

**REVIEW OF APPLICATION FOR CERTIFICATION OF  
DALLES DAM NORTH FISHWAY HYDROELECTRIC PROJECT  
(a.k.a. the North Shore Fishway Hydroelectric Project)**

This report provides review findings and recommendations related to the application submitted to the Low Impact Hydropower Institute (LIHI) by the Northern Wasco County People's Utility District (PUD) for Low Impact Hydropower Certification of the applicant's small hydroelectric facility which is co-located at the U.S. Army Corps of Engineers' (ACOE) The Dalles Dam, a large scale dam on the lower Columbia River in southwestern Washington state. As licensed, the applicant's project is named The Dalles Dam North Fishway Hydroelectric Project (FERC Project No. 7076)<sup>1</sup>; however, the applicant refers to it as the North Shore Fishway Hydroelectric Project, and that name is generally used in this report. The LIHI application was deemed complete and publicly noticed on July 17, 2010. No comments were received.



**Figure 1. Native Americans precariously tethered to shore while fishing in 1951 at Celilo Falls, now flooded by The Dalles Dam.**

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<sup>1</sup> A 50-year license was granted, expiring December 1, 2037.

## Background

On December 31, 1987, the Federal Energy Regulatory Commission (FERC) granted a license to the PUD for development of a 4.2 MW North Shore Fishway facility co-located at the Corps' The Dalles Dam.<sup>2</sup> Part of the Columbia River System, The Dalles Dam is the second mainstem dam on the Columbia River 191.5 miles upriver from the ocean. Bonneville Dam is located 45.4 miles downstream, and that dam's backwater (Lake Bonneville)<sup>3</sup> extends to The Dalles Dam. Completed in 1937, Bonneville was first in time, followed later by The Dalles Dam in 1957. The main stem of the Columbia River now supports 14 dams, of which three are in Canada and 11 in the United States. The four lower mainstem dams on the Columbia River (Bonneville, The Dalles, John Day, and McNary) and the four lower dams on the Snake River, a major tributary, incorporate navigation locks to allow ship and barge traffic from the ocean upriver as far as Richland, Washington and Lewiston, Idaho.



Figure 2. Columbia River Basin dam development.

<sup>2</sup> On November 8, 1989, the license was amended to increase the installed capacity to 4.9 MW.

<sup>3</sup> The normal range of water levels for Bonneville Lake is 71.5 to 76.5 feet msl. Celilo Lake ranges from elevation 155 to 160 feet msl.

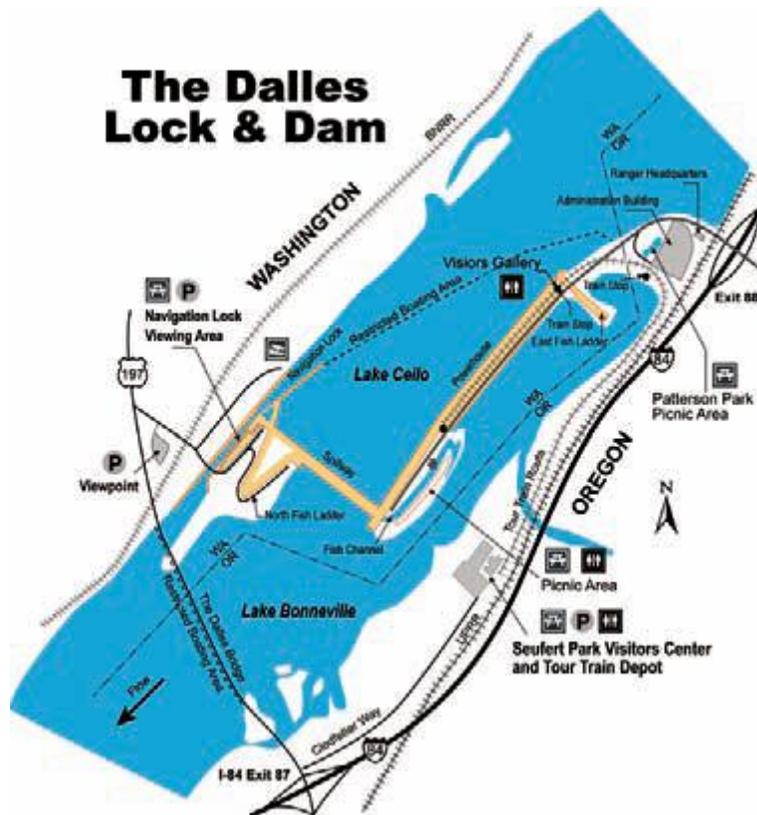


Figure 3. The Dalles Lock & Dam (from USACOE Portland District brochure, *The Dalles, John Day & Willow Creek Dams*, undated)

**The Dalles Dam.** The Columbia River forms the border between the states of Washington and Oregon, but almost all of The Dalles Dam is physically located in Washington. The dam is L shaped, extending 8,700 feet in total length from the Oregon shore abutment to the navigation lock on the Washington shore as shown in Figure 3. The 1,150-foot-long spillway contains 23 Tainter gate bays. There are two fish ladders to accommodate upstream fish passage, the East Fishway and the North Fishway, both part of the original dam construction. The North Fishway is between the navigation lock to the north and the dam spillway to the south. Figure 4, from Google Earth, shows water being discharged through the northernmost Tainter gates; the entrance for the North Fishway is near the northernmost Tainter gate (Gate #1) discharge area.

The dam's backwater extends 23.6 miles upstream, creating Lake Celilo. Celilo Village, one of the oldest continually inhabited aboriginal sites in North America, was submerged when the gates were closed in 1957, along with Celilo Falls, a steep set of falls and rapids that Native Americans accessed for fishing that was important to their economy and culture.

**Federal Hydroelectric Project.** The main powerhouse for The Dalles Dam is operated as part of the Federal Columbia River Power System, which is a coordinated basin management effort by three federal agencies: the ACOE, the U.S. Bureau of Reclamation, and the Bonneville Power Administration. The powerhouse contains 22 units; 14 became operational in October 1960, and

the remaining 8 units in November 1973. The maximum installed capacity of that powerhouse is about 2,100 MW, and the operating head is about 80 feet.

