Review of Application
for
LIHI Certification of the
Nisqually Hydroelectric Project
Pierce, Thurston, and Lewis Counties, Washington

Prepared July 31, 2008 by
Fred Ayer, Executive Director

Introduction and Overview

This report reviews the Application for Certification submitted by Tacoma Public Utilities (Tacoma) for Low Impact Hydropower Certification of the Nisqually Hydroelectric Project No. 1862 (project), located on the Nisqually River, in Pierce, Thurston, and Lewis Counties, Washington State. The project is partially located on lands of the Mount Baker-Snoqualmie National Forest.

The Federal Energy Regulatory Commission (FERC) issued a new license for the Nisqually River Hydroelectric Project in 1997. Interveners in the relicensing process included: the U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), the Nisqually Indian Tribe (Nisqually Tribe), the Washington State Parks and Recreation Commission (WSPRC), the Washington Department of Fisheries (reorganized as the Washington Department of Fish and Wildlife [WDFW]), American Rivers, the Federation of Fly Fishers, the Northwest Rivers Council, and the American Whitewater Affiliation (AWA) (FERC 1997). The license order contains articles that require additional studies and provide for various mitigation measures and operating conditions for the new license term. The license order also adopted instream flows that the parties had previously negotiated and FERC had approved in an earlier proceeding addressing both the Nisqually Project and the Yelm Project No. 10703, which is located approximately 14 miles downstream from the LaGrande powerhouse (FERC 1997a). A rehearing was granted by FERC in 1998 to address the concerns of the Nisqually Tribe and Tacoma Public Utilities regarding several license articles (FERC 1998).

Facility Description

The mainstem Nisqually River contains two hydroelectric projects, the Yelm project (operated by the city of Centralia, Washington) and the Nisqually River Project (operated by the applicant). The Yelm project consists of a single diversion dam, canal,

powerhouse, and fishway, which allows anadromous fish migrating upstream to pass through the Yelm project and continue to areas immediately downstream of the Nisqually project (FERC 1997a).

The Nisqually Hydroelectric Project consists of two hydroelectric facilities: the 50 MW LaGrande facility and the 64 MW Alder facility (Figure 1). Each facility includes a dam, reservoir, flowline, powerhouse, and an associated power transmission switchyard. Both switchyards lead to a single transmission system that extends 26.2 miles to the City of Tacoma. The Alder facility is operated in a peaking mode and LaGrande is operated as a run-of-river facility (FERC 1997, Tacoma 2003).

The Alder facility (river mile 44.2) includes a 285-foot-high concrete arch dam that impounds Alder Lake, a 7.4-mile-long storage reservoir with a maximum surface area of 3,065 acres and an operating storage capacity of 161,457 acre-feet at elevation 1,207 feet. Adjacent to the main dam structure is a reinforced concrete spillway channel with a total discharge capacity of 80,000 cubic feet per second (cfs). The Alder powerhouse is located at the base of the dam. The powerhouse contains two generating units (FERC 1997).

The LaGrande facility (river mile 42.7) consists of a 192-foot-high concrete gravity dam impounding LaGrande reservoir. The LaGrande reservoir has a surface area of 45 acres and contains 2,700 acre-feet of total storage. The LaGrande reservoir is situated in a deep, precipitous canyon, extending a distance of 1.5 miles to the base of Alder dam. LaGrande Dam has a large reinforced concrete spillway with an 80,000-cfs capacity. The dam diverts flows into a 6,400-foot-long underground tunnel, which terminates at a steel penstock leading to a manifold structure serving five individual penstocks for each of five generating units in the LaGrande powerhouse. The 1.7-mile-long LaGrande bypassed reach is situated in a deep gorge between LaGrande Dam and the LaGrande powerhouse (FERC 1997).

