature conditions, providing a slight cooling effect which would preserve or slightly improve the existing thermal refugia in that section of the bypass. The slightly cooler water would benefit the native sculpins and the native and non-native salmonids in the Grace bypass reach.

The lower reach of the bypass provides the most suitable habitat for any BCT potentially in the vicinity of the Grace Development. Although stocking of BCT has occurred near the Grace Development, surveys have not indicated BCT utilize habitat in the Grace bypass reach. The proposed lower minimum flow would not affect BCT use of the bypass reach because the presence of non-native species in the bypass reach may be a limiting factor to BCT colonizing the bypass reach, as the non-native trout compete directly with BCT for habitat and food resources or may prey on early life stages of BCT. Non-native New Zealand mudsnails are prolific in the lower bypass reach but have low nutritional value for fish and may also be a limiting factor for BCT to utilize the reach (Oasis 2011). Therefore, the Grace bypass reach is currently not serving as a recovery area for BCT in the vicinity of the Grace Development, and the proposed minimum flow change would not alter that status.

BCT mainly occur in tributaries of the Bear River and upstream of Soda Dam and in Bear Lake. Restoration of the tributary habitats pursuant to Article 405 and Bear River Project's Relicensing Settlement Agreement is critical for re-establishing BCT populations in tributaries to the Bear River. While the Grace bypass reach does not contain tributaries and does not currently support spawning BCT, the proposed action at

the Paris Project (decommissioning of the Paris Project and habitat restoration in Paris Creek) would restore 3.5 miles of high-quality habitat for BCT, which would benefit the Bear River population of BCT. Further, ongoing implementation of the Bear River Settlement Agreement and requirements under the license (including the Habitat Restoration Plan and Land and Water Acquisition Plan)[16] would continue to improve and protect aquatic and riparian habitats and restore migratory corridors in the Bear River Project area. These restoration programs would continue to be enacted, monitored, and adaptively managed to improve outcomes through ongoing coordination of such activities through the ECC.

The proposed action to reduce minimum flow would not adversely affect aquatic resources in the Grace bypass reach. Fish requiring cool water habitats, including salmonids introduced to the area by stocking, and native sculpins, currently occupy the middle and lower reaches of the bypass and the thermal conditions present there would persist or slightly improve under the proposed action. The Grace bypass reach does not provide BCT habitat, and that condition would not change under the proposed action. Non-native fish would continue to occur throughout Grace bypass reach.

3.3.5 Terrestrial Resources

Affected Environment

Paris Project

The term riparian has been defined as "plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic and lentic water bodies (rivers, streams, lakes, or drainage ways). Riparian areas have one or both of the following characteristics: (1) distinctly different vegetative species than adjacent areas, and (2) species similar to adjacent area but exhibiting more vigorous or robust growth forms. Riparian areas are usually transitional between wetland and upland" (FWS 1997). At Paris Creek, riparian communities are found from the headwaters of the creek to below the powerhouse. The riparian corridor is primarily a mix of shrub willows, dogwood, and river birch. Additionally, portions of the canal support a narrow band of shrub-type plants and have not been surveyed.

Wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Fed. Reg. 1982). A narrow band of palustrine emergent wetlands surrounds the forebay at the Paris Project. Other small pockets of palustrine emergent wetlands are likely associated with Paris Creek and the riparian corridor.

[16] *PacifiCorp*, 110 FERC ¶ 62,294 (2005) and *PacifiCorp*, 110 FERC ¶ 62,296 (2005).

In the Paris Project area, wildlife species are generally transient individuals. Animals that inhabit the area include: waterfowl, cranes, ungulates, lynx, coyotes, wolverines, rodents, birds, reptiles, amphibians, and insects.

Bear River Project

At the Grace Development, riparian communities are associated with the Bear River and springs located in the bypass reach. Due to the confined nature of the Bear River channel, the riparian zone is typically limited to a narrow fringe. Where seeps occur along the river channel, the riparian community extends further upslope away from the river. Riparian communities are also associated with the spring complexes that occur throughout project area.

Palustrine emergent wetlands are most common near the springs and seeps in the Grace bypass reach. Small pockets of palustrine wetlands also occur along reaches of the river.

Wildlife species in the Bear River Project area are generally transient individuals. Animals that inhabit the area include: waterfowl, cranes, ungulates, lynx, coyotes, wolverines, rodents, birds, reptiles, amphibians, and insects. The U.S. Fish and Wildlife Service (FWS) has documented the presence of bald eagles, and the possible occurrence of gray wolf (an experimental, nonessential population) (FERC 2003). Bald eagles may transiently occur in the area, but there are no bald eagle nests located within or adjacent to the proposed work area.

Environmental Effects

Paris Project

Vegetation would be temporarily disturbed by removal of both project and non-project facilities. Small pockets of riparian vegetation would be lost as a result of abandoning the conveyance canal. However, restoration of flows in the stream itself would expand the riparian corridor in areas from the headwaters down to the powerhouse. The increase in riparian areas due to restoration of flows in the creek would offset any small pockets of lost riparian areas associated with the canal.

Small pockets of wetlands would be lost as a result of abandoning the conveyance canal. Increased flows in Paris Creek during critical growing periods would result in the restoration and enhancement of small, isolated wetlands in the canyon bottom. The long-term increase in wetlands due to restoration of flows in the creek would offset any lost wetland areas associated with canal.

Activity during decommissioning and restoration may temporarily disturb wildlife, but disturbance would be short term and restricted to a small area. Long-term improvements to wildlife habitat would occur once structures (forebay, inlet and outlet structures, penstock, spillway and spillway flume, discharge pipe, employee house and garage) are removed and the disturbed land is revegetated and restored.

The Paris Creek restoration project and decommissioning of the Paris Project would have minor, short term adverse effects on riparian vegetation and wetlands, however, any minor effects would be offset by the restoration of flows. The Paris Creek restoration efforts after project decommissioning would have a long-term positive effect on wildlife.

Bear River Project

Minimum flow releases in the Grace bypass reach would be reduced by 15 cfs (from 63 cfs to 48 cfs). This change would not result in a measurable effect on riparian vegetation along the bypass channel. Any effects on vegetation due to reduction of minimum flows in the Grace bypass reach would be negligible as flow changes would not occur during the growing season.

Reducing minimum flow releases in the Grace bypass reach by 15 cfs would not cause a measurable effect on wetland vegetation along the bypass channel. The Grace bypass reach has typically received at least 48 cfs but not always 63 cfs, especially when inflows are low and water is diverted for irrigation. Wetlands in this area are accustomed to this variability in flow and are not consistently exposed to flows of 63 cfs. The reduction of 15 cfs would have negligible effects on wetlands.

Reducing the minimum flow requirement in the Grace bypass reach would not alter wildlife habitat as the change would be minimal and flows are already heavily manipulated to support power generation and irrigation demands. The proposed reduction in minimum flow would not adversely affect riparian vegetation, wetlands, or wildlife in the Grace bypass reach or the tailrace of the Grace Development.

3.3.6 Threatened and Endangered Species

Based on the FWS's Information for Planning and Consultation (IPaC) website, federally listed, proposed, and candidate species may occur in the Paris and Bear River project area.[17] Listed and candidate species include Canada lynx *(Lynx canadensis,* threatened), North American wolverine (*Gulo luscus,* threatened), monarch butterfly (*Danaus plexippus*, candidate) and Ute Ladies'-tresses (*Spiranthes diluvialis*, threatened).

There are no Lynx Analysis Units, or core Canada lynx habitat areas within or near the project area. Canada lynx are not known to occur in the area and are not expected to occur based on the dominant vegetation types and low numbers of snowshoe hares. Canada lynx and North American wolverine are not expected to occur on the project site based on the lack of cover and ongoing disturbance in the area. It is unlikely that monarch butterfly use project lands due to the agricultural practices near the project. Milkweed, on which monarch butterfly forage and reproduce, is unlikely to occur in these

[17] Commission staff conducted a search of the FWS' IPaC database (https://ecos.fws.gov/ipac/) November 20, 2023.

areas due to a high likelihood of herbicide use and removal of non-crop plant species. Ute Ladies'-tresses does not occur in the development area (FERC 2003). Therefore, the proposed surrender and decommissioning of the Paris Creek Project and modified minimum flow at the Grace Development would have no effect on federally listed species.

3.3.7 Recreation, Land Use and Aesthetic Resources

Affected Environment

Paris Project

The area affected by the Paris Creek restoration project supports limited, dispersed recreational use, primarily recreational vehicle travel, sightseeing, and some hunting. There is no Commission approved recreation at the project. For sightseers, the powerhouse is the primary aesthetic feature. Grazing is also permitted on some private and federally owned lands and cattle ranchers use the canal for stock water.

Bear River Project

The severe topography of the Grace bypass reach limits recreational access and use. The upper and lower reaches support sport fishing, and under the current license PacifiCorp provides periodic summer releases to provide whitewater boating opportunities. The only Commission approved recreation facilities are the Black Canyon boat put-in and take-out (both containing gravel hand-launch boat ramp; floating dock; gravel parking area; a portable restroom; and an interpretive display that explains the benefits of hydropower).

Environmental Effects

Paris Project

Recreational use would not be affected by decommissioning or the restoration of the Paris Project. The Paris Project attracts some sightseers, but the powerhouse, which is the main visual feature, would be left in place. Facilities that would be removed are negligible components of the landscape. Fishing opportunities would be enhanced by improving fish access to the upper portion of the creek.

Decommissioning the project would result in the loss of stock water. PacifiCorp, Ward Brothers Dairy, and members of the Bloomington Grazing Association have prepared an agreement to address the loss of canal water as a source of stock water. Under the agreement, PacifiCorp would make a payment to the stock watering entities to aid in the development of alternative sources of stock water in exchange for the stock watering entities releasing PacifiCorp from any claims arising from the loss of the canal as a source of stock water.

The loss of the 715-kW hydroelectric facility with Paris Project decommissioning and the surrender of the project exemption would change the land use of project lands.

Any ground disturbed by decommissioning the Paris Project (removing the penstock, discharge pipe, tailrace, flume, and employee house) would be graded and re-seeded with seed mix approved by the Forest Service. The earthen forebay area would be graded to resemble natural landforms. Construction activities would temporarily affect overall sound levels in the project vicinity. Elevated construction noise from equipment and traffic would be generated for the duration of construction but would return to current levels upon project completion. PacifiCorp's proposed grading and re-seeding measures would ensure that the effects on land use and aesthetic resources would be minor. Given the rural area and limited construction activity, noise effects would be temporary and minor.

Bear River Project

Sport fishing and whitewater boating releases, and the associated use of the Black Canyon boat put-in and take-out, would not be affected by the proposed reduction in minimum flows. Inflow from springs in the lower reach would maintain habitat, and potentially benefit conditions as the cold spring flows would not be as diluted by warmer water that is diverted through the bypass reach. As discussed in the Section 3.3.4, *Aquatic Resources*, habitat in the upper reach would not be significantly degraded from current conditions so no changes to the fish community are expected, and recreational fishing opportunities, which are primarily supported by stocking efforts, would still exist. Flow effects would occur outside the boating season and would not affect recreational boating. Reducing the minimum flow requirement in the Grace bypass reach would not affect aesthetic resources.

3.3.8 Cultural and Historic Resources

Affected Environment

Paris Project

Historic properties are cultural resources listed or eligible for listing in the National Register. Historic properties can be buildings, structures, objects, districts (a term that includes historic and cultural landscapes), or sites (archaeological sites or locations of important events). Historic properties also may be resources of traditional religious and cultural importance to any living community, such as an Indian tribe or a local ethnic group, that meet the National Register criteria; these properties are known as traditional cultural properties. Cultural resources must possess sufficient physical and contextual integrity to be considered historic properties. For example, dilapidated structures or heavily distributed archaeological sites, although they may retain certain historical or cultural values, may not have enough integrity to be considered eligible.

Section 106 of the National Historic Preservation Act (NHPA) requires the Commission to evaluate potential effects on properties listed or eligible for listing the National Register prior to an Undertaking. An Undertaking means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal

agency, including, among other things; processes requiring a federal permit, license or approval. Advisory Council on Historic Preservation (Advisory Council) regulations implementing section 106 define effects on historic properties as those that change characteristics that qualify those properties for inclusion for the National Register.