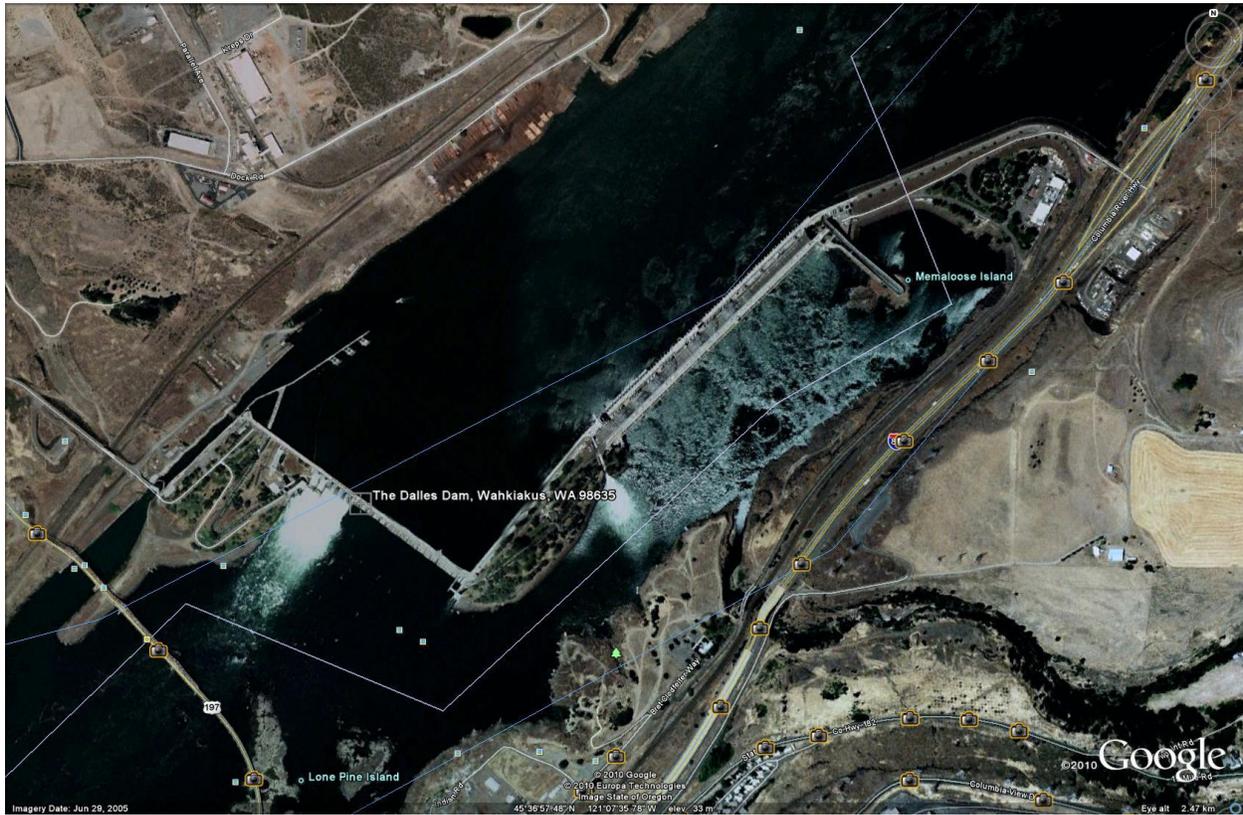


Figure 4. Google Earth image of The Dalles Dam. Subject project on left in this view.

**PUD’s North Shore Fishway Hydroelectric Project.** The PUD’s North Shore Hydroelectric Project was built to utilize the fishway’s auxiliary water supply. It first produced commercial power on May 28, 1991. The purpose of the auxiliary water supply is to supplement the fishway’s operating flow of 70 cfs with sufficient additional flow to provide a total attraction flow of 800 cfs at the entrance to the ladder. Previously, the supplemental flow dropped into a plunge pool and then discharged into the fishway entrance area, where it combined with the fishway’s operating flow.

Water enters the auxiliary water supply system after passing through a trashrack with 7/8-inch bar spacing that prevents the passage of larger fish and debris. The water then enters a 150-foot long intake structure that was built as part of the PUD’s project for the specific purpose of excluding fish from the turbine. The intake structure contains a wall of stainless steel wedge wire screen panels. The screens have 1/8-inch openings to exclude juvenile fish and admit the water used for generation. The overall surface area of the screens is sufficient to limit approach velocities and prevent impingement. A small amount of flow containing the excluded fish discharges through an adjustable weir at the end of the building, dropping about six feet into a 12-foot-deep concrete basin, and then entering a 16-inch-diameter, 1,200-foot-long pipe that conveys the fish to the fishway entrance area.



**Figure 5. Lower end of the North Fishway. PUD powerhouse on right.**

A 10-foot diameter, 85-foot long penstock carries generation flows from the intake structure to the powerhouse, which is situated adjacent to the lower end of the fishway as shown in Figure 5. The station has produced about 40,000 MWh of electricity annually.



**Figure 6. The Dalles Dam looking east. Features starting at north end: Lock, North Fishway, spillway bays, ice and trash sluiceway discharge, federal powerhouse, and East Fishway.**

## Issues Relevant to LIHI Certification

In the context of the Columbia River System and more specifically The Dalles Dam, the North Shore Fishway Project is relatively minor in terms of social and environmental impacts. The 1987 federal license contains a limited number of articles related to the LIHI criteria. The project is not subject to a water quality certification.

## LIHI Criteria Review

Under each of the issue sections that follow, I include a table that contains the related LIHI questionnaire response by the applicant, any comments received from the public or resource agencies, and my analysis and conclusions. Any comment letters are appended to this document.

*Summary of Conclusions and Recommendations.* I recommend that the facility be certified for the standard period of five years with no special conditions. The project has operated for almost two decades without raising any apparent controversy. I reviewed the FERC eLibrary documents going back ten years and could find no record of significant violations or issues. The licensee's primary responsibility is to effectively pass juvenile fish downstream, and that is subject to annual monitoring and reporting. Because of the particular characteristics of the project, it raises very limited issues, and most of the LIHI criteria are not applicable. The ACOE owns the dam, and the licensee's facility is simply a small component of the ACOE's larger operation. The ACOE has primacy.

### *Flows*

With a drainage area of 237,000 square miles at The Dalles Dam, the Columbia River has an average flow of about 177,900 cfs. In the Columbia River System, The Dalles Dam is considered a run-of-river facility, along with the other seven dams that incorporate locks. Upstream dams are primarily used to reregulate river flow. The only mainstem U.S. dam that is considered a storage structure is Grand Coulee (in service 1942). The other storage dams in the network are in Canada or in tributary watersheds in the U.S. The storage dams are operated as part of the Coordinated Columbia River System to redistribute snowmelt runoff, reduce flooding, and provide for irrigation and other water uses.<sup>4</sup>

The ACOE powerhouse contains 22 turbine/generator units, 14 with a capacity of 8,500-12,400 cfs each and 8 with a capacity of 8,900-14,000 cfs each. In contrast, the PUD facility only has a capacity of 800 cfs<sup>5</sup> for its single turbine, or 0.4% of the average river flow and even a smaller percentage of the ACOE's total plant capacity.

