COVER SHEET

FEDERAL ENERGY REGULATORY COMMISSION

FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR THE ROCKY REACH HYDROELECTRIC PROJECT
Docket No. P-2145-060

Section 5
Staff's Conclusions
Pages 233 through 262
FEIS

5.0 STAFF'S CONCLUSIONS

5.1 COMPREHENSIVE DEVELOPMENT AND RECOMMENDED ALTERNATIVE

Sections 4(e) and 10(a) of the FPA, 16 U.S.C. 797(e) and 803(a)(1) require the Commission to give equal consideration to developmental and non-developmental uses of the waterway on which a project is located. When we review a hydropower project, we consider the water quality, fish and wildlife, recreational, and other non-developmental values of the waterway equally with the project's electric energy and other developmental values.

This section presents our rationale in balancing the developmental and non-developmental values and our recommendations for the plan best adapted to comprehensive development of the waterway. Our balancing analysis considers the comparative environmental effects of the alternatives (section 3.0, *Environmental Consequences*), their economic viability (section 4.0, *Developmental Analysis*), and their consistency with relevant agency recommendations, comprehensive plans, and laws and policies (sections 5.2, 5.3, and 5.4, respectively).

Based on our independent review and analysis of the project, the measures proposed by Chelan PUD, and the additional measures recommended by agencies and other stakeholders, we recommend relicensing the project as proposed with our additional staff-recommended environmental measures (staff alternative) as discussed below.

We are recommending the staff alternative because: (1) issuance of a new license would allow Chelan PUD to continue to operate the project as a dependable source of electric energy for its customers; (2) the 865.76-MW project would avoid the need for an equivalent amount of fossil-fuel fired electric generation and capacity elsewhere, continuing to help conserve these non-renewable energy resources while reducing atmospheric pollution; and (3) the recommended environmental protection and enhancement measures would improve water quality, protect or enhance fish and terrestrial resources, improve public use of recreational facilities and resources, and maintain and protect historic and archaeological resources within the area affected by project operation. The overall benefits of this alternative would be worth the cost of proposed environmental measures.

We recommend including the following environmental measures proposed by Chelan PUD in any license issued for this project, but revising certain specific elements of the measures, as noted:

1. Establish four forums: RR Fish, Wildlife, Recreation, and Cultural Resource forums and a RR Policy Committee;

2. Implement the Shoreline Erosion Plan;
3. Implement the Water Quality Plan;
4. Continue to implement the HCP for Rocky Reach to protect salmon and steelhead;
5. Implement the White Sturgeon Plan (except as noted below);
6. Continue to implement the Bull Trout Plan (except as noted below);
7. Implement the Pacific Lamprey Plan (except as noted below);
8. Conduct a comprehensive evaluation of the effects of predatory fish species on HCP plan species;
9. Implement the Wildlife Plan with refinements (see below)
10. Implement the Cultural Plan; and
11. Implement the Recreation Plan with refinements (see below).

In addition to Chelan PUD's proposed measures, we recommend the following modifications and refinements:[35]

1. Modify the goal of the White Sturgeon Plan from increasing sturgeon abundance to a level commensurate with available habitat to implementing measures that would reduce or eliminate the effects of the O&M of the Project on white sturgeon. Additionally, we are not recommending that Chelan PUD be required to conduct an analysis of the carrying capacity of the available habitat.
2. Modify the Bull Trout Plan so that Chelan PUD will not be required to participate in development of FWS's bull trout recovery plan, specifically attending meetings and participating in regional information exchanges and monitoring efforts.
3. Modify the Pacific Lamprey Plan so that Chelan PUD will not be required to: achieve the best passage rates found at other Columbia River projects, implement a no-net-loss standard for Pacific lamprey, fund regional research, or participate in regional information exchanges.

[35] The Commission has often stated that it is the licensee's responsibility to complete measures required by the license, that dollar figures are not absolute limitations (that is, the Commission reserves the authority to require licensees to fulfill the requirements of the license notwithstanding any limitations on expenditures either proposed by the applicant or recommended by others), and that cost caps are not absolute limitations (See Virginia Electric Power Co., 110 FERC ¶ 61,241 [2005] and Portland General Electric Co., 111 FERC ¶ 61,450 [2005]).

4. Implement one element of the Resident Fish Plan—Conduct surveys to determine the effects of predatory resident fish on juvenile salmon and steelhead. Exclude from the license the other measures included in the plan, including fish rearing and stocking, fishing enhancement measures, recreational fishing evaluation, and monitoring of resident fish species and abundance.

5. Revise the Wildlife Plan in consultation with WDFW, BLM, the Forest Service, FWS, and other entities that wish to participate in the RR Wildlife Forum and file the Plan with the Commission for approval within 1 year of license issuance. The final Plan, which would be updated every 5 years, would: (a) specifically describe the habitat improvement projects that would be undertaken for the next 5 years, an implementation schedule, and any monitoring or maintenance programs to ensure success of the measures; (b) include a detailed description of an integrated noxious weed control plan, including a description of the areas to be treated in the first five years of license issuance, and the methods of treatment; (c) include a detailed description of the wildlife surveys that would be implemented for the next 5 years, with subsequent 5-year reports including any proposed modifications to survey efforts; and (d) include the provisions of the "Ute-ladies'-tresses along Rocky Reach Reservoir Management Plan." The final Plan would also contain a provision for making project features and including in the project boundary the Chelan Wildlife Area and BLM and Forest Service-owned lands where annual O&M of the implemented measures is required to ensure effectiveness. The final plan would **not** include measures that are not directly habitat related and are generally the responsibility of the land managing agency.

6. Incorporate the riparian habitat associated with the Sun Cove property in the project boundary and protect the wildlife habitat (as opposed to acquiring a conservation easement).

7. Revise the Recreation Plan to include the following elements: (a) a description with detailed drawings of the type and location of all proposed recreational facilities and improvements, including proposed design, construction materials and methods; (b) an implementation schedule for all measures and filings with the Commission for approval; (c) a description of the interpretive trails and signs developed in concert with the Cultural Plan; (d) identification of the entity responsible for O&M of the recreation facilities; (e) a discussion of how the needs of the disabled were considered in the planning and design of the recreation facilities; (f) in concert with Article 9(g) (Recreation Resources Monitoring and Evaluation Program) of the Settlement Agreement, monitor recreation use on an estimated 150 acres of BLM lands, located adjacent to the Rocky Reach Project reservoir and within the project boundary; and (g) documentation of consultation with at

least, but not limited to, WDFW, BLM, NPS, Washington State Parks, and the City of Entiat on the design and implementation of the proposed recreation facilities. File the plan for Commission approval within one year of license issuance. Ensure components of the plan are consistent with the proposed Recreation Plan implementation schedule in the Settlement Agreement.

Most of the measures proposed by Chelan PUD and the staff would reduce the net power benefits of the project. We discuss the most substantive of these measures in the following text. We also discuss measures not included in our recommended alternative.