The Paris Project consists of the forebay, penstock, tailrace, powerhouse with associated equipment, and operator house. The Paris Creek restoration project would also involve modifications of two structures that are not part of the project, which are the diversion structure located in Paris Creek and a 4-mile-long conveyance canal. The initial construction of the diversion structure and canal occurred in the late 1800s, known as the Weilenmann Ditch. The facilities were enlarged in 1909 and 1910 for use by the Bear Lake Power Company (Power Company) (Ellis 2022). In 1909, the owners of the Weilenmann Ditch entered into an agreement with the Power Company under which the owners agreed that the Power Company could enlarge the canal and use it to transport water to the project and operate and maintain the canal. In 1936, the Power Company reached another agreement with the irrigation companies connected to the tailrace structure. Under this agreement, the water rights of these companies are diverted through the canal and delivered to the tailrace. The project's powerhouse and other features were constructed from 1909 to 1910 and began operation in July 1910 (Mark 2022).

In compliance with section 106 of the NHPA, PacifiCorp conducted an intensive survey to identify, record and evaluate cultural resources at the project along the non-project canal and diversion structure in 2022. One survey addressed non-project facilities and included a 60-foot-wide area along the canal, forebay, headworks, and areas that potentially could be disturbed during decommissioning (Ellis 2022). Additional surveys were completed within the project's boundary, which included the powerhouse, penstock and associated employee residences (Mark 2022). The historic structures and facilities documented during these surveys found 12 historic resources. Eleven are elements to a potential Paris development historic district. These consist of two elements that are not part of the project, the diversion and intake structure and the canal. There are nine elements that are part of the project, which includes the following: the forebay, downhill spillway, penstock, bridge/spillway over the Upper Southfield Ditch, power plant, operator's house, garage, firehose house, and tailrace with slide gates. These retain integrity and are recommended as eligible for the National Register under Criterion A in the Area of Industry and under Criterion C in the Areas of Architecture and Engineering (Mark 2022). The surveys did not find any archaeological resources within the project's Area of Potential Effects (APE).

Bear River

The Bear River Project's approved Historic Properties Management Plan (HPMP) provides defines the APE for the project's Soda, Grace-Cove (now only Grace), and

Oneida developments, and was approved on June 17, 2008.[18] Although project boundaries exist for each of the developments addressed in the HPMP, they would not encompass all areas that could contain historic properties that could be affected by project operation. Therefore, the APE managed under the HPMP includes all lands within the developments as well as any lands outside these boundaries that could be directly or indirectly affected by operations and maintenance activities. This includes access roads located with the project boundaries, as well as portions of the Bear River between and downstream from the development facilities.

Environmental Effects

Paris Project

Effects on cultural resources within the APE can result from project-related activities such as reservoir operations, modifications to project facilities, or project-related ground-disturbing activities. Effects can also result from other forces such as wind and water erosion, recreational use (project related and non-project related), vandalism, private and commercial development. The proposed Paris Creek restoration project and proposed decommissioning of the Paris Project would adversely affect historic properties eligible for listing in the National Register. Specifically, part or all of the following structures and facilities would be removed: the diversion and headworks, a portion of the conveyance canal on Forest Service land, other structures and buildings on site, intake trash racks in the forebay, and the penstock. All these features are considered contributing elements of the historic properties or themselves, individually, historic properties. Their removal would constitute an adverse effect to historic properties through the direct loss of resources and indirect effects on cultural resources, and by the loss of federal jurisdiction.

Pursuant to the Commission's Tribal Policy, the Commission has notified the following federally recognized Tribes (Tribes) and invited their participation in section 106 consultation for the Undertaking: Northwestern Band of the Shoshone Nation, Shoshone-Bannock Tribes of the Fort Hall Reservation, Confederated Tribes of the Warm Springs Reservation of Oregon, Fort Belknap Indian Reservation of Montana, and Eastern Shoshone Tribe of the Wind River Reservation. No Tribes have requested to participate in the section 106 consultation for the Undertaking.

PacifiCorp included a copy of a draft Memorandum of Agreement (MOA) in its surrender application that it developed as our non-federal representative with staff from the Forest Service's Caribou-Targhee National Forest, Idaho State Historic Preservation Office (Idaho SHPO), and BLM. The Commission should condition any approval issued in connection with the Undertaking to be conducted by a professional meeting the applicable Secretary of the Interior's (SOI) Professional Qualifications Standards in the

[18] *PacifiCorp*, 123 FERC ¶ 62,229 (2008).

appropriate discipline. The MOA includes the following stipulations for PacifiCorp to conduct to mitigate adverse effects: (1) prepare a Historic American Building Level II report for the structures to be removed; (2) scan the "The Synchronizer," which is the employee news magazine published by Utah Power & Light. There are 13 volumes each with 12 editions, each edition is approximately 50 pages; (3) retain the services of a qualified architectural historian to consult with PacifiCorp and Idaho SHPO to prepare guidance for the following projects for the Grace Development Administration Building: repair of stucco and remaining historic windows, recommendations for the replacement on non-historic windows with appropriate modern windows that recreate the historic window designs, and restoration of gutters fascia, soffits, exterior lighting and exterior walkways, and if necessary, complete landscaping; (4) cease all work in the immediate vicinity of the unanticipated discovery and ensure a buffer zone is established around the unanticipated discovery sufficient to protect the resource to allow for further evaluation; (5) within twelve months after the project work has been completed or on a different schedule as agreed upon by the parties, the SOI qualified professional will complete the National Register nomination form update, then submit the draft versions to the Forest Service and the Idaho SHPO for review. Once reviewed, PacifiCorp's consultant will have six months to finalize the updated National Register nomination form and submit it to the National Register; and (6) any stipulations outlined above that require access to the Paris Hydroelectric Project are subject to conformance with PacifiCorp's safety and security policy and protocols and insurance requirements.

On October 2, 2023, Commission staff issued the revised draft MOA for a 30-day review and comment period. On October 30, 2023, the Idaho SHPO provided administrative edits to the MOA, which Commission staff addressed and incorporated into the MOA accordingly. In addition, Commission staff stated it would ensure that all mitigated measures stipulated in the MOA are executed for adverse effects. In a letter dated December 11, 2023, Forest Service's Caribou-Targhee National Forest stated it supported finalizing the MOA. On January 11, 2024, Commission staff provided the draft MOA to the Advisory Council for comment and asked whether the Advisory Council intends to participate pursuant to 36 CFR Part 800.6. In a letter dated February 27, 2024, the Advisory Council stated that since it did not respond within 15 days regarding their nonparticipation, it assumes the Commission continued consultation to resolve adverse effects. On April 11, 2024, the Commission signed the MOA and provided it for signature to the Idaho SHPO, Forest Service's Caribou-Targhee National Forest, BLM, and the Tribes. Commission staff recommends that the MOA be incorporated into any surrender and amendment order to mitigate adverse effects to historic properties.

Bear River Project

The proposed reduction in minimum flows would not increase or significantly alter erosion and sedimentation processes in the bypass reach and would therefore have no effect to cultural resources at the Grace Development. However, PacifiCorp would

utilize the provisions of section 6.7 of the HPMP if there are any inadvertent discoveries because of project operations.

3.3.9 Environmental Justice

In conducting NEPA reviews of proposed actions at hydropower projects, the Commission follows Executive Order 12898, and Executive Order 14096, which direct federal agencies to identify an address "disproportionate and adverse human health or environmental effects" of those actions on minority and low-income populations (i.e., environmental justice communities).[19] Executive Order 14008, also directs agencies to develop "programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative effects on disadvantaged communities, as well as the accompanying economic challenges of such impacts." [20] Environmental justice is "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."[21] The term "environmental justice community" includes disadvantaged communities that have been historically marginalized and overburdened by pollution.[22]

---

[19] Exec. Order No. 12,898, 59 Fed. Reg. 7629, at 7629, 7632 (Feb. 11, 1994); Exec. Order No. 14,096, 88 Fed. Reg. 25251 (Apr. 21, 2023).

[20] Exec. Order No. 14,008, 86 Fed. Reg. 7619, at 7629 (Jan. 27, 2021).

[21] EPA, *Learn About Environmental Justice*, https://www.epa.gov/environmentaljustice/learn-about-environmental-justice (Sep. 6, 2022). Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies. *Id.* Meaningful involvement of potentially affected environmental justice community residents means: (1) people have an appropriate opportunity to participate in decisions about a proposed activity that may affect their environment and/or health; (2) the public's contributions can influence the regulatory agency's decision; (3) community concerns will be considered in the decision-making process; and (4) decision makers will seek out and facilitate the involvement of those potentially affected. *Id.*

[22] Environmental justice communities include, but may not be limited to minority populations, low-income populations, or indigenous peoples. See USEPA, EJ 2020 Glossary (Aug. 18, 2022), https://www.epa.gov/environmentaljustice/ej-2020-glossary.

Commission staff used *Promising Practices for EJ Methodologies in NEPA Reviews* (*Promising Practices*)[23] which provides methodologies for conducting environmental justice analyses throughout the NEPA process for this proposed action. Additionally, consistent with EPA recommendations, Commission staff used EPA's Environmental Justice Screening and Mapping Tool (EJScreen) as an initial screening tool to better understand locations that require further review or additional information regarding minority and/or low-income populations; potential environmental quality issues; environmental and demographic indicators; and other important factors. [24]

Meaningful Engagement and Public Involvement

The Council on Environmental Quality's (CEQ) *Environmental Justice Guidance Under the National Environmental Policy Act (CEQ Environmental Justice Guidance)*[25] and *Promising Practices* recommend that federal agencies provide opportunities for effective community participation in the NEPA decision-making process by: identifying potential effects and mitigation measures in consultation with affected communities; improving accessibility of public meetings, crucial documents, and notices; and using adaptive approaches to potential barriers to effective participation. In addition, Executive Order 13985 and Executive Order 14096 strongly encourage independent agencies to "consult with members of communities that have been historically underrepresented in the Federal Government and underserved by, or subject to discrimination in, federal policies and programs,"[26] and "provide opportunities for the meaningful engagement of persons and communities with environmental justice concerns who are potentially affected by Federal activities."[27] As discussed in Section 1.5, *Public Notice and*

---

[23] Federal Interagency Working Group on Environmental Justice & NEPA Committee, *Promising Practices for EJ Methodologies in NEPA Reviews* (Mar. 2016) (*Promising Practices*), https://www.epa.gov/sites/default/-files /2016-08/documents/nepa_promising_practices_document_2016.pdf.

[24] The EPA recommends that screening tools, such as EJScreen, be used for a "screening-level" look and a useful first step in understanding or highlighting locations that may require further review.

[25] CEQ, *Environmental Justice: Guidance Under the Environmental Policy Act*, 4 (Dec. 1997) (CEQ's Environmental Justice Guidance), https://www.energy.gov/sites/default/files/nepapub/nepa_documents/RedDont/GCEQ-EJGuidance.pdf

[26] Exec. Order 13985, 86 Fed. Reg. at 7009 (Jan. 20, 2021).

[27] Exec. Order No. 14096, 88, Fed. Reg. 25254 (Apr. 21, 2023).

Comments of this EA, there have been opportunities for public involvement during the Commission's environmental review process, although the record does not demonstrate that these opportunities were targeted at engaging environmental justice communities. The Commission's communication and involvement with the surrounding communities began when a public notice was issued for both projects on July 21, 2023, which established a 30-day comment and period and intervention deadline, and a Notice of Intent to Prepare an Environmental Assessment was issued on January 24, 2024.

All documents that form the administrative record for these proceedings, with the exception of privileged or critical energy infrastructure information, are available to the public electronically through the internet on the FERC's website (www.ferc.gov). Anyone may comment to FERC about the proceeding, either in writing or electronically. Commission staff has consistently emphasized with the public that all comments receive equal weight by Commission staff for consideration in the EA.