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<sup>4</sup> A publication that details the Columbia River System (*The Columbia River System Inside Story*, 2<sup>nd</sup> Ed., Federal Columbia River Power System, April 2001) is available online at: [www.bpa.gov/power/pg/columbia\\_river\\_inside\\_story.pdf](http://www.bpa.gov/power/pg/columbia_river_inside_story.pdf)

<sup>5</sup> The FERC Environmental Assessment (November 16, 1987) indicates at p. 11 that the fishway was being operated at 70 cfs and the auxiliary water supply system at 730 cfs. Pursuant to license Article 312,

The hydroelectric project is now a component of the auxiliary water supply system for upstream fish passage. It does not independently regulate flow. Overall flow management for The Dalles Dam is the responsibility of the ACOE as part of the basin wide collaboration by the ACOE, the Bonneville Power Authority, and the U.S. Bureau of Land Management.

LIHI Questionnaire: Flows

<b>A.1</b>	<p><b>Is the Facility 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?</b></p>
	<p><b>Applicant Response and Explanation:</b>  <b>Yes</b>                  The PUD conducts an annual monitoring program to evaluate fish passage conditions as required by the FERC license. Results are summarized and distributed to permit issuing agencies and interested parties. As stated before, the PUD facility did not change the volume or manner in which the auxiliary water is drawn from the forebay. Consequently it is reasonable to say that the PUD has not negatively impacted or altered flow conditions for fish and wildlife. Further, the PUD has enhanced conditions by providing a passage route away from the auxiliary water system and conveying fish directly to the tailrace.</p>
	<p><b>Related Public Comments:</b> None.</p>
	<p><b>Reviewer Analysis/Conclusions:</b> This criterion does not apply to this facility. Flows are managed by the ACOE. The Dalles Dam discharges into Lake Bonneville. No special flow constraints appear to be in place to protect riverine habitat. This facility uses an extremely small fraction of the river flow. The only important aspect of its flow management is continuous maintenance of the attraction flow during upstream fish passage periods.</p>
	<p><b>YES (N/A) = PASS</b></p>

*Water Quality*

Both Lake Bonneville and Lake Celilo are in the Washington Department of Ecology’s Section 303(d) list (2008) of impaired waters (Category 5 waters) for temperature exceedances based on 1996 and 2001 data. They are both also listed based in dioxin contamination found in the tissue of white sturgeon. Further, they are Category 4A waters based on total dissolved gas (TDG) exceedances, a condition common for the Columbia River and for which a total maximum daily load (TMDL) has been developed to remove the Lower Columbia River (up to the Snake River) from the 303(d) listing for TDG (*Total Maximum Daily Load for Lower Columbia River Total Dissolved Gas*, September 2002, Oregon Department of Environmental Quality and the Washington State Department of Ecology).

the PUD and ACOE determined that the fishway could be operated using less flow, providing more flow for generation. Accordingly, the license was amended in 1989. The license amendment indicates that the fishway was being operated at 150 cfs, not 70 cfs, and that the operating flow could be reduced to 80 cfs. This presumably provided the additional 70 cfs of flow, and the final design capacity of 800 cfs.

When the project was going through the licensing process, FERC issued Order 464, which effectively waived certification by the State under Section 401 of the federal Clean Water Act. The Washington Department of Ecology did file comments on the license application. These comments are discussed in the FERC environmental assessment and apparently focused on pollution control during construction activities.

The FERC environmental assessment does not discuss water quality sampling, nor is any required under post-licensing conditions.

LIHI Questionnaire: Water Quality

<b>B.1</b>	<p><b>Is the Facility either:</b>  <b>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>  <b>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?</b></p> <p><i>Applicant Response and Explanation:</i>  <b>Yes to (a)</b>                  Operation of the PUD turbine has negligible impact on the 750 cfs of water run through it. Additionally, subsequent to its passage through the turbine, this water is discharged the fish ladder and then into 125,000 cfs (conservatively) in the Columbia River quickly mixing with the larger volume of fast moving water.</p> <p><i>Related Public Comments:</i> None.</p> <p><i>Reviewer Analysis/Conclusions:</i> Technically, the PUD’s response should have been Yes to (b) since the project does not have a water quality certification. Given the scale of the project, it does not exacerbate any water quality problems that already exist due to the Columbia River dams.  <b>YES = Go to B.2.</b></p>
<b>B.2</b>	<p><b>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?</b></p> <p><i>Applicant Response and Explanation:</i>  <b>No</b>                  The Columbia River below The Dalles Dam may violate parts of the Clean Water Act but it wouldn’t be due to the PUD, it would be the result of the federal dam at The Dalles, and the other mainstem dams on the Columbia. [Also commented, “The Columbia River below The Dalles Dam may violate parts of the Clean Water Act but those effects are the result of The Dalles Dam, not the PUD turbine. As stated before, the PUD does not impound any water or alter in any way the auxiliary water intake in the forebay.”]</p> <p><i>Related Public Comments:</i> None.</p> <p><i>Reviewer Analysis/Conclusions:</i> As described, waters at the projects are 303(d) listed. So the appropriate response is Yes.  <b>YES = Go to B.3.</b></p>
<b>B.3</b>	<p><b>If the answer to question B.2 is yes, has there been a determination that the Facility is not a cause of that violation?</b></p> <p><i>Applicant Response and Explanation:</i>                  The PUD bypassed this question.</p> <p><i>Related Public Comments:</i> None.</p>

<p><b>Reviewer Analysis/Conclusions:</b> The water quality impairments are not related to this small facility. Technically, no regulatory agency has made that determination; however, this clearly merits a Yes response to pass the criteria. <b>YES = PASS</b></p>
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### *Fish Passage and Protection*

The environment for Pacific salmon and steelhead in the Columbia River basin has been adversely affected by the development and operation of the Federal Columbia River Power System but was already in decline prior to the construction of the first federal water project in the 1930s. Over harvest and pollution and habitat destruction from logging, farming, grazing, road construction, land development, older dams, mining, and urbanization had already reduced the quantity and quality of fish habitat in much of the basin. The dams have degraded the water quality of the middle and lower Columbia River, increasing temperature and total dissolved gas concentrations. Dams have also altered natural runoff characteristics, have slowed fish migration, and have exposed salmonids to predators, such as the voracious northern pikeminnow.