Tacoma maintains about 1,113 acres of project land around Alder and LaGrande reservoirs for project operations and related recreation facilities. Most of Alder Lake's shoreline is contiguous with lands of the Mt. Baker-Snoqualmie National Forest, the Washington Department of Natural Resources (WDNR), and Weyerhaeuser Timber Company. About 177 acres of project lands are dedicated to developed recreation. Recreational use at the project is confined to the lands and waters of Alder Lake, which includes about 28 miles of shoreline. Tacoma operates and maintains three recreation facilities on the northern shores of Alder Lake: Alder Lake Park, Sunny Beach Point Day-use Area, and Rocky Point Day-use Area. The WDNR also operates and maintains a campground with a boat launch on the south shoreline of Alder Lake (FERC 1997).

Public comment. [I.D comments or lack thereof]

General conclusions. The project's design, location, topography, and geology have resulted in a project that appears to be consistent with LIHI criteria…

Recommendation. Based on my review of information submitted by the applicant, my review of additional documentation, and my consultations with resource agency staff, I believe the [Project name] Hydroelectric Project meets [or does not meet] all of the criteria to be certified and I recommend [or don't recommend] certification.

LIHI Hydropower Certification Criteria

Goals, Standards and Applicant's Responses

The Low Impact Hydropower Institute certifies those hydropower facilities that meet its eight criteria:

A. River Flows:

***Goal**: The facility (dam and powerhouse) should provide river flows that are healthy for fish, wildlife, and water quality, including seasonal flow fluctuations where appropriate.*

***Standard**: For instream flows, a certified facility must comply with recent resource agency recommendations[1] for flows. If there were no qualifying resource agency recommendations, the applicant can meet one of two alternative standards: (1) meet the flow levels required using the Aquatic Base Flow methodology or the "good" habitat flow level under the Montana-Tennant methodology; or (2) present a letter from a resource agency prepared for the application confirming the flows at the facility are adequately protective of fish, wildlife, and water quality.*

A. Flows:

Criteria

1) 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 conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?

YES

According to Tacoma's Annual Minimum Instream Flow Report for 2002 (as reviewed in FERC 2002a) and information gleaned from interviews with agency representatives, the applicant has met in-stream flow requirements (Article 403) for the LaGrande bypass reach and the river reach below LaGrande powerhouse. Instream flow requirements for the project only apply to the LaGrande bypass reach and the reach downstream of LaGrande powerhouse (FERC 1997). Occasional disruptions in

[1] "recent resource agency recommendations" are defined as final recommendations made by state, federal, or tribal resource agencies in a proceeding, such as a Federal Energy Regulatory Commission (FERC) licensing proceeding. Qualifying agencies are those whose mission includes protecting fish and wildlife, water quality and/or administering reservations held in the public trust. Agencies such as a state or tribal department of fish and game, or the U.S. Fish and Wildlife Service are considered a "resource agency" but the FERC, with its balancing responsibilities, is not. The agency recommendations must be recent, which means they were issued after 1986 (after enactment of the Electric Consumers Protection Act, which amended the Federal Power Act to increase the profile of recommendations from fish and wildlife agencies in the FERC licensing process). If there are a number of resource agency recommendations, then the most stringent (most environmentally protective) is used. In the case of settlement agreements, the final settlement terms will be considered the agency's "recommendation."

minimum flows have occurred (the most recent occurring from June 21-23, 2003 in the LaGrande bypass reach) and have been reported to FERC and relevant agencies (Leigh pers. comm., Ging pers. comm.). Most of the disruptions have been due to mechanical or software failures (FERC 2003, Leigh pers. comm.).

According to Tacoma's Annual Natural Resources Report for 2002, Tacoma has met ramping rate conditions for the LaGrande bypass reach and reaches below LaGrande powerhouse, as well as reservoir level requirements (Articles 404, 405, 406, and 407) (Tacoma 2003). Agency and tribal representatives we spoke with believed Tacoma has met ramping rate conditions as required in the license (Walter pers. comm., Leigh pers. comm., Ging pers. comm., Fransen pers. comm.).

