Attachment 3 Facility Overview

Project Location

The 390.15 MW Pelton Round Butte Project (Project), owned and operated jointly by Portland General Electric Company (PGE) and the Confederated Tribes of the Warm Springs Reservation of Oregon (Tribes) (together, Applicants), consists of the Round Butte, Pelton, and Reregulating developments located on the Deschutes River in Jefferson County, Oregon (Figure 1). The Deschutes River basin is located in north-central Oregon and drains an area of approximately 10,500 mi^2. The Deschutes River generally flows in a northerly direction to its confluence with the Columbia River. The Project is located in the transition area between the lower and middle Deschutes River basins. The Reregulating Development is located approximately 100 miles upstream from the confluence of the Deschutes and Columbia rivers (Figure 1).

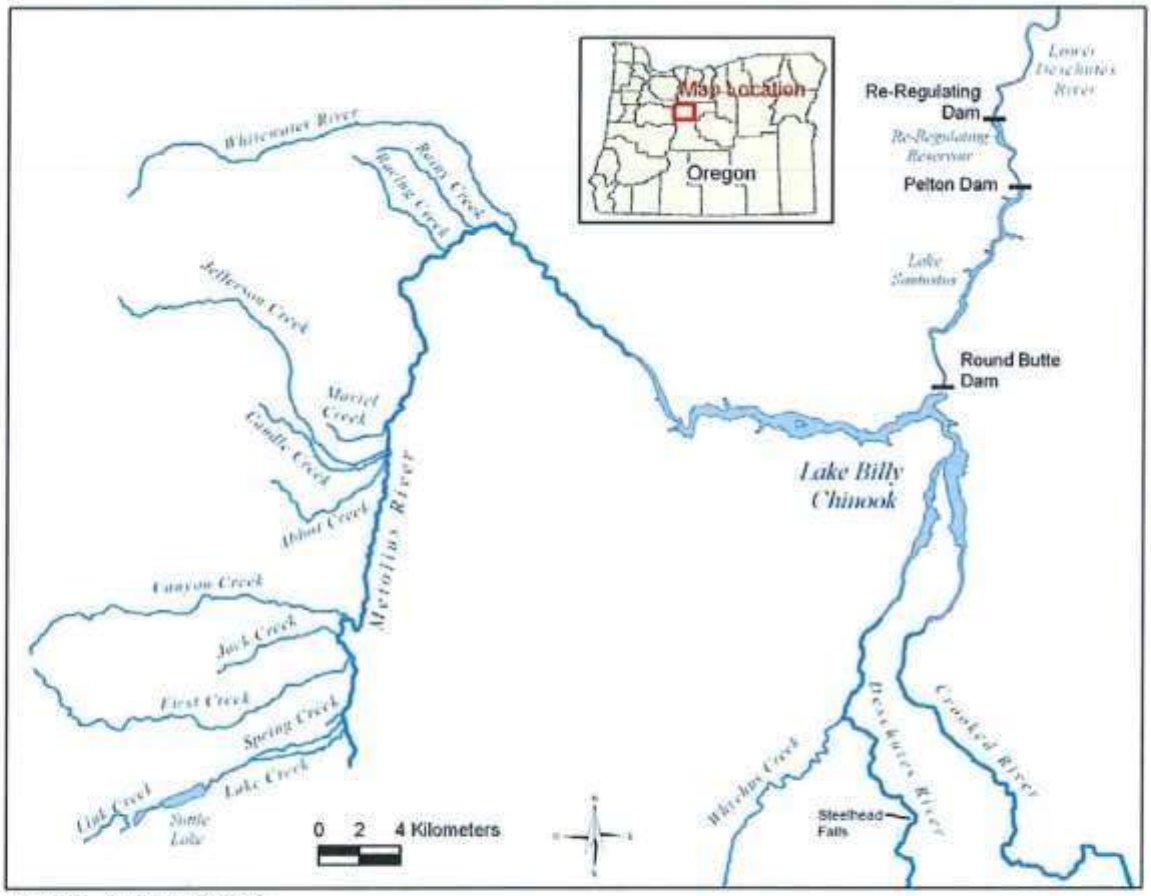

Figure 1. Project location

Project Facilities

The 390.15-MW Pelton Round Butte Project consists of three developments located in sequence on the Deschutes River. The powerhouses for all three developments are integral with each of the three project dams, and there are no bypassed reaches. The 270.45-MW Round Butte Development is the uppermost development and is located at river mile (RM) 110.4. It includes the 4,000-acre Lake Billy Chinook, the Project's largest storage reservoir. Lake Billy Chinook is located on the Deschutes, Metolius, and Crooked rivers. The dam for the 100.8-MW Pelton Development is located on the Deschutes River about 7 miles downstream from the Round Butte Dam (at RM 103.4). The 540-acre Pelton reservoir, known as Lake Simtustus, begins at the base of the Round Butte Dam. The 18.9-MW Reregulating Development is the most downstream development; its 190-acre reservoir on the Deschutes River extends from the tailwater of the Pelton Dam 2.5 miles downstream to the Reregulating Dam at RM 100.1.

Round Butte Development

The Round Butte Development principally consists of a 1,382-foot-long, 440-foot-high compacted, rock-filled embankment dam; a reservoir (Lake Billy Chinook) with a gross storage capacity of 535,000 acre-feet at the normal maximum water surface elevation of 1,945 feet mean sea level (msl); a powerhouse containing one 82.35-MW turbine generating unit; one 86.25-MW turbine generating unit; and one 101.85-MW generating unit with a total installed capacity of 270.45 MW; three 2,800-foot-long, 230-kilovolt (kV) transmission lines extending from the powerhouse to the Round Butte Switchyard; a fish hatchery (Round Butte Hatchery) located adjacent to the dam; and appurtenant facilities.