5.1.1 Shoreline Erosion Plan

In the Settlement Agreement, Chelan PUD proposes four measures to address erosion: (1) performing erosion repair work at four sites selected by Chelan PUD to demonstrate appropriate erosion control techniques and educate the public about such techniques; (2) making information on erosion control methods available to local governments and individuals with land along the reservoir shoreline; (3) monitoring shoreline erosion during the new license term; and (4) planning and carrying out appropriate erosion repairs at a BLM site within the project boundary. The first three measures are included in Chelan PUD's proposed Shoreline Erosion Plan and could be implemented at an annualized cost of $21,220. The measures would stabilize four sites that are currently eroding, provide the public tangible examples of appropriate stabilization techniques and information regarding stewardship measures that can be used to prevent shoreline erosion, and provide a basis to identify erosion sites and sites in need of remedial work. We conclude that these benefits would be worth the associated costs. The fourth measure of Chelan PUD's proposal, the cost of which is included in Chelan PUD's proposed Cultural Plan (see section 5.1.10), would stabilize and protect a cultural site from project induced erosion. This measure, along with other cultural site treatment measures, has an estimated cost of $204,800 (equaling an annualized cost of $17,020), and we conclude that this site protection would be worth the associated cost.

5.1.2 Water Quality Plan

With the exception of the numeric criteria for temperature and TDG, the Columbia River within the project area generally meets the applicable water quality standards (refer to tables 1, 2, 6, and 7). CE-QUAL-W2 modeling results suggest that project-caused increases in the water temperatures seldom exceed the allowable limits set in the existing water temperature standard. Three water quality issues would likely require management through implementation of compliance plans: (1) TDG, (2) oil and hazardous material spill prevention and countermeasures, and (3) water temperature. Chelan PUD proposes to address water quality issues by implementing the Water Quality Plan that includes operating the project under the Hourly Coordination Agreement and Hanford Reach

Agreement; implementing several measures addressing TDG and its potential effects on fish; monitoring water temperatures in the project's forebay, tailrace, and juvenile and adult fishways; monitoring temperature, DO and pH in shallow waters of the project's reservoir; and implementing and revising the project's Spill Prevention Control and Countermeasure Plan along with upgrading oil monitoring and separating equipment as needed. In the Water Quality Plan included in the Settlement Agreement, Chelan PUD (2006b) addresses water quality issues and cites the results of nine water quality studies that provided WDOE with the basis for issuing a water quality certification for the project. We recommend implementing this Water Quality Plan, which would incur an annualized cost of $110,260 and would facilitate Chelan PUD's meeting state water quality standards and thereby improve water quality in the project area. That goal is supported by WDOE and the recommendations of the Umatilla Tribes and American Rivers, and would benefit designated uses, including fish (including salmonid species) and wildlife habitat, water supply (domestic, irrigation, industrial), recreation, and navigation. Implementing Chelan PUD's proposal to monitor water temperature in the project's forebay and tailrace from April through October along with modeling for an additional 5-year period would support more robust modeling to better evaluate project effects on discharges.

Chelan PUD's proposal to annually submit a gas abatement plan accompanied by an up-to-date operations plan, a fisheries management plan, physical monitoring plan, and biological monitoring plan would likely improve the efficacy of fish passage based on results of TDG monitoring, and would provide a mechanism for meeting performance goals with respect to native fish. Annually updating the plan would address the potential need to revise the operations plan as recommended by the Umatilla Tribes. We recommend that Chelan PUD implement measures for meeting water quality standards, including TDG, within a 10-year period. Chelan PUD should coordinate activities associated with meeting TDG standards with meeting fish passage criteria to ensure that meeting the TDG standards does not result in an overall negative effect on the fish community. This would include an 8-year period for adaptively developing and implementing TDG abatement measures, followed by a 2-year period to pursue other means of satisfying Washington State water quality standards. We do not recommend adopting the recommendation of the Umatilla Tribes that Chelan PUD establish a special water quality committee. We estimate that the cost of this measure would be $5,120 annually, and we conclude that such a measure would not be worth the cost and would be unnecessary since the proposed function of the committee would be adequately addressed by the RR Fish Forum.

5.1.3 HCP Implementation for Anadromous Fish

Implementation of the HCP is a key element of Chelan PUD's proposal. The HCP is a 50-year agreement to protect five species of Columbia River steelhead and salmon: spring and summer/fall Chinook salmon, sockeye salmon, coho salmon, and steelhead,

which are collectively referred to as the Plan Species. The HCP aims to result in no net impact on the Plan Species by implementing a combination of mitigation tools to achieve fish passage survival rates and a virtual 100 percent survival of fish passing the project. Components of no net impact include 91 percent combined juvenile and adult project survival achieved by project improvement measures implemented within the geographic area of the project, 7 percent achieved through hatchery programs, and 2 percent achieved through the tributary program, which includes a fund for habitat improvements. Under the terms of the HCP, if the HCP terminates before the end of the license term, Chelan PUD would continue to implement the last agreed-to measures until the Commission orders otherwise.

The HCP relies on the juvenile fish bypass system as the primary method for increasing juvenile salmonid survival. As prescribed in the HCP, Chelan PUD would continuously operate the juvenile bypass system from April 1 to August 31 each year to protect the juvenile fish migration. The HCP also specifies spill as a means of increasing survival of juvenile salmonids as they pass through the project. The HCP specifies that Chelan PUD would provide spill to pass fish during a time period that encompasses 95 percent of each species' downstream migration. The HCP calls for continued use of the existing fishway to facilitate upstream passage for adult salmon and steelhead (as well as other fish species that use this pathway, including bull trout). The HCP establishes a survival standard for adult Plan Species that must be achieved when technology becomes available to measure adult survival, with a three-phase program that would provide for adjustments to ensure biological success.

Full implementation of the HCP as a means of protecting anadromous fish, which would be achieved at an annualized cost of $15,014,120, has wide-spread support among the stakeholders and is included in Interior's and NMFS' section 18 fishway prescriptions, WDFW's section 10(j) recommendations, and the recommendations of WDOE. The Umatilla Tribes recommend alternative goals, including reduced juvenile salmonid mortality goals for 2013 and 2020, adult salmon upstream survival goals of 97 to 98 percent by 2013, and additional funding for regional evaluations of salmon stocks.

In both its Master Order (107 FERC ¶ 61,280) and its Order Amending the Rocky Reach Project license (107 FERC ¶ 61,281), the Commission accepted the proposed HCP and its associated measures, indicating that "the orders will serve the public interest by putting into place a long-term program to aid in the recovery of the endangered species and help to prevent other salmonids from becoming listed." The Commission based its approval of the HCP on the environmental analysis presented in the NMFS final EIS (NMFS, 2002) for the HCP, with the Commission participating as a cooperating agency, and after consideration of all comments from other parties that pertained to the HCP. The Umatilla Tribes recommend passage standards for juvenile and adult salmon through the entire project, with mortality defined as direct and delayed mortality. However, as we discuss in section 3.4.2.1, *Actions Covered by the Rocky Reach Anadromous Fish*

Agreement and Habitat Conservation Plan, there is currently no proven method for accurately differentiating project-caused mortality and natural mortality. Additionally, the Umatilla Tribes' recommendation does not propose any measures to address losses resulting from failure to pass through the project as does the Commission-approved HCP. Because the costs of the Umatilla Tribes' more stringent standards are unknown, and methods to achieve those standards are not certain, it is not apparent what public benefit would be realized by implementing the Tribes' standards compared to the HCP. Therefore, we do not recommend adopting the Umatilla Tribes' proposed standards.

5.1.4 White Sturgeon Plan

Chelan PUD proposes to implement the White Sturgeon Plan designed to promote white sturgeon population growth in the project reservoir to a level that is supportable by the available habitat. The White Sturgeon Plan includes a supplementation program, a monitoring program, long-term indexing, investigation of emigration rates of the supplemented population, supplementation program review, determination of carrying capacity of available habitat based on monitoring results, and an evaluation of spawning potential. The White Sturgeon Plan would include consideration of a new hatchery as one of several potential elements of a supplementation program, but does not specify a schedule for hatchery construction. Development and implementation of a White Sturgeon Plan was endorsed by recommendations of the Umatilla Tribes as well as by the parties to the Settlement Agreement, including FWS and WDFW. The Umatilla Tribes made additional recommendations, calling on Chelan PUD to implement a 4-tier sturgeon study and construct a hatchery facility within 5 to 15 years of new license issuance to supplement the sturgeon population.