YES *go to B*

PASS

A. Flows – 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 for both the reach below the tailrace and all bypassed reaches. FACILITY PASSES.

B. Water Quality:

Goal: *Water quality in the river is protected.*

Standard*: The water quality criterion has two parts. First, a facility must demonstrate that it is in compliance with state water quality standards, either through producing a recent (after 1986) Clean Water Act Section 401 certification, or demonstrating compliance with state water quality standards (typically by presenting a letter prepared for the application from the state confirming the facility is meeting water quality standards). Second, a facility must demonstrate that it has not contributed to a state finding that the river has impaired water quality under Clean Water Act Section 303(d) (relating to water quality limited streams).*

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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

A Section 401 Water Quality Certification was issued for the Nisqually project by the Washington Department of Ecology (WDOE) in 1992 (see Appendix B). The majority of the conditions contained within the certification pertain to oil and hazardous materials spill prevention and control. The certificate also contains a minimum instream flow condition (5 cfs) for the LaGrande bypass reach and a condition requiring compliance with state water quality criteria for Class A waters (FERC 1997). The state has classified the Nisqually River as follows: Nisqually River from mouth to Alder Dam – Class A (excellent), Nisqually River from Alder Dam to headwaters – Class AA (extraordinary) (WDOE 1997).

YES go to B2

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?

None of the project or nearby waters (including the mainstem Nisqually River and the project lakes) are listed on the most recent 303(d) list published by the Washington State Department of Ecology (WDOE 1998).

NO = PASS. Go to C

PASS

B. Water Quality – The Facility is in Compliance with all conditions issued pursuant to a Clean Water Act §401 in the Facility area and in the downstream standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act. FACILITY PASSES

C. Fish Passage and Protection:

Goal: *The facility provides effective fish passage for riverine, anadromous and catadromous fish, and also protects fish from entrainment.*

Standard: *For riverine, anadromous, and catadromous fish, a facility must be in compliance with recent (after 1986) mandatory prescriptions regarding fish passage (such as a Fish and Wildlife Service prescription for a fish ladder) as well as any recent resource agency recommendations regarding fish protection (e.g., a tailrace barrier). If anadromous or catadromous fish historically passed through the facility area but are no longer present, the applicant must show that the fish are not extirpated or extinct in the area because of the facility and that the facility has made a legally binding commitment to provide any future fish passage recommended by a resource agency.*

When no recent fish passage prescription exists for anadromous or catadromous fish, and the fish are still present in the area, the facility must demonstrate either that there was a recent decision that fish passage is not necessary for a valid environmental reason, that existing fish passage survival rates at the facility are greater than 95% over 80% of the run, or provide a letter prepared for the application from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service confirming the existing passage is appropriately protective.

1) **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?**

Resource agencies have not issued Mandatory Fish Passage Prescriptions for the project (FERC 1997).

N/A = Go to C2.

2) **Are there historic records of anadromous and/or catadromous fish movement through the facility area, but anadromous and/or catadromous fish do not presently move through the Facility area (e.g., because passage is blocked at a downstream dam or the fish run is extinct)?**

The historical range of anadromous fish in the Nisqually River appears to have been limited by a set of falls situated between the present-day locations of LaGrande and Alder dams (Fransen pers. comm., Leigh pers. comm., Ging pers. comm., Tacoma 1991). The bypass reach below LaGrande Dam may have also presented a significant obstacle to upstream migration for anadromous fish (Tacoma 1991). According to the applicant, resource agencies, and tribal representatives, there are no known historical records or scientific surveys indicating anadromous fish presence upstream of LaGrande Dam,

and few if any records exist for the bypass reach immediately downstream of LaGrande Dam . Given the available information, it appears unlikely that anadromous fish regularly utilized the area upstream of LaGrande Dam under pre-project conditions.

NO = Go to C3.

3) If, since December 31, 1986:

a) Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C2a above), and

b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,

c) Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?

Resource agencies had the opportunity to issue fish passage prescriptions during relicensing of the project but declined due to the presence of historical natural barriers located between the present-day sites of LaGrande and Alder dams.