Round Butte Development

Pelton Development

The Pelton Development principally consists of a 636-foot-long, 204-foot-high concrete arch dam with a crest elevation of 1,585 feet msl; 7-mile-long, 540-acre reservoir (Lake Simtustus) with a gross storage capacity of 31,000 acre-feet at a normal maximum water surface elevation of 1,580 feet msl; a powerhouse with three turbine generating units with a total installed capacity of 100.8 MW; a 7.9-mile-long, 230-kV transmission line extending from the powerhouse to the Round Butte Switchyard; and other appurtenances.

Pelton Dam

Reregulating Development

The Reregulating Development principally consists of a 1,067-foot-long, 88-foot-high rock-filled embankment dam with a spillway crest elevation of 1,402 feet msl; a 2.5-mile-long, 190-acre reservoir with a gross storage capacity of 3,500-acre-feet and a useable storage capacity of 3,270 acre-feet at a normal maximum water surface elevation of 1,435 feet msl; a non-operating 3- mile-long fishway extending from the tailrace upstream to the forebay of the Pelton Development; a powerhouse containing one 18.9-MW, bulb-type turbine generating unit; a 200-foot-long, 6.9 kV primary transmission line extending from the generator to a step-up transformer located adjacent to the powerhouse; and other appurtenances.

Reregulating Dam

Project Operations

The Settlement Agreement and new license provided for the Licensees to institute a state-of-the-art program of controls for project operations that tightly constrain how the Project is operated, allowing the Licensees to operate the Round Butte and Pelton Developments for peak energy and load production and load following capacity while operating the Reregulating Development to match Project outflows with daily average inflows.

The Round Butte and Pelton developments are operated as peaking and load following facilities, typically generating between the hours of 6 a.m. and 11 p.m. daily. Lake Billy Chinook provides seasonal storage and could be drawn down as much as 5 feet, to elevation 1,940 feet msl, in the winter, although typically the reservoir is only drawn down about 10 feet, to elevation 1,935 feet. The reservoir is typically refilled during the months of April and May. During the summer, reservoir is held at the highest practicable level with a relatively stable pool elevation that does not fluctuate more than 1.0 foot below the normal maximum pool elevation of 1,945 feet msl. The surface elevation of Lake Simtustus usually fluctuates less than 0.75 foot per day.

