United States of America
Federal Energy Regulatory Commission

City of Centralia Light Department

ORDER ISSUING ORIGINAL LICENSE
(Major Constructed Project)

MAR 07 1997

On September 15, 1989, the City of Centralia Light Department (Centralia) filed a license application under Part I of the Federal Power Act (FPA) to upgrade and continue to operate and maintain the existing, unlicensed, 12-megawatt (MW) Yelm Hydropower Project No. 10703, located on the Nisqually River, in Thurston and Pierce Counties, near the towns of Yelm and McKenna, Washington. The project affects the navigable waters and lands of the United States.

BACKGROUND

Notice of the application was published. No protests were filed in this proceeding, and no agency objected to issuance of this license. Trout Unlimited, the Nisqually Indian Tribe (Nisqually Tribe), the Washington Department of Fisheries (Washington Fisheries), and the Washington Department of Wildlife (Washington Wildlife) filed timely motions to intervene indicating areas of concern and the enhancement measures that the Commission should consider in the licensing proceeding.

The Commission determined that the Yelm Project was located on a navigable waterway and therefore required to be licensed pursuant to Section 23(b)(1) of the FPA, 16 U.S.C. § 817(b)(1). 27 FERC ¶ 63,058, aff'd 38 FERC ¶ 61,274 (1987). The Commission's finding was upheld. City of Centralia v. FERC, 851 F.2d 278 (9th Cir. 1988). About 3,000 feet of the transmission line corridor (10 acres) is located on lands of the Department of the Army's Fort Lewis Military Reservation.

Because the interventions were timely and unopposed, they were granted automatically under Rule 214(c)(1) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(c)(1) (1995).

Schorno Agri-Business, Inc., and other adjacent property owners also filed motions to intervene but they were later withdrawn.
Comments and motions to intervene received from interested agencies, Indian tribes, and individuals have been fully considered in determining whether, or under what conditions, to issue this license.

On March 1, 1990, the National Marine Fisheries Service (NMFS), Washington Fisheries, and Washington Wildlife filed a joint motion to consolidate the Nisqually Project No. 1862 relicensing proceedings with the Yelm Hydroelectric Project license proceedings. On August 27, 1992, American Rivers, et al., filed a similar motion for consolidating these proceedings. These parties argued that consolidating the proceedings was necessary to comprehensively evaluate the two projects' cumulative effects on the Nisqually River. On July 14, 1993, the Commission issued an order denying the motion for consolidation. The Commission stated that it would consider the two projects together and address the cumulative impacts of the projects. Therefore, consolidation was not required.

An Environmental Assessment (EA) for this project was issued on March 16, 1992. The EA concludes that issuance of a license for the Yelm Hydroelectric Project would not constitute a major federal action significantly affecting the quality of the human environment. A Safety and Design Assessment was also prepared and is available in the Commission's public file for this project.

A Draft Environmental Impact Statement (DEIS) assessing the impacts of the Nisqually Project and the cumulative impacts of the Nisqually and Yelm Projects was issued in December 1994. Comments were filed by the U.S. Army Corps of Engineers (Corps), Interior, the U.S. Environmental Protection Agency (EPA), the Washington Department of Fish and Wildlife (WDFW), the Washington Department of Natural Resources (WDNR), City of Tacoma, Pierce County Washington, Tacoma-Pierce County Chamber of Commerce, Nisqually River Council, the Nisqually Tribe, American Rivers, and 31 individuals. The Commission staff prepared a Final Environmental Impact Statement (FEIS) which was issued in April 1996. The FEIS concludes that continued operation of the Nisqually and Yelm Projects, with the staff's recommendations, would result in minor adverse impacts on the environment which would be largely mitigated and offset by project benefits and that a new license for the Nisqually Project and an original

4/ 64 FERC ¶ 61,116.

5/ American Rivers was joined in its comments by Federation of Fly Fishers, Rivers Council of Washington, American Whitewater Affiliation, and the Mountaineers.
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license for the Yelm Project with measures to protect and enhance the environment should be issued. 6/

PROJECT DESCRIPTION

The existing Yelm Project consists of a diversion dam, a fishway, two intake structures with fish screens, a power canal with three spillways along it that discharge into the Nisqually River, a penstock, a powerhouse with three turbine-generator units with a total installed capacity of 12 MW, a tailrace, a 69-kilovolt (kV) transmission line, and appurtenant facilities. The project has a 13.6-mile-long bypassed reach. The proposed project upgrade includes building a new spillway, new fish screens, and two new rearing ponds. A more detailed project description is contained in ordering paragraph (B).

NISQUALLY RIVER PROCEEDINGS

In 1976, the Nisqually Tribe filed a complaint with the Commission regarding the Nisqually Hydroelectric Project's operation and its effects on the Nisqually River's anadromous fishery. In response to this complaint, the Commission instituted formal hearings before an Administrative Law Judge (ALJ), known as the Nisqually River Proceedings (Proceedings), to consider whether the project was having an adverse effect on anadromous fish and, if so, whether changes in the project's operations or other measures were needed.

In 1977, Centralia, owner and operator of the downstream Yeilm Hydroelectric Project, was made a party to the Proceedings. The Nisqually River Coordinating Committee (Coordinating Committee), a joint resource agency and utility group, 7/ was formed under the Proceedings to examine instream flow and other issues. The Coordinating Committee ultimately recommended an instream flow regime that was subsequently adopted by the ALJ. 8/ This flow regime is in effect today and, as a result of final

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6/ By separate order, I am today issuing a new license for the Nisqually Project.

7/ Consisting of Centralia, Tacoma, the Nisqually Tribe, the Washington Departments of Fisheries and Wildlife, and later, National Marine Fisheries Service and U.S. Fish and Wildlife.

8/ Fifth Amended Interim Order Designating Flow Regime, September 6, 1985 (unpublished).
In 1989, Tacoma and the Nisqually Tribe entered into an agreement in which Tacoma agreed to provide the minimum flow regime in the Yelm project bypassed reach and the mainstem which was developed by the Coordinating Committee, and in exchange, the Nisqually Tribe agreed to support making the minimum flow regime permanent by Commission order. Tacoma further agreed to provide certain operation and maintenance funding for the Nisqually Tribe's Clear Creek Hatchery Facility.

In 1991, Centralia and the Nisqually Tribe entered into an agreement in which Centralia agreed to operate the Yelm Project to achieve the minimum flow regime which was developed by the Coordinating Committee, and in exchange, the Nisqually Tribe agreed to support making the minimum flow regime permanent by Commission order. Centralia also agreed to fund the construction and operation of two separate rearing ponds with a capacity of 1.5 million chinook salmon and 500,000 coho.

The parties filed the settlements with the motion, but stated that the parties to these agreements were not seeking Commission approval of them pursuant to Rule 602, 18 C.F.R. § 385.602.

62 FERC ¶ 63,032. The Decision adopted the following permanent minimum flow regime:

1. The flow in the bypassed section [of the Nisqually River at the Yelm Project] and in the mainstem of the Nisqually River from LaGrande [powerhouse] to the Yelm Project Diversion of the Nisqually River shall at all times equal or exceed:

<table>
<thead>
<tr>
<th></th>
<th>Bypass</th>
<th>Mainstem</th>
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<tbody>
<tr>
<td>October 1 - December 15</td>
<td>550 cfs</td>
<td>700 cfs</td>
</tr>
<tr>
<td>December 16 - May 31</td>
<td>600 cfs</td>
<td>900 cfs</td>
</tr>
<tr>
<td>June 1 - July 31</td>
<td>500 cfs</td>
<td>750 cfs</td>
</tr>
<tr>
<td>August 1 - September</td>
<td>370 cfs</td>
<td>575 cfs</td>
</tr>
</tbody>
</table>

2. To provide the required flows, Tacoma's releases from LaGrande Dam shall be sufficient so that the flow in the mainstem portion of the Nisqually River,
By direction of the Commission, the Decision became effective April 5, 1993.

measured as the flow reaching the Yelm Project Diversion Dam, shall at all times equal or exceed the greater of: (a) those flows specified in paragraph (1) above for the bypass, less 20 cfs, plus the lesser of 720 cfs or the calculated natural inflow at the Yelm Project Diversion Dam; or (b) the flows specified in paragraph (1) above for the mainstem.

(3) The requirement of paragraph (2)(a) may be reduced upon mutual agreement of Tacoma and Centralia in the event that conditions do not permit Centralia to use its full water entitlement, provided, however, that the flow in the mainstem shall never be less than that specified in paragraph (1).