In 2021, the Commission established the Office of Public Participation (OPP) to support meaningful public engagement and participation in Commission proceedings. OPP provides members of the public, including environmental justice communities, landowners, Tribal citizens, and consumer advocates, with assistance in Commission proceedings – including navigating Commission processes and activities relating to the proposed action. For assistance with interventions, comments, requests for rehearing, or other filings, and for information about any applicable deadlines for such filings, members of the public are encouraged to contact OPP directly 202-502-6592 or OPP@ferc.gov for further information. OPP staff can help the public more fully participate in Commission proceedings generally does not act in a decisional capacity on the merits of any particular case.

Identification of Environmental Justice Communities

According to *CEQ Environmental Justice Guidance* and *Promising Practices*, minority populations are those groups that include: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. Following the recommendations set forth in *Promising Practices*, the Commission uses the 50 percent and the **meaningfully greater analysis** methods to identify minority populations. Using this methodology, minority populations exist when either: (a) the aggregate minority population of the block groups in the affected area exceeds 50 percent; or (b) the aggregate minority population in the block group affected is 10 percent higher than the aggregate minority population percentage in the county. The aforementioned guidance also directs low-income populations to be identified based on the annual statistical poverty thresholds from the U.S. Census Bureau. Using *Promising Practices'* **low-income threshold criteria** method, low-income populations are identified as census block groups where the percentage of low-income population in the identified block group is equal to or greater than that of the county.

To identify potential environmental justice communities for the analysis presented here, Commission staff used 2022 U.S. Census American Community Survey data for the race, ethnicity, and poverty data at the block group level (Census, 2022). Here, Commission staff selected Bear County, Idaho for the Paris Project, and Caribou County, Idaho for the Bear River Project, as the comparable reference communities to ensure that affected environmental justice communities are properly identified.

According to the current U.S. Census Bureau information, minority and low-income populations exist with the area of both proposed actions, as discussed further below. The minority populations (by race and ethnicity) and low income populations within Idaho, the counties affected by the proposed surrender and amendment proposals (Bear County and Caribou, Idaho) and U.S. census groups[28] within the vicinity of the project sites are identified in Appendix C – Table 7 and Table 8. For these projects, Commission staff chose a 1-mile radius around areas affected by the surrender and amendment (i.e., Paris project area and 1-mile around the Grace Development bypass reach that would be affected by the proposed action) (Figure 4, Figure 5). For these proposed actions, Commission staff determined that a 1-mile radius is large enough given the scope of the surrender and amendment and concentration of project-related effects near the Paris Project and areas near the Bear River that would be affected by the proposed action.[29] For this analysis, we use U.S. Census American Community Survey File no. B03002 for the race and ethnicity data and Survey File no. B17017 for poverty data at the census block group level.[30]

Table 7 identifies one block group within the geographic scope of the Paris Project that is considered an environmental justice community. Census Track 950200, Block Group 3 has a minority population in the block group that is more than 10 percent higher

[28] Census block groups are statistical divisions of census tracks that generally contain between 600 and 3,000 people. U.S. Census Bureau 2022. Glossary: Block Group. https://www.census.gov/glossary/. Accessed March 2024.

[29] The activities proposed, including facility removal and equipment staging near the dams and powerhouses, would occur within small footprints within or nearby environmental justice communities. Staff found that effects on recreation and land use, as well as aesthetics, may affect environmental justice communities but that effects associated with the proposed activities would not exceed a 1-mile radius.

[30] U.S. Census Bureau, American Community Survey 2021, ACS 5-Year Estimates Tables, File #B17017, Poverty Status in the Past 12 Months by Household type of Age of Householder, https://data.census.gov/cedsci/table?q=B17017; File #B03002 Hispanic or Latino By Race, https://data.census.gov/cedsci/table?q=b03002 .

than the aggregate minority population, and has a low-income population that is equal to or greater than its respective county in Bear Lake County, Idaho. Table 8 identifies two block groups within the geographic scope of the Bear River Project that are considered an environmental justice community. Census Tracts 960100, Block Groups 3 and 4 have a minority population in the block groups that is more than 10 percent higher than the aggregate minority population percentage in the Caribou County, Idaho. A geographic representation of these communities relative to the area affected by the proposed surrender and amendment can be found in Appendix B- Figure 4 and Figure 5.

Environmental Effects

Promising Practices provides methodologies for evaluating environmental justice effects related to human health or environmental hazards; the natural physical environmental hazards; the natural physical environment; and associated social, economic and cultural factors. Consistent with *Promising Practices*, Executive Order 12898, and Executive Order 14096, we reviewed the proposed actions to determine if resulting effects would be disproportionate and adverse on minority and low-income populations and also whether effects would be significant.[31] *Promising Practices* provides that agencies can consider any of a number of conditions in this determination and the presence of any of these factors could indicate a potential disproportionate and adverse effect. For these projects, a disproportionate and adverse effect on an environmental justice community means the adverse effect is predominantly borne by such population. Relevant considerations include the location and the natural physical environment of project facilities and the project's human health and environmental effects, including associated social, economic, or cultural direct, indirect, and cumulative effects, on identified environmental justice communities.

As described in Section 2.1, *Proposed Action*, the licensee proposes to decommission the Paris Project and stop the diversion of water from Paris Creek into the diversion of water from Paris Creek into the irrigation canal that serves the Paris Project. As part of a larger habitat restoration effort, after the decommissioning and exemption surrender, the flows currently diverted to the canal would be returned to Paris Creek for enhancement and restoration for BCT in the current bypassed reach of Paris Creek.

---

[31] See *Promising Practices* at 33 (stating that "an agency may determine that impacts are disproportionately high and adverse, but not significant within the meaning of NEPA" and in other circumstances "an agency may determine that an impact is both disproportionately high and adverse and significant within the meaning of NEPA"); *see also Promising Practices* at 45-46 (explaining that there are various approaches to determining whether an impact will cause a disproportionately high and adverse impact). We recognize that CEQ and EPA are in the process of updating their guidance regarding environmental justice and we will review and incorporate that anticipated guidance in our future analysis, as appropriate.

Activities would take place within 1-mile of the Paris Project and 1-mile of the Grace Development bypass reach for the Bear River Project.

Potential effects to the natural and human environment from construction related to the surrender of the Paris Project and the amendment to the Bear River Project are identified and discussed throughout this document. Factors that could affect environmental justice communities include geologic and soil resources (Section 3.3.1, *Geology and Soils*) and cultural and historic resources (Section 3.3.8, *Cultural and Historic Resources*). These effects are addressed in greater detail in the associated sections of the EA. Effects to environmental justice communities are not present for water quality, fisheries and aquatic resources, wildlife and botanical resources, wetlands and riparian habitat, threatened and endangered species, and recreation and land use resources.

Based upon the above finding regarding geology and soils and cultural and historic resource effects, Commission staff conclude that any adverse effects of the proposed action to members of environmental justice communities, residing nearby or visiting the area, would be temporary and not significant. Additionally, in consideration of the included census data, and limited and temporary scope of the proposed project surrender and project amendment construction activities, Commission staff conclude the licensee's proposal would not result in disproportionally high and adverse effects on environmental justice communities.

Geology and Soils

As discussed in Section 3.3.1, *Geology and Soils*, effects of the proposal on geology and soils would be minor and short-term for the decommissioning and surrender of the Paris Project. In addition, the proposed reduction in minimum flows would not increase or significantly alter erosion and sedimentation process in the bypass reach and would have no effect to geology and soils at the Grace development. Such effects for the decommissioning of the Paris Project would be greatest during and initially after construction and would diminish in the future.

Decommissioning activities at the Paris Project include ground disturbing activity with heavy equipment for the demolition and removal of the forebay structures, removal of the penstock, and grading of the site. All concrete and rubble associated with demolition of the structures would be buried in designated locations on site, where it would facilitate grading. In Commission staff's review, we find that the concrete would be buried at a sufficient depth and will be seeded and will help stabilize the area for the long-term. In addition, the powerhouse building would remain intact, but all existing equipment, supplies, and furnishings would be removed. Floor penetrations for the penstock and tailrace would be filled with concrete and the building would be secured to ensure public safety. The operator house would be demolished after asbestos abatement and disposed of off-site, except for the house foundation which would be broken up and buried in designated locations on site.

PacifiCorp indicates that no temporary access road would be needed, and it would use the existing road at Telegraph Hollow to enter the canal and move equipment and materials back and forth from the parking lot. While decommissioning activities have the potential to cause erosion, Commission staff find that PacifiCorp's proposal to implement sediment control and grading measures would mitigate any concerns to geology and soils. In addition, the small increase in traffic resulting from the proposed action when compared to existing conditions, traffic effects within environmental justice communities would be less than significant.

Cultural and Historic Resources

As discussed in Section 3.3.8, *Cultural Historic Resources*, effects of the proposal on cultural and historic resources due to the proposed Paris Creek restoration project and proposed decommissioning of the project would adversely affect historic properties eligible for listing in the National Register. Specifically, part or all the following structures and facilities would be removed: the diversion and headworks, a portion of the conveyance canal on Forest Service land, other structures and buildings on site, intake trash racks in the forebay, and the penstock. All these features are considered contributing elements of the historic properties or themselves, individually, historic properties. Their removal would constitute an adverse effect to historic properties through the direct loss of resources and indirect effects on cultural resources, and by the loss of federal jurisdiction.

To mitigate adverse effects to historic properties and cultural resources, PacifiCorp developed a draft MOA in consultation with the Forest Service's Caribou-Targhee National Forest, Idaho SHPO, and BLM as our non-federal representative. In accordance with section 106 of the NHPA, PacifiCorp consulted with the Idaho SHPO and Native American Indian Tribes to determine the adverse effects due to the surrender. The proposed Paris Creek restoration project and proposed decommissioning of the project would adversely affect historic properties eligible for listing in the National Register since following the actions of the proposed surrender. Therefore, we recommend the MOA developed between the Commission and Idaho SHPO, with PacifiCorp as a concurring party, should be incorporated into any surrender order for the Paris Hydroelectric Project to mitigate adverse effects to historic properties. In addition, we find that PacifiCorp's proposed reduction in minimum flows would not increase or significantly alter erosion and sedimentation processes in the bypass reach and would therefore have no effect to cultural resources at the Grace Development at the Bear River Project. However, PacifiCorp would utilize the provisions of section 6.7 of the HPMP if there are any inadvertent discoveries because of project operations.

Determination of Disproportionate and Adverse Effects on Environmental Justice Communities

Based on the above findings regarding geology and soils as well as cultural resources, Commission staff conclude that any adverse effects of the proposed actions to

members of environmental justice communities, residing nearby or visiting the area, would be temporary and not significant. Additionally, in consideration of the included census data, and the limited and temporary scope of the proposed project amendment construction activities, Commission staff conclude that this amendment would not result in disproportionate and adverse effects on environmental justice communities.

3.3.10 Air Quality and Climate Change

Affected Environment

Air Quality

Air quality is generally good to moderate in the area around both projects based on the Air Quality Index (AQI), as measured at the Idaho DEQ monitoring station in Preston, Idaho.[32] The primary emission sources from human activity in the area includes vehicle combustion, mobile dust emissions, and woodstove emissions (Idaho DEQ 2019). The Oneida Development of the Bear River Project is within Franklin County, but the Grace Development nor Paris Project are not. A portion of Franklin County, Idaho, was designated by the EPA in 2009 for nonattainment [that is, not in compliance with the National Ambient Air Quality Standards (NAAQS) for fine particle pollution ($PM_{2.5}$)] under the Clean Air Act (CAA). The Idaho DEQ and Franklin County communities implemented measures to address sources of pollution and improve air quality, and the EPA subsequently determined that the area met the 2006 $PM_{2.5}$ NAAQS and redesignated the area to an attainment area with a 10-year maintenance plan in 2021 (EPA 2021b).

Greenhouse Gases and Climate Change

The term "greenhouse gases" (GHGs) refers to certain gases and aerosols that occur in the atmosphere both naturally and because of human activities, such as the burning of fossil fuels. GHGs are non-toxic and non-hazardous at normal ambient concentrations; however, they were identified as pollutants by the EPA because the agency determined that the current and projected concentrations of these gases in the atmosphere threaten the public health and welfare of current and future generations through climate change. There are six long-lived and directly emitted GHGs: carbon dioxide (CO_2), methane (CH_4), nitrous oxides (NO_x), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Of these, CO_2, CH_4, and NO_x would be emitted during project construction due to the burning of fossil fuels for operation of construction equipment. There are no NAAQS or other significance thresholds for GHGs.