As we note in our analysis in section 3.4.2.2, *White Sturgeon Populations*, development and implementation of the White Sturgeon Plan, as described in the Settlement Agreement, would provide a supplementation program for white sturgeon that would mitigate for project effects and enhance the white sturgeon population in the reservoir. As proposed by Chelan PUD, the total annualized cost of finalizing and implementing the plan would be $71,680. We conclude that this plan would be worth the cost and we recommend that Chelan PUD implement the measures within the White Sturgeon Plan. However, we do not recommend that Chelan PUD be required to meet the goals of the plan. The goals of the plan would require Chelan PUD to increase the white sturgeon population to levels commensurate with available habitat and levels that would allow for appropriate and reasonable harvest. Because we are unable to determine if these goals are attainable and what level of enhancement, including costs, would be necessary to achieve these goals, we do not recommend including these goals as a requirement of any license issued for the project.

The Umatilla Tribes recommend construction of a white sturgeon hatchery facility within 5 to 15 years after license issuance. At this time, the results of the initial

investigations into the success of the supplementation program and other study results are unknown. The White Sturgeon Plan contemplates construction of a white sturgeon hatchery, but states that the RR Fish Forum would use adaptive management to determine how to best provide broodstock for the supplementation program and would decide if construction of a white sturgeon hatchery is necessary. This approach would provide flexibility for selecting a source of white sturgeon. Because construction of a hatchery may be unnecessary and not worth the cost if other lower cost sources of viable white sturgeon are available, we do not recommend, at this time, requiring Chelan PUD to construct a white sturgeon hatchery facility within 5 to 15 years of license issuance.

5.1.5 Bull Trout Plan

On February 28, 2005, Chelan PUD filed its Bull Trout Management Plan under Article 411 of the existing license for the project, and the Commission approved the plan on April 19, 2005 (111 FERC ¶ 62,071). The plan as approved by the Commission included the following elements: (1) a monitoring program to identify potential project-related impacts to upstream and downstream passage of adult and subadult bull trout, (2) evaluation of potential stranding or entrapment that may occur, (3) participation in regional bull trout monitoring and research efforts, (4) implementation of impact minimization measures, and (5) implementation of conservation measures, as spelled out in the Bull Trout Management Plan. In its April 19, 2005, order approving the plan, the Commission indicated that implementation of the Bull Trout Management Plan was in the public interest and our analysis in this document further supports the conclusion that implementing the Bull Trout Management Plan as part of relicensing the Rocky Reach Project would be in the public interest. Refinements to the FERC-approved plan that are incorporated into the Settlement Agreement would have similar effects on bull trout in the project. Therefore, we recommend that implementation of the Settlement Agreement's Bull Trout Plan (with an annualized cost of $79,260) be included in any license issued for the project area.

While some coordination and consultation of bull trout measures would be inherent in efforts to mitigate for project effects on bull trout, attendance at FWS's bull trout recovery plan meetings, and participation in regional bull trout monitoring and research efforts are not project-related. Therefore we do not recommend including this measure in any license issued for the Rocky Reach Project.

5.1.6 Pacific Lamprey Plan

Chelan PUD proposes to implement a Pacific Lamprey Plan with provisions to measure ongoing impacts on upstream passage of adult lamprey, and downstream passage of adult and juvenile Pacific lamprey and eliminate those impacts where appropriate and reasonable. The plan measures would address current passage inefficiencies that have been identified, and the proposed continued monitoring would

document the upstream passage effectiveness after modifications are implemented. Implementation of this plan would assist in the recovery and maintenance of the Pacific lamprey, which are a culturally significant native species in the Columbia River. We estimate the total annualized cost for implementing the plan to be $83,990 and we find that the benefits of the plan would be worth the cost.

As part of the plan, Chelan PUD proposes to implement measures to meet a passage standard for lamprey that is similar to the best passage rates at other projects on the Columbia and Snake rivers. Such standards are unrelated to the magnitude of project effects and may vary in time, and thus are difficult to enforce. Further, the passage rates that can be achieved at other projects may be unreasonable or infeasible when applied to the Rocky Reach Project. Lastly, the cost to achieve these standards is unquantifiable, but could be very high. Therefore, we conclude that these standards may not be worth the cost and we do not recommend including them in any license issued for the project.

Implementing the HCP, which we recommend, may provide additional benefits to Pacific lamprey passing the project and inhabiting tributaries to the Columbia River in the vicinity of the project. Such actions would include operation of the juvenile bypass system, which would provide a safe passage route for downstream migrating juvenile lamprey, and implementation of the Northern pikeminnow predator control program, which would reduce the predation mortality of downstream migrating juvenile lamprey.

The Umatilla Tribes indicate that regional fisheries managers are developing passage standards for juvenile lamprey and that once these standards are developed, Chelan PUD should be required to meet these standards. Because no passage standards exist at this time, we are unable to determine whether such standards would be attainable or worth the cost and we do not recommend that Chelan PUD be required to meet undefined juvenile lamprey passage standards.

For upstream adult lamprey passage, the Umatilla Tribes recommend that Chelan PUD be required to achieve 80 percent upstream passage with a median passage time of 24 hours by 2013 and 97 to 98 percent upstream passage by 2030. Regional upstream passage standards for adult lamprey are currently under development. The Umatilla Tribes provide information suggesting that 80 percent passage has been achieved at other projects; however, we have no information to indicate that 80 percent passage success is attainable at the Rocky Reach Project or that 98 percent upstream passage is attainable at Rocky Reach or any other project. Additionally, it is not apparent that failure of adult lamprey to pass the Rocky Reach Project results in unsuccessful reproduction or that the recommended passage standards are necessary to recover or maintain the Columbia River lamprey population. Based on this information, we do not recommend including this requirement in any license issued for the project.

Chelan PUD's proposal includes providing juvenile lamprey to investigate project effects on downstream migrating lamprey. Obtaining juvenile lamprey from outside the

project area for such studies would avoid injury to local stocks resulting from such investigations. Chelan PUD also proposes to contribute to local or regional investigation programs to develop methods to assess effects on juvenile lamprey. While coordination and consultation would be inherent in efforts to mitigate for project effects on lamprey, contributing to local or regional investigation programs are not project-related. Therefore, we do not recommend inclusion of such provisions as a requirement in any license issued for the Rocky Reach Project.

Chelan PUD proposes, and the Umatilla Tribes recommend, that Chelan PUD identify and implement measures to address unavoidable impacts to achieve no net impact to lamprey from project operations. Addressing unavoidable project impacts would further reduce project effects on lamprey and benefit the population; however, the FPA does not impose a no-net-loss requirement[36], and we do not recommend including this as a requirement of any license issued for the project.

We do not recommend the habitat assessments as proposed by Chelan PUD or as recommended by the Umatilla Tribes because they would not specifically benefit lamprey populations within the project area or identify or mitigate for ongoing project effects.