(4) The flows shown in paragraph (1) above for the period June 1 through July 31 shall be extended up to August 15 if in-season steelhead spawning data indicate this is warranted as determined by the NRCC.

(5) For the period October 1 through December 15, Tacoma agrees to provide higher flow in the mainstem if water conditions are good and to maintain such higher flow, up to 900 cfs, after it has been established.

(6) Under adverse water conditions Tacoma may petition the NRCC for modifications in these minimum flow requirements.

13/ 63 FERC ¶ 61,026.
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INTERESTS OF THE NISQUALLY TRIBE

The Nisqually Tribe states that it is a present day successor to the Treaty of Medicine Creek, 14/ which reserved to the treaty signatories the right of taking fish in their usual and accustomed fishing areas. 15/ It also states that the Yelm Project is located in the Nisqually Tribe's usual and accustomed fishing area. 16/

The Nisqually Tribe states further that it relies on anadromous fish runs supported by the Nisqually River Drainage in exercising its protected treaty fishing rights. 17/ It contends that operation of the Nisqually Project, alone and in conjunction with the Clear Creek facility on the Nisqually River, which began operation in 1991, will adversely affect its treaty rights.

14/ See 10 Stat. 1132 (1854); and United States v. Washington, 626 F. Supp. 1405 (W.D. Wash. 1985). The treaty was made between the United States and the Nisqually, Puyallup, Steilacoom, Squaxin, S'Homamish, Steh-chase, T'Peeksin, Squa-alitl, and Sa-heh-wamish tribes and bands of Indians. The present-day Nisqually tribe is the successor of the Nisqually and Steilacoom tribes.

The present-day Squaxin tribe is the successor to the Squaxin, Steh-chase, T'Peeksin, Squa-alitl, and Sa-heh-wamish tribes. The present-day Puyallup tribe is the successor to the Puyallup and S'Homamish tribes. The Puyallup tribe did not intervene in this relicensing proceeding. However, it did intervene in the Nisqually Proceedings, and there stated that the Yelm and Nisqually Projects could adversely affect its treaty rights.

15/ Article III of the treaty states:

The right of taking fish, at all usual and accustomed grounds and stations, is further secured to said Indians, in common with all citizens of the Territory, and of erecting temporary houses for the purpose of curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses on open and unclaimed lands.

See 10 Stat. at p. 1133.

16/ See United States v. Washington, supra, 384 F. Supp. at 367-78 (W.D. Wash. 1974), where the court determined that the Nisqually River System is the usual and accustomed fishing place of the Nisqually Tribe.

17/ The Nisqually tribe operates the Clear Creek Hatchery facility on the Nisqually River, which began operation in 1991.
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...cumulatively with the Yelm Project, affect those rights. It contends that the Commission has a fiduciary duty to protect those rights.

We recognize that, as an agency of the federal government, the Commission is subject to the United State's fiduciary responsibilities towards Indian tribes. We carry out these responsibilities in the context of the FPA.

In 1991, the Nisqually Tribe and Centralia entered into a stipulation and settlement agreement which resolved all claims and disputes existing between them in long-standing federal court litigation. Pursuant to that agreement, Centralia committed to operate the Yelm Project to achieve the minimum flow regime in the Yelm Project bypassed reach and the mainstem which was developed by the Coordinating Committee, and the tribe agreed to support making the minimum flow regime permanent. The Nisqually Tribe states that its treaty rights are protected under this agreement.

CONSUMPTION EFFICIENCY IMPROVEMENT PROGRAM

Section 10(a)(2)(C) of the FPA requires the Commission, in acting on the license application of a state or municipality, to consider the extent of electric consumption efficiency programs. We have reviewed Centralia's efforts to encourage and help its customers to conserve electricity and find that they are making a good faith effort. The applicant's plans and activities to promote and achieve conservation of electric energy and reduce peak demand for generating capacity have been extensive. Continued operation of the existing hydro project complies with the Northwest Power Planning Council's Regional Energy Plan.

18/ See Covelo Indian Community v. FERC, 895 F.2d 581, 586 (9th Cir. 1990).


20/ The agreement was not presented to the Commission for its approval.

21/ 16 U.S.C. § 803
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WATER QUALITY CERTIFICATION

Under Section 401(a)(1) of the Clean Water Act (CWA), the Commission may not issue a license for a hydroelectric project unless the state certifying agency has either issued a water quality certification for the project or waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year.

On September 6, 1989, Centralia requested water quality certification for the project from the Washington Department of Ecology (Washington Ecology); and following denial, reapplied on September 17, 1990. On February 11, 1991, Washington Ecology granted water quality certification with conditions, two of which go beyond the authority granted in the CWA.

Conditions II.B.2 and IV.C contain a caveat that would allow the state to establish additional requirements in any short-term Water Quality Modification that it issues. This, in effect, gives the state the opportunity to revisit its certification. The process for modifying certifications is initiated by the federal licensing agency, not the state. Consequently, conditions II.B.2 and IV.C are outside the scope of the CWA, and are rejected.

The remaining conditions submitted by Washington Ecology are water quality related. The water quality certificate is attached to this order as Appendix A.

COASTAL ZONE MANAGEMENT ACT

Under Section 307 (c)(3)(A) of the Coastal Zone Management Act, the Commission cannot issue a license for a project within or affecting a state's coastal zone, unless the state concurs with the licensee's certification of consistency with the state's Coastal Zone Management Program (CZMP), such program having previously been approved by the Secretary of Commerce. The state's concurrence is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's


23/ Section 401(a)(1) requires an applicant for a federal license or permit to conduct any activity which may result in any discharge into navigable waters to obtain from the state in which the discharge originates certification that any such discharge will comply with applicable water quality standards.


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certification. By letter dated June 23, 1996, Washington Ecology concurred with the applicant's certification of project consistency with the CZMP.

FISH PASSAGE

Section 18 of the FPA 26/ states that the Commission shall require construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of Commerce (Commerce) or Interior.

Commerce, through NMFS, requests that Centralia be required to provide additional fishways or corrective modifications at the diversion dam when prescribed by Commerce under Section 18 of the FPA. We recognize that future fish passage needs and management objectives may not be known at the time of licensing. Therefore, Article 412 of the license reserves the Commission's authority to require fishways that Commerce may prescribe in the future.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES AND SECTION 10(j) PROCESS

Section 10(j)(1) of the FPA requires the Commission, when issuing a license, to include license conditions, based on recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act, for the protection of, mitigation of adverse impacts to, and enhancement of fish and wildlife resources.

If the Commission believes that any such recommendation may be inconsistent with Part I of the FPA or other applicable law, the Commission must attempt to resolve the inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of the agencies. If the Commission ultimately does not adopt a recommendation, it must publish findings that adopting the recommendation is inconsistent with Part I of the FPA or other applicable law and that the conditions selected by the Commission will adequately and equitably protect, mitigate adverse impacts to, and enhance fish and wildlife resources, together with a statement of the basis for these findings. 27/

The Commission received recommendations from Washington Fisheries, Interior, and Commerce. These recommendations, which would enhance the salmon and steelhead trout fishery in the Nisqually River and wildlife habitat in the project area, include

ramping rates to prevent fish stranding (Article 403), increased minimum bypass flows (Article 404), a funding plan for the construction of rearing ponds (Article 406), new intake fish screens (Article 408), a plan to rehabilitate Thompson Creek (Article 410), a fishway operations plan (Article 411), and a management plan for wildlife habitat (Article 413). They are adopted in this license.

28/ The EA recommended Centralia's proposed 2-inch per hour ramping rate to protect fish resources in the bypassed reach from sudden reductions in flow. The EA also recommended that all scheduled reductions be avoided during the nighttime between June 1 and September 30 and during the daytime between February 1 and May 31. As stated in the EA, NMFS found Centralia's proposal acceptable. In addition, the water quality certificate issued by Washington Ecology on February 11, 1991, contained a ramping rate condition consistent with the recommendation in the EA. Later, in a letter dated April 30, 1992, NMFS recommended we adopt the following revised ramping rate schedule detailed by Washington Fisheries in an August 21, 1991, letter to Centralia.

<table>
<thead>
<tr>
<th>Season</th>
<th>Daylight hours*</th>
<th>Night hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 16-June 15</td>
<td>no ramping</td>
<td>2&quot;/hour</td>
</tr>
<tr>
<td>June 16-September 30</td>
<td>1&quot;/hour</td>
<td></td>
</tr>
<tr>
<td>October 1-February 15</td>
<td>2&quot;/hour</td>
<td></td>
</tr>
</tbody>
</table>

*Daylight hours begin 1 hour before sunrise and end 1 hour after sunset.