[32] Idaho DEQ Real-Time Air monitoring station reports. https://airquality.deq.idaho.gov/report/SingleStationReport. Accessed February 2024.

In 2021, Idaho produced approximately 37.8 million metric tons of CO_{2e} from the following sources: 43% from agriculture, 29% from transportation, 12% from residential and commercial heating, 10% industrial, and 6% from electricity generation.[33] Although much of Idaho's electricity has been imported from power plants in neighboring states, hydroelectric plants, which account for approximately half of the in-state electricity generation,[34] do not produce GHG emissions, therefore the GHG emissions from electricity production in the state are due almost entirely to the natural gas generation (Strait et al 2010). Idaho DEQ has developed a statewide action plan to improve air quality and reduce emissions which has, in part, identified voluntary GHG reduction measures for priority sectors (agriculture, buildings, natural and working lands, power, transportation, and waste) and quantified the projected emission reductions and co-benefits of those measures (Idaho DEQ 2024).

Climate change is the variation in the Earth's climate (including temperature, precipitation, humidity, wind, and other meteorological variables) over time. Climate change is a global concern; however, the climate change analysis in this EA focuses on the existing and potential climate change effects specific to the location of both projects in Idaho. The Fifth U.S. National Climate Assessment (USGCRP 2023) divides the United States into 10 distinct regions; Idaho is in the Northwest Region. The Climate Assessment identifies the following climate change trends in climate in the Northwest Region: (1) annual average temperatures across the Northwest increased by almost 2°F since 1900, and (2) warmer winter temperatures have led to declines in mountain snowpack. Climate change effects projected for the Northwest Region and the state of Idaho include: (1) increasing air temperatures; (2) reduced volumetric snowpack storage, due to the transition of snow dominated watersheds to mixed rain-and-snow watersheds and mixed rain-and-snow watersheds to rain-dominated watersheds, and snowmelt occurring earlier in the year due to warmer temperatures; and (3) changes in precipitation amount and timing (with a decrease in summer precipitation and increase in winter and spring precipitation) which may result in more frequent and severe regional drought, increased wildfire potential, and decreased water availability (USGCRP 2023, Abatzoglou et al 2021).

As described in Section 3.1, *General Description*, water in the Bear River is heavily managed and allocated for specific uses. The heavy management of flow buffers some effects of climate change in the mainstem river below Bear Lake (Degiorgio et al 2010), since the natural hydrology of the system has been altered by the Bear Lake

[33] EPA Greenhouse Gas Inventory Data Explorer. https://cfpub.epa.gov/ghgdata/inventoryexplorer/#allsectors/allsectors/allgas/econsect/all. Accessed March 2024.

[34] Idaho State Profile and Energy Estimates. https://www.eia.gov/state/analysis.php?sid=ID#240. Accessed March 2024.

releases to meet downstream water allocations. Even so, based on the current trends and projections for climate change effects, the Bear River mainstem may see higher demand for water in the irrigation season due to changes in the timing, magnitude and duration of high and low flows, reduced snowpack and the shift from snow to rain, and increased summer air temperatures, which is likely to affect all water users (Idaho DEQ 2022). The flow regimes in unregulated tributaries to the Bear River may experience increased variability of streamflow due to projected changes in the timing, magnitude, and duration of high and low flows.

Environmental Effects

Air Quality

Paris Project

Construction activities related to the decommissioning and removal of structures at the Paris Project would employ various heavy equipment, such as heavy haul trucks, light duty trucks, cranes, and dozers. Vehicles would use existing roads for access to minimize disturbance. The use of this equipment would result in localized emissions of criteria pollutants through fugitive dust and vehicle exhaust. Vehicle emissions sources would also emit GHGs (discussed below). The Forest Service has reviewed and approved, through a categorical exclusion, PacifiCorp's activities regarding the canal, and stated that the project is consistent with the 2003 Caribou Revised Forest Plan and Idaho state requirements, with no modification needed to ensure compliance with the CAA.

The construction activities do not occur in a nonattainment area. The final disposition of the majority of project features leaves them broken up and buried on site or remaining in place, with only the employee house being demolished and disposed of off-site following asbestos abatement measures. Because the majority of material removed would not leave the project site, dust particles from loose materials are expected to remain localized to the construction area. Subsequent grading and seeding of the land following disturbance would provide soil stabilization help reduce erosion from wind and water. Therefore, increased air emissions during construction activities would be short term and temporary, occurring over the limited time necessary for removal of the Paris Creek features.

Bear River Project

The proposed minimum flow amendment for the Grace Development of the Bear River Project would have no effect on local air quality conditions.

Greenhouse Gases and Climate Change

The proposal would not affect overall power generation capacity regionally, as the net loss in electrical production by the Paris Project due to decommissioning would be minimal (2,264 megawatt hours (Mwh) of lost power generation) and would be partially

offset by increasing the duration of time the Grace Development can generate (current annual average 148,353 Mwh/year) by enabling operations during the lower inflow period in the winter months. Because GHG emissions would be limited to the construction period and the long-term intent of the proposed action would allow the Grace Development to generate at lower inflows, thus promoting in-state renewable energy development which does not contribute to atmospheric pollution (including GHG), the proposed actions, overall, would be consistent with state and national goals for reducing GHG emissions.

Based on the climate change projections for the area, altered streamflows may reduce available cold-water habitat, and hydrologic and temperature changes may result in a shift in the distribution of suitable habitats and native trout populations (IDFG 2022). One method for improving climate change outcomes for the BCT and other native cold water fish in Idaho includes identifying and conserving streams where the habitat conditions are most likely to continue supporting suitable habitat in the future, and the proposed action would accomplish this by restoring access to an important expanse of BCT spawning habitat, providing 3.5 miles of cold-water habitat, improving habitat complexity, and restoring the natural spring flow hydrograph by returning flows currently diverted through the canal to the Paris Project to Paris Creek. As stated in Section 3.3.4, *Aquatic Resources*, the Grace bypass reach is not currently serving as a recovery area for BCT, and cold-water habitat is limited to the vicinity of the springs at the downstream end of the reach. Assuming the altered hydrology in the mainstem river buffers projected climate change effects related to the timing and duration of flow, the proposed action of reducing minimum flows to the Grace bypass would not be anticipated to substantially improve or alter habitat conditions throughout the reach. However, efforts by the ECC through implementation of the settlement agreements and Bear River license articles 402,403, 404, 405, 406 (requiring, respectively, establishment of the ECC, development of a BCT restoration plan, stocking BCT, restoring aquatic and riparian habitat, and acquiring land and water rights in the project area) would be expected to continue to identify and protect BCT habitat, and may anticipate and mitigate climate change effects through adaptive management of those programs.

3.4 Effects of No-Action Alternative

Under the no-action alternative, PacifiCorp would continue to operate the Paris and Bear River projects as they are currently, no decommissioning of Paris Project facilities would occur, and no changes to the minimum flows at the Bear River Project would be made. Commission staff did not identify any significant environmental effects that would result from the no-action alternative. The projects would continue to operate as they are now. However, under the no action alternative, river restoration activities would not occur as proposed.

4.0 CONCLUSIONS AND STAFF RECOMMENDATIONS

4.1 Conclusion

Approval of the proposal to decommission the Paris Project and surrender the Paris Project license exemption, together with approval of PacifiCorp's companion application to amend the license for the Bear River Project to reduce the minimum instream flow for the Grace development bypass reach, is in the public interest because it would not result in long-term adverse effects and it would allow the parties to move forward with their plans to enhance and restore approximately 3.5 miles of cold-water habitat for BCT on Paris Creek. This restoration project would advance the aquatic resource restoration goals of the Bear River Project license and the associated Bear River Hydroelectric Relicensing Settlement Agreement. PacifiCorp has developed a number of separate agreements with federal land management and resource agencies, private landowners, and other stakeholders to address and mitigate for the decommissioning of the Paris Project and associated actions along Paris Creek.

Commission staff conclude there would be no long-term adverse effects from the proposed surrender of the Paris Project exemption or amendment of the project license for the Bear River Project but there would be long-term benefits.

4.2 Staff Recommendations

PacifiCorp's proposed action includes agreements with federal land management and resource agencies and other stakeholders which should be implemented. These separate agreement documents are outside the Commission's jurisdiction to enforce. Commission staff recommend PacifiCorp implement the stipulations included in the MOA being developed with the Idaho SHPO. Commission staff also recommend that PacifiCorp be required to complete decommissioning activities on Paris Project lands prior to the Commission finding the exemption surrender effective.

4.3 Finding of No Significant Impact

The proposed surrender of the Paris exemption and associated amendment to the Bear River Project license would allow PacifiCorp to pursue a larger river restoration effort involving a number of other stakeholders. Based on our independent analysis, we find that the proposed surrender of the Paris Project exemption and the proposed Bear River Project license amendment would not constitute a major federal action significantly affecting the quality of the human environment.

5.0 LITERATURE CITED

The literature cited in this EA is presented as Appendix D.

6.0 LIST OF PREPARERS

The list of preparers of this EA is presented as Appendix E.

APPENDIX A

STATUTORY AND REGULATORY REQUIREMENTS

Clean Water Act

Under section 401(a)(1) of the Clean Water Act (CWA),[35] any applicant for a federal license or permit to conduct activities that may result in a discharge into United States waters, must obtain either a water quality certification (WQC or certification) from the appropriate state pollution control agency verifying that any discharge from the project would comply with applicable provisions of the CWA or a waiver of such certification. If the state "fails or refuses to act on a request for certification, within a reasonable period of time (which shall not exceed one year) after receipt of such a request," then certification is deemed waived.

PacifiCorp stated in its application that it confirmed with Idaho Department of Environmental Quality (Idaho DEQ) that the proposed decommissioning of the Paris Project facilities does not require certification under section 401 of the CWA. Because no in-water work would be required to carry out decommissioning activities at the Paris Project, no CWA section 401 WQC is needed.

PacifiCorp stated in its surrender application that future in-water work to remove the diversion and intake on Forest Service lands after the surrender of the Paris Project exemption would require a water quality certificate. All future in-water work would occur on features that are not part of the project (i.e., removal of the diversion and intake structure, and construction of a new intake for Paris Relief and Upper Southfield irrigation companies). PacifiCorp would be responsible for acquiring any necessary permits for the proposed work, including for actions outside of the Commission's jurisdiction.

The minimum flow amendment at the Grace Development would be implemented without the need for any in-water work or construction activities. PacifiCorp confirmed with Idaho DEQ that proposed reduction in minimum flows in the Grace Development bypass reach does not require certification under section 401 of the CWA, nor does it require a modification of the existing WQC for the Bear River Project.[36]

---

[35] 33 U.S.C. § 1341(a)(1).

[36] On June 23, 2003, IDEQ issued certification for the Bear River Project, with conditions consistent with the Relicensing Settlement Agreement. The WQC is incorporated into the license by ordering paragraph (E) and attached as Appendix A to the Bear River Project license.

Clean Air Act

Section 176(c) of the Clean Air Act (CAA)[37] prohibits federal agencies from taking actions in nonattainment and maintenance areas unless the emissions from the actions conform to the state or Tribal implementation plan for the area. Federal actions that cause emissions only in areas not designated as nonattainment or maintenance, such as attainment or unclassified areas, are not required to evaluate conformity with a state or Tribal implementation plan for the action.

The Bear River Project's Oneida Development is within Franklin County, Idaho, currently designated as an area of attainment with a maintenance plan for $PM_{2.5}$ (EPA 2021b). The proposed actions at the Grace Development of Bear River Project and at the Paris Project are located within an area designated as "Attainment" or "Unclassifiable" for all criteria pollutants and no implementation plans have been developed for those areas. As such, evaluation of conformity with such plans is not applicable for the proposed project.