Through its reservoir storage, the Reregulating Development redistributes upstream peaking flows into steadier around-the-clock flows. Flow releases are controlled to maintain an average daily flow in the Deschutes River downstream of the Reregulating Dam that approximates the average daily inflow to the project. The Reregulating Reservoir surface elevation can fluctuate as much as 27 feet (between 1,435 feet msl and 1,408 feet msl) daily; however, typical fluctuations are about 15 feet daily. The turbine and spillway gates automatically respond to river stage measurements recorded at a United States Geological Survey (USGS) gage (No. 14092500) located at the dam.

The Project is operated to provide flow releases below the Reregulating Development that equal or exceed the allowed minimum flow, which is defined according to a schedule of target flows that range

from 3,500 cfs to 4,571 cfs by month. These target flows must be met as long as Project inflows exceed the target flows and the established provision to allow for refilling of Lake Billy Chinook under low flow conditions is not in effect. Fluctuations in the river below the Reregulating Dam are limited to 0.1 feet per hour and 0.4 feet per day, except from May 15 to October 15, when fluctuations are limited to 0.05 feet per hour and 0.2 feet per day.

Attachment 4 Buffer Zone

The Project does not include a formally-designated 200-foot buffer zone around the Project impoundments. Rather, the benefit that would be created at other projects by a buffer zone is accomplished at the Project by the overlapping layers of resource protection plans that govern and protect all aspects of shoreline resources at the Project (Table 3). In addition, with the exception of a small area on Lake Billy Chinook, virtually all of the land adjoining the reservoirs is under public ownership. This array of management plans, combined with the extensive public ownership, provides a level of resource protection comparable to what would result from a buffer zone. In any case, a formal buffer zone is not required for a facility to meet the Watershed Protection Criterion if the licensee has established a watershed enhancement fund, as the Licensees have done with the Pelton Round Butte Fund. The Pelton Round Butte Fund meets the criteria for receiving an additional three years of certification.

Project and Adjacent Lands

The Project boundary encompasses a total of approximately 14,300 acres. Most of this property is owned by the United States government and administered by the U.S. Forest Service (USFS), U.S. Bureau of Land Management (BLM), and U.S. Bureau of Indian Affairs (BIA). Included in the total are approximately 2,162 acres of lands within the Warm Springs Reservation; these lands are primarily located to the north of the Metolius River and to the west of the Deschutes River. Lands adjoining the Project include property owned by PGE, the United States government, the State of Oregon, the Tribes, and private citizens. United States government land in the Project vicinity consists primarily of the Deschutes National Forest, located south of the Metolius River, and the Crooked River National Grassland, located to the east of the Deschutes River and near its confluence with the Metolius River. The Crooked River National Grassland is administered by the Ochoco National Forest. In addition to the lands occupied by the Project facilities and reservoirs, the Project includes 10,797 acres of undeveloped uplands that are managed for wildlife habitat. Of this total, 7,700 acres are located within the Metolius Mule Deer Winter Range, generally south and west of Lake Billy Chinook; approximately 3,000 acres are located in the Trout Creek basin, a tributary to the Deschutes River downstream of the Project; and 97 acres are located along Campbell Creek near the Reregulating Reservoir within the Project boundary. Considering only shoreline along the Project's three impoundments, 55% is publicly-owned, 30% is owned by the Tribes, 5% is owned by the Licensees, and 10% is owned by private parties other than the Licensees.