Washington Fisheries states in their letter that the revised ramping rate schedule would more closely follow salmonid emergence timing in the Nisqually River, and NMFS concurs. Although we believe that the ramping rate schedule recommended in the EA and required in the 401 water quality certificate would provide adequate protection to salmon and steelhead during certain times, we agree that the above ramping rates and schedule follow more closely actual emergence times in the Nisqually River and thus would provide greater protection to immature salmon and steelhead trout. While we are now in agreement with NMFS's revised rates and schedule and have included them in Article 403, we recognize that the ramping rates found in the 401 water quality certificate have not been revised by Washington Ecology and are, therefore, included in this license (appendix A).
Staff made a preliminary determination by letter dated March 23, 1992, that Commerce's recommendation for construction of a tailrace barrier to prevent delay, injury, or mortality to upstream migrating adult salmon and steelhead may be inconsistent with the purposes and requirements of Part I of the FPA and other applicable law. Staff said the measure may be inconsistent with sections 4(e) and 10(a) because the incremental benefit to the fishery would not justify the cost of installing the tailrace barrier. Staff also found the measure may be inconsistent with section 313(b) because Commerce had not provided substantial evidence to support it.

Commerce replied by letter dated April 30, 1992. Staff then convened a meeting with Commerce on July 28, 1992, in Seattle, Washington 29/ and held a telephone conference 30/ on August 19, 1992, in an attempt to resolve the inconsistency. After these discussions, Commerce submitted additional information that indicated that salmon may be present in the project's tailrace area and may be exposed to injury or mortality from project operations. Commerce further stated that they would be satisfied if any license issued contained a provision for a post-license study of the nature and extent of delay and injury to anadromous fish at the Yelm Project's tailrace.

Staff believes the information submitted by Commerce shows the possibility of fish being injured, killed, or delayed by project operations. Thus, Commerce's recommendation for construction of a tailrace barrier is supported by substantial evidence and not inconsistent with section 313(b) of the FPA. However, the information is not sufficient to quantify the fish injury, mortality, false attraction, or delay caused by the Yelm Project's tailrace, or the consequences of these potential project-induced effects on the stream's fishery. 31/ Therefore,

29/ Other participants included Washington Fisheries, Trout Unlimited, the Nisqually Tribe, Centralia, CH2M Hill (Centralia's consultant), and Tacoma City Light.

30/ Other participants included Washington Fisheries, Washington Wildlife, the Nisqually Tribe, Centralia, the U.S. Fish and Wildlife Service (FWS), and Trout Unlimited.

31/ The Nisqually River supports an anadromous fishery composed of mostly steelhead trout and pink, chum, coho, and chinook salmon. Washington Fisheries reports that from 1980 to 1989 salmon runs that passed the Yelm powerhouse tailrace averaged 1,031 chinook, 6,076 chum, 3,010 pink, and 2,615 coho. The winter steelhead run into the Nisqually River is one of the few significant natural runs of steelhead in rivers in the Puget Sound Basin. From 1976 through 1991, the total catch of winter steelhead averaged about 1,642.
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the potential incremental benefits of eliminating project-caused effects to fish on the fishery, which might result from installing a barrier at the project’s tailrace, have not been demonstrated. Therefore, we agree with Commerce that a study is necessary to determine how many fish are injured or killed by contact with the project turbine blades, tailrace structures, or tailrace discharge. We also conclude a study is needed to determine how much false attraction and delay in upstream migration of anadromous fish in the Nisqually River is occurring at the Yelm tailrace.

We recognize that a study could be expensive, costing as much as $300,000 and may produce inconclusive results. We also recognize that installation of a tailrace barrier is expensive (about $1.6 million) although neither amounts have a substantial effect on project economics.

Therefore, to determine if the salmonids using the tailrace area are significantly impacted by the project, we are requiring Centralia to consult with Commerce, Interior, the WDFW, and the Nisqually Tribe, and to file with the Commission, for approval, within six months from the date of issuance of this license, a plan and schedule for implementing a tailrace injury, mortality, false attraction, and migration delay study (Article 407). However, because the tailrace barrier study as recommended by Commerce may be inconclusive, Article 407 permits the licensee to forego the study and install the tailrace barrier.

The Nisqually Tribe states that since 1977 no delay of salmon or steelhead has been documented at the Yelm powerhouse. Furthermore, the Tribe states that studies in 1989 and 1990 showed that chinook and pink salmon were far upstream of the powerhouse at an early date. The Tribe states also that escapement goals are being met and the available upstream spawning and rearing habitat is being fully used.
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OTHER ISSUES

A. Construction-related Conditions

Most of the new construction work proposed for the project consists of rebuilding spillway No. 3 to avoid stranding salmonids. Article 409 requires that the final design drawings for this work be prepared in consultation with the agencies.

Articles 301 through 304 set the timeframes for commencing and reporting on the construction activities that would occur at the project. These measures provide for Commission review and approval of the design of cofferdams and deep excavations before any construction activities begin. Article 401 approves the licensee's proposed Erosion Control plan which would minimize erosion and sedimentation from construction activities.

B. Project Operation

We are including a requirement to operate the project in a run-of-river mode to protect the salmon and steelhead trout fishery (Article 402), and a condition that requires monitoring (Article 405) to ensure compliance with run-of-river operation and the ramping rates required in Article 403.

C. Threatened and Endangered Species

1. Bald Eagle

Bald eagles, which are federally listed as threatened in the state of Washington, use the Nisqually River Basin as winter habitat. In addition, there are three nesting pairs of eagles that live in the vicinity of the project year-round. The EA contains the staff's assessment of the project's potential effects on bald eagles. The staff concluded that continued operation and maintenance of the project, with the protective measure recommended by the staff, wouldn't be likely to adversely affect the threatened bald eagle.

The protective measure is to include within the project boundary an existing bald eagle nest on land owned by Centralia but outside the current project boundary. Article 415 requires Centralia to file exhibit G drawings showing a revised project boundary that includes the eagle nest tract.

By letter dated March 23, 1992, the staff asked the FWS for its concurrence on the staff's conclusion. The FWS responded by letter dated May 20, 1992. The FWS largely concurred with the staff's conclusion. The FWS, however, disagreed with two parts of the staff's assessment and provided updated information on the occurrence of protected species. These issues are discussed below.
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Loss of Bald Eagle Perching or Roosting Habitat

The EA says Centralia would remove some cottonwood trees to build the fish screen.

By letter dated May 20, 1992, the FWS recommended that if the cottonwoods are suitable for eagle perching or roosting, Centralia should consider replacing the trees. The staff asked Centralia for further information on the fish screen construction site. Centralia said that its application was erroneous. There are no trees of any kind at the fish screen construction site. Therefore, fish screen construction wouldn't entail the loss of any trees on which bald eagles could perch or roost and replacing trees, as recommended by the FWS, isn't necessary.

Transmission Line Collision

The 26.2-mile-long project transmission line crosses the Deschutes River and the Skookumchuck River. The Deschutes and Skookumchuck Rivers receive light bald eagle use in the winter. Eagles using those rivers as flight paths could collide with the project transmission line.

In the EA, the staff said that they don't believe that the existing transmission line presents a collision hazard to bald eagles. By letter dated May 20, 1992, the FWS disagreed with the staff's conclusion and recommended that Centralia place aviation spheres on the lines at river crossings.

Marking the transmission line sections that cross the Deschutes and Skookumchuck Rivers is justified because bald eagles use the rivers as flight paths and the cost is negligible. Therefore, Article 414 requires Centralia to install aviation markers on the sections of the project transmission line that cross the rivers. We conclude that the continued operation and maintenance of the project, with the mitigative measures required herein, isn't likely to adversely affect the bald eagle.

2. Northern Spotted Owl

The FWS says that the northern spotted owl, which is federally listed as threatened, may occur in the project area.


The staff didn't address the potential effects of the project on the spotted owl in the EA because the FWS hadn't listed this species as occurring in the project area in earlier correspondence.

Northern spotted owls require unlogged old-growth forests or mixed forests of mature and old-growth timber for breeding and foraging. Two forest types occur in the project area: Douglas-fir forest and riparian woodland. Douglas-fir forest grows along the canal and the transmission line right-of-way, and riparian woodlands lie between the canal and the Nisqually River. These forested areas are interspersed with wetlands, agricultural land, and residential and urban development.