NO = Go to C5

4) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream or downstream passage of riverine fish?

Resource agencies have not issued Mandatory Fish Passage Prescriptions for the passage of riverine fish at the project dams .

If NOT APPLICABLE *go to C6*

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

The Nisqually FERC license Article 417 required Tacoma to prepare a plan to evaluate tailrace attraction and injury or mortality to fish at the LaGrande powerhouse tailrace within 6 months of license issuance. A study plan was written by Tacoma, the Nisqually Tribe, and resource agencies and was submitted to FERC in September 1997. After a series of delays, FERC modified Article 417 in 1998 to require the plan to be submitted after installation of a flow continuation valve, which was installed in April 2000 (FERC 2001).

In October 2000, Tacoma requested, and FERC approved, a delay in performing the tailrace study until steelhead and salmon become reestablished in the bypass reach below LaGrande Dam. According to FERC documentation, the delay request was the result of discussions between Tacoma, resource agencies, and the Nisqually Tribe. Barrier removal and gravel augmentation in the LaGrande bypass reach is anticipated to improve habitat for salmonids, thereby attracting fish past the powerhouse and into the bypass reach. Currently, few if any anadromous salmonids utilize the bypass reach for spawning. FERC ordered that Tacoma file a final study plan by October 2005, and required Tacoma to monitor fish use of the bypass reach in the meantime. If significant spawning activity is noted prior to 2005, FERC will require Tacoma to expedite submission of a plan and schedule for implementation (FERC 2001).

YES = PASS. Go to D (Watershed Protection)

PASS

C. Fish Passage and Protection – The facility is 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 - FACILITY PASSES.

D. Watershed Protection:

***Goal**: Sufficient action has been taken to protect, mitigate and enhance environmental conditions in the watershed.*

***Standard**: A certified facility must be in compliance with resource agency recommendations and FERC license terms regarding watershed protection, mitigation or enhancement. These may cover issues such as shoreline buffer zones, wildlife habitat protection, wetlands protection, erosion control, etc. The Watershed Protection Criterion was substantially revised in 2004. The revised criterion is designed to reward projects with an extra three years of certification that have: a buffer zone extending 200 feet from the high water mark; or, an approved watershed enhancement fund that could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1. and has the agreement of appropriate stakeholders and state and federal resource agencies. A Facility can pass this criterion, but not receive extra years of certification, if it is 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.*

4) 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.

The project appears to be in compliance with license conditions relating to watershed protection and management (Leigh pers. comm., Walter pers. comm., Leigh pers. comm.). The primary vehicle of watershed protection in the license is the Wildlife Management Plan (required in Article 423) and the development of erosion control plans (Article 401) for major ground-disturbing activities (FERC 1997). WDFW is currently working with Tacoma to ensure continued implementation of the provisions of the Wildlife Management Plan .

YES = PASS. Go to E (Threatened and Endangered Species Protection)

PASS

D. Watershed Protection – The facility is in compliance with both state and federalresource agencies recommendations in a license approved shoreland management plan regarding Protection, mitigation, and enhancement of shorelands surrounding the Project - FACILITY PASSES

E. Threatened and Endangered Species Protection:

***Goal**: The facility does not negatively impact state or federal threatened or endangered species.*

***Standard:** For threatened and endangered species present in the facility area, the facility owner/operator must either demonstrate that the facility does not negatively affect the species, or demonstrate compliance with the species recovery plan and any requirements for authority to "take" (damage) the species under federal or state laws.*

Threatened and Endangered Species Protection:

1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?