The dam site is part of the critical migratory habitat for seven Endangered Species Act listed salmon and steelhead species, both in upstream migration as adults and downstream as juveniles: Snake River spring/summer Chinook, Snake River fall Chinook, Snake River steelhead, Snake River sockeye, middle Columbia River steelhead, upper Columbia River spring Chinook, and upper Columbia River steelhead. The 14 federal dams that comprise the Federal Columbia River Power System on the Columbia and Snake rivers are subject to a National Marine Fisheries Service (NMFS) 2008 Biological Opinion. The Reasonable and Prudent Alternative for the 2008 Biological Opinion outlines planned improvements to the hydrosystem to boost juvenile passage survival and adult returns. These actions include water management operations, dam modifications, spill, juvenile transport, and other activities. The hydrosystem improvements must achieve performance standards of 96% per dam passage survival for spring juveniles and 93% per dam passage survival for summer juvenile migrants averaged across all of the dams, by the ten-year period of the 2008 Biological Opinion.

Achieving low mortality rates for the mainstem dams is critical to the success of the migratory fish recovery program. At The Dalles Dam, there are no facilities specifically constructed to pass fish downstream. Outmigrants of interest are juvenile anadromous salmonids primarily consisting of subyearling and yearling Chinook salmon, coho salmon, sockeye salmon, and steelhead trout. The passage period is April through November, and observations are made at the upstream John Day Dam by the Pacific States Marine Fisheries Commission to determine actual timing. Currently, passage is principally through a control spill of 40% of the river flow from April through August. It is estimated that 80% of the fish move downstream via spillage, 10% through the ice and debris sluiceway channel at the main powerhouse<sup>6</sup>, and the remaining 10% through the turbines. The ACOE recently completed a \$45 million spill wall between spillway

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<sup>6</sup> The FERC environmental assessment at p. 12 indicates that the principal means of downstream passage at that time (1987) was via the sluiceway.

bays 8 and 9<sup>7</sup> to reduce predation by conveying outmigrants towards the deeper river thalweg and thereby reduce predation, helping achieve the goals of the NMFS Biological Opinion for protecting salmon and steelhead listed under the Endangered Species Act.

Because of the relatively low flow passed through the ancillary water supply system, outmigration via that route is not by design. All in the same, at the time of licensing, it was considered important to protect fish that enter the system, in part because all of the natural reproduction of these fish is upstream of The Dalles Dam. Limited data was available to characterize fish that passed downstream via the ancillary water supply system. The PUD has monitored downstream fish passage through its facility annually during the juvenile salmon and steelhead outmigration period since its start-up in the spring of 1991. A fish sampling and monitoring program is required under license Article 403<sup>8</sup>. FERC issued an order approving the plan on May 23, 1990. Beginning in 1994 and continuing until December 2006, NMFS issued Section 10 Endangered Species Act (ESA) permits for the sampling activities. In 2006, while reviewing the Section 10 permit application for the 2007 sampling season, NMFS concluded that the Section 10 permit should be obtained through a Section 7 consultation process. This required preparation of a biological assessment, which FERC filed with NMFS by letter dated January 31, 2008, requesting formal consultation under Section 7. Sampling was skipped in 2007, but continued in 2008 with NMFS's informal consent, pending receipt of a Section 10 permit, which has not yet been granted.

According to the biological assessment, the juveniles that enter the system have a short residence time, and likely increased survival compared to the pre-project system. The fish passage route that preceded the PUD project was much more turbulent resulting in potentially greater impact to juvenile salmon and steelhead. The system consisted of two falls, one about 10 feet and the other about 40 feet. From there, juveniles traveled through the auxiliary water supply system which emptied into the area under the diffuser gratings in the lower run of the fish ladder. If the juveniles were able to exit the gratings without injury, they were still forced to exit the ladder diffuser area before reaching the tailrace below the dam. Although FERC Article 403 speaks to effectiveness monitoring, there does not appear to be any baseline data against which to compare the current operation. However, the record does not indicate that NMFS or any other party has asked for major modifications of the exclusionary structure.

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<sup>7</sup> Spillway numbering starts at the spillway closest to the North Fishway and extends from there to the south towards Oregon.

<sup>8</sup> The article reads in part, "The licensee, after consultation with the Department of the Army, Portland District Corps of Engineers, the Northwest Power Planning Council, the Washington Department of Wildlife, the Washington Department of Fisheries, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Columbia River Inter-Tribal Fish Commission, and the Confederated Tribes and Bands of the Yakima Indian Nation, shall file for Commission approval a plan to monitor the effectiveness of the fish screens and of the downstream fish bypass facility, required by article 402, under the full range of flow conditions under which the project would operate, in protecting downstream migrant fishes and in facilitating downstream fish passage..."

LIHI Questionnaire: Fish Passage and Protection

<b>C.1</b>	<p><b>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?</b></p> <p><i>Applicant Response and Explanation:</i>  <b>Yes</b>                  The PUD maintains a screened bypass system to convey fish safely around the turbine for downstream migrants. There is no upstream component to the facility other than providing the auxiliary water and maintaining the adult fish ladder entrance on the north ladder. Since the PUD took over this responsibility “out of criteria” occurrences have been dramatically reduced.</p> <p><i>Related Public Comments:</i> None.</p> <p><i>Reviewer Analysis/Conclusions:</i> As part of the Federal Columbia River Power System, The Dalles Dam is subject to NMFS’s 2008 Biological Opinion. There is no specific prescription for the PUD project; however, its operation does not appear to conflict with the 2008 Biological Opinion, and it is part of the auxiliary water supply system that provides supplemental water for attraction of upstream migrants at the North Fishway.  <b>YES = Go to C.5.</b></p>
<b>C.5</b>	<p><b>Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?</b></p> <p><i>Applicant Response and Explanation:</i>  <b>Yes</b>                  The screened bypass system conveys all fish entering it to the tailrace via the bypass pipe.</p> <p><i>Related Public Comments:</i> None.</p> <p><i>Reviewer Analysis/Conclusions:</i> There is no prescription for riverine fish; however, the PUD’s operation would be compatible with upstream and downstream movement. The correct response is probably N/A.  <b>YES (N/A) = Go to C.6.</b></p>
<b>C.6</b>	<p><b>Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?</b></p> <p><i>Applicant Response and Explanation:</i>  <b>Yes</b>                  The PUD bypass pipe discharges into the tailrace of the dam and from there they have to navigate any tailrace barriers as any run of the river fish would have to do. The Corps of Engineers is responsible for entrainment protection downstream of their project for all fish.</p> <p><i>Related Public Comments:</i> None.</p> <p><i>Reviewer Analysis/Conclusions:</i> As provided for in the FERC license (articles 402 and 403), the PUD has installed intake screens and a downstream migrant bypass facility to address the concerns of the fisheries agencies and tribes. The design followed a consultation process, and annual monitoring occurs, with the potential for structural modifications if deemed necessary to protect fish.  <b>YES = PASS</b></p>

*Watershed Protection*

The PUD has no responsibility for management of the reservoir shoreline.