Centralia proposes to build the following new project facilities: (1) a fish screen across the power canal; (2) a new spillway and pipeline to replace spillway no. 3; and (3) a parking area and restroom facilities at the powerhouse. Construction of these new project features would require the clearing of 6.7 acres of conifer forest. The proposed construction areas, however, were disturbed when the project was originally built and are now occupied by second-growth timber, which isn't suitable spotted owl nesting or foraging habitat. Continued project operation and maintenance wouldn't affect the spotted owl.

Because the project won't adversely affect potential habitat, we conclude that the project wouldn't affect the northern spotted owl.

3. Marbled Murrelet

The FWS says that the marbled murrelet, which the FWS lists as threatened, may occur in the project area. 35/

The staff didn't address the potential effects of the project on the marbled murrelet in the EA because the FWS hadn't listed this species as occurring in the project area in earlier correspondence.

The marbled murrelet nests in old-growth and mature coniferous forests. Construction of new project features, such as the fish screens and the spillway no. 3 replacement, won't


require removing any old-growth or mature coniferous forest that
might provide nesting habitat.

Because the project won't adversely affect potential nesting
habitat, we conclude that the project wouldn't affect the marbled murrelet.

The FWS has designated draft critical habitat units for the
murrelet; the project isn't located in any critical habitat unit.

4. Grizzly Bears

The FWS says that the grizzly bear, which is federally
listed as threatened, may occur in the project area. 36/

The staff didn't consider the potential effects of the
project on the grizzly bear in the EA because the FWS hadn't
listed this species as occurring in the project area in earlier
correspondence.

A confirmed grizzly bear sighting was reported during the
summer of 1993 from near Kapowsin, on the western flank of Mt.
Rainier about 15 miles northeast of the Yelm diversion dam. 37/
Grizzly bears maintain a remnant population in the northern
Cascades of Washington, but there are no other recent reports of
grizzly bears in the project vicinity.

Even though the presence of a grizzly bear within 15 miles
of the project has been recently documented, it's unlikely that
grizzly bears occur on project lands because (1) the nearest
known breeding population of bears is more than 100 miles from
the project, and (2) human development and disturbance levels
probably make the project area unsuitable as habitat. Because
grizzly bears probably don't occur in the project area and
because the construction of new project features and the proposed
project operation wouldn't adversely affect any existing or
probable future habitat, we conclude the proposed action wouldn't
have any effect on grizzly bears.

36/ Personal communication (available in the public file), Jeff
Haas, U.S. Fish and Wildlife Service, Olympia, Washington,

37/ Letter from Curt Leigh, Mitigation Program, Washington
Department of Wildlife, Olympia, Washington, December 16,
1993.
D. Recreation and other Land Use-related Conditions

Recreation and Visual Resources. The recreational opportunities in the project area are limited. The license requires recreational enhancement measures at the powerhouse access site (Article 416), enhancement and public safety measures at the diversion dam portage site (Article 417), and a plan to construct and maintain a public access site to the Nisqually River at McKenna for boating and fishing (Article 418). The license also requires implementation of a visual resource enhancement plan (Article 419). These measures would enhance recreational activities in the project area, and would protect and enhance project area aesthetics.

Cultural Resources. Centralia has filed a cultural resources management plan to protect areas of cultural concern to the Nisqually Tribe. Article 420 requires that the plan be implemented. In addition, any land-clearing or land-disturbing activity that occurs at the project has the potential to uncover previously unidentified archeological or historic properties. Article 421 includes measures that would avoid and mitigate effects on such properties.

Use and Occupancy of Project Lands and Waters. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Article 422 is a standard condition that allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape plantings, non-commercial piers, retaining walls, etc. Such uses must be consistent with the purpose of protecting and enhancing the scenic, recreational, and environmental value of the project.

E. Administrative Conditions

The Commission collects annual charges from licensees for the administration of the FPA, and to reimburse the United States for the occupancy and use of any federal lands at projects. For unlicensed, jurisdictional projects, the Commission collects back annual charges for the period during which the project was unlicensed. Articles 201 and 202 provide for the collection of such funds. Article 203 requires the licensee to file, for documentation and compliance purposes, an original and copies of the project's drawings. In addition, some projects directly benefited during the term of their original licenses, from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 501 requires the

38/ Under 18 CFR § 11.6, Centralia may claim a total or partial exemption from the assessment of annual charges.
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licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

CUMULATIVE IMPACTS

The Nisqually River flows west-northwest from Mount Rainier to the southern end of Puget Sound. Most of the Nisqually River upstream of the Nisqually Project is managed for timber production. Below the Nisqually Project, the river flows through a steep canyon to the Mashel River juncture and then enters the rolling hills of the Puget Sound lowlands. This land is used for agriculture and timber production. Below the Yelm Project, the river runs through the Nisqually Indian Reservation and Fort Lewis Military Reservation.

The upstream Nisqually Hydroelectric Project consists of two developments, and occupies an 11-mile stretch of the Nisqually River near the towns of Elbe, Alder, and LaGrande, Washington. The Yelm Hydroelectric Project is located 14.4 miles downstream from the Nisqually Hydroelectric Project, near the towns of Yelm and McKenna.

The FEIS for the Nisqually Project addressed the cumulative effects on geology and soils, water quantity and quality, aquatic resources, terrestrial resources, and recreation resources. The EA for the Yelm Project addressed the cumulative effects on the salmon and steelhead fishery and on recreation.

To improve spawning habitat, the Nisqually Project DEIS recommended a gravel enhancement plan downstream of the Nisqually Project to offset the loss of gravel and fine sediment in the Nisqually River below the Nisqually Project. In response, the Pierce County Department of Emergency Management and several landowners adjacent to the river downstream of the Nisqually Project expressed concern that the gravel placement proposed by staff in the DEIS would worsen the flooding problem that occurs in that area.

Pierce County and the landowners also suggested that the Yelm Project has contributed to the flooding and erosion since 1986, when its flashboards were replaced with stationary gates a foot lower than its original height. Because the current gates do not collapse in floods like the flashboards did, the landowners believe the dam is allowing water to back up causing aggradation and flooding.

39/ Comment letters filed March 6 and 14, 1996.
In response to Pierce County's concerns, the Corps notes that the lands surrounding the Nisqually River downstream from the Nisqually Project were highly erodible and present very little resistance to flows and that the river with its highly erodible banks would be very difficult to contain in a stable channel. The river is subject to frequent landslides.

The FEIS modifies the gravel augmentation recommendation to specify a study by the Nisqually Project licensee, City of Tacoma, which would involve placement of only 1,000 cubic yards of suitable gravel. The FEIS finds that because natural occurrences like landslides and man-made occurrences like forestry practices, which generate bedloads significantly higher than 1,000 cubic yards, augmentation with 1,000 cubic yards of gravel should not contribute to downstream aggradation or flooding.

The FEIS also finds that upstream aggradation does not appear to be caused by the Yelm diversion dam. This is based on Centralia's contention that the rebuilt Yelm diversion dam has less influence on the river profile than the old dam with flashboards, and that since its construction, Centralia has not noted any increase in the sediment accumulation nor any change in the morphology of the river in the project area. In addition, Centralia estimates the backwater effect of the project has remained at about 1,200 to 1,500 feet upstream since 1929. Based on this information and the Corps' findings, we conclude that the Yelm diversion dam has minimal impact, if any, on the upstream aggradation and flooding.

Regarding water quality, quantity, and the maintenance of the downstream fishery, the Nisqually FEIS finds that continuation of the flow regime authorized by the Decision will continue to benefit the salmon and steelhead fishery resources by providing stable, high flows during fall migration periods when many adult salmonid species are present. No one has recommended a different flow regime.

The EA for the Yelm Project concludes that licensing the Yelm Project, with the conditions recommended, would provide cumulative beneficial impacts for the salmon and steelhead fishery and for recreation opportunities of the Nisqually River Basin. The FEIS for the Nisqually Project concludes that licensing both projects, with the conditions recommended, would

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41/ See Section 4.4.1 of the Nisqually Project Final EIS.

42/ See Section 3.4 and pp. 34-8 and 6-16 of the Final EIS.
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have beneficial cumulative impacts for the salmon and steelhead fishery and enhance recreation opportunities in the Nisqually River Basin.