Table 3. Resource Protection Plans at the Pelton Round Butte Project

Resource Protection Plan	Purpose
Pelton Round Butte Fund	Increase instream flows that benefit aquatic habitat by supporting resource projects in the Deschutes River Basin, acquiring or leasing instream water rights, and participating in water conservation projects
Flow and Reservoir Level Protections	To maximize the economic value of the Project, while minimizing environmental impacts resulting from operation of the Project
Terrestrial Resources Management Plan	Carry out mitigation and enhancements to reduce or eliminate the effects of project operations on terrestrial resources. Applies to all lands inside the FERC boundary, including the reservoirs and shorelines
Shoreline Management Plan	Address development on lands around Lake Billy Chinook
Shoreline Erosion Plan	Implement measures to monitor and control stream and impoundment shoreline erosion
Tribal Resource Management Plans	Address natural resource issues within the Warm Springs Reservation, including the project area
Lower River Gravel Study and Pilot Augmentation Plan	Improve and monitor gravel mobility, supply, and use by spawning salmonids in the lower Deschutes River
Lower River Large Wood Management	Connect the upper and lower Deschutes River ecosystems by transferring large woody debris that enters the Project's reservoirs to the lower river
Lower Basin Fish Habitat Enhancement Trout Creek	Re-grade, reshape, and realign Trout Creek's stream channel to make the channel more hydraulically stable, and re-vegetate the riparian zone

Attachment 5 Agency Letters

Oregon
John A. Kitzhaber, MD, Governor

Department of Environmental Quality
Eastern Region Bend Office
475 NE Bellevue Drive, Suite 110
Bend, OR 97701-7415
(541) 388-6146
Fax (541) 388-8283
TTY 711

September 18, 2014

Low Impact Hydropower Institute
P.O. Box 194
Harrington Park, NJ 07640

Re: Letter of Support for Low Impact Hydro Institute Re-certification for the Pelton-Round Butte Project (FERC Project No. 2030)

Dear members of the Low Impact Hydropower Institute review committee:

The Oregon Department of Environmental Quality (DEQ) expresses our support for Low Impact Hydropower re-certification of the Pelton-Round Butte (PRB) Project. As described below, the Project is compliant with state water quality requirements as outlined in Section B of the Recertification Questionnaire.

1. Is the Facility either: a) In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or b) In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?

YES: Clean Water Act Section 401 water quality certification for the Project was issued by the Oregon Department of Environmental Quality (ODEQ) and the Confederated Tribes of the Warm Springs Reservation Water (CTWSR) Control Board in June 2002. The Project is in compliance with the conditions included in these certifications.

2. Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?

YES: The Deschutes River below the Project is included on the State's 303(d) list for not meeting water quality standards for the following parameters: flow modification, dissolved oxygen, pH, and temperature. Lake Billy Chinook and Lake Simtustus are listed for not meeting water quality standards for pH and chlorophyll-a.

3. If the answer to question B.2 is yes, has there been a determination that the Facility does not cause, or contribute to, the violation?

YES: This determination was made as part of the original 401 certification for the project and referenced in DEQ's comments for the LIHI certification from 2006. Since 2006, a selective withdrawal structure has gone on-line as part of the Project. As was required in the 401 certification and the associated Water Quality Monitoring and Management Plan, operation of the facility is being done under an adaptive management approach. PGE has been monitoring water quality conditions within the Project and in the Deschutes River downstream of the project and is continuing to learn how to adjust operations to better meet water quality standards. PGE, DEQ and the CTWSR are in regular communication to ensure compliance with the terms of the 401 certifications.

Please feel free to contact me if you have any additional questions: lamb.bonnie@deq.state.or.us or 541-633-2027.

Sincerely,

Bonnie Lamb
Deschutes Basin Coordinator

ec: Ted Wise, ODFW

Oregon
John A. Kitzhaber, M.D, Governor

Department of Fish and Wildlife
Eastern Region
61374 Parrell Road
Bend, OR 97702
(541) 388-6363
FAX (541) 388-6281

October 13, 2014

Low Impact Hydropower Institute
P.O. Box 194
Harrington Park, NJ 07640

Subject: Letter of Support for Low Impact Hydro Institute Certification for the Pelton Round Butte Project (FERC Project No 2013)

Dear members of the Low Impact Hydropower Institute review committee:

The Oregon Department of Fish and Wildlife (ODFW) express our support for the Low Impact Hydropower Institute (LIHI)re-certification pf the Pelton-Round Butte (PRB) Project. As described below ODFW is of the opinion that the Project satisfactorily meets the pertinent LIHI fisheries criteria as outlined in Section C of the re-certification questionnaire. These criteria are more specifically addressed below:

Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?