LIHI Questionnaire: Watershed Protection

<b>D.1</b>	<b>Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the high water mark in an average water year around 50 - 100% of the impoundment, and for all of the undeveloped shoreline?</b>
	<i>Applicant Response and Explanation:</i> N/A Since the PUD is not responsible for any impoundment they are not responsible for maintaining a buffer zone of any kind.
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> I agree. <b>NO = Go to D.2.</b>
<b>D.2</b>	<b>Has the facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1.,and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?</b>
	<i>Applicant Response and Explanation:</i> N/A
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> There is no watershed enhancement fund. <b>NO = Go to D.3.</b>
<b>D.3</b>	<b>Has the facility owner/operator established through a settlement agreement with appropriate stakeholders and that has state and federal resource agencies agreement an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation).</b>
	<i>Applicant Response and Explanation:</i> N/A
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> There is no settlement agreement. <b>NO = Go to D.4.</b>
<b>D.4</b>	<b>Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project?</b>
	<i>Applicant Response and Explanation:</i> N/A
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> There are neither recommendations nor a shoreline management plan related to the PUD's activities. <b>N/A = PASS</b>

*Threatened and Endangered Species Protection*

Endangered Species Act listed fish are discussed in detail under the Fish Passage and Protection criteria above.

The FERC Environmental Assessment indicated that two ESA-protected wildlife species, the peregrine falcon (*Falco peregrinus*) and the bald eagle (*Haliaeetus leucocephalus*), potentially occur in the vicinity of the project. Both are now federally delisted, and neither is currently state listed as threatened or endangered.

LIHI Questionnaire: Threatened and Endangered Species Protection

<b>E.1</b>	<b>Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?</b>
	<i>Applicant Response and Explanation:</i> Yes
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> I concur that there are listed (fish) species present. <b>YES = Go to E.2.</b>
<b>E.2</b>	<b>If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all recommendations in the plan relevant to the Facility?</b>
	<i>Applicant Response and Explanation:</i> Yes The PUD secures an ESA permit each year to sample fish from the bypass system to ensure safe passage conditions. The PUD is in the process of securing a Biological Opinion for the sampling associated with the project. This was initiated at the request of the National Marine Fisheries Service 2 years ago and the PUD is still waiting for the BiOp to be issued.
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> As discussed under the Fish Passage and Protection criteria, the facility does not appear to conflict with the 2008 Federal Columbia River Power System Biological Opinion, but it is not specific to the PUD facility. <b>YES = Go to E.3.</b>
<b>E.3</b>	<b>If the Facility has received authority to incidentally <i>Take</i> a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?</b>
	<i>Applicant Response and Explanation:</i> Yes Through 2007, the PUD did secure a Section 10 Incidental Take permit. In early 2008, NMFS told the PUD that we actually should have a Section 7 consultation resulting in a biological opinion. In concert with FERC, the PUD prepared a biological assessment and submitted it to NMFS. We are waiting for NMFS to finish the consultation and issue the biological opinion. NMFS anticipates finishing the BiOp before the end of April, 2010.
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> As I understand it, the Biological Opinion will relate specifically

	to the annual sampling and authorization of that activity, and not the overall facility operation. The prior Section 10 permit expired in 2006. So this is N/A since there are no outstanding permits. <b>N/A = Go to E.5. (I provide the PUD's response to E.4 since the PUD answered YES to E.3.)</b>
<b>E.4</b>	<p><b>If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:</b></p> <p>a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or</p> <p>b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or</p> <p>c) There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or</p> <p>d) The recovery plan under active development will have no material effect on the Facility's operations?</p> <p><i>Applicant Response and Explanation:</i>  <b>Yes</b>          We are in the process; a biological assessment was just submitted to FERC for their submission to NMFS. When that process is complete, we will be able to answer with an unconditional, "YES".</p> <p>A biological opinion should be issue by April 08.</p> <p>[Also commented: a) The PUD already has a FERC license and the biop, when issued, will provide annual ESA coverage for our monitoring effort. b) The biological opinion issued for our monitoring effort is too small and limited in scope to incorporate any form of a recovery plan. d) Since the PUD is in a region with numerous ESA listings related to the operation of the Federal Columbia River Power System, there is no need for the PUD to formulate a recovery plan, nor would it be incumbent on the PUD to do so since it's scope of operation is so limited.]</p> <p><i>Related Public Comments:</i> None.</p> <p><i>Reviewer Analysis/Conclusions:</i>  <b>I did not apply E.4.</b></p>
<b>E.5</b>	<p><b>If E.2 and E.3 are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?</b></p> <p><i>Applicant Response and Explanation:</i> None.</p> <p><i>Related Public Comments:</i> None.</p> <p><i>Reviewer Analysis/Conclusions:</i> Although it specifically related to the annual monitoring, it is reasonable to conclude based on the FERC Biological Assessment that the facility and its operation have a negligible effect on listed fish.  <b>YES = PASS</b></p>

*Cultural Resource Protection*

The project is subject to a standard license article (Article 405) that requires the PUD to consult with the State Historic Preservation Officer before any new land clearing or land disturbing activities are commenced, and prepare a cultural resources management plan. The project area is already highly disturbed by original dam construction. I solicited comments from the Washington Department of Archaeology & Historic Preservation and received a letter concurring with my preliminary conclusion that the facility is not affecting historical or archaeological resources. The letter, dated December 8, 2010, is appended to this report.

LIHI Questionnaire: Cultural Resource Protection

<b>F.1</b>	<b>If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?</b>
	<i>Applicant Response and Explanation:</i> Yes
	<i>Related Public Comments:</i> The Washington State Archaeologist provided a letter stating that no historic properties are affected by the facility.
	<i>Reviewer Analysis/Conclusions:</i> The project has not raised any apparent conflicts with respect to cultural resources. Its footprint is a small area already highly disturbed by original construction of The Dalles Dam. <b>YES = PASS</b>

*Recreation*

Given the scope, ownership, location, and design of this project, it did not necessitate development of a recreation plan.