The FEIS for the Nisqually Project also concludes that, with the preservation of over 1,000 acres of wildlife habitat at the upstream Nisqually Project, there will be beneficial cumulative impacts to the wildlife resources of the Nisqually River Basin.

COMPREHENSIVE PLANS

Section 10(a)(2)(A) of the FPA 43/ requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving waterways affected by the project. Under Section 10(a)(2)(A), federal and state agencies filed 68 plans that address various resources in Washington. Of these, 9 plans are relevant to this project: 44/ No conflicts were found.

COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA 45/ require the Commission in acting on applications for license, to give equal consideration to the power development purposes and to the purposes of energy conservation, the protection, mitigation of


45/ 16 U.S.C. § 797(e) and § 803(a)(1).
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damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as is the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

The Yelm EA and the Nisqually FEIS analyzed the effects associated with the issuance of a license for the Yelm Project and recommend a variety of measures to protect and enhance the environmental resources which, as discussed above, we adopt. We conclude that issuance of a license for the Yelm Hydroelectric Project would not constitute a major federal action significantly affecting the quality of the human environment.

In determining whether a proposed project will be best adapted to a comprehensive plan for developing a waterway for beneficial public purposes, pursuant to Section 10(a)(1) of the FPA, the Commission considers a number of public interest factors, including the economic benefits of project power.

Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in Mead Corporation, Publishing Paper Division, 46/ the Commission employs an analysis that uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

Based on current economic conditions, without future escalation or inflation, the Yelm Hydroelectric Project, if licensed as Centralia proposes (which includes a tailrace barrier) would provide a firm capacity of 2,200 kW and produce annually an average of about 75 gigawatt-hours (GWh) of energy, at an annual cost of about $1.452 million (about 19.4 mills/kWh). The current annual value of the project's power would be about $2,107,000 (28.1 mills/kWh). We base this value on the cost of alternative resources, where the alternative would be an equivalent amount of power purchased from Bonneville Power

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Administration (BPA) at its current average system cost. BPA calculates its average system cost for any year by dividing its forecasted revenue requirements, which include the cost of the federal base system, new resources, and transmission, by its expected total system sales. To project the cost of new resources, BPA assumes new resources available include combustion turbine, cogeneration, small hydro, efficiency improvements, wind and geothermal.

To determine whether the proposed project is currently economically beneficial, we subtract the project cost from the value of the project power. We find that the project would be economically beneficial, costing about $655,000 (8.7 mills/kWh) less than the alternative.

When licensed in accordance with the conditions adopted herein (with staff mitigation and enhancements including a study to determine the need for a tailrace barrier rather than immediate construction of a tailrace barrier), the project would provide the same amount of energy and capacity at an annual cost about $1.384 million, which is $723,000 (about 9.6 mills/kWh) less than the cost of alternative power sources.

Based on review of the agency and public comments filed on this project, review of staff's evaluation of the environmental and economic effects of the proposed project and its alternatives, and analysis pursuant to Section 10(a)(1), I find that the Yelm Hydroelectric Project, with our mitigative and enhancement measures, will be best adapted to the comprehensive development of the Nisqually River for beneficial public uses.

LICENSE TERM AND RACK ANNUAL CHARGES

Commission policy for license terms and payment of back annual charges for previously unauthorized, existing pre-1935 projects on navigable streams establishes: 48/

1. 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigative or enhancement measures; 40-year terms for projects with a moderate amount thereof; and 50-year terms for projects with an extensive amount thereof.


2. Back annual charges from April 1, 1962, unless there was an earlier specific navigability finding, in which case from the date of navigability finding or January 1, 1938, whichever is later.

Centralia has been operating the Yelm Project since 1930. Centralia proposes moderate new construction, mitigation, and enhancement. Accordingly, the license for the Yelm Hydroelectric Project will be for a term of 40 years, effective from the first day of the month the license is issued. I am also, today, by separate order, issuing a 40-year license for the Nisqually Project to accommodate the moderate enhancement measures that licensee will be undertaking. Thus, the license expiration dates of these projects will be the same.

As the project was found to require licensing based on navigability in the late 1980's, the back annual charges, for the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, will be from April 1, 1962, until the effective date of the license.

SUMMARY

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 Yelm EA and the Nisqually Final EIS.

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

The Director orders:

(A) This license is issued to the City of Centralia Light Department (licensee) for a period of 40 years, effective the first day of the month in which this order is issued, to upgrade, operate, and maintain the Yelm Hydroelectric Project. 49/ This license is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, and to the regulations the Commission issues under the provisions of the FPA.

49/ Upgrading of the project includes, but is not limited to, the building of: (a) a new spillway and pipeline to replace spillway no. 3 to avoid stranding salmonids in Thompson Creek; (b) new fish screens at the intake structure; and (c) two new rearing ponds.
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(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:

<table>
<thead>
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<th>Exhibit Sheet</th>
<th>FERC No. 10703-</th>
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<tr>
<td>G-5</td>
<td>65</td>
<td>Project Facilities</td>
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</tbody>
</table>

2. The following project works: (a) a 20-foot-high, 166-foot-long diversion dam, with a 7-acre diversion pool; (b) a 105-foot-long, 8-foot-wide fishway; (c) two intake structures with fish screens; (d) a 9.1-mile-long power canal with three spillways along it that discharge into the Nisqually River; (e) an 84-inch-diameter, 487-foot-long penstock from the power canal that bifurcates to two 65-inch-diameter, 52-foot-long penstocks at the powerhouse; (f) an 84-inch-diameter, 546-foot-long penstock from the power canal to the powerhouse; (g) a powerhouse with two 3-MW and one 6-MW turbine-generator units with a total installed capacity of 12 MW; (h) a 160-foot-long tailrace discharging water to the Nisqually River; (i) a 26.2-mile-long, 69-kilovolt (kV) transmission line; and (j) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F below:

Exhibit A -- Section entitled "Facilities", starting on page A-1, and Table A-2.

Exhibit F -- (as amended by additional information responses filed September 25, 1990, and August 2, 1991).

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<tr>
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<td>F-2</td>
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<td>Flume at Yelm Creek Profile and Transition Details</td>
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<td>F-44</td>
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<td>Powerhouse Plan and Tailrace Sections</td>
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<td>Transmission Line Type B Pole Construction</td>
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<td>F-59</td>
<td></td>
<td>Transmission Line Type C Pole Construction</td>
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<tr>
<td>F-60</td>
<td></td>
<td>Transmission Line Type D Pole Construction</td>
</tr>
</tbody>
</table>
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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) Those sections of exhibits A and the exhibits F and G described above are approved and made part of the license.

(D) This license is subject to the articles set forth in Form L-3, October 1975, entitled "TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED MAJOR PROJECT AFFECTING NAVIGABLE WATERS AND LANDS OF THE UNITED STATES."

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

1) For the purpose of reimbursing the United States for the costs of administering Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 12,000 kilowatts.

2) For the purpose of reimbursing the United States for the use, occupancy, and enjoyment of 10 acres of its lands for transmission line right-of-way.

Article 202. The licensee shall pay the United States an amount equal to the annual charges that would have been assessed from April 1, 1962, to the last day of the month preceding the month in which this order is issued, as if the project had been licensed during the period, as follows:

1) For the purposes of reimbursing the United States for the costs of administering Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is (a) 11,000 kilowatts from April 1, 1962, to June 30, 1976, and (b) 12,300 kilowatts from July 1, 1976, to the effective date of this license.
(2) For the purpose of reimbursing the United States for the use, occupancy, and enjoyment of 10 acres of its lands for transmission line right-of-way.

Article 201. Within 45 days of the issuance of this license, the licensee shall file an original set and two complete duplicate sets of aperture cards of the approved drawings. The set of originals must be reproduced on silver or gelatin 35mm microfilm. The duplicate sets are copies of the originals made on diazo-type microfilm. All microfilm must be mounted on type D (3-1/4" x 7-3/8") aperture cards.

Prior to microfilming, the FERC Drawing Number shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number must be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., F-1, G-1, etc.), Drawing Title, and date of issuance of this license must be typed on the upper left corner of each aperture card.

The original and one duplicate set of aperture cards shall be filed with the Secretary of the Commission, ATTN: OHL/Division of Licensing and Compliance. The remaining duplicate set of aperture cards shall be filed with Commission’s Portland Regional Office.

Article 301. The licensee shall commence construction of the project works authorized under this license within 2 years from the issuance date of the license and shall complete construction of the project within 4 years from the issuance date of the license.