Endangered Species Act

Section 7 of the Endangered Species Act of 1973 (ESA)[38] requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened or endangered species or result in the destruction or adverse modification of the critical habitat of such species. The potential occurrence of threatened and endangered species is detailed in Section 3.3.6, *Threatened and Endangered Species*. As described in this section, Commission staff determined that the proposed action would have no effect to ESA listed species.

National Historic Preservation Act

Under section 106 of the National Historic Preservation Act (NHPA),[39] and its implementing regulations,[40] federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register of Historic Places (National Register), defined as historic properties, and afford the Advisory Council on Historic Preservation (Advisory Council) a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation officer (SHPO) or, where a project will be located on Tribal lands, the Tribal Historic Preservation Officer, to determine whether and how a

[37] 42 U.S.C. § 7506.

[38] 16 U.S.C. § 1536(a).

[39] 54 U.S.C. § 306108.

[40] 36 CFR pt. 800 (2021).

proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effect.

On July 7, 2021, the Commission formally designated PacifiCorp as the non-federal representative for the purpose of conducting informal coordination and consultation with the Idaho SHPO, appropriate Tribes, and other consulting parties pursuant to the regulations at 36 CFR Part 800.2(c)(4) implementing section of the NHPA. However, the Commission remains largely responsible for all findings and determinations regarding the effects of the project on any historic property. On May 6, 2022, the Idaho SHPO concurred that the planned Undertaking would result in an adverse effect to historic properties.

Memorandum of Agreement

The proposed Paris Creek restoration project and proposed decommissioning of the project would adversely affect historic properties eligible for listing in the National Register. Specifically, part or all the following structures and facilities would be removed: the diversion and headworks, a portion of the conveyance canal on Forest Service land, other structures and buildings on site, intake trash racks in the forebay, and the penstock. All these features are considered contributing elements of the historic properties or themselves, individually, historic properties. Their removal would constitute an adverse effect to historic properties through the direct loss of resources and indirect effects on cultural resources, and by the loss of federal jurisdiction.

PacifiCorp included a copy of a draft Memorandum of Agreement (MOA) in its surrender application that it developed with staff with the Forest Service's Caribou-Targhee National Forest, Idaho SHPO, and BLM as our non-federal representative. On October 2, 2023, Commission staff issued the revised draft MOA for a 30-day review and comment period. On October 30, 2023, the Idaho SHPO provided administrative edits to the MOA. Commission staff addressed and incorporated the administrative edits to the MOA accordingly. In addition, the Commission staff stated it would ensure that all mitigated measures stipulated in the MOA are executed for adverse effects. On January 11, 2024, Commission staff provided the draft MOA to the Advisory Council for comment, and asked whether the Advisory Council whether it intends to participate pursuant to 36 CFR Part 800.6. In a letter dated February 27, 2024, the Advisory Council stated that since it did not respond within 15 days regarding their non-participation, it assumes the Commission continued consultation to resolve adverse effects.

Area of Potential Effects (APE)

Pursuant to section 106 of the NHPA, the Commission must take into account whether any historic property could be affected by a proposed action within a project's area of potential effect (APE). The APE is determined in consultation with the SHPO and is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE consists of the project boundary as well as areas outside of the

project boundary that could be directly affected. In this case, the APE is located on PacifiCorp fee-owned lands and federal lands outside of the project's boundary within the Forest Service.

Executive Orders 12898 & 14008

The Commission follows Executive Order 12898, which directs federal agencies to identify and address "disproportionately high and adverse human health or environmental effects" of their actions on minority and low-income populations (i.e., environmental justice communities).[41] Executive Order 14008 also directs agencies to develop "programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.[42]

Environmental justice is the "fair treatment and meaningful of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" (EPA, 2021b).

Commission staff identified three environmental justice communities within 1-mile of the Grace Development bypass reach and 1-mile of the Paris Project area and considered how the communities may affected by the geology and soils and cultural resources effects of the proposed action. Commission staff's analysis of the effects of the proposed action on these communities is presented in Section 3.3.9, *Environmental Justice*. Commission staff conclude that approving the proposed surrender and amendment would not result in disproportionate and adverse effects on the identified environmental justice population.

[41] Exec. Order 12,898, 59 Fed. Reg. 7629 (Feb. 16, 1994). While the Commission is not one of the specified agencies in the Exec. Order 12898, the Commission nonetheless addresses environmental justice in its analysis, in accordance with its statutory duties.

[42] Exec. Order 14,008, 86 Fed. Reg. 7619 (Feb. 1, 2021). The term "environmental justice community" includes disadvantaged communities that have been historically marginalized and overburdened by population. Id. § 219, 86 Fed. Reg. 7619, 7629. The term also includes, but may not be limited to, minority populations, low-income populations, or indigenous peoples (EPA 2021a).

APPENDIX B
FIGURES

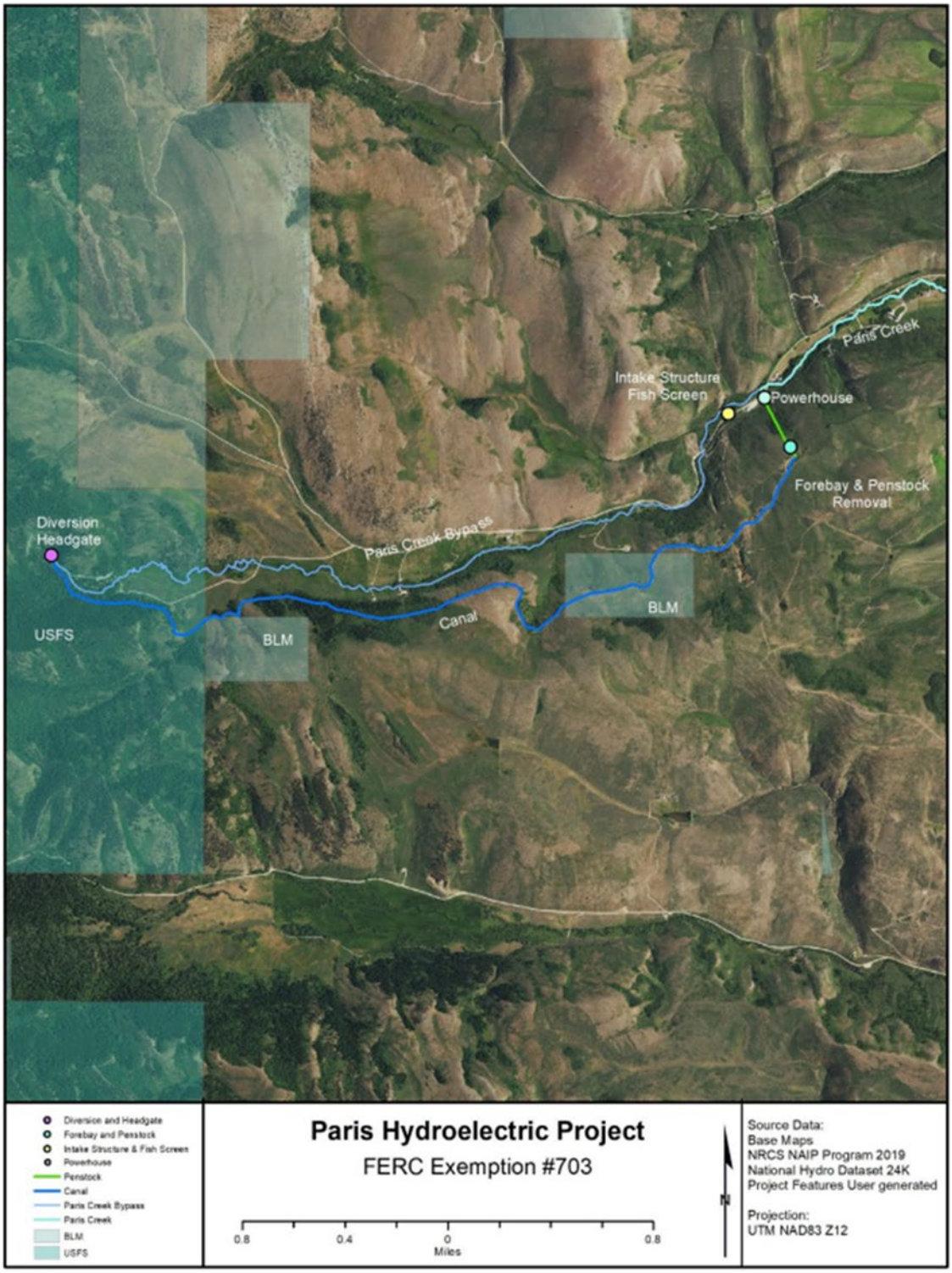

Figure 1. Paris Project decommissioning work and associated actions in the vicinity of the project (Source: PacifiCorp 2023b).

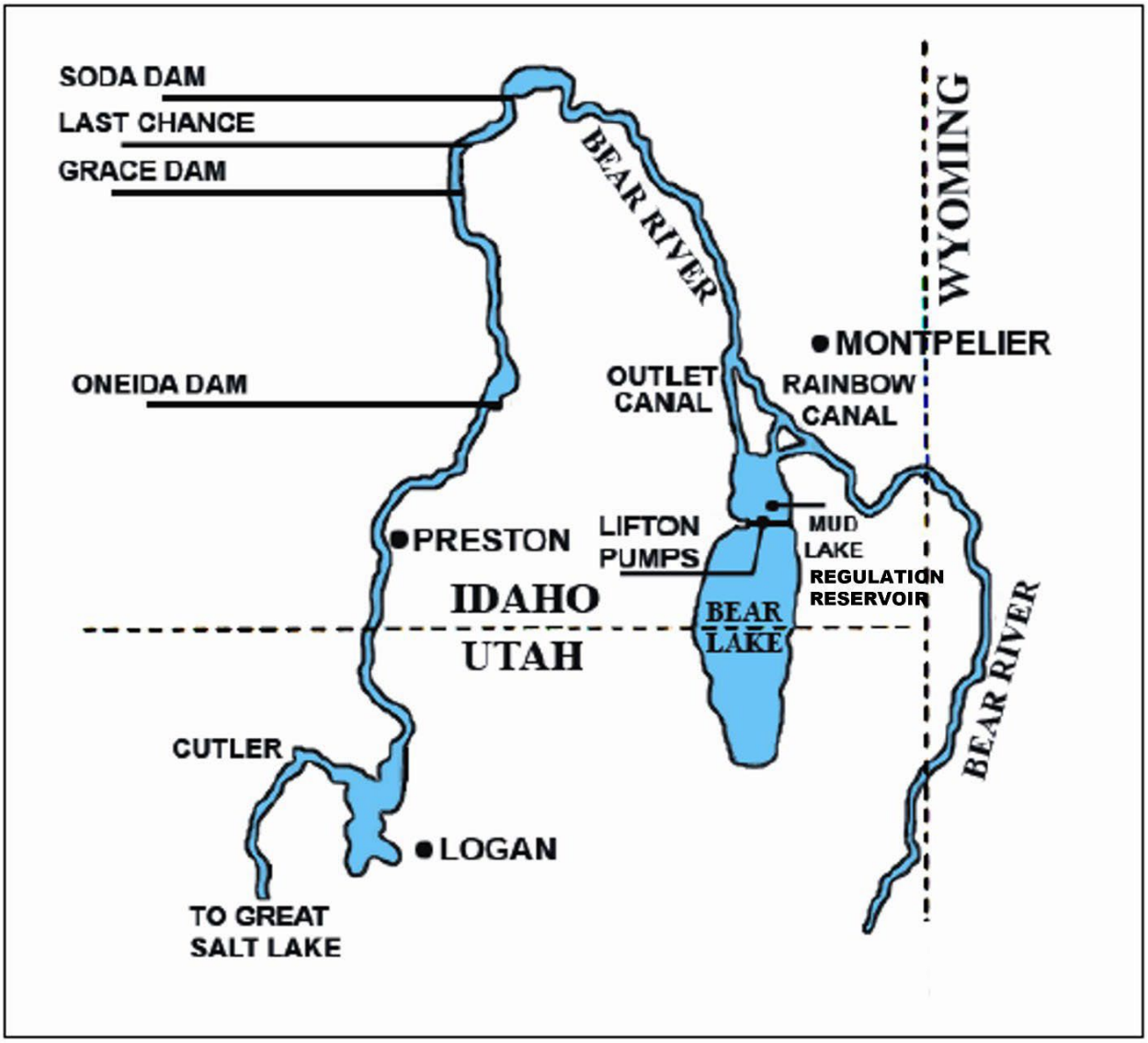

Figure 2. Bear River Project (Source: Commission staff).