The following special threatened and endangered species occur within the project area (FERC 1996, NOAA Fisheries 2003, Ging pers. comm., Fransen pers. comm.):

Chinook salmon – Federal Threatened (Puget Sound ESU)
Coho salmon – Federal candidate (Puget Sound/Straight of Georgia ESU)
Gray wolf – Federal Endangered, State Endangered
Grizzly bear – Federal Threatened, State Endangered
Northern spotted owl - Federal Threatened, State Endangered
Bald eagle – Federal Threatened, State Threatened
Marbled Murrelet – Federal Threatened, State Candidate

Chinook salmon were listed under the federal ESA in 1999, after the FERC license for the project was issued. Both Chinook and Coho salmon are present downstream of the project (Fransen pers. comm., NMFS 2003). The Chinook salmon population in the Nisqually River is heavily supported by tribal hatchery production but the hatchery fish are not considered critical to recovery of the species (Barr pers. comm.). Bull trout (Federally Threatened – Puget Sound ESU) are thought to use some areas of the lower Nisqually River for feeding, but are generally not known to be present in significant numbers in the river

YES *Go to E2*

2) 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?

None of the existing recovery plans for species within the project area contain recommendations specific to the project (USFWS 2003, NOAA Fisheries 2003).

NOT APPLICABLE *Go to E3*

3) If the Facility has received authority to Incidentally Take 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?

The project has not received authority to incidentally take listed species. NOAA Fisheries does not currently consider the Nisqually project a high priority for Section 7 consultation for Chinook salmon

NOT APPLICABLE Go to E5

5) If E2 and E3 are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?

During the original LIHI application process, USFWS personnel indicated that the project and project operations are not likely to negatively affect listed wildlife species (Ging pers. comm.). NOAA Fisheries personnel do not know of any current issues or negative impacts to Chinook salmon resulting from the project or project operations, but referred the application reviewer to the Nisqually Tribe for information on Chinook salmon status in the river (Fransen pers. comm.). A supporting letter from the Nisqually Tribe states that it is unlikely that the project has adverse impacts on Chinook salmon (Walter 2003a). In addition, the Tribe believes that, based on ongoing fisheries studies, that the current project operations are actually beneficial to Chinook salmon and other salmonids in the river. Tribal monitoring indicates that Chinook salmon escapements are increasing; however the extent of "natural" production resulting from spawning hatchery fish is unknown.

YES *Pass, go to F*

PASS

E. Threatened and Endangered Species Protection – Except for the occasional transient no threatened or endangered species or their critical habitat listed under state or federal Endangered Species Acts are present in the Facility area. FACILITY PASSES.

F. Cultural Resource Protection:

Goal: *The facility does not inappropriately impact cultural resources.*

Standard: *Cultural resources must be protected either through compliance with FERC license provisions, or, if the project is not FERC regulated, through development of a plan approved by the relevant state, federal, or tribal agency.*

Criteria:

1) **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?**

The applicant appears to have met all cultural resource protection requirements of the FERC license. According to a May 2000 FERC inspection report, there are no sites listed in the National Register of Historic Places that are located within the project boundary, and no sites are known to be impacted by the project. The cultural resource assessment conducted as part of the relicensing process concluded that no known historic or archaeological sites exist in the project area (FERC 2000). FERC license Article 429 requires Tacoma to consult a state Historic Preservation Officer before starting ground-disturbing activities.

YES *Pass, go to G*

PASS

G. Cultural Resources – The Facility is in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license - FACILITY PASSES.

H. Recreation:

Goal: *The facility provides free access to the water and accommodates recreational activities on the public's river.*

Standard: *A certified facility must be in compliance with terms of its FERC license or exemption related to recreational access, accommodation and facilities. If not FERC-regulated, a facility must be in compliance with similar requirements as recommended by resource agencies. A certified facility must also provide the public access to water without fee or charge.*

Criteria:

1) 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?

The Nisqually project appears to be in compliance with the recreation-related conditions in the FERC license (Articles 427, 428, and 413) (FERC 2000). Article 428 required Tacoma to study the feasibility of recreational flow releases in the LaGrande bypass reach, the results of which are discussed below. A recent issue related to the stocking of kokanee salmon for the Alder Lake fishery (Article 413) is also discussed below.