Article 302. Within 90 days after finishing construction, the licensee shall submit for Commission approval eight copies of revised exhibits A, F, and G describing and showing the project as built. The licensee shall submit six copies to the Commission, one copy to the Commission’s Regional Director, and one to the Director, Division of Licensing and Compliance.
Article 303. Before starting construction, the licensee shall review and approve the design of contractor-designed cofferdams and deep excavations and shall make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 60 days before starting construction of the cofferdam, the licensee shall submit one copy to the Commission's Regional Director and two copies to the Commission. One of these copies shall be a courtesy copy to the Commission's Director, Division of Dam Safety and Inspections, of the approved cofferdam construction drawings and specifications and the letters of approval.

Article 304. The licensee shall, at least 60 days prior to the start of construction, submit one copy to the Commission's Regional Director and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and 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 Commission may require changes in the plans and specifications to assure a safe and adequate project. If the licensee plans substantial changes to location, size, type, or purpose of the water retention structures, powerhouse, or water conveyance structures, the plans and specifications must be accompanied by revised Exhibit F and G drawings, as necessary.

Article 401. The Erosion Control Plan filed on June 5, 1991, dated May 1991, is approved and made part of this license and shall be implemented. Final drawings and specifications for the plan shall be filed along with the plans and specifications required by Article 302. The Commission may require changes to the erosion control plan to ensure adequate protection of the environmental, scenic, and cultural values of the project area.

Article 402. Within 60 days following approval of the run-of-river and ramping rates monitoring plan required by Article 405, the licensee shall operate the project in a run-of-river mode for the protection of aquatic resources in the Nisqually River downstream of the project.

The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that, at any point in time, the sum of flows released into the project tailrace and bypassed reach, approximate the sum of inflows to the project reservoir.
Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee and Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the Nisqually Indian Tribe. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. Within 60 days following approval of the run-of-river and ramping rate monitoring plan required by Article 405, the licensee shall operate the project such that flows below the diversion dam in the bypassed reach are altered at the following rates and schedule:

<table>
<thead>
<tr>
<th>Season</th>
<th>Daylight hours</th>
<th>Night hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 16-June 15</td>
<td>No Ramping</td>
<td>2&quot;/hour</td>
</tr>
<tr>
<td>June 16-September 30</td>
<td>1&quot;/hour</td>
<td>1&quot;/hour</td>
</tr>
<tr>
<td>October 1-February 15</td>
<td>2&quot;/hour</td>
<td>2&quot;/hour</td>
</tr>
</tbody>
</table>

*Daylight hours begin 1 hour before sunrise and end 1 hour after sunset.

These limits may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon agreement between the licensee, the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the Nisqually Tribe. If these limits are so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each incident.
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Article 404. The licensee shall release from the Yelm Project the following continuous minimum flows specified in the 1993 Decision Terminating Docket 50/ and measured at U.S. Geological Survey gage no. 12089500 at McKenna or inflows to the project reservoir, whichever is less, for the enhancement of fish resources in the bypassed reach of the Nisqually River.

<table>
<thead>
<tr>
<th>PERIOD</th>
<th>MINIMUM FLOW (cubic feet per second)</th>
</tr>
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<td>August 1 to September 30</td>
<td>370</td>
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This flow schedule may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon agreement between the licensee and the Nisqually River Coordinating Committee. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 405. Within six months from the date of issuance of this license, the licensee shall file for Commission approval, a plan to monitor run-of-river operation and ramping rates required in Articles 402 and 403, respectively, and the plan shall include but not be limited to:

1. the method of collecting and recording the flow and ramping rate data;

2. a schedule for installing the required equipment;

3. the location, design, and calibration of the monitoring equipment;

The ALJ's March 25, 1993 Initial Decision Terminating Docket (Decision) is hereby made a part of this License Order. The Decision specifies minimum instream flows for both the mainstream Nisqually River upstream from the Yelm diversion dam and the Yelm bypassed reach downstream from the Yelm diversion dam.
a provision for providing recorded data to the consulted agencies within 30 days from the date of an agency's request for the data.

The licensee shall prepare the plan after consultation with the U.S. Geological Survey, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Washington Department of Fish and Wildlife, and the Nisqually Tribe. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies and the tribe, and specific descriptions of how the agencies' and tribe's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies and the Tribe to comment and make recommendations before filing the plan with the Commission. If the licensee doesn't adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 406. Within six months from the date of issuance of the license, the licensee shall provide $650,000 (1990 dollars: $1,583,700) to the Nisqually Tribe (Tribe), necessary for the construction of two rearing ponds with the designed capacity of 1.5 million chinook salmon (37,500 lbs) and 500,000 chum salmon (33,333 pounds). Furthermore, the licensee shall provide $153,200 per year (1990 dollars; indexed for inflation using the IPD) to the Tribe, for operation and maintenance of the rearing ponds. The payments shall be quarterly installments commencing 10 days after the rearing ponds are operational and shall continue quarterly thereafter until expiration of the license. Within 90 days of providing funds, the licensee shall file with the Commission documentation of the funding for construction. The licensee shall also file with the Commission quarterly statements documenting the funding for operation and maintenance of the rearing ponds.

31/ Adjusted for inflation to reflect the changes in the Gross National Product Implicit Deflator for Federal government Purchase of Goods and Services (IPD) (as set forth in paragraph 9 of Settlement Agreement).
Article 407. The licensee, after consulting with the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife), National Marine Fisheries Service (NMFS), the Washington Department of Fish and Wildlife (Washington Fish and Wildlife), and the Nisqually Tribe (Tribe), shall file within six months from the date of issuance of this license, for Commission approval, either: 1) a plan to study tailrace induced injury, mortality, false attraction, and upstream migration delay to determine if a tailrace barrier is needed to prevent significant adverse effects on anadromous fish; or 2) a plan to install a tailrace barrier in the project's tailrace to eliminate injuries, mortality, false attraction, and migration delays which might be caused by the project's tailrace.

The tailrace attraction, injury, mortality, and delay study plan shall include:

(a) documentation of consultation with Washington Fish and Wildlife, U.S. Fish and Wildlife, NMFS, and the Tribe;

(b) a schedule for studying the tailrace attraction, injury, mortality, and delay at the project's tailrace;

(c) specific descriptions of how agency and Tribal comments and recommendations were incorporated into the plan;

(d) agency and Tribal comments and recommendations on the final completed plan after the plan has been prepared and resubmitted for their review; and

(e) a schedule for filing the tailrace study results, agency and Tribal comments on the results, and licensee responses to agency and Tribal comments with the Commission.

The licensee shall allow a minimum of 30 days for the agencies and the Tribe to comment and make recommendations during consultation periods and before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the proposed plan. The tailrace attraction, injury, mortality, and delay study shall not begin until the licensee is notified by the Commission that the filing is approved. Upon Commission approval, the licensee shall implement the proposal, including any changes required by the Commission.
If the tailrace attraction and injury study indicates that substantial migration delay or fish mortality or injury is occurring at the Yelm tailrace, or if the licensee decides to proceed with tailrace barrier construction without the study, the licensee shall file with the Commission, for approval, plans and a schedule for tailrace barrier construction to reduce migration delay and fish injury.

The licensee shall prepare the tailrace barrier construction plan after consultation with the Washington Fish and Wildlife, U.S. Fish and Wildlife, NMFS, and the Tribe. This filing shall include, but not be limited to:

(a) detailed design drawings of the licensee's proposed tailrace barrier, specifications of the barrier's features, and barrier flow velocities;

(b) documentation of consultation with Washington Fish and Wildlife, U.S. Fish and Wildlife, and the Tribe;

(c) specific descriptions of how agency and Tribal comments and recommendations were incorporated into the plan;

(d) agency and Tribal comments and recommendations on the completed plan after it has been prepared and resubmitted for the agencies’ and Tribe’s review; and

(e) a schedule for constructing the tailrace barrier.

The licensee shall allow a minimum of 30 days for the agencies and the Tribe to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee’s reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Tailrace barrier construction shall not begin until the licensee is notified by the Commission that the filing is approved. Upon Commission approval, the licensee shall implement the proposal, including any changes required by the Commission.