The answer to this question is yes.

Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?

The answer to this question is yes.

Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?

The answer to this question is yes.

The Project has established design, performance, and effectiveness criteria to help ensure maximum survival performance for all life stages of salmonids. These criteria are included in the United States Fish and Wildlife Service (FWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries Section 18 prescriptions, and included in the PRB Project Federal Energy Regulatory Commission (FERC) License.

PGE's design and construction of the PRB Project's screened Selective Water Withdrawal (SWW) facility has proven to be a safe and efficient means of preventing entrainment of resident fishes and downstream migrating juvenile salmonids while providing for selective release of water from varying reservoir depths.

An additional point of consideration is the question as to whether or not the Facility is in compliance with Resource Agency Recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?

The answer to this question is that Project currently complies with the Resource Agency recommendations for those considerations raised in the question.

In summary, the mandatory fish passage prescriptions for upstream and downstream passage of anadromous, cataromous and resident fish are contained in the Section 18 fishway prescriptions as issued by FWS and NOAA Fisheries and contained in the Settlement Agreement were incorporated into the new license for the Project issued by FERC. With these prescriptions in place and PGE's efforts to meet upstream passage goals, on top of successfully meeting downstream smolt passage and survival criteria, ODFW is supportive of the LIHI re-certification for the Project. PGE has in the years since their first LIHI certificate worked cooperatively with ODFW and other governmental agencies in the company's endeavor to fulfill upstream and passage criteria as outlined in the original Settlement Agreement and FERC License.

While goals of volitional upstream fish passage are not yet a realized, the three step approach for the reintroduction of anadromous fish laid out within the Settlement Agreement and the FERC license provides that once the reintroduction efforts reach a point of measured success and is determined to be wholly feasible, PGE will move to design and construct a viable upstream passage facility. In the interim period, adult fish attempting to make their way up river of the Project are trapped downstream and released upstream of the Project.

In closing ODFW appreciates the opportunity **to** provide input on PGE's proposed LIHI re-certification. Should you have any questions pertaining to these comments please do not hesitate to contact me.

Sincerely,

Ted Wise
High Desert Hydropower Coordinator
61374 Parrell Road
Bend, Oregon 97701
541-633-1115
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DESCHUTES LAND TRUST

September 11, 2014

Scot Lawrence
Portland General Electric
Environmental Compliance & Licensing – Deschutes Projects
121 SW Salmon St – 3wtBR05
Portland, OR 97204

Re: Portland General Electric

Dear Scot:

We're writing to support the Pelton Round Butte project's recertification with the Low Impact Hydro Institute. You've asked me to summarize how the project has contributed to watershed enhancement and land conservation in our area.

The Land Trust has been working to support the reintroduction of salmon and steelhead to the upper Deschutes basin for more than fifteen years. In 2000, using Portland General Electric funding, we purchased Camp Polk Meadow, a stream reach noted for its steelhead production potential, and one that had been divided into multiple parcels and listed for sale, threatening the integrity of the floodplain and our ability to restore it. That purchase saved the Camp Polk Meadow reach, including 145 acres of prime floodplain, and facilitated our eventual restoration of Whychus Creek through the meadow, a project we completed in 2012. That restoration project, funded in part by the Pelton Round Butte Fund, won both the USFS Region 6 Collaborative/Integrated Aquatic Stewardship award and the Oregon State Land Board's 2012 Stream Restoration award.