LIHI Questionnaire: Recreation

<b>G.1</b>	<b>If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?</b>
	<i>Applicant Response and Explanation:</i> Yes
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> The FERC license does not require recreational facilities or a plan. <b>YES = Go to G.3.</b>
<b>G.3</b>	<b>Does the Facility allow access to the reservoir and downstream reaches without fees or charges?</b>
	<i>Applicant Response and Explanation:</i> N/A
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> The project does not affect public access.

<b>YES = PASS</b>
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*Facilities Recommended for Removal*

Dam removal issues would be independent of this facility.

LIHI Questionnaire: Facilities Recommended for Removal

<b>H.1</b>	<b>Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?</b>
	<i>Applicant Response and Explanation:</i> <b>No</b>
	<i>Related Public Comments:</i> None.
	<i>Reviewer Analysis/Conclusions:</i> No. <b>NO = PASS</b>

## **APPENDIX**

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UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Northern Wasco County People's  
Utility District

Project No. 7076-002

ORDER ISSUING LICENSE

(Major Project - SWM of Less  
(December 31, 1987))

Northern Wasco County People's Utility District has filed a license application under Part I of the Federal Power Act (Act) to construct, operate, and maintain the Dalles Dam North Fishway Project, located in Klichitst County, Washington. The project would occupy lands of the United States administered by the Corps of Engineers and would be located at the north end of the Corps' Dalles Dam on the auxillary water supply system to the North Fishway fish ladder.

Notice of the application has been published and comments have been received from interested federal, state, and local agencies. The Washington Departments of Game and Fisheries, the National Marine Fisheries Service (NMFS), the Confederated Tribes of the Warm Springs Reservation of Oregon and Columbia River Inter-Tribal Fish Commission, and the Confederated Tribes and Bands of the Yakima Indian Nation have been granted intervention. The NMFS petitioned, in their Motion to Intervene, for a stay of the licensing proceedings until the applicant completed the additional fishery studies requested by the Commission. The significant concerns of the intervenors are fishery resources and the cumulative effect on these resources, wildlife resources, and minimum flows. These concerns, along with those of the commenting agencies, are discussed in the Environmental Assessment.

Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the Act, as amended by the ECPA, Public Law No. 99-495, requires the Commission to include license conditions, based on the recommendations of federal and state fish and wildlife agencies, for the protection, mitigation, and enhancement of fish and wildlife. The environmental assessment for the Dalles Dam North Fishway Hydroelectric project addresses the concerns of the federal and state fish and wildlife agencies, and provides recommendations consistent with those of the agencies.

Comprehensive Plans

Section 10(a)(2) of the Act, as amended by ECPA, requires the Commission to consider the extent to which a project is consistent with comprehensive plans (where they exist) for improving, developing, or conserving a waterway or waterways affected by the project. The plans must be prepared by an agency established pursuant to federal law that has the authority to prepare such a plan or by the state in which the facility is or will be located. The Commission considers plans to be within the scope of section 10(a)(2), only if such plans reflect the preparer's own balancing of the competing uses of a waterway, based on their data and on applicable policy considerations (i.e., if the preparers consider and balance all relevant public use, with regard to plans prepared at the state level, such plans are within the scope of section 10(a)(2), only if they are prepared and adopted pursuant to a specific act of the state legislature and developed, implemented, and managed by an appropriate state agency. 1/

The Commission has concluded that comprehensive planning under section 10(a)(2)(A), like comprehensive planning under section 10(a)(1), should take into account all existing and potential uses of a waterway relevant to the public interest, including navigation, power development, energy conservation, fish and wildlife protection and enhancement, recreational opportunities, irrigation, flood control, water supply, and other aspects of environmental quality. In order that the Commission may fully understand or independently confirm the content and conclusions of a comprehensive plan, the Commission should general guidelines for developing such plans, which would contain the following: (1) a description of the waterways that are subject of the plan, including pertinent maps;

(2) a description of the significant resources of the waterways; (3) a description of the various existing and planned uses for these resources; and (4) a discussion of goals, objectives, and recommendations for improving, developing, or conserving the waterways in relation to these resources. The more closely a plan conforms to these guidelines, the more weight it will have on the Commission's decisions. The Commission, however, will consider plans that do not meet the criteria for comprehensive plans, as it

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

considers all relevant studies and recommendations in its public interest analysis pursuant to section 10(a)(1), to the extent that the documentation supports the plan. 2/

The staff has identified the Northwest Power Planning Council's Northwest Conservation and Electric Power Plan (Plan) and the Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program (Program) as falling within the scope of section 10(a)(2). The proposed project is consistent with the goals and policies of the Plan and the Program, since as required therein, fish and wildlife agencies, Indian tribes, and the Council have been consulted with regard to the project, and since the license is being conditioned to mitigate fish and wildlife impacts. The staff reviewed two resource plans 3/ that address various aspects of waterway management in relation to the proposed project, as part of a broad public interest examination under section 10(a)(1) of the Act. No conflicts were found.

Based on a review of agency and public comments filed in this proceeding, and on the staff's independent analysis, herein the Dalles Dam North Fishway Project is best adapted to a comprehensive plan for the Columbia River, taking into consideration the beneficial public uses described in section 10(a)(1) of the Act.

Summary of Findings

An EA was issued for this project. Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment are contained in the EA attached to this order. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment attached to this order.

2/ See Commission Order No. 481, issued October 20, 1987.

3/ Washington Statewide Comprehensive Outdoor Recreation Plan, 1985, Interagency Committee for Outdoor Recreation; Washington State Coastal Zone Management Program, 1976, Washington Department of Ecology.

The Director, Office of Hydropower Licensing, concludes that the project would not conflict with any planned or authorized development, and would be best adapted to comprehensive development of the waterway for beneficial public uses.

The Director orders:

(A) This license is issued to Northern Wasco County People's Utility District (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate and maintain the Dalles Dam North Fishway Project. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provision of the Act.

(B) The project consists of:

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

Exhibit G-	FERC No. 7076-	Showing
1	1	Location Map
2	2	Project Boundary Map

(2) Project works consisting of: (a) a 210-foot-long, 20-foot-wide rectangular concrete intake channel connected to the auxiliary water supply system to the North Fishway fish ladder of the Corps' Dalles Dam; (b) a 10-foot-diameter, 85-foot-long steel penstock; (c) a 35-foot by 64-foot powerhouse containing one generating unit with an installed capacity of 4200 kW at a design head of 80 feet; (d) a 3-mile-long, 12.5-kV transmission line connecting to the applicant's existing Lambert Substation; and (e) appurtenant facilities.