5.1.7 Resident Fish Plan

The Resident Fish Plan proposed by Chelan PUD as part of the Settlement Agreement is intended to protect and enhance resident fish and habitat and enhance recreational fishing opportunities in the project area. The plan includes measures to continue an existing resident fish stocking program, implement resident fish habitat enhancement projects, evaluate the introduction of new species to the project waters, and conduct a comprehensive evaluation of the effects of predatory resident fish species on HCP plan species.

Under the Resident Fish Plan, Chelan PUD would continue to fund the existing fish stocking program to enhance off-site recreational fishing opportunities in Chelan and Douglas counties. As parties to the Settlement Agreement, WDFW, BLM and FWS support Chelan PUD's proposal.

In comments on the draft EIS, WDFW indicates that the hatchery fish would not be raised at project facilities or stocked in project waters; therefore, the resident fish stocking proposal included in the Settlement Agreement would have no benefit to resident fish or recreational resources in the project area. In comments on the draft EIS, WDFW indicates that stocking resident fish species in the project area could adversely affect threatened and endangered fish species. Under the staff-recommended alternative,

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[36] See, e.g., *Ohio Power,* 71 FERC ¶ 61,092 (1995) and *Indiana Michigan Power Co.,* 82 FERC ¶ 61,274 (1998).

Chelan PUD would expend substantial effort and expense to benefit threatened and endangered fish species in the project area. Based on the potential conflict with efforts to recover threatened and endangered fish species in the project area, we conclude that stocking resident hatchery fish in the project area would be imprudent. Because the resident fish stocking proposal would have no benefit to resident fish or recreational resources in the project area and any efforts to enhance resident fish in the project area could conflict with salmon and steelhead recovery efforts, we do not recommend including this measure as part of any license issued for the project.

As part of the Resident Fish Plan, Chelan PUD listed several resident fish habitat enhancement projects that would be considered for implementation within the Lake Chelan Project area. Chelan PUD also indicated that other, unspecified projects may be considered for implementation within the Rocky Reach Project area or on tributaries to the project reservoir. While implementation of these measures may have general benefits for resident fish and enhance recreational fishing opportunities, the uncertainty regarding the location for implementation of these projects prevents us from determining the effect of these measures on Rocky Reach Project resources and we do not recommend including them in any license issued for the Rocky Reach Project.

The Resident Fish Plan's measure to investigate introduction of a new species for recreational fisheries in the reservoir would provide information for resource managers that may lead to the development of new recreational fishing opportunities in the project area. However, as indicated above, there could be adverse effects between federally listed species and any introduced non-listed species and we do not have enough information in the record to indicate that such a measure is necessary or appropriate. Therefore, we are not recommending that this measure be included in any new license for the project.

One aspect of the Resident Fish Plan that we recommend would be conducting a comprehensive evaluation of the effects of predatory fish species on HCP Plan Species, which could be useful in identifying effective ways to increase reservoir survival of juvenile salmon and steelhead. We estimate the annualized cost of this measure to be $6,140, and conclude that the benefit to fish resources would be worth the cost. However, if the comprehensive evaluation does not reveal any significant link between predatory fish and juvenile salmon and steelhead survival, Chelan PUD proposes to conduct three 1-year surveys to monitor changes in abundance or species composition of reservoir resident fish populations. It is not clear why this information is needed or how it would be used. There is no information in the record to suggest that ongoing operations or programs affect resident fish, nor is there information on how data from these surveys would be used to benefit fish in the project area. Therefore, while we recommend including a study of the effects of predatory resident fish on HCP Plan Species, we cannot find any basis for conducting the three 1-year surveys of resident fish.

5.1.8 Other Fish and Wildlife Measures

As part of the relicensing process, technical groups were formed for each comprehensive plan (e.g., resident fish, white sturgeon, bull trout, Pacific lamprey, and wildlife) due to the complexity of issues surrounding each species and so that agency experts could focus on meetings pertaining to their specific area of expertise and not be required to attend all NRWG meetings. Chelan PUD proposes that the various technical groups continue to function as part of a RR Fish Forum. We view the Tribes' recommendations to form a comprehensive fisheries and aquatics committee to be equivalent. We recommend the RR Fish Forum share information, coordinate efforts, and make decisions regarding implementation of the provisions of the Resident Fish Plan, the White Sturgeon Plan, the Pacific Lamprey Plan, and the Bull Trout Plan. If the RR Fish Forum recommends measures that would be inconsistent with the conditions of any new license, Chelan PUD, as the licensee, could request FERC approval of modified management plans or an amendment of the license.

The Umatilla Tribes recommend that Chelan PUD develop and annually update a detailed fishery operations plan to meet performance goals and objectives for all native species and water quality interests. In their response to comments (April 17, 2005), Chelan PUD stated that as part of the HCP they annually produce a Fish Passage Plan that is developed and reviewed in conjunction with state and federal fishery agencies and Tribes, and must be approved by NMFS. In the draft EIS, we concluded that the Tribes' detailed fishery operations plan was not needed because it would duplicate current programs and would not provide any net benefit to fish resources. In comments on the draft EIS, the Umatilla Tribes state that the annual Fish Passage Plan is not offered to the Tribes for comment because the Tribes have not signed the HCP. To address this issue, any order issued for the Rocky Reach Project would consider the need for Chelan PUD to consult with the Umatilla Tribes on the Fish Passage Plan.

Chelan PUD proposes to develop and begin implementation of an aquatic invasive species monitoring and control plan to monitor for the presence of new invasive species at or near project facilities, which we estimate would cost $7,680 to prepare. Chelan PUD already manages the Eurasian watermilfoil through routine harvest at public access points at its recreational facilities. In addition, though zebra mussels have not been identified in the project area, Chelan PUD is already monitoring their current dispersion and investigating potential methods for mitigating its impacts, should the species be detected in the project area. An aquatic invasive species prevention program would benefit native aquatic species by formalizing Chelan PUD's existing aquatic invasive species programs. Therefore, we recommend that Chelan PUD develop an aquatic invasive species plan that describes Chelan PUD's efforts and plans to monitor and control aquatic invasive species.

5.1.9 Wildlife Plan

Chelan PUD proposes and the Forest Service, BLM, and WDFW recommend that Chelan PUD implement the Wildlife Plan filed with the Settlement Agreement. The Wildlife Plan broadly describes measures that would be implemented to restore and enhance wildlife habitat on state and federal lands within the Chelan and Rocky Reach Wildlife Areas, to protect riparian habitat along the reservoir on Chelan PUD's Sun Cove property, to control noxious weeds within the Rocky Reach Wildlife Area, to continue conducting wildlife surveys, and to protect the federally listed Ute ladies'-tresses. We review each of these measures below.

Under the terms of the Settlement Agreement, Chelan PUD would be responsible primarily for funding actions to be undertaken by WDFW, the Forest Service, and BLM on lands within the Chelan and Rocky Reach Wildlife Areas—lands located outside the current project boundary and consisting mostly of upland habitats that are not affected by project operations (see section 3.5.2).

The Settlement Agreement and Wildlife Plan lack sufficient detail for the Commission staff to determine specifically what actions would be undertaken, where they would occur, when they would occur, and although less important, a basis for the defined funding allocations and timing. The settlement parties suggest that such details would be determined in coordination with the RR Wildlife Forum on an annual basis. An annual progress report would be prepared documenting actions taken and funded during the year, accomplishments, monitoring and evaluation results of such actions, and recommendations for future actions. The plan does not, however, provide for filing such plans with the Commission for review and approval to ensure that the actions are benefiting resources affected by the project.