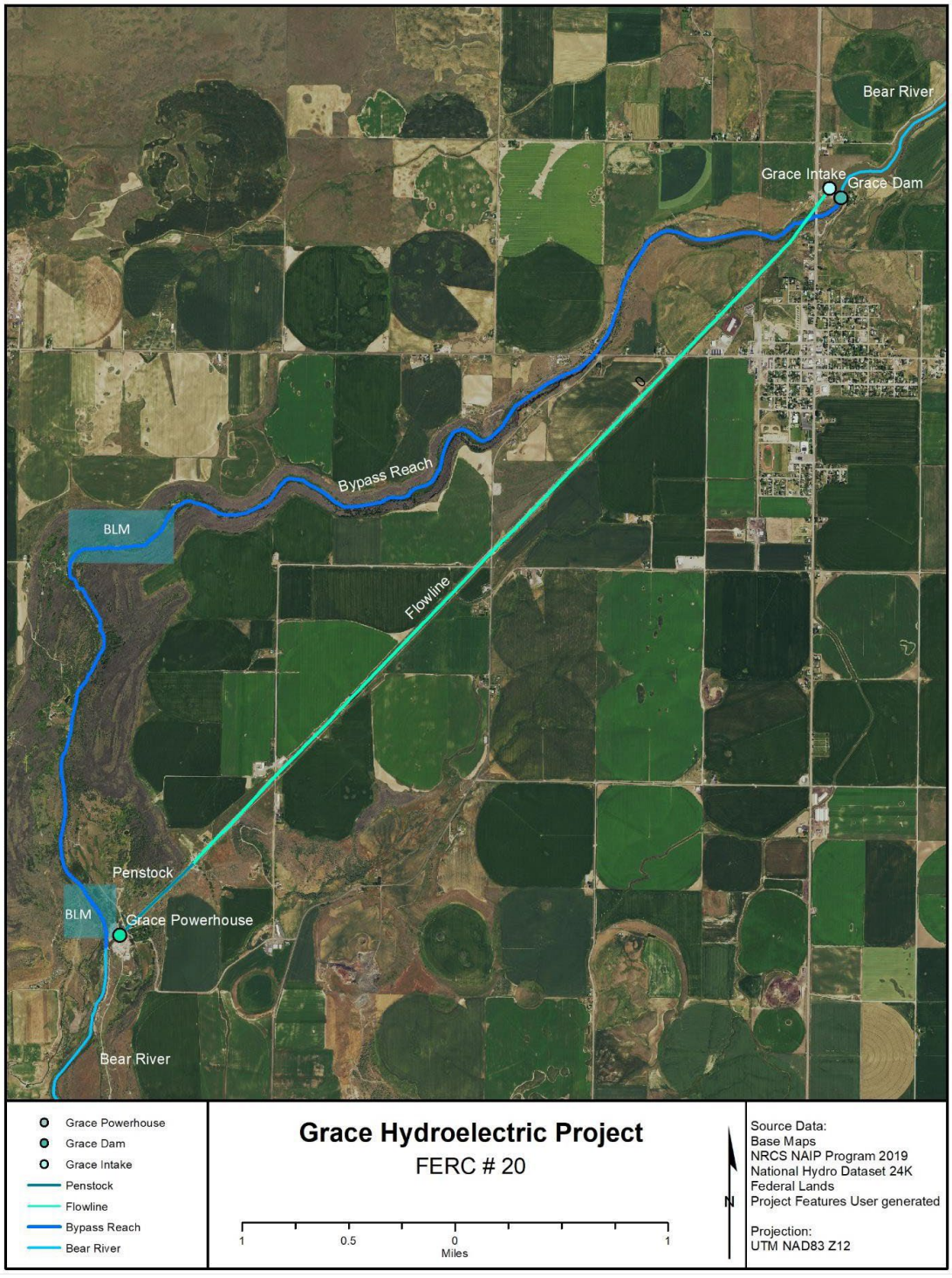

Figure 3. Grace Development of the Bear River Project (Source: PacifiCorp 2023b).

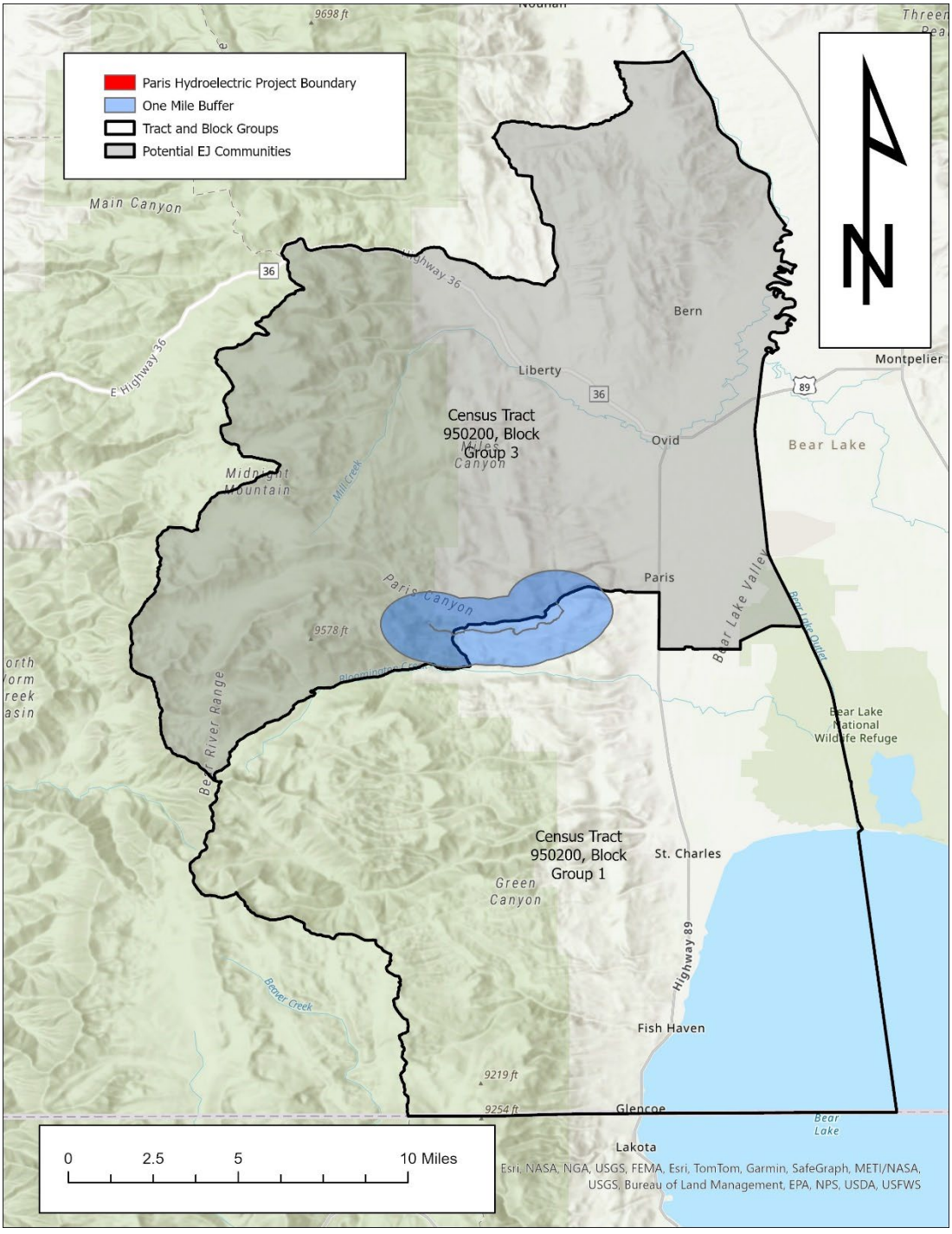

Figure 4. Census tract and block groups within 1-mile of the Paris Project boundary (Source: Commission staff).

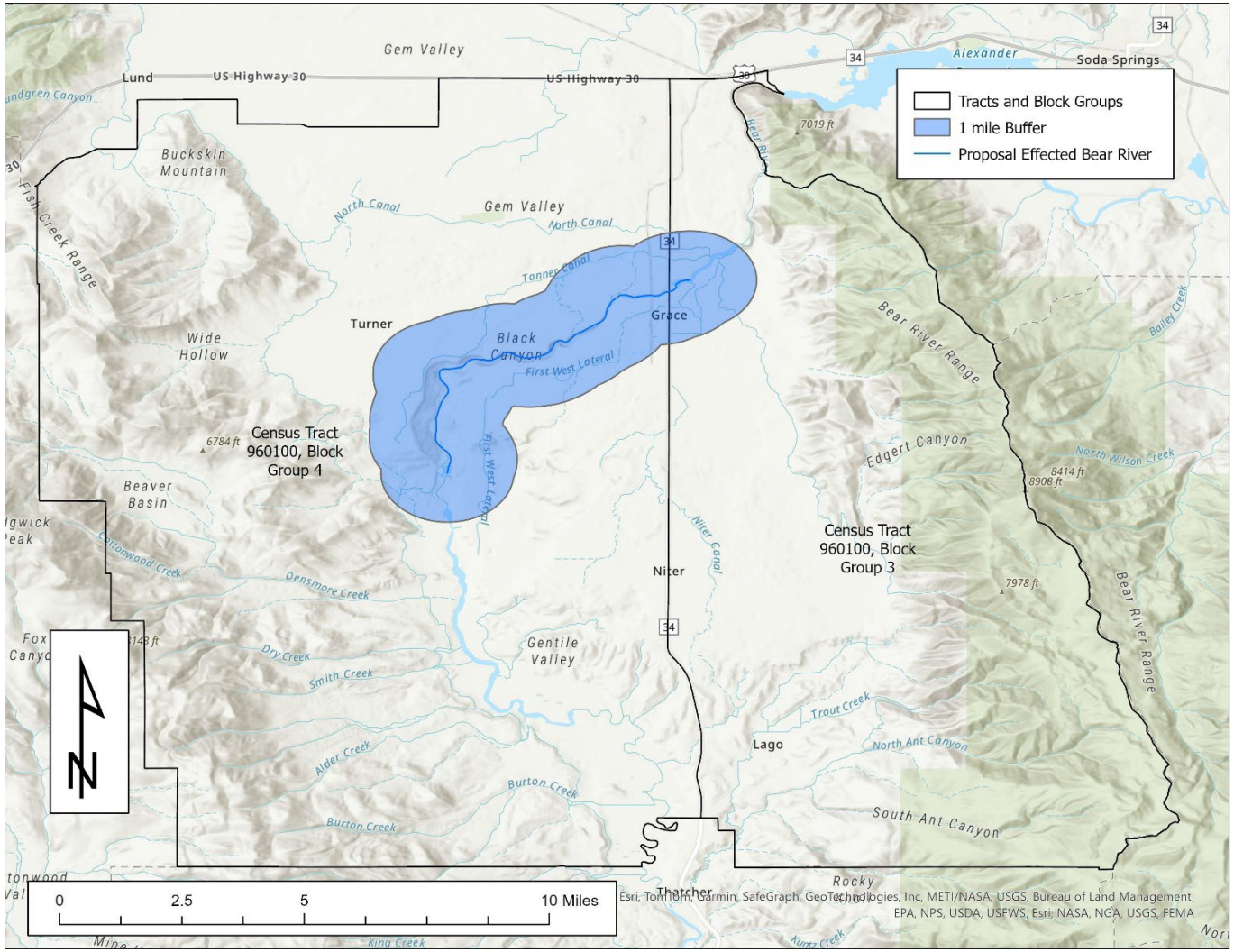

Figure 5. Census tract and block groups within 1-mile of the Grace Development bypass that would be affected by the proposed action (Source: Commission staff).