Article 408. Within six months from the date of issuance of this license, the licensee shall file, for Commission approval, detailed design drawings and a construction schedule of the licensee's proposed replacement fish screens to reduce the entrainment of outmigrating salmon smolts. These fish screens shall be located in the diversion canal downstream from the confluence of the two intake structures. The new fish screens shall be self-cleaning and the approach velocity shall not exceed 0.4 feet per second (fps). The fish return pipeline shall be a 48-inch-diameter pipe with an outfall velocity not to exceed 2.0 fps.
The licensee shall prepare the aforementioned drawings and schedule after consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, the Washington Department of Fish and Wildlife, and the Nisqually Tribe. The licensee shall include with the drawings, documentation of consultation, copies of comments and recommendations on the drawings and schedule after they have been prepared and provided to the agencies and the Tribe, and specific descriptions of how the agencies' and Tribe's comments are accommodated by the facilities. The licensee shall allow a minimum of 30 days for the agencies and the Tribe to comment and to make recommendations before filing the drawings and schedule with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the proposed facilities and schedule. No fish screen construction shall begin until the licensee receives notification of Commission approval. Upon Commission approval, the licensee shall implement the proposal, including any changes required by the Commission.

Article 409. Within six months from the date of issuance of this license, the licensee shall file, for Commission approval, detailed design drawings and a construction schedule for the new spillway No. 3 to discharge emergency power canal releases directly into the Nisqually River upstream of the powerhouse tailrace.

The licensee shall prepare the aforementioned drawings and schedule after consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, the Washington Department of Fish and Wildlife, and the Nisqually Tribe. The licensee shall include with the drawings, documentation of consultation, copies of comments and recommendations on the drawings and schedule after they have been prepared and provided to the agencies and the Tribe, and specific descriptions of how the agencies' and Tribe's comments are accommodated by the facilities. The licensee shall allow a minimum of 30 days for the agencies and the Tribe to comment and to make recommendations before filing the drawings and schedule with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the proposed facilities and schedule. No spillway No. 3 construction shall begin until the licensee receives notification of Commission approval. Upon Commission approval, the licensee shall implement the proposal, including any changes required by the Commission.
Article 410. Within six months of the date of issuance of this license, the licensee shall file with the Commission, for approval, its plan and schedule to rehabilitate the aquatic riparian habitat in the 4,800-foot-long section of lower Thompson Creek.

The habitat rehabilitation plan shall include a schedule for: (1) implementing and completing the plan; (2) monitoring and measuring the success of the rehabilitation measures; (3) consulting with the appropriate federal and state agencies and Indian tribe; and (4) filing the results, agency and Tribe comments, and licensee's response to agency and Tribal comments on the plan with the Commission.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, the Washington Department of Fish and Wildlife, and the Nisqually Tribe. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies and Tribe, and specific descriptions of how the agencies' and Tribe's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies and the Tribe to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 411. The licensee shall continue to implement the fishway operations plan developed by the Washington Department of Fish and Wildlife and the Nisqually Tribe that ensures the operation of the existing fish ladder with a 70 cubic feet per second (cfs) attraction flow and a 20 cfs chamber flow.

These flows may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon agreement between the licensee, the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the Nisqually Tribe. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 412. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or provide for the construction, operation and maintenance of such fishways as may be prescribed by the Secretary of Commerce pursuant to Section 18 of the Federal Power Act.
Article 413. Within six months from the date of issuance of this license, the licensee shall file with the Commission, for approval, a wildlife habitat management plan.

The plan shall include, but not be limited to, the following:

1) the wildlife habitat management measures the licensee proposed in its filing of August 7, 1991, for (a) the settling basin on the power canal, (b) the transmission line corridor, and (c) the banks of Thompson Creek; and

2) identification of buffer zone locations and widths for wetlands and riparian areas on the power canal and other project lands.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service, the Department of the Army Fort Lewis Military Reservation, the Washington Department of Fish and Wildlife, and the Nisqually Tribe. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies and the Nisqually Tribe, and specific descriptions of how the comments of the agencies and the Nisqually Tribe are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies and the Nisqually Tribe to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing or land-clearing activities associated with the wildlife management plan shall begin until the Commission notifies the licensee that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 414. Within six months from the date of issuance of this license, the licensee shall file with the Commission, for approval, a plan to install aviation markers on the project transmission line at river crossings, to protect bald eagles at the project. The plan shall include, but not be limited to, the following:

1) the size and color of markers to be used;

2) the spacing of markers; and

3) a schedule for installing markers.
The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service and the Washington Department of Fish and Wildlife. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 415. Within 90 days from the date of issuance of this license, the licensee shall file, for approval, a revised Exhibit G showing inclusion within the project boundary of the tract between the power canal and the Nisqually River in which a bald eagle nest site is located.

Article 416. Within 120 days from the date of issuance of this license, the licensee shall implement the enhancement measures at the powerhouse access site filed on September 24, 1990, as pages E-77 through E-79, and on November 13, 1990, as page 3-1. The recreational enhancements at the powerhouse site consist of: (1) adding additional parking spaces, public access signs, and a restroom facility; (2) improving access to the fishing banks and along the nature trails by providing steps with hand rails on steep slopes and regular maintenance; and (3) developing the existing kayak and raft launch so that trailer-launched boats have access to the site.

Within 90 days after completing construction or installation of these facilities, the licensee shall file: (1) as built drawings showing the facilities, and (2) a revised exhibit G to include within the project boundary any lands needed for construction, use, and maintenance of the facilities. In addition, the licensee shall operate and maintain or arrange for the operation and maintenance of the facilities during the term of the license. The Commission may require changes to these measures to ensure adequate protection of the environmental, scenic, and cultural values of the project area.

Article 417. The recreational enhancements and public safety measures at the diversion dam portage site filed on November 13, 1990, as pages 1-1 through 1-20 and page 2-1, and on October 7, 1991, consisting of 24 pages are approved and made part of this license and shall be implemented within 120 days from the date of issuance of this license. The measures consist
of: (1) maintaining a gravel-surfaced route and providing a new large-wheel trailer if necessary; (2) providing a pay telephone;
(3) installing a flood light to illuminate the portage take-out sign; and (4) improving public safety by providing a boater safety cable across the river—upstream of the diversion dam, additional warning signs above the diversion dam, and a hand railing at the dam abutment. Measures to provide walk-in angler access just below the diversion dam, filed February 22, 1991, should not be implemented because of potential conflict with bald eagle habitat.

Within 90 days after completing construction or installation of these facilities, the licensee shall file: (1) as built drawings showing the facilities, and (2) a revised exhibit G to include within the project boundary any lands needed for construction, use, and maintenance of the facilities. In addition, the licensee shall operate and maintain or arrange for the operation and maintenance of the facilities during the term of the license. The Commission may require changes to these measures to ensure adequate protection of the environmental, scenic, and cultural values of the project area.

Article 418. Within six months from the date of issuance of this license, the licensee shall file with the Commission for approval, a plan to construct and maintain a public access site to the Nisqually River at McKenna. The plan, at a minimum, shall include provisions for: (1) access signs; (2) hand-carried and trailer-launched boat access; (3) bank fishing areas; (4) sanitation facilities; and (5) a parking area large enough to accommodate 20 vehicles with trailers. In designing the site, the licensee shall evaluate the potential for accommodating the disabled, based on the Americans with Disabilities Act of 1990, and shall incorporate appropriate provisions into the access site plan.

The licensee shall prepare the plan after consultation with the Nisqually River Council, National Park Service, Washington Interagency Committee for Outdoor Recreation, Washington State Parks and Recreation Commission, and Pierce County. The licensee shall include with the plan 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 the agency comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee’s reasons, based on project-specific information.
The Commission reserves the right to require changes to the plan. No land-disturbing or land-clearing activities associated with the access site shall begin until the licensee is notified by the Commission that the plan is acceptable. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

**Article 419.** Within one year from the date of issuance of this license, the licensee shall implement the visual resource enhancement plan filed with the Commission on June 21, 1990, consisting of one page. Final drawings and specifications for the plan shall be filed along with the plans and specifications required by Article 307. The Commission may require changes to the plan to ensure adequate protection of the environmental, scenic, and cultural values of the project area.

**Article 420.** Within one year of the date of issuance of this license, the licensee shall implement its cultural resources management plan filed with the Commission by letter dated September 21, 1990, to protect areas of cultural concern to the Nisqually Tribe (Tribe). Within three years after the date of issuance of this license, the licensee shall file for Commission approval a report on the status of the implementation of the cultural resources management plan, together with a copy of a letter from the Tribe commenting on the plan's implementation. The Commission may require changes to the plan.