Consequently, we recommend that Chelan PUD file, within 1 year of license issuance, a final Wildlife Plan for Commission approval. The final Wildlife Plan should be developed in consultation with WDFW, BLM, the Forest Service, FWS, and other entities that wish to participate in the RR Wildlife Forum. Our additional recommended revisions to the Wildlife Plan and the basis for those revisions are described below.

5.1.9.1 Habitat Restoration and Enhancement

Under the proposed terms of the Settlement Agreement, Chelan PUD would make available to WDFW a total of $849,000 over the term of the license to restore 1,300 to 1,400 acres of agricultural lands within the Chelan Wildlife Area to native shrub-steppe habitat. In addition, Chelan PUD would also make available $74,000 annually to WDFW to restore, improve, and maintain (presumably, other native shrub-steppe habitat) other lands within the Chelan Wildlife Area. As discussed in section 3.5.2, the Wildlife Plan identifies potential activities that could benefit terrestrial resources in the wildlife areas: plant shrubs and trees to develop riparian strips and wetland areas; install water guzzlers

and other wildlife watering basins; provide artificial nesting structures; and provide brush piles to offer escape cover as an interim measure until planted riparian habitat becomes established.

Chelan PUD would also provide the Forest Service and BLM up to $10,000 and $40,000 annually to coordinate restoration actions on adjoining Forest Service and BLM lands, respectively. As identified in the Wildlife Plan, funding could be used for native shrub-steppe habitat rehabilitation, noxious weed control, and water development projects (i.e., wildlife watering basins).

A principal objective of the habitat restoration measures is to improve winter survival of mule deer. Lands within the Chelan and Rocky Reach Wildlife Areas now serve as the principal wintering habitat for mule deer. However, under extremely severe winter conditions (heavy snowfall and frigid temperatures), mule deer may be forced to seek and use the riparian habitats along the project shoreline and across the Columbia River.

No information in the record indicates how often this occurs, but WDFW during the 2005 technical conference indicated that it has happened, exposing mule deer to human disturbance and vehicular collisions as they cross a state highway and railroad to get to habitats along the project shoreline. In addition, the mule deer would be subject to disturbance associated with winter recreation activities on the project reservoir, such as duck hunting and some snowmobiling.

Improving the amount and quality of shrub-steppe communities within the Chelan and Rocky Reach Wildlife Areas may help delay migrations to and demands on riparian habitat adjacent to the project and across the Columbia River in Douglas County. There are no opportunities within the current project boundary to make habitat improvements that would be as beneficial to wintering mule deer, but those improvements could be undertaken within the wildlife management areas. For further discussion, see section 3.5.2.1.

The Wildlife Plan filed with the Settlement Agreement goes beyond habitat improvements to include actions typically borne by the land managing agency, including providing law enforcement to protect wildlife areas, managing non-project related public use, and managing non-project related recreation to ensure compatibility of such recreation within wildlife areas. We do not recommend that these measures be included in the final plan.

To ensure that future habitat improvement projects maintain a nexus to the project, we recommend that Chelan PUD file a report every 5 years for Commission approval that specifically describes habitat improvement projects that would be undertaken over the next 5 years. The Plan would specifically describe the planned measures and would include an implementation schedule, a description of any needed monitoring and

maintenance programs to ensure the success of the measures and the monitoring results of the previous 5 years.

Implementing the above habitat restoration measures is estimated to have a total annualized cost of $186,210. The benefits to mule deer and other shrub steppe dependant wildlife from implementing these measures would outweigh their costs. Where such habitat improvement measures involve annual O&M, the lands subject to such measures should be brought into the project boundary.

5.1.9.2 Sun Cove Riparian Habitat Protection

Chelan PUD proposes and WDFW recommends that Chelan PUD enter into a contract with the Chelan-Douglas Land Trust or another organization for a conservation easement in perpetuity, at no cost to the acquiring entity, on the Sun Cove property owned by Chelan PUD in Douglas County, Washington, for the purpose of protecting riparian habitat. The conservation easement would protect a 50-foot-wide, 3,500-foot-long stretch of riparian habitat, while providing for two 100-foot-long access corridors to provide future recreation access to the reservoir. The riparian habitats are undisturbed and provide habitat for a variety of wildlife. The adjoining upland habitats have limited wildlife value because they are small, fragmented, and abut existing development. The riparian habitats would be subject to future development. Protecting the riparian habitats would help control the impacts of future development, while still providing access to the project reservoir. It is typical and appropriate in this case to include such a buffer zone within the project boundary. Because Chelan PUD owns the property and protection of the lands would not require active management, there would be only a nominal cost to the project. There is no need to enter into a conservation easement to protect these lands. We recommend that the above-mentioned lands be included in the project boundary and that Chelan PUD protect these habitats from future development through the Wildlife Plan.

5.1.9.3 Wildlife Surveys

Chelan PUD proposes in the Settlement Agreement to continue to conduct annual wildlife surveys for species selected by the RR Wildlife Forum. Chelan PUD would conduct the surveys and report the survey results to the RR Wildlife Forum on a schedule determined by the Forum. The Wildlife Plan filed with the Settlement Agreement goes further to also include habitat improvement projects and to limit the cost of the survey and habitat improvement projects to $10,500[37] or equivalent staff-days per year for the

[37] Because Chelan PUD's proposed expenditure of $10,500 annually for these surveys is $3,070 more than its expenditure under the current license, the entry for this measure on table 19 is $3,070 because that would be the incremental cost associated with this measure under a new license.

term of the license. The intent of the funding as described in the management plan is to survey and monitor threatened, endangered, and sensitive species using techniques and on a schedule developed in coordination with the RR Wildlife Forum.

As noted above, the Commission cannot agree to cost caps. In addition, allocating additional funds for habitat improvements would be redundant with the recommended habitat improvement measures for the Chelan and Rocky Reach Wildlife Areas discussed above and thus is not warranted.

Chelan PUD currently conducts Canada goose nesting surveys and over-wintering bald eagle surveys. Continuing the goose and bald eagle surveys would provide valuable information for continued management of these species on project lands and waters. Broadening the survey efforts to include other threatened and endangered species may help promote the recovery of listed species or prevent future listings. However, as described in the Settlement Agreement and Wildlife Plan, the Commission cannot evaluate the cost or need of such efforts or ensure compliance with this currently undefined measure. Therefore, we recommend that Chelan PUD include in its final Wildlife Plan a detailed description of the survey efforts that would be conducted during the first 5 years of the license. Subsequent 5-year wildlife management reports, as described above, would allow for any modifications to approved survey efforts.

5.1.9.4 Integrated Noxious Weed Control Program

Chelan PUD proposes to implement an Integrated Noxious Weed Control Plan (see section 3.5.2.4) in accordance with the measures described in the Wildlife Plan. The Wildlife Plan, however, requires Chelan PUD to make available $10,000 per year for the term of the license to implement an integrated noxious weed control program in the Rocky Reach Wildlife Management Area. The plan does not describe the methods of control, areas to be treated, or an implementation schedule. Chelan PUD's participation in an area-wide noxious weed control strategy would facilitate restoration of shrub-steppe communities, protect wildlife habitat, protect and enhance sensitive plant communities, and ensure that project operations do not contribute to the spread of noxious weeds. Thus we recommend that the final Wildlife Plan include a detailed description of an integrated noxious weed control plan, developed in consultation with BLM, the Forest Service, and WDFW, and including a description of the areas to be treated in the first 5 years of license issuance, and the methods of treatment. Because the details of the plan have not been fully developed, we cannot accurately estimate the cost of the program. However, $10,000 per year (excluding development costs) seems to be a reasonable estimate and the benefits in terms of noxious weed control would be worth the cost.