APPENDIX C
TABLES

Water Year	Month											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1990	-	-	-	3.2	2.8	1.3	8.4	22.7	16.0	8.0	6.8	3.6
1990- 91	4.9	4.5	4.3	3.3	2.8	2.0	2.6	18.9	35.0	14.4	10.9	8.7
1991- 92	7.1	5.8	4.7	3.8	2.6	2.2	8.9	18.5	6.7	4.9	3.0	2.7
1992- 93	2.9	2.8	2.3	1.5	1.1	0.9	1.4	17.8	36.1	31.4	21.2	16.5
1993- 94	12.9	9.4	6.9	4.7	1.2	0.0	3.3	28.7	16.8	9.9	6.9	5.7
1994- 95	4.7	4.0	3.6	2.9	2.0	1.3	3.4	22.4	35.9	28.1	17.6	13.2
1995- 96	10.8	9.0	6.8	4.5	3.6	3.6	7.2	28.0	35.2	32.3	23.6	16.3
1996- 97	13.8	10.4	7.8	7.3	6.9	6.0	9.9	30.5	32.8	34.4	29.0	24.0
1997- 98	18.7	13.7	10.9	9.4	7.6	6.8	7.8	31.9	34.9	33.1	22.2	16.4
1998- 99	13.4	10.2	8.7	7.1	5.9	5.3	6.3	21.8	34.7	30.2	24.0	18.0
1999- 00	12.7	11.3	10.2	8.8	7.1	5.4	7.6	30.5	21.4	11.1	8.9	7.0
2000- 01	6.0	6.5	5.1	4.6	3.6	3.3	4.0	24.0	10.0	6.7	3.6	3.8
2001- 02	-	2.1	3.0	2.4	1.7	1.2	2.7	21.8	19.5	9.7	5.3	5.8
2002- 03	5.2	3.7	2.1	1.5	1.2	1.5	5.5	23.1	20.9	10.6	7.4	6.9
2003- 04	6.1	4.5	2.4	-	-	-	2.4	24.8	23.1	13.4	10.5	9.3
2004- 05	8.0	6.5	5.2	3.8	3.5	3.5	6.0	25.1	32.6	24.7	21.2	17.3
2005- 06	12.7	10.6	9.1	7.0	5.5	4.9	8.6	29.2	28.5	25.0	22.0	16.8
2006- 07	14.9	11.1	8.8	7.4	6.3	6.1	8.7	28.8	18.9	13.1	9.1	6.2
2007- 08	5.6	3.3	4.1	3.1	2.0	2.4	0.7	17.1	29.5	27.4	19.0	13.6
2008-09	11.6	8.4	6.5	5.1	4.2	3.9	5.5	26.4	32.4	28.2	20.7	15.9
2009-10	13.6	8.2	8.5	6.8	5.8	4.5	5.2	16.2	31.8	21.8	15.6	11.9
2010-11	8.4	6.7	6.1	4.9	4.2	3.1	5.3	21.1	31.7	31.6	28.3	22.1
2011-12	17.9	11.6	11.0	9.4	8.3	4.6	10.2	29.6	28.0	18.3	13.7	10.8
2012-13	9.2	3.4	5.2	3.6	3.2	3.1	3.7	24.2	18.1	10.8	4.3	6.5

Water Year	Month											
	Oct	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
2013-14	5.4	1.0	2.4	2.3	2.0	2.2	4.0	24.3	27.8	18.1	11.0	9.9
2014-15	8.4	2.3	3.7	3.1	2.5	2.9	13.4	30.3	29.5	20.1	15.1	11.9
Average	9.8	6.8	6.0	4.9	3.9	3.3	5.9	24.5	26.5	19.9	14.7	11.6
Maximum	18.7	13.7	11.0	9.4	8.3	6.8	13.4	31.9	36.1	34.4	29.0	24.0
Minimum	2.9	1.0	2.1	1.5	1.1	0.0	0.7	16.2	6.7	4.9	3.0	2.7

Table 1. Calculated flows (cfs) through the Paris Project hydroelectric facility (Source: PacifiCorp 2023b).

Water Year	Month											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
2009-10	105	100	84	78	73	76	89	86	75	120	72	70
2010-11	75	78	71	66	66	66	245	104	187	114	227	342
2011-12	125	486	292	252	251	249	300	308	388	355	299	282
2012-13	133	99	92	103	80	78	144	-	-	-	-	-
2013-14	91	83	61	65	64	65	166	94	78	138	76	72
2014-15	71	69	70	69	67	65	161	119	103	104	85	79
2015-16	75	61	65	68	66	88	253	162	76	126	91	72
2016-17	85	74	73	69	71	572	278	100	67	68	80	102
2017-18	336	275	145	143	168	130	135	207	105	171	91	80
2018-19	76	66	67	68	68	88	126	162	69	161	70	68
2019-20	72	73	70	67	71	182	70	85	109	261	228	95
2020-21	64	58	56	59	59	79	100	152	359	205	94	90
2021-22	89	62	50									
Average	108	122	92	92	92	145	172	144	147	166	129	123
Maximum	336	486	292	252	251	572	300	308	388	355	299	342
Minimum	64	58	50	59	59	65	70	85	67	68	70	68

Table 2. Average monthly flow releases (cfs) from Grace Dam into the bypass reach (Source: PacifiCorp 2023b).

Parameter	Idaho DEQ Standard Section	Beneficial Use COLD/SS
pH	Section 250.01(a)	6.5 to 9.0.
Total Gas Pressure	Section 250.01(b)	Not to exceed 110% of saturation at atmospheric pressure at the point of sample collection.
Dissolved Oxygen	Section 250.02(a)	Greater than 6 mg/L (instantaneous standard) at all times. In lakes and reservoirs this standard does not apply to the bottom 20% of water depth in natural lakes and reservoirs where depths are 35 meters or less.
	Section 250.02(f)(i)(2)(a)	One-day minimum of not less than 6 mg/L or 90% of saturation, whichever is greater.
Temperature	Section 250.02(b)	Water temperatures of 22 °C (acute standard) or less with a maximum daily average of no greater than 19 °C (chronic standard).
	Section 250.02(f)(ii)	Water temperatures of 13 °C (acute standard) or less with a maximum daily average no greater than 9 °C (chronic standard).
Turbidity	Section 250.02(e)	Shall not exceed background below any applicable mixing zone set by the Department by more than 50 NTU instantaneously or more than 25 NTU for more than 10 consecutive days.

Table 3. Surface water quality criteria (Source: PacifiCorp 2023c).

Location	Measure	Month												
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Soda Dam	Avg	18.3	21.5	19.5	15.4	9.4	4.7	3.3	2.9	2.7	3.1	6.4	11.2	15.9
	Max	20.8	22.8	21.7	17.3	12.9	8.2	3.8	3.2	3.2	3.9	12.1	13.7	17.4
	Min	15.7	19.0	15.8	12.4	7.3	3.3	2.9	2.6	2.2	2.3	2.6	8.8	13.5
Grace Forebay	Avg	21.6	19.7	15.5	9.4	3.7	1.6	1.0	1.0	2.5	6.6	11.6	16.1	21.6
	Max	22.4	22.3	18.1	13.8	7.2	2.9	2.1	2.0	4.3	12.5	14.2	18.0	22.4
	Min	20.7	15.7	12.4	6.7	1.5	0.4	0.3	0.3	1.2	3.1	8.6	13.1	20.7
Lower Bypass Reach	Avg	16.9	19.5	17.2	14.1	9.6	5.2	3.1	2.6	2.8	4.8	8.5	11.7	15.2
	Max	20.8	23.0	21.2	17.6	14.6	9.4	5.2	5.1	5.4	9.2	14.2	17.0	19.5
	Min	12.1	13.9	12.4	9.9	5.8	2.3	1.0	0.6	0.9	1.8	3.9	7.2	11.0
Cove Dam Site	Avg	18.5	21.7	19.7	15.6	9.6	4.2	2.0	1.5	1.6	3.8	6.9	11.6	16.0
	Max	21.4	23.9	22.2	17.9	14.4	8.1	3.5	3.3	4.0	6.4	13.3	15.9	17.7
	Min	16.3	18.7	16.0	12.0	6.1	2.1	0.1	0.0	0.0	2.1	3.6	8.4	13.3
Above Oneida Reservoir	Avg	19.0	21.8	19.4	15.3	9.9	4.2	1.7	0.9	1.9	5.8	7.8		
	Max	20.1	23.9	24.3	22.9	18.2	16.6	9.3	4.5	4.4	6.5	11.7	11.5	
	Min	16.4	14.1	18.2	15.1	9.9	4.1	1.0	-0.1	-0.1	-0.1	1.6	5.1	

Table 4. Daily average water temperatures recorded at the Bear River Project (Source: PacifiCorp 2023b).

Site #	Site Name	*n*	TSS (mg/L)					Total P (mg/L)				
			Mean	Median	St dev	Max	Min	Mean	Median	St dev	Max	Min
BR-12	Above Alexander Reservoir	36	31	18	29	118	5	0.059	0.043	0.045	0.201	0.007
BR-13	Below Grace Dam	36	13	11	9	35	5	0.046	0.041	0.018	0.082	0.017
BR-14	Below Cove Power Plant	36	15	13	10	36	5	0.05	0.048	0.021	0.101	0.011
BR-15	Above Oneida Reservoir	36	33	28	47	295	5	0.075	0.071	0.056	0.333	0.011

Table 5. Total suspended solids (TSS) and Total Phosphorus (Total P) at Bear River Project locations (Source: PacifiCorp 2023b).

Fish	Origin	Locations	Habitat and Temperature Preferences
Bonneville cutthroat trout (*Oncorhynchus clarkii utah*)	Native	Found in Bear River Tributaries downstream of the Grace bypass	Cool streams with pools and runs, associated with rootwads/wood debris, undercut banks. Preferred summer temperatures 17-18 °C.
Mountain whitefish (*Prosopium williamsoni*)	Native	Grace bypass	Cold mountain rivers and streams, prefers cobble and large gravel substrates. Preferred summer temperatures 11-20 °C.
Rainbow trout (*Oncorhynchus mykiss*)	Non-native	Grace bypass (middle and lower reaches)	Cool, clear rivers, streams, and lakes, between 10-16° C, but may adapt to warmer temperatures.
Brook trout (*Salvelinus fontinalis*)	Non-native	Grace bypass (lower reaches)	Small, clear, and very cold streams, with high DO water. Prefer summer temperatures below 20 °C.
Brown trout (*Salmo trutta*)	Non-native	Grace bypass (middle and lower reaches)	Streams, rivers, and lakes in faster flowing waters; prefers temperatures below 20 °C but may adapt to warmer temperatures.
Walleye (*Sander vitreus*)	Non-native	Grace bypass (middle and lower reaches)	Rivers, natural lakes, and reservoirs; adaptable to different depths and turbidity conditions. Prefers cooler water temperatures between 18-22 °C and clean, hard bottoms.
Smallmouth bass (*Micropterus dolomieu*)	Non-native	Grace bypass (middle and lower reaches)	Lakes and cool streams with clear water and gravel substrate. Prefers water with a current and temperatures between 19° to 22 °C.
Yellow perch (*Perca flavescens*)	Non-native	Grace bypass (middle and lower reaches)	Ponds, lakes, and slow-moving rivers, most commonly found in clear water near vegetation. Prefers temperatures between 17-25 °C.
Carp (*Cyprinus carpio*)	Non-native	Grace forebay	Streams, rivers, natural lakes, and man-made impoundments; prefers warm, moderately shallow water with abundant vegetation and can tolerate turbid, polluted waters with low DO.