Both Portland General Electric and the Confederated Tribes of the Warm Springs Reservation have been instrumental to our land conservation efforts since we began conserving and restoring streams and floodplains to support salmon restoration. Notably, the Pelton Round Butte Fund helped us with the fee acquisitions of the Whychus Canyon Preserve (450 acres, two miles of Whychus Creek) and the Remund property (480 acres, two miles of Whychus Creek). These two projects, together with our 2006 purchase of a conservation easement at Rimrock Ranch (1120 acres, two miles of Whychus Creek, partially funded by Portland General Electric), comprise six contiguous, protected miles of Whychus Creek. We are now working with restoration partner the Upper Deschutes Watershed Council on designing and implementing restoration of this entire reach. The Pelton Round Butte Fund has provided funding for that restoration project.

I hope this provides useful information to support your recertification; please let me know if there's anything else we can do.

Sincerely,

Brad Nye
Conservation Director

CRWC
CROOKED RIVER WATERSHED COUNCIL

498 SE Lynn Blvd.
Prineville, Oregon 97754

Phone: (541) 447-8567 **Fax:** (541) 416-2115

contact@crwc.info
www.crookedriver.deschutesriver.org

Scot Lawrence
Portland General Electric
121 SW Salmon Street
Portland, OR
97204

September 15th, 2014

Dear Scot,

We are writing to express our gratitude and support for the work accomplished by the Pelton General Fund. This mitigation fund established under your current FERC license is critical to the work we conduct in the Crooked River watershed. Our focus in the lower Crooked, and its two primary tributaries, aligns with PGE's goal to successfully reintroduce steelhead and Chinook salmon to the river systems located above the Pelton-Round Butte hydroelectric complex.

Our individual landowner projects to meet this goal have been supported by the General Fund going back to 2008, and continuing to the present. Some of the first projects undertaken with PGE support included large fish screening and passage needs, while current activities directly supported by the fund feature fish passage at Rice-Baldwin diversion dam, development of the Fin Safe screening program for private diversions, and the development of increased floodplain habitat in the Crooked River reach just below the City of Prineville. These projects collectively create a significantly improved set of conditions that support the reintroduction objective.

We continue to enjoy a highly productive working relationship with PGE. Via the General Fund mitigation process we are able to successfully match state and federal funding with PGE mitigation funds to increase the rate of project implementation, pursue and complete more complicated projects that have languished in planning documents for decades, and support the continuing work of our organization serving the Crooked River.

We appreciate the existence of the General Fund as it has been a tremendous benefit to our project list and our organizations ability to continue work on the basin-wide reintroduction goal.

Sincerely,

Chris M. Gannon
Director
Crooked River Watershed Council

Warm Springs
GEO VISIONS

P.O. Box 460
Warm Springs OR 97761
541.553.3555 (v)

Cultural Resources Department

September 16, 2014

Portland General Electric
Environmental Services
121 SW Salmon Street 3WTC BR05
Portland, Oregon 97204

RE: Pelton Round Butte Projects Low Impact Hydropower Institute Recertification Application

To Whom It May Concern:

This letter is in support of Portland General Electrics (PGE) Low Impact Hydropower Institute Recertification Application for the Pelton Round Butte Project (Project). Warm Springs Geo Visions is a solely owned and operated enterprise of the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO), PGE's co-Licensee of the Project. Because we are also the lead for the CTWSRO on Section 106 of the National Historic Preservation Act, we have the unique opportunity to work and coordinate with state and federal agencies, as well as private utilities on the requirements for hydropower licensing. As an enterprise we have the opportunity to contract with private, federal and state licensees and actually see how utilities are managing resources. Portland General Electric is one of those utilities that actively manage for the protection of historic resources for the future. A Cultural Resource Management Plan has been developed for the Project that is a comprehensive manual for the protection of archaeological and historic resources, which includes the built environment and structures. With no archaeologist on staff, they actively contract with archaeological firms, Warm Springs Geo Visions being the prime for the Project, to review proposed actions and assess them for their potential affect on historic properties prior to project implementation. To conclude PGE has an active training program for staff on archaeological and built resources and, yearly provides refresher courses for those staff that may be in need.

Sincerely,

Sally Bird
Warm Springs Geo Visions
Manager