5.1.9.5 Ute Ladies'-tresses Protection

Chelan PUD proposes and settlement parties support a three-pronged approach to protecting Ute ladies'-tresses populations along the project reservoir. Chelan PUD would: (1) implement an integrated noxious weed control program; (2) monitor populations of Ute ladies'-tresses; and, (3) acquire, from willing sellers, a conservation easement for a population on private lands.

Four populations of Ute Ladies'-tresses are located on lands hydraulically connected to the project reservoir and harbor populations of other rare plant species. Three are under Chelan PUD or state or federal control. The fourth is located on private lands. Potential threats to the population on private lands have not been identified.

Implementing an Integrated Noxious Weed Control Program would help control the major threat to existing populations of Ute ladies'-tresses. As we said in section 3.6.2.5, daily water level fluctuations as a result of the water releases create conditions that are favorable to the invasion of noxious weeds. Noxious weeds appear to pose the greatest threat to the Ute ladies'-tresses because they can take over the habitat. Ute ladies'-tresses cannot compete with aggressive species that form dense monocultures. Monitoring these populations would help track changes in population numbers and distribution. Such information may help determine the habitat requirements of these plants and the influences of water fluctuations on those requirements. Implementing the monitoring program is estimated to cost $3,070 annually and would be worth the cost.

A conservation easement on the private lands supporting the aforementioned fourth population would help protect from development those populations that are located on lands otherwise outside of Chelan PUD control, but on lands hydraulically connected to the project reservoir. At an estimated cost of acquiring the conservation easement of $160,000, we recommend that Chelan PUD pursue the acquisition to protect this federally listed species from willing sellers. These lands should be brought into the project boundary.

5.1.9.6 Coordination with Recreation Improvements

Chelan PUD's proposed recreational improvements would have little effect on wildlife habitat because the improvements would occur at existing recreational sites, in areas that have received heavy dispersed recreational use, and in primarily urban lands in the City of Entiat. Nonetheless, we included in the Staff Alternative Chelan PUD's proposal to consider potential adverse recreational effects on wildlife habitat during recreation management planning and site development so that we can ensure that recreational development considers potential effects on wildlife. The cost of this measure would be included in the recreation plan and would provide for public interaction with nature while protecting valuable wildlife habitat.

5.1.10 Cultural Plan

Key elements of Chelan PUD's Cultural Plan include: (1) formation of a RR Cultural Forum, comprising representatives from Chelan PUD and several agencies and tribes; (2) appointment of a Cultural Resources Coordinator; (3) development and implementation of treatment plans in consultation with the RR Cultural Forum for currently identified eligible sites, and for any eligible sites discovered in the future; (4) implementation of the Cultural Plan's archaeological monitoring program; (5) development and implementation of a management plan for TCPs; (6) development of a curation plan; (7) development of an integrated cultural resources information management system; (8) development and implementation of a cultural resources interpretive plan and educational program; and (9) site treatment measures. Implementing the Cultural Plan is estimated to have a total annualized cost of approximately $35,010 and we find that the benefits of the plan would be worth the cost.

5.1.11 Recreation Plan

Early in the relicensing process, Chelan PUD convened the Social Sciences Working Group to develop, conduct, and review project-related recreational studies. The Recreation Plan, as described in the Settlement Agreement, includes continued O&M of existing recreational facilities, expansion/revitalization of some existing park facilities, and creation/extension of multi-use trails, and addresses the need for future evaluation of recreational use and needs. The annualized cost of implementing the proposed Recreation Plan would be approximately $1,652,720. We find that in section 3.8, *Recreational Resources*, implementing the proposed plan would substantially improve recreational resources at the project.

However, we note that many aspects of the Recreation Plan have not been finalized, including the scope of measures to be implemented at the 40-acre Entiat Park per Article 9(e) of the Settlement Agreement. Therefore, we recommend that Chelan PUD include in a Revised Recreation Plan a description and location of project-related recreation facilities, including interpretive trails and public access; cost estimates and detailed drawings of these facilities; identification of the entity responsible for O&M of the recreation facilities; a discussion of how the needs of the disabled were considered in the planning and design of each recreation facility; and documentation of consultation with at least, but not limited to, WDFW, Washington State Parks, NPS, BLM, and the City of Entiat. Components of the plan should be consistent with the proposed Recreation Plan implementation schedule in the Settlement Agreement. Although not explicit in the Settlement Agreement or the proposed Recreation Plan, Chelan PUD appears to have anticipated the need to update the Recreation Plan with Commission approval over time as measures are finalized. Consequently, there would be no additional cost associated with this recommendation.

In concert with Article 9(g) (Recreation Resources Monitoring and Evaluation Program) of the Settlement Agreement, we recommend that Chelan PUD monitor recreation use on an estimated 150 acres of BLM-administered lands, located adjacent to the Rocky Reach Project reservoir and within the project boundary. As discussed in section 3.8.1, project-related dispersed recreational use at the project reservoir is projected to increase. Monitoring recreation use on these BLM lands, as well as all other lands adjacent to the project reservoir, would address the need for future evaluation of dispersed recreational use and needs. The annualized cost of this measure is $3,070 and we find the benefits of monitoring recreation use on these lands to be worth the cost.

We have not adopted the Forest Service's recommendations, pursuant to section 10(a) of the FPA, for a comprehensive Information and Education program and a Recreation Enhancement Fund, as discussed in section 3.8.2 of the EIS. The annualized costs of implementing these measures are $2,000 and $294,830, respectively, which would not fulfill any demonstrated project need and are not worth the costs. Therefore, we are not recommending that these measures be included in any new license for the project.

5.2 FISH AND WILDLIFE AGENCY RECOMMENDATIONS

Under the provisions of the FPA, each hydroelectric license issued by the Commission shall include conditions based on recommendations provided by federal and state fish and wildlife agencies for the protection, mitigation, or enhancement of fish and wildlife resources affected by the project.

In response to our REA notice, the following fish and wildlife agencies submitted recommendations for the project: NMFS (letter filed March 9, 2005), Interior (letters filed March 14, 2005 and June 1, 2005), and WDFW (letter filed March 9, 2005). As a party of the Settlement Agreement, WDFW filed modified terms and conditions in a letter filed May 24, 2006. Interior, in letters filed December 28, 2005 and January 17, 2006, indicated its intention to file modified conditions and prescriptions at a later date. However, in a letter filed May 24, 2006, Interior stated that because of its successful involvement in the Settlement Agreement, it believes that the measures contained therein address the substantive issues. In this final EIS, we assume that Interior's June 1, 2005, recommendations are superceded by the relevant provisions of the Settlement Agreement.