Fish	Origin	Locations	Habitat and Temperature Preferences
Redside shiner (*Richardsonius balteatus*)	Native	Grace Development	Lakes, ponds, ditches, sloughs, springs, and slower moving sections of rivers and streams; prefers sand or mud substrate and abundant vegetation. Prefers summer temperatures between 12-20 °C.
Utah sucker (*Catostomus ardens*)	Native	Grace Development	Streams and lakes, adaptable to a variety of environmental conditions; may be found in very cold or warm water (up to 26 °C).
Mountain Sucker (*Catostomus platyrhynchus*)	Native	Grace Development	Stream riffles, adaptable to a variety of environmental conditions. Prefers summer temperatures between 12-20 °C.
Longnose dace (*Rhinichthys cataractae*)	Native	Grace bypass	Fast-flowing sections of streams associated with rocks at riffles. Prefers summer temperatures between 11-20 °C
Mottled sculpin (*Cottus bairdii*)	Native	Grace bypass (middle to lower reaches)	Cool, clear streams with moderate to rapid current and rubble, gravel, or rocky substrate. Prefers summer temperatures between 13-18 °C but may be found in 21 °C water.
Paiute sculpin (*Cottus beldingii*)	Native	Grace bypass (middle to lower reaches)	Lakes and streams with cool, clear water and slight to moderate current and rubble or large gravel substrate. Prefers summer temperatures warmer than 15 °C, has been found in water over 21 °C.

Table 6. Fish in the Bear River Project vicinity. Origin: Native or Non-native. Location: Where found in the project areas. Habitat: general summary of water systems, substrates, and summer temperatures. Based on FERC 2003, Oasis 2011, PacifiCorp 2023b, Wallace and Zaroban 2013.

Demographic Composition within the Project Area											
State/County/Census Tract and Block Group	Race and Ethnicity Columns										Low Income Column
	Total Population	White Alone, not Hispanic or Latino[a]	Black or African-American[a]	American Indian and Alaska Native[a]	Asian[a]	Native Hawaiian & Other Pacific Islander[a]	Some Other Race[a]	Two or More Races[a]	Hispanic or Latino (any race) [a]	Total Minority Population[c]	Households Below Poverty Level[b]
State of Idaho	1,854,109	80.1%	0.6%	0.9%	1.3%	0.1%	0.4%	3.5%	13.1%	19.9%	10.9%
Bear Lake County	6,436	92.5%	0.1%	0.3%	0.8%	0.0%	0.5%	1.4%	4.3%	7.5%	12.1%
Census Tract 950200, Block Group 1	609	98.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	1.1%	5.3%
Census Tract 950200, Block Group 3	1,101	85.8%	0.0%	1.9%	0.0%	0.0%	0.0%	0.4%	11.9%	14.2%*	14.4%*

A blue shaded cell with red text and an * denotes a qualifying value for inclusion as an environmental justice community.
[a]U.S. Census Bureau, 2022a.
[b]U.S. Census Bureau, 2022b.

Table 7. Minority populations by race and ethnicity and low-income population within one mile of the work area at the Paris Project (Source: Commission staff).

Demographic Composition within the Project Area											
State/County/Census Tract and Block Group	Race and Ethnicity Columns										Low Income Column
	Total Population	White Alone, not Hispanic or Latino[a]	Black or African-American[a]	American Indian and Alaska Native[a]	Asian[a]	Native Hawaiian & Other Pacific Islander[a]	Some Other Race[a]	Two or More Races[a]	Hispanic or Latino (any race) [a]	Total Minority Population[c]	Households Below Poverty Level[b]
State of Idaho	1,854,109	80.1%	0.6%	0.9%	1.3%	0.1%	0.4%	3.5%	13.1%	19.9%	10.9%
Caribou County	7,058	89.3%	0.0%	0.1%	>0.1%	0.0%	0.0%	3.3%	7.2%	10.7%	9.5%
Census Tract 960100, Block Group 3	1,404	74.1%	0.0%	0.0%	>0.1%	0.0%	0.0%	3.7%	22.1%	25.9%*	6.8%
Census Tract 960100, Block Group 4	990	84.5%	0.0%	0.1%	0.1%	0.0%	0.0%	1.7%	13.5%	15.5%*	8.8%

A blue shaded cell with red text and an * denotes a qualifying value for inclusion as an environmental justice community.
[a]U.S. Census Bureau, 2022a.
[b]U.S. Census Bureau, 2022b.

Table 8. Minority populations by race and ethnicity and low-income population within one mile of the proposed action area at the Grace Development (Source: Commission staff).

APPENDIX D

LITERATURE CITED

Abatzoglou, J. T., Marshall, A. M., Harley, G. L. 2021. Observed and Projected Changes in Idaho's Climate. Idaho Climate-Economy Impacts Assessment. James A. & Louise McClure Center for Public Policy Research, University of Idaho. Boise, ID.

CEQ (Council on Environmental Quality). 1997. Environmental Justice: Guidance Under the National Environmental Policy Act. https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf. Accessed January 2024.

Cirrus (Cirrus Ecological Solutions). 2010. Final Report - Fish Stranding Following Boater-Flow Releases. Prepared by Cirrus Ecological Solutions, Logan, UT for PacifiCorp. November.

Cirrus (Cirrus Ecological Solutions). 2019 Soda Spinning Reserve Temperature Technical Report. Prepared by Cirrus Ecological Solutions, Logan, UT for PacifiCorp. August.

Ellis, Sheri M. 2022. An Intensive-level Archaeological Inventory of the Power Canal for the Paris Hydroelectric Development Decommissioning, Bear Lake County, Idaho. Certus Environmental Solutions, Salt Lake City.

EPA (U.S. Environmental Protection Agency). 2016. Promising Practices for EJ Methodologies in NEPA Reviews. Report of the Federal Interagency Working Group on Environmental Justice and NEPA Committee. https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf. Accessed January 2024.

EPA. 2021a. Learn about Environmental Justice. https://www.epa.gov/environmentaljustice/learn-about-environmental-justice. Accessed January 2024.

EPA 2021b. Air Plan Approval; ID: Logan Utah-Idaho PM2.5 Redesignation to Attainment and Maintenance Plan. Final Rule. 86 FR 27532. https://www.federalregister.gov/documents/2021/05/21/2021-10633/air-plan-approval-id-logan-utah-idaho-pm25-redesignation-to-attainment-and-maintenance-plan. Accessed March 2024.

ERI (Ecosystems Research Institute). 1998. Water Quality Study for the Bear River in Idaho. Logan, Utah.

ERI. 2006. Final Bear River/Malad River Subbasin Assessment and Total Maximum Daily Load Plan for HUCs 16010102, 16010201, 16010202, 16010204. Submitted by: Idaho Department of Environmental Quality Pocatello, Idaho. Prepared by: ERI, Inc. Logan, Utah. March 2006.

Degiorgio, J, P. McCarthy, M. Cross, G. Garfin, D. Gori, J. Tuhy. 2010. Bear River Climate Change Adaptation Workshop Summary. May 26 and 27, 2010, Salt Lake City, Utah. https://www.cakex.org/documents/bear-river-climate-change-adaptation-workshop-summary.

Fed. Reg. (Federal Register). 1982. Title 33: Navigation and Navigable Waters; Chapter II, Regulatory Programs of the Corps of Engineers, Vol. 47, No. 138, p. 31810, US Government Printing Office, Washington, D.C.

FERC (Federal Energy Regulatory Commission). 2003. Bear River Project Final Environmental Impact Statement (FEIS) for Hydropower Licensing, issued April 16, 2003.

FWS (U.S. Fish and Wildlife Service). 1997. A System for Mapping Riparian Areas in the Western United States. https://www.fws.gov/sites/default/files/documents/a-system-for-mapping-riparian-areas-in-the-western-united-states-2019.pdf.

Lentsch, L.D., Toline, C.A., J. Kershner, J.M. Hudson, and J. Mizzi. 2000. Conservation agreement and strategy for Bonneville cutthroat trout (*Oncorhynchus clarkii utah*). Utah Division of Wildlife Resources, Publication 00-19, Salt Lake City, Utah.

Lyman, C., and Carter, J. 2015. Fishery and Habitat Monitoring of Paris Creek, Idaho (2001 to 2012), to Determine the Effects of Hydropower Operations on Instream Flow and Aquatic Ecosystems. U.S. Forest Service, Montpelier, ID and Yellowstone to Unitas Connection.

Idaho Department of Environmental Quality (Idaho DEQ). 2017. Bear River Basin TMDL Five-Year Review. State of Idaho Department of Environmental Quality, Boise, ID.

Idaho DEQ. 2022. Idaho's 2022 Integrated Report, Final April 2022. State of Idaho Department of Environmental Quality, Boise, ID.

Idaho DEQ. 2024. Gem State Air Quality Initiative Priority Plan. https://www2.deq.idaho.gov/admin/LEIA/api/document/download/21897

Idaho Department of Fish and Game (Idaho DFG). 2012. Development of a Bonneville Cutthroat Trout Broodstock Program in the Bear River, Idaho. State of Idaho Department of Fish and Game, Boise, ID.

Idaho DFG. 2022. Management Plan for the Conservation of Bonneville Cutthroat Trout in Idaho. Idaho Department of Fish and Game, Boise, ID.

Lyman, C., and Carter, J. 2015. Fishery and Habitat Monitoring of Paris Creek, Idaho (2001 to 2012), to Determine the Effects of Hydropower Operations on Instream Flow and Aquatic Ecosystems. U.S. Forest Service, Montpelier, ID and Yellowstone to Unitas Connection.

Mark, T. 2022. Intensive-Level Architectural Survey of the Paris Hydroelectric Development, Bear Lake County, Idaho. Cultural Resources Report No. 22-125. Salt Lake City, Utah: SWCA Environmental Consultants.

Oasis (Oasis Environmental). 2011. Effects of the Variable Flow Regime on the Ecology of the Black Canyon of the Bear River, Idaho. Prepared by Oasis Environmental, Bigfork, MT for PacifiCorp and the Environmental Coordination Committee. September.

PacifiCorp. 2010. Article 401: 2009 Annual Summary of License Implementation and Compliance. Filed with the Federal Energy Regulatory Commission (Commission) on February 26, 2010. Document Accession #: 20100226-5015

PacifiCorp. 2013. Revised Operations and Compliance Plan: Article 415. Filed with the Commission on June 20, 2013. Document Accession #: 20130620-5151.PacifiCorp 2023(a). Article 401: 2022 Annual Summary of License Implementation and Compliance. Filed with the Commission on February 27, 2023. Document Accession #: 20230227-5240.

PacifiCorp. 2023(b). Bear River Hydroelectric Project (FERC No. P-20) Application for Amendment of License to Modify Grace Development's Minimum Stream Flow. Filed with the Commission on March 14, 2023. Document Accession #: 20230316-5066.

PacifiCorp. 2023(c). Initial Consultation Document in Support of Pumped Storage License Amendment, Oneida Development, Bear River Hydroelectric Project (FERC Project No. 20). Filed with the Commission on September 21, 2023. Document Accession #: 20230921-5050.

U.S. Census Bureau. 2022a. American Community Survey, 5-Year Estimates 2018-2022 – B03002 Hispanic or Latino Origin by Race. Available at: https://data.census.gov/. Accessed January 2024.

U.S. Census Bureau. 2022b. American Community Survey, 5-Year Estimates 2018-2022 – B17017 Poverty Status of Households in the Past 12 Months by Household Type. Available at: https://data.census.gov/. Accessed January 2024.

USGCRP (U.S. Global Change Research Program). 2023: Fifth National Climate Assessment. A.R. Crimmins, C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. https://nca2023.globalchange.gov/#overview.

Utah Power and Light Company. 1982. Application for Exemption for Small Conduit Hydroelectric Facility, Paris Project No. 703. Filed with the Commission on October 28, 1982.

Wallace, R. L., and D. W. Zaroban. 2013. Native fishes of Idaho. American Fisheries Society, Bethesda, Maryland.

APPENDIX E

LIST OF PREPARERS

Jennifer Ambler- Project Coordinator, Fish Biologist. Geology and Soils, Water Quality, Water Quantity, Threatened and Endangered Species, and Aquatic Resources (Ph.D. Environmental Science and Public Policy, M.S. Oceanography, B.S. Environmental Science)

Holly Frank- Fish Biologist. Geology and Soils, Water Quality, Water Quantity, Threatened and Endangered Species, Aquatic Resources, Air Quality, and Climate Change. (M.S. Wildlife and Fisheries Conservation, B.A. Biology).

Shana High- Environmental Biologist. Terrestrial Resources, and Recreation, Land Use and Aesthetic Resources (Graduate Certificate in Natural Resources; B.A. Environmental Science).

Jennifer Polardino- Historian. Cultural and Historic Resources, Environmental Justice (M.A., B.A., History).