**Article 421.** If archeological or historic sites are found during project construction or operation, the licensee shall:

1. consult with the Washington State Historic Preservation Officer (SHPO) and the Nisqually Tribe (Tribe) about any discovered sites;
2. prepare a cultural resources management plan and a schedule to evaluate the significance of the sites and to avoid or mitigate any impacts to Register eligible sites;
3. base the plan on recommendations of the SHPO and the Tribe and on the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation;
4. file the plan for Commission approval, together with the written comments of the SHPO and the Tribe on the plan; and
5. take the necessary steps to protect the discovered archeological or historic sites from further impact until notified by the Commission that all of these requirements have been satisfied.

The Commission may require cultural resources survey and changes to the cultural resources management plan based on the filings. The licensee shall not implement a cultural resources management plan or begin any land-clearing or land-disturbing activities in the vicinity of any discovered sites until informed by the Commission that the requirements of this article have been fulfilled.
Article 422. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and water for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food piers and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters which may be subject to the payment of
reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved Exhibit E or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type
of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used); the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

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

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

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

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

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

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

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

Article 501. If the licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement since April 1, 1962, and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

(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 constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order pursuant to 18 CFR 385.13. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Kevin P. Madden
Acting Director
Office of Hydropower Licensing
APPENDIX A

The Water Quality Certification is subject to the following conditions. Additional requirements may also be established in Short-Term Water Quality Standard Modifications, as described below.

I. GENERAL REQUIREMENTS

A. An Oil Spill Prevention, Containment, and Countermeasure Plan must be prepared that covers all oil-filled equipment to be installed at the site. This equipment includes the turbine/generator set and all oil-filled transformers and capacitors to be installed at the dam to serve this project.

B. Care shall be taken to prevent any petroleum products, paints, chemicals, or other harmful materials from entering the water.

C. All construction debris shall be properly disposed of on land so that it cannot enter state water.

D. Work in the waterway shall be done so as to minimize turbidity.

E. All lumber treated with creosote or other protective material shall be completely dry before use in or near the waterway.

F. Concrete shall be cured a minimum of seven (7) days before any contact with water.

G. Mobile equipment that enters the water shall be maintained such that a visible sheen from petroleum products does not appear.

H. Five (5) days advance notice shall be given to Ecology before dredging or other work in the waterway commences.

I. A short-Term Water Quality Standards Modification shall be obtained from Ecology prior to the start of work in the waterway. The plan of work for the portion of the project within the waterway shall accompany the request. The request shall also include a copy of the Hydraulics Project Approval secured from the Department of Fisheries or Wildlife for the project, and an explanation of how SEPA has been addressed for the project. Wastewater containing cement, such as washwater from concrete trucks, shall not be discharged to state ground or surface waters.
Project No. 10703-001

J. Discharge of process wastewater to waters of the state without a permit is prohibited. A plan for the treatment and disposal of process wastewater generated by the facility shall be approved by Ecology prior to the operation of the final facility.

K. The construction activities must comply with all conditions of the Washington Department of Wildlife (or Fisheries) Project Approval.

L. Improvements to fish habitat (e.g., placement of boulders and gravel), must be done in a manner to minimize turbidity.

M. A State Water Right Permit (RCW 90.03.250 and Chapter 908-12 WAC) must be applied for prior to commencing construction of the project.

N. The project shall comply with the in-stream flow requirements as set forth below. Instream flows shall be maintained in any bypass reach or downstream of the project, sufficient to meet water quality goals and standards for the waterway, as provided in Chapter 173-201 WAC, 173-500 WAC, and 90.54 RCW.

A minimum flow or natural flow, shall remain in the bypassed reach, as measured at USGS gage location #12089500, Nisqually River at McKenna, as follows:

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<tr>
<th>Period</th>
<th>Flow Rate</th>
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<tbody>
<tr>
<td>October 1st - December 15th</td>
<td>550 cfs</td>
</tr>
<tr>
<td>December 16th - May 31st</td>
<td>600 cfs</td>
</tr>
<tr>
<td>June 1st - July 31st</td>
<td>500 cfs</td>
</tr>
<tr>
<td>August 1st - September 30th</td>
<td>370 cfs</td>
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II. WATER QUALITY CRITERIA

A. At the point of discharge, the water shall not exceed the following criteria:

All water quality criteria and action requirements for Class A waters (WAC 173-201-045(2)(c)) shall remain in effect.

Total Suspended Solids (TSS): Maximum for any one day shall not exceed 45 mg/l; average of daily values for any calendar month shall not exceed 25 mg/l.

B. Water Quality Monitoring and Reporting

Water quality monitoring shall be conducted during construction and operation of the facilities as follows:
1. Long-Term Facility Operations

Effective immediately, representative water samples shall be taken at least once per week, at a downstream sampling point approved by Ecology. Parameters to be monitored shall include temperature, pH, dissolved oxygen, and turbidity at a minimum. Total Suspended Solids (TSS) shall be monitored at least once per month.

2. Construction Activities

More rigorous monitoring will be required during project construction. Those monitoring requirements will be defined in the Short-Term Water Quality Modification(s) issued by Ecology, after a review of the plan and schedule for construction activities.

Monitoring results obtained during the previous calendar month shall be summarized and reported on a form approved by Ecology. The report shall be submitted no later than the 15th day of the month following the completed report period. The report shall be sent to the Southwest Regional Office, Department of Ecology, Mail Stop LU-11, 7272 Cleanwater Lane, Olympia, Washington 98504.

III. OIL SPILL PREVENTION AND CONTROL

Care shall be taken to prevent discharges of oil from equipment or facilities into state waters or onto adjacent land.

Visible floating oils released from construction area shall be contained and removed from water immediately.

All land-based oils storage tanks shall be diked or located so as to prevent oil spills from escaping to the water. The petroleum storage area shall be impervious to prevent oil from seeping through the ground.

Fuel hoses, oil drums, etc., shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent discharges. Proper security shall be maintained to discourage vandalism.

In the event of a discharge of oil, fuel or chemicals into state waters, or onto land with a potential for entry into state waters, containment and clean-up efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include proper disposal of any spilled material and used cleanup materials.
No emulsifiers or dispersants are to be used in waters of the state without approval from the Water Quality Section, Southwest Regional Office, Department of Ecology.

In the event of any petroleum product or other chemical spill into state ground or surface waters or onto land with a potential for entry into state ground or surface water, Ecology shall be notified immediately by telephone at (206) 753-2353 (24 hour number).

IV. CONSTRUCTION ACTIVITIES

A. The construction contractor shall use all reasonable measures to prevent or minimize the impacts of construction activities on state ground and surface waters. These measures include Best Management Practices to control erosion and sedimentation, proper use of chemicals, oil and chemical spill prevention and control, clean-up of surplus construction supplies and other solid wastes, adequate operation and maintenance of sedimentation ponds, and separation of construction areas from state surface waters by dikes, cofferdams, or similar structures.

B. All sedimentation ponds shall be cleaned out and the settled sediment shall be removed from the pond area or otherwise stabilized before the ponds are decommissioned. Settled sediments shall not be allowed to enter state ground or surface waters.

1. All construction debris shall be properly disposed of on land in such a manner that it cannot enter into the waterway or cause water quality degradation to state waters.

2. Work in or near the waterway shall be done so as to minimize turbidity, erosion, other water quality impacts, and stream bed deformation.

3. All areas disturbed or newly created by the project construction will be seeded, riprapped with clean, durable riprap or given some other equivalent type of protection against erosion.

4. Extreme care shall be taken to prevent any petroleum products, fresh cement, lime or concrete, chemicals, or other toxic or deleterious materials from entering the water in any manner.
4. Fresh, uncured concrete in direct contact with the water is toxic to aquatic life. All concrete shall be cured in the dry and shall be allowed to cure a minimum of seven (7) days before contact with water.

5. All lumber treated with creosote or other protection material shall be completely dry before use in or near the waterway.

6. Dredge spoils shall be transported and disposed of in a manner that prevents the spoils from entering state waters and prevents leachates or drainage from the spills from degrading water quality.

C. Ecology may establish additional requirements in any short-term Water Quality Modifications it issues for work in the waterway.

V. ADDITIONAL REQUIREMENTS

Ramping requirements shall be as follows:

Flow reduction rates in the bypass reach shall not exceed 100 cfs per hour or two inches per hour, whichever is less, based on the current gate rating curve. This requirement shall apply during all months of the year, except that scheduled reductions shall be avoided during the daytime between February 1 and May 31 and at night between June 1 and September 30.

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Product Category: A01