Section 10(j) of the FPA states that whenever the Commission believes that any fish and wildlife agency recommendation is inconsistent with the purposes and the requirements of the FPA or other applicable law, the Commission and the agency shall attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agency. Table 20 lists the federal and state recommendations filed subject to section 10(j), and whether the recommendations are adopted under the Staff Alternative. Environmental recommendations that we

Table 20. Fish and wildlife agency recommendations for the Rocky Reach Project. (Source: Staff)

Recommendation	Agency	Within the Scope of 10(j)?	Annualized Cost	Staff Recommendation[a]
1. Limit the term of the new license to not extend beyond 2054, the term of the HCP.	NMFS (1)	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources.	$0	The Commission will make its determination regarding the term of any new license in the license order, based on the record.
2. Carry out the Tributary Conservation Plan and the Hatchery Compensation Plan, in their entirety, as set forth in the Rocky Reach anadromous fish HCP.	NMFS (2,3)	Yes	$15,014,120	Adopted.
3. Article 2(e) – develop and implement an Aquatic Invasive Species Plan	WDFW	Yes	$640	Adopted
4. Article 3, subparts (a), (b)(1), (b)(2), (c)(1), (c)(2), and (d) – White Sturgeon Plan	WDFW	Yes	$61,440	Adopted
5. Article 3, subpart (b)(3) – determine a long-term source for hatchery sturgeon	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	Included in Cost for No. 4	Adopted
6. Article 3, subpart (c)(3) – compile information on regional white sturgeon programs	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$26,160	Not adopted

Recommendation	Agency	Within the Scope of 10(j)?	Annualized Cost	Staff Recommendation[a]
7. Article 3, subpart (e) – prepare an annual summary report of sturgeon activities	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$10,240	Adopted
8. Article 4, subparts (a), (b)(1), (c), (d), and (e)(3) – Bull Trout Plan	WDFW	Yes	$79,260	Adopted
9. Article 4, subpart (b)(2) – prepare an annual report of adult bull trout monitoring	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	Included in Cost for No. 8	Adopted
10. Article 4, subpart (e)(1) – attend meetings of the Upper Columbia River Bull Trout Recovery Team	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$1,690	Not adopted
11. Article 4, subpart (e)(2) – study the feasibility of collecting large woody debris from Rocky Reach reservoir for tributary enhancements	WDFW	No, study could have been done during prefiling	Included in Cost for No. 8	Adopted
12. Article 4, subpart (e)(4) – participate in regional information exchange and development of methods	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	Unknown	Not adopted
13. Article 5, subparts (a)(1), (a)(2), (a)(4), (a)(5), (a)(6), (a)(7), and (b) – Pacific Lamprey Plan	WDFW	Yes	$83,990	Adopted

Recommendation	Agency	Within the Scope of 10(j)?	Annualized Cost	Staff Recommendation[a]
14. Article 5, subpart (a)(3) – complete a literature review of upstream lamprey passage at other projects	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$1,700	Not adopted
15. Article 5, subpart (c) – survey juvenile lamprey in habitat that may be affected by the project	WDFW	No, study could have been done during prefiling	$4,250	Not adopted
16. Article 5, subpart (d) – collect information regarding lamprey distribution, population status, and juvenile migration timing and collect tissue samples	WDFW	No, study could have been done during prefiling	Unknown	Not adopted
17. Article 6, subpart (a) – provide annual funding to WDFW to rear and plant fish in water bodies in Chelan and Douglas counties	WDFW	No, no nexus to project resources and funding is not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$100,000	Not adopted
18. Article 6, subpart (b) – implement resident fish enhancement measures at Lake Chelan or within the project boundary	WDFW	No, unclear nexus to project resources and is not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$3,820	Not adopted

Recommendation	Agency	Within the Scope of 10(j)?	Annualized Cost	Staff Recommendation[a]
19. Article 6, subpart (c) – create additional recreational opportunities in the reservoir by introducing new fish species	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$5,100	Not adopted
20. Article 6, subpart (d)(1) – conduct a resident fish survey to determine the effects of predatory resident fish on juvenile salmon and steelhead	WDFW	No, study could have been done during prefiling	Included in Cost for No. 21	Adopted
21. Article 6, subpart (d)(2) – develop and implement measures to reduce predation on juvenile salmon and steelhead and monitor effectiveness	WDFW	Yes	$6,140	Adopted
22. Article 6, subpart (d)(3) – conduct 3, one-year surveys to monitor resident fish abundance and species composition	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	Included in Cost for No. 21	Not adopted
23. Article 7, subpart (a) – fund WDFW's restoration, maintenance, and improvement of Chelan WMA	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$75,780	Funding not adopted. Adopted the measure plus 5-year management plan with updates
24. Article 7, subpart (b) – fund WDFW's restoration of cultivated lands on Chelan WMA	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$59,230	Same as No. 23

Recommendation	Agency	Within the Scope of 10(j)?	Annualized Cost	Staff Recommendation[a]
25. Article 7, subpart (c) – fund habitat restoration on BLM lands	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$40,960	Same as No. 23
26. Article 7, subpart (d) – fund habitat restoration on FS lands	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$10,240	Same as No. 23
27. Article 7, subpart (e) through (j) – Wildlife Plan	WDFW	Yes	$25,540	Adopted
28. Article 9 – Recreation Plan	WDFW	No, not a specific measure to protect, mitigate, or enhance fish and wildlife resources	$1,646,790	Adopted with the provision to file a Revised Recreation Plan

[a] Many of the measures recommended under section 10(j) of the FPA include specific dollar limitations. While we are recommending adopting several of these measures, the Commission has stated previously that it considers it the licensee's obligation to complete the measures required by a license and that dollar figures are not absolute limitations (that is, the Commission reserves the authority to require licensees to fulfill the requirements of the license notwithstanding any limitations on expenditures either proposed by the applicant or recommended by others).

consider outside the scope of section 10(j) have been considered under section 10(a) of the FPA and are addressed in the specific resource sections of this document. We adopted all the recommendations that we considered to be within the scope of section 10(j).

5.3 CONSISTENCY WITH COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA 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), federal and state agencies filed comprehensive plans that address various resources in Washington. Thirty-nine of those plans address resources applicable to the project (table 21). We did not find any conflicts.

Table 21. FERC comprehensive plans considered for the Rocky Reach Hydroelectric Project.

Comprehensive Plan	Contact Agency
Spokane Resource Area Management Plan and Final Environmental Impact Statement. 1985.	U.S. Department of Interior Bureau of Land Management Spokane, WA
Okanogan National Forest land and resource management plan. 1989.	U.S. Department of Agriculture Forest Service Okanogan, WA
The Nationwide Rivers Inventory. January 1982.	U.S. Department of the Interior National Park Service Washington, DC
Wenatchee National Forest Land and Resource Management Plan. 1990.	U.S. Department of Agriculture Forest Service Wenatchee, WA
An assessment of outdoor recreation in Washington State: A State Comprehensive Outdoor Recreation Planning Document 2002–2007. October 2002.	Interagency Committee for Outdoor Recreation Olympia, WA
Voices of Washington: Public Opinion on Outdoor Recreation and Habitat Issues, 1995.	Interagency Committee for Outdoor Recreation Olympia, WA
Washington Outdoors: Assessment and Policy Plan, 1990-1995. April 1990.	Interagency Committee for Outdoor Recreation Tumwater, WA

Comprehensive Plan	Contact Agency
State of Washington, Outdoor Recreation and Habitat: Assessment and Policy Plan, 1995–2001. November 1995.	Interagency Committee for Outdoor Recreation Olympia, WA
Washington State Trails Plan: Policy and Action Document. June 1991.	Interagency Committee for Outdoor Recreation Tumwater, WA
Final Environmental Impact Statement and Fishery Management Plan for Commercial and Recreation Salmon Fisheries off the Coasts of Washington, Oregon and California Commencing in 1978. March 1978.	U.S. Department of Commerce National Oceanic & Atmospheric Administration National Marine Fisheries Service Seattle, WA
The fifth Northwest Electric Power and Conservation Plan. Council Document 2005-07.	Northwest Power and Conservation Planning Council Portland, OR
Columbia River Basin Fish & Wildlife Program. Council Document 2000-19.	Northwest Power and Conservation Planning Council Portland, OR
Columbia River Basin Fish & Wildlife Program. Council Document 2003-11.	Northwest Power and Conservation Planning Council Portland, OR
Protected Areas Amendments and Response to Comments. Council Document 88-22.	Northwest Power and Conservation Planning Council Portland, OR
Statute Establishing the State Scenic River System, Chapter 79.72 Revised Code of Washington. 1977.	Washington State Department of Fish & Wildlife Olympia, WA
Eighth amendment to the fishery management plan for commercial and recreational salmon fisheries off the coasts of Washington, Oregon, and California commencing in 1978. January 1978.	Pacific Fishery Management Council Portland, OR