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

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or

outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

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

(D) This license is subject to the articles set forth in Form L-2, (October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States", except article 20. The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued.

a. For the purpose of reimbursing the United States for the cost of administration of Part I of the act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 5,600 horsepower.

b. For the purpose of recompensing the United States for utilization of surplus water or water power from a government dam a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time.

Article 202. The licensee shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

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

Article 302. The licensee shall, at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections may require changes in the plans and specifications to assure a safe and adequate project.

Article 303. The licensee shall, within 90 days of completion of construction file with the Commission revised Exhibits A, F and G to describe and show the project as built.

Article 304. The design and construction of those permanent and temporary facilities including reservoir impounding cofferdams and deep excavations, that would be an integral part of, or that could affect the structural integrity or operation of the Government project shall be done in consultation with and subject to the review and approval of the Corps' District Office. Within 90 days from the issuance date of the license, the licensee shall furnish the issuance date of the license, the Commission's Regional Director for their information, a schedule for submission of design documents, and the plans and specifications for the project. If the schedule does not afford sufficient review and approval time, the licensee, upon request of the Corps, shall meet with the Corps and the Commission's staff to revise the schedule accordingly.

Article 305. The licensee shall review and approve the design of contractor designed cofferdams and deep excavations other than those approved according to Article 304 prior to the start of construction and shall ensure that construction of cofferdams and deep excavations are consistent with the approved design. At least 30 days prior to start of construction of the Cofferdam, the licensee shall file 2 copies with the Commission, and submit 1 copy to the Commission's Regional Director, and the Corps of Engineers, of the approved Cofferdam construction drawings and specifications and the letter(s) of approval.

Article 106. Within 90 days from the issuance date of the license, the licensee shall enter into an agreement with the Corps of Engineers to coordinate plans for access to and site activities on lands and property administered by the Corps so that the authorized purposes, including operation of the federal facilities, are protected. In general, the agreement shall not be in conflict with the Commission's requirements contained in the license, shall identify the facility, and the study and construction activities, as applicable, and terms and conditions under which studies and construction will be conducted. The agreement shall set forth reasonable arrangements for access to the Corps site to conduct studies and construction activities, such access rights to be conditioned by the Corps as may be necessary to protect the federally authorized project purposes and operations. Should the licensee and the Corps fail to reach an access agreement, the licensee shall refer the matter to the Commission for resolution.

Article 107. The construction, operation and maintenance of the project works that, in the judgment of the Corps of Engineers, may affect the structural integrity or condition of the Corps project shall be subject to periodic or continuous inspections by the Corps. Any construction, operation and maintenance deficiencies or difficulties detected by the Regional Director shall be immediately reported to the Commission's Regional Director. Upon review, the Regional Director shall refer the matter to the licensee for appropriate action. In cases when construction, operation or maintenance practices or deficiencies may create a situation posing imminent danger to the structural integrity and safety of the Corps project, the Corps inspector has the authority to stop construction, the operation, or maintenance while awaiting the resolution of the problem.

Article 108. At least 60 days prior to start of construction, the licensee shall submit for approval a regulating plan to the Corps of Engineers, describing (a) the designed mode of hydropower operation, and (b) reservoir flow diversion and regulation requirements as established by the Corps for operation of the Corps project during construction. In addition, the licensee, prior to start of power plant operation, shall enter into an operating Memorandum of Agreement (MOA) with the Corps describing the detailed operation of the powerhouse acceptable to the Corps. The MOA shall specify any restrictions needed to protect the primary purposes of the Corps project for navigation, recreation, water

quality, and flood control. The Regional Director shall be invited to attend meetings regarding the agreement. The MOA shall be subject to revision by mutual consent of the Corps and licensee as experience is gained by actual project operation. Matters will be referred to the Commission for resolution, the Commission will be referred to the Commission for resolution. Three copies of the regulating plan and signed MOA between the Corps and the licensee and any revision thereof shall be filed with the Commission and one copy submitted to the Regional Director.

Article 109. The licensee shall have no claim under this license against the United States arising from the effect of any changes made in the operation or reservoir level of the Corps of Engineers' project.

Article 110. The licensee shall provide the Regional Director two copies of all correspondence between the licensee and the Corps of Engineers. The Regional Director shall not authorize construction of any project work until the Corps of Engineers' written approval of construction plans and specifications has been received.

Article 111. The licensee shall enter into a firm agreement with the Corps of Engineers, if the licensee intends to have the Corps operate and maintain the project. The licensee shall reimburse the Corps for all expenses incurred in the operation and maintenance of the project. The licensee may assume the responsibility for the operation and maintenance of the project if so desired.

Article 112. The licensee shall study the feasibility of the installation of additional capacity based on the current operational criteria of the Corps for the Auxiliary Water Supply System. If the study shows that the installation of additional capacity is feasible, an amendment of license shall be filed for approval, with the Commission prior to the start of construction.

Article 101. The licensee, after consultation with the Washington Department of Biology, the Washington Department of Wildlife, the Washington Department of Fisheries, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service, and before commencing any project-related land-clearing, land-disturbing, or spoil-producing activities, shall prepare and shall file for Commission approval a comprehensive plan to control erosion, dust, and slope stability, and to

minimize the quantity of sediment and other potential water pollutants resulting from project construction, spill-disposal, and project operation and maintenance. The Commission reserves the authority to require changes to the plan. No project-related land-clearing, land-disturbing, or spill-producing activities shall begin until the licensee is notified that the plan complies with the requirements of this article. The plan shall be based on actual-site geological, soil, slope, and groundwater conditions and on the final project design, and shall include detailed descriptions of the actual-site drawings of control measures, topographic map locations of all control measures, specific implementation schedule, specific details of monitoring and maintenance programs for the project construction period and for project operation, and a schedule for periodic review of the plan and for making any necessary revisions to the plan. The licensee shall include in the filing documentation of consultation with the agencies before preparing the plan, copies of agency comments or recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how all of the agency comments and recommendations are accommodated by the plan. Before filing the plan, the licensee shall allow a reasonable time frame, in no case less than 10 days, for agencies to comment and to make recommendations. If the licensee disagrees with any agency recommendations, the licensee shall provide a discussion of the reasons for disagreement, based on actual-site geological, soil, and groundwater conditions, and shall provide written responses from the agencies on the licensee's reasons for disagreement.