Discussion: Recreational flow releases in the LaGrande bypass reach (Article 428)

During the relicensing of the Nisqually project, a major issue was whether Tacoma should be required to provide whitewater recreational flows from LaGrande Dam into the 1.7 mile long bypass reach. Issues of concern included potential impacts to aquatic resources, reservoir recreation upstream of the dam, public safety concerns, and costs associated with lost power generation, river access, and potential whitewater rescue operations. Resource agencies were particularly concerned that major recreational releases would negatively affect fisheries. After considering these issues, FERC (in license Article 428) required Tacoma to file a 3-year plan for evaluating whitewater boating opportunities in the LaGrande bypass reach. The plan was to include flow releases, during each year of the three-year period, on two weekends in mid-to-late November or December. Tacoma was also required to file an annual report with the Commission for its approval. License Article 421 required an additional study to assess the impacts of whitewater releases on fishery resources in the bypass reach (FERC 2002).

The 3-year plan was filed by the utility and whitewater releases were subsequently conducted. Test runs of the reach were conducted by members of the American Whitewater Affiliation (AWA) and other whitewater boating groups. The initial test runs were successful, however during one of the last runs in December 2000 one boater drowned. On March 30, 2001, Tacoma filed its final report evaluating recreational flows and recommended that whitewater releases be discontinued permanently, due to safety, cost, and fisheries concerns. In November 2001, FERC found that the fisheries study was inconclusive, but agreed to not require further recreational releases in the bypass reach due to safety and cost concerns (FERC 2002).

Discussion: Kokanee stocking in Alder Lake (Article 413)

The license for the Nisqually project requires that Tacoma annually stock 500,000 kokanee salmon fry in Alder Lake to enhance the reservoir's resident kokanee fishery and requires monitoring of the fishery to assess the effectiveness of the stocking program, in consultation with WDFW, USFWS, and the Nisqually Tribe (FERC 1997). In Tacoma's 2002 kokanee stocking report, the utility proposes reducing the stocking rate to 200,000 fry per year for 5 years, starting in 2004 (FERC 2003b). Tacoma reports that anglers are failing to return to fish Alder Lake due

to the small size of kokanee caught in the reservoir and believes that lowering the stocking rate will increase the average size and catch rate of kokanee in the reservoir, due to the density-dependence of body size in kokanee populations. WDFW does not concur with Tacoma's assessment and proposal, and has called for a "data-driven, science basis" for any changes to the stocking program (Leigh pers. comm., FERC 2003b). FERC has called for more information and analysis from Tacoma to justify the stocking rate drop, citing the lack of support from WDFW and concerns that factors other than stocking rate may be affecting the catch rate and growth of kokanee in Alder Lake (FERC 2003b). Tacoma's response to FERC's request is due in August.

YES = Go to G3

3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?

Access to Alder Lake is provided without charge, although fees are required for use of certain camping and boat launching facilities (FERC 2000). LaGrande Lake and the bypass reach are not easily accessible due to cliffs and steep, rocky terrain.

YES *Pass, go to H*

PASS

G. Recreation – The Facility is in Compliance with all requirements regarding Recreation protection, mitigation or enhancement included in the FERC license and allow access to the reservoir and downstream reaches without fees or charges - FACILITY PASSES.

Facilities Recommended for Removal:

Goal*: To avoid encouraging the retention of facilities that have been considered for removal due to their environmental impacts.*

Standard: *If a resource agency has recommended removal of a dam associated with the facility, certification is not allowed.*

1) **Is there a Resource Agency recommendation for removal of the dam associated with the Facility?**

There are no resource agency recommendations for removal of either LaGrande or Alder dam, or any other project feature.

NO *Pass, Facility is Low Impact*

PASS
FACILITY IS LOW IMPACT

RECORD OF CONTACTS WITH RESOURCE AGENCY STAFF

Date of Conversation:
Application Reviewer: Fred Ayer, Executive Director
Person Contacted:
Telephone/email:
Areas of Expertise:

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