Comprehensive Plan	Contact Agency
Settlement Agreement Pursuant to the September 1, 1983, Order of the U.S. District Court for the District of Oregon in Case No. 68-513. Columbia River fish management plan. November 1987.	State of Washington. State of Oregon. State of Idaho. Confederated Tribes of the Warm Springs Reservation of Oregon. Confederated Tribes of the Umatilla Indian Reservation. Nez Perce Tribe. Confederated Tribes and Bands of the Yakama Indian Nation. Portland, OR
A Resource Protection Planning Process Identification of Prehistoric Archaeological Resources in the Lower Columbia Study Unit. 1987.	Washington State Dept. of Community Development, Office of Archaeology & Historic Preservation Olympia, WA
Resource Protection Planning Process—Paleoindian Study Unit. 1987.	Washington State Dept. of Community Development, Office of Archaeology & Historic Preservation Olympia, WA
Resource Protection Planning Process Mid-Columbia Study Unit. 1987.	Washington State Dept. of Community Development, Office of Archaeology & Historic Preservation Olympia, WA
A Resource Protection Planning Process Identification Component for the Eastern Washington Protohistoric Study Unit. 1987.	Washington State Dept. of Community Development, Office of Archaeology & Historic Preservation Olympia, WA
Water Resources Management Program—Methow River Basin. November 1977.	Washington State Department of Ecology Yakima, WA
Water Resources Management Program—Okanogan River Basin	Washington State Department of Ecology Yakima, WA
Wenatchee River Basin Instream Resources Protection Program. December 1982.	Washington State Department of Ecology Yakima, WA
State Wetlands Integration Strategy. December 1994.	Washington State Department of Ecology Yakima, WA
Application of Shoreline Management to Hydroelectric Developments. September 1986.	Washington State Department of Ecology Yakima, WA

Comprehensive Plan	Contact Agency
Instream Resource Protection Program for the Main Stem Columbia River in Washington State. 1982.	Washington State Department of Ecology Yakima, WA
Hydroelectric Project Assessment Guidelines. 1987.	Washington State Department of Fisheries Olympia, WA
1987 Strategies for Washington's Wildlife. December 1986.	Washington State Department of Game Olympia, WA
State of Washington Natural Heritage Plan. 1987.	Washington State Department of Natural Resources Olympia, WA
Final Habitat Conservation Plan. September 1997	Washington State Department of Natural Resources Olympia, WA
Washington State Hydropower Development/Resource Protection Plan. December 1992.	Washington State Energy Office Olympia, WA
Washington State Scenic River Assessment. September 1988.	Washington State Parks and Recreation Commission Olympia, WA
Scenic Rivers Program—Report. January 1988.	Washington State Parks and Recreation Commission Olympia, WA
Higgins Eye mussel recovery plan. Prepared by the Higgins Eye Mussel Recovery Team, July 1983.	U.S. Fish & Wildlife Service Twin Cities, MN
North American Waterfowl Management Plan. May 1986.	U.S. Fish & Wildlife Service. Canadian Wildlife Service. U.S. Department of the Interior. Environment Canada.
Fisheries USA: The Recreational Fisheries Policy of the US Fish and Wildlife Service. Undated.	U.S. Fish & Wildlife Service Washington, DC
Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest-Related Species Within the Range of the Northern Spotted Owl. April 1994.	Bureau of Land Management Forest Service Washington, DC

5.4 RELATIONSHIP OF LICENSE PROCESS TO LAWS AND POLICIES

5.4.1 Water Quality Certification

The status of the water quality certification for the project is discussed in section 2.3.1.1, *Water Quality Certification*.

5.4.2 Coastal Zone Consistency Certification

According to an electronic communication on July 2, 2003, between WDOE and Chelan PUD, WDOE does not intend to require a Coastal Zone Management Consistency Statement for the project because the project is not located in Washington's coastal zone (Chelan PUD, 2003c, as cited in Chelan PUD, 2004a).

5.4.3 Section 18 Fishway Prescriptions

Fishway prescriptions are discussed in section 2.3.1.2, *Section 18 of the Federal Power Act—Authority to Require Fishways*.

5.4.4 Endangered Species Act

Section 7 of the ESA requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered and threatened species or cause the destruction or adverse modification of the critical habitats of such species. Three federally listed fish species (Upper Columbia River spring Chinook salmon, Upper Columbia River steelhead, and bull trout), six federally listed wildlife species (gray wolf, Canada lynx, northern spotted owl, grizzly bear, pygmy rabbit, and bald eagle), and three federally listed plants (Ute ladies'-tresses, showy stickseed, and Wenatchee Mountains checker-mallow) could occur in the project area. Our assessment of effects on listed species is discussed in section 3.6, *Threatened and Endangered Species and Essential Fish Habitat*, and our final recommendations are presented in section 5.1, *Comprehensive Development and Recommended Alternative*.

NMFS concluded in its HCP final EIS (NMFS, 2002) that implementation of the HCP measures would result in incidental take of all Permit Species (including Upper Columbia River spring Chinook salmon and Upper Columbia River steelhead) through direct, indirect, and delayed mortality caused by the project dam. NMFS issued a Section 10(a)(1)(B) permit for the HCP, finding that the HCP measures would, to the maximum extent practicable, monitor, minimize, and mitigate the effects on Plan Species resulting from the otherwise lawful operation of the project. Chelan PUD's proposal to the Commission incorporates all the measures of the HCP, and our conclusions are the same.

FWS issued a biological opinion on May 12, 2004, stating that "implementing the proposed action (incorporating the HCP into the existing FERC license for Rocky Reach) is not likely to jeopardize the continued existence of the Columbia River distinct population segment of bull trout, and is not likely to destroy or adversely modify proposed critical habitat for bull trout" (letter from J. Gonzales, FWS, Wenatchee, WA, to M. Salas, Secretary, Commission, Washington, DC, dated May 12, 2004). Chelan PUD's proposal before the Commission incorporates all the measures listed in the FWS biological opinion, including implementation of the Bull Trout Management Plan, and our conclusions are the same.

In a letter dated October 17, 2005, FWS indicated that it disagreed with our determinations and it initiated formal consultation. In that letter, FWS indicated that the agency would provide its biological opinion no later than March 4, 2006. In a letter dated March 9, 2006, FWS indicated that a Settlement Agreement was forthcoming and that the timeline for completing the biological opinion was moot. FWS recommended that the Commission reinitiate consultation based on the final EIS. In a May 3, 2006 letter, we indicated that our recommended action (proposed action for ESA consultation) was unchanged and we requested that FWS complete the consultation initiated by the October 17, 2005, letter.

We conclude that relicensing the project with our recommended measures would not affect the gray wolf, Canada lynx, northern spotted owl, grizzly bear, pygmy rabbit, showy stickseed, or Wenatchee Mountains checker-mallow and would not be likely to adversely affect bald eagles or Ute ladies'-tresses.