Article 402. The licensee, after consultation with the Department of the Army, Portland District Corps of Engineers, the Northwest Power Planning Council, the Washington Department of Wildlife, the Washington Department of Fisheries, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Columbia River Inter-Tribal Fish Commission, and the Confederated Tribes and Bands of the Yakima Indian Nation, shall file for Commission approval, for the Dalles Dam North Fishway Hydroelectric Project, functional design drawings of the fish screen, with a design approach velocity of 0.5 foot per second, and functional design drawings of the downstream fish bypass facility for the diversion intake, including an operating and maintenance plan for these facilities within 1 year after the date of issuance of the license. The licensee shall include documentation of

consultation and comments from the consulted entities on the functional design drawings and on the operating and maintenance plan. The Commission reserves the authority to require changes in the functional design drawings and in the operating and maintenance plan. The licensee shall file as-built drawings of the fish screens and of the downstream fish bypass facility within 6 months after completion of construction.

Article 403. The licensee, after consultation with the Department of the Army, Portland District Corps of Engineers, the Northwest Power Planning Council, the Washington Department of Wildlife, the Washington Department of Fisheries, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Columbia River Inter-Tribal Fish Commission, and the Confederated Tribes and Bands of the Yakima Indian Nation, shall file for Commission approval a plan to monitor the effectiveness of the fish screens and of the downstream fish bypass facility, required by article 402, under the full range of flow conditions, in protecting downstream migrant fishes and in facilitating downstream fish passage. The plan shall include a proposal whereby project operation could be rapidly altered to protect downstream migrants from project-induced injury, mortality, or migration delays and schedule for implementing the monitoring program and for filing the results of the monitoring program with the consulted entities and with the Commission. The licensee shall file the plan within 1 year after the date of issuance of this license, and shall include documentation of consultation and comments from the consulted entities on the plan and schedule. The Commission reserves the authority to require changes in the monitoring plan and in the schedule.

The licensee shall file with the consulted entities and with the Commission a report on the results of the monitoring study, according to the approved schedule, and shall file for Commission approval any recommendations for changes in project facilities or project operation to facilitate downstream fish passage. The filing shall include comments from the consulted entities on the monitoring results and any recommendations. The Commission reserves the authority to require changes in project facilities or project operation to ensure the protection of the fishery resources.

*Commission Report  
Due in 1 year*

Article 404. The licensee, after consultation with the U.S. Fish and Wildlife Service and the Washington Department of Wildlife, and within 1 year from the date of issuance of the license and if the final project design includes the provision of above-ground transmission line, shall file for Commission approval a transmission line design plan, prepared in accordance with guidelines set forth in the application, "Suggested Practices for Raptor Protection on Power Lines," Raptor Research Report No. 4, published by the Raptor Research Foundation, Inc., 1981. The plan shall include detailed design drawings of the transmission line, clearly showing phase spacing, configuration and grounding practices, a construction schedule, and agency comments on the adequacy of the design plan. The licensee must not conduct any transmission line construction until the plan is approved by the Commission.

Article 405. The licensee, before starting any land-clearing or land-disturbing activities within the project boundaries other than those specifically authorized in this license, shall consult with the State Historic Preservation Officer (SHPO). If the licensee discovers previously unidentified archaeological or historic properties during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the properties and consult with the SHPO. In either instance, the licensee shall file with the Commission a cultural resource management plan prepared by a qualified cultural resource specialist.

The cultural resource management plan shall include the following: (1) a description of each discovered property indicating whether it is listed on or eligible to be listed on the National Register of Historic Places; (2) a description of the potential effect on each discovered property; (3) proposed measures for avoiding or mitigating effects; (4) documentation of the nature and extent of consultation; and (5) a schedule for mitigating effects and conducting additional studies. The Commission may require changes to the plan.

The licensee shall not begin land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a property discovered during construction, until informed that the requirements of this article have been fulfilled.

Article 406. The licensee shall permit representatives from the Department of the Army, Portland District Corps of Engineers, the Northwest Power Planning Council, the Washington Department of Wildlife, the Washington Department of Fisheries, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Columbia River Inter-Tribal Fish Commission, and the Confederated Tribes and Bands of the Dalles Dam North Fishway Hydroelectric Project, access to the records related to fish and wildlife mitigative measures.

Article 407. The Commission reserves the authority to order, upon its own motion or upon the recommendation of federal, state, fish and wildlife agencies or affected Indian tribes, alterations of project structures and operations to take into account the fullest extent practicable at each relevant stage of the decision-making process the regional fish and wildlife program developed and amended pursuant to the Pacific Northwest Electric Power Planning and Conservation Act.

(E) The licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(F) This order is issued under authority delegated to the Director and is final unless appealed under Rule 1902 to the Commission by any party within 30 days from the issuance date of this order. Filing an appeal does not stay the effective date of this order or any date specified in this order. The licensee's failure to appeal this order shall constitute acceptance of the license.

Fred E. Springer  
Acting Director, Office  
of Hydropower Licensing



STATE OF WASHINGTON

**DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION**

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December 8, 2010

Mr. Jeffery Cueto  
Low Impact Hydropower Institute  
34 Providence Street  
Portland, Maine 04113

Re: North Shore Hydroelectric Project Certification  
Log No.: 120810-02-FERC

Dear Mr. Cueto:

Thank you for contacting our Department. We have reviewed the materials you provided for the proposed Wasco County PUD North Shore Hydroelectric Project Certification at the Dalles Dam, Klickitat County, Washington.

We concur with the proposed determination of No Historic Properties Affected.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4). In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity must stop, the area secured, and the concerned tribe and this department notified.

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in compliance with the Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36CFR800.4. Should additional information become available, our assessment may be revised, including information regarding historic properties that have not yet been identified. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.  
State Archaeologist  
(360)586-3080  
email: [rob.whitlam@dahp.wa.gov](mailto:rob.whitlam@dahp.wa.gov)



## CONTACTS

	<b>Authorized Representatives</b>	<b>Contact Information</b>
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	Bob Guidinger, Plant Manager	(541) 298-3325
Pacific States Marine Fisheries Commission	Rick Martinson, Contract Biologist	(541) 296-8989
National Marine Fisheries Service	Gary Fredricks	(503) 231-6855 <a href="mailto:Gary.fredricks@noaa.gov">Gary.fredricks@noaa.gov</a>
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FERC	Erich Gaedeke	(503) 552-2716 <a href="mailto:Erich.Gaedeke@ferc.gov">Erich.Gaedeke@ferc.gov